

# RETHINKING MINIMALISM

research plan



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date

January 4<sup>th</sup> 2021

# I - RELEVANCE, FASCINATION AND QUESTIONS

The world's population is growing and in combination with a mass-urbanization movement, this results in the projection that 70% of the population will be living in cities by 2050 (UN, 2019). Manhattan, New York City's most dense borough, will need expansion in order to accommodate 105.000 new inhabitants by 2040 (NYC gov, 2019). Horizontal expansion is not possible, due to the important logistical connections; the Hudson River and the East River. Vertical expansion limits have already been reached and should be questioned in terms of durability. The expansion within the building block itself will be explored in this project.

My fascination is minimalism. Currently, we design architecture in a static way, the rooms are linked to each other and the user is the dynamic factor moving from room to room. This results in a lot of unused space, which is a waste in a time where space is a luxury in cities. In minimalism, the user is the static factor and the rooms are dynamic, using the whole space for one function at a time. In this research I want to take the concept of minimalism as the starting point, and research how this can be applied in metropolitans in order to generate a higher housing density.

The research will start with a **hypothesis**. The hypothesis is based on a quote by Graham Hill (2019), founder of LifeEdited, whom I interviewed a year ago. He stated that, *'We have a reality, we have an environmental budget and it depends on how many of us there are, whether it is 2 billion or 12 billion.'* As I personally agree with this statement, I would like to start the research paper with this starting point. The hypothesis of this research paper will be *'Urban housing will be minimal in terms of size.'* It is important to define the word minimal here. In this research minimal architecture is defined as a micro-apartment with a flexible and transformable floor plan, with sustainability, urban density and reducing the ecological footprint as the main motive.

This relevance and problem statement, results in the following **research question**: *How can we optimize minimal housing on both the architectural and urban scale in the future scenario of high density living due to mass-urbanization?*

The sub-questions of this research will be the following:

- 1. Which spatial quantities or qualities are desired and not present in current minimal architecture?*
- 2. How can we rearrange the habits and habitats in a way that guarantees the flexibility of the space and allows for personal territory?*
- 3. How can we share these expressive spaces and live collectively in cities without sacrificing the urban quality of individuality? Can there be a part-time territory?*

The **aim** of this research is to develop a new way of urban living. Housing in a high density with a fundamentally different approach to the program and layout. Creating collective spaces, while maintaining the quality of urban individuality. Also the relationship between sustainability and square meters will be analyzed, and the aim is to reduce the ecological footprint of the housing. This research paper will present the rethinking of minimal architecture.

## 2 - THEORETICAL FRAMEWORK

Minimalist architecture is the starting point of this research. In order to develop a new perspective into the organization of the floor plan in a fundamentally different way, it is important to research the habits, habitats and the relation between them. The research will also include the definition of minimalism. In order to give a critique on the current minimal architecture it is important to research the theory of territory. Therefore, a theoretical framework is given, analyzing the theory from different perspectives. First, the theory of **territory** will be discussed in the more biological and philosophical sense, based on the readings by Uexküll<sup>1</sup>, Buchanan<sup>2</sup> and Deleuze<sup>3</sup>. Then the connection between territory and architecture will be made based on the readings of Grosz<sup>4</sup>, focusing on the concept of **framing**. Lastly, the connection between territory and the interior and furniture will be made based on the readings of Cache<sup>5</sup>.

The critique on current minimalism will result in a framework that leads to the 'rethinking of minimalism'. This framework is set based on a criticism in twofold. Firstly, from a quantitative perspective. The division is made between functional and expressive spaces, based on the theory of Deleuze. Secondly, from a qualitative perspective, focusing more on the territorialization and personal ownership of the space. This will be done based on the allowance for furniture and decorations based on the theory of Cache and Grosz. Also the theory of **hot and cold media** by McLuhan<sup>6</sup> will be implemented, analyzing the relation between low participation / high resolution and high participation / low resolution.

The research will look into the territorialization of the space, but also the deterritorialization and reterritorialization (te-de-re) based on the theory of Grosz. The question arises whether we can design collective spaces while maintaining the quality of urban individuality. The possibility of a **part-time territory** will be considered, going back to the theoretical framework and the theory of territory by Deleuze.

The research will be presented in the following documents: [1] the research plan, [2] graduation plan, [3] research paper, [4] glossary and [5] design brief. The glossary will include all the terminologies, theoretical concepts and interpretations.

- 1 Uexküll, J. von & Kriszat, G. (1934) Streifzüge durch die Umwelten von Tieren und Menschen. Geibungsyoin Verlag. (A Stroll Through the Worlds of Animals and Men. Instinctive Behaviour. Edited and translated by Claire Schiller. New York: International Universities Press, 1957.)
- 2 Buchanan, B. (2008) Onto-ethologies: The animal environments of Uexküll, Heidegger, Merleau-Ponty, and Deleuze. Albany: State University of New York Press.
- 3 Deleuze, G. & Guattari, F. (1987) A thousand plateaus: Capitalism and schizophrenia. Minneapolis: University of Minnesota Press.
- 4 Grosz, E. A. (2008) Chaos, territory, art: Deleuze and the framing of the earth. New York: Columbia University Press.
- 5 Cache, B. (1995) Earth Moves: The Furnishing of Territories. Massachusetts: MIT Press Cambridge.
- 6 McLuhan, M. (1964) Understanding Media: The extensions of man. New American Library, USA.

### 3 - METHODOLOGY

The architectural research approach is '**case studies and combined strategies**', according to the architectural approaches by Groat and Wang's *Architectural Research Methods* (2002). The combined strategy is a literature study, focusing on the theory of territory and framing (Deleuze, Grosz and Cache), which is subdivided into theory of territory, territory and architecture and territory and interiors in the first chapter, which forms the theoretical framework. It is important to note that the literature study is the main strategy and that the case studies are used to apply the theory and form conclusions.

The episteme for this project is **typology**. The repetitive pattern of floorplan design is analyzed and reinterpreted. The habits and habitat are disconnected and reordered. The research tool, plan analysis (in the form of case studies) will be an influence throughout the research.

The research paper starts with an introduction, highlighting the problem statement and the relevance. The main research question and three sub-questions are introduced. The paper structure will be guided by these sub-questions, which will be answered in chapter 3, 4 and 5.

In chapter 3 'Defining minimalism', two case studies will be analyzed by applying the theory from both a qualitative and quantitative perspective. The case studies are both minimal apartment projects. All the case studies are located in New York City and were built in the last five years, in order to make a realistic comparison with each other and the graduation project. The methodology in chapter 4 'Habits and Habitat' can be interpreted as the **correlational approach**, due to the analysis of the habit patterns and the rearrangement based on desires instead of habitats. The final chapter 'Collective Individualism' focuses on the collective spaces and their territorialization and is a combination of the literature study and the third case study.

In the concluding chapter, the answers to the sub-questions will result in an answer to the main question. The research will conclude in the tools and framework needed to design the following relations: the building and public space, the collective space and the private space, the private space and the interiors.

## 4 - REFLECTION

Minimalism is my fascination, and based on this interest I was selected for this studio. It all started with watching the Netflix documentary Minimalism (2016) three years ago. I was interested in minimalism as an architectural concept, then in relation with consumer behaviour. I have chosen this topic for my MSc2 theory thesis, guided by Andrej Radman. After this semester I went to New York to do an internship and simultaneously do an independent research study into minimalism which was a continuation of my theory thesis, where I discovered I really enjoy academic writing and reading. Therefore I have chosen to do a literature study quite early on in the process of this project.

One of the main challenges during this process has been connecting the research and design. I do not mean this in the sense that I had trouble concluding the research into a design brief, quite the opposite. I believe I had a very clear vision on what kind of project I wanted to design in the next phase, and how the research paper could form the foundation for it. I mean that I had the incorrect notion that the research paper and design study were two separate processes. First I would write the paper, then after that I would start the design. In reality I figured out that research and design are intertwined. During chapter 4, I realized that I need to do two sub-studies in relation to the theory of framing (a wall/floor/ceiling study and a window study). I needed to allow myself to do these studies and then continuing with the research paper.

I believe I have succeeded in overcoming this challenge, and in order to do this I have made a research structure diagram, which you can find on the final pages. By structuring the relations between research and design it gave me a clear overview of what I was doing and in what direction I was going. I am grateful for the process I have been through and look forward to exploring the rest of the project.

### /// - SELF-ASSESSMENT

The lectures during this course have both inspired me and gave me unexpected insights. Especially the first lecture by Klaske Havik *'Methods of Analysis'* inspired me in terms of the wide range of methodologies and methods, but also in terms of research visualization. The how-to tutorial by Andrej Radman *'Theory'* gave me interesting insights, during both the preparation and the lecture itself. During the preparation assignment, I read a short essay and was asked to draw a diagram of what was just described. To me it seemed obvious that how I had visualized the text while reading it (I was not aware that I did it until the assignment was introduced) was *the* way to visualize it. However, when reflecting back on the assignment with a friend who is also in the explore lab studio, we came to the conclusion that we had visualized the same essay in a totally different way. I really enjoyed the conversation with her, how she came to her diagram and how our visions differ from each other.

I have attended the masterclass *'What if? Sustainability, future designs of the past.'* which I found interesting. However, in hindsight the workshop *'Disciplinary mergers and multi-disciplinary encounters'* would have been a better fit for me. I have been able to learn from the power-desire-diagram and adapted it to my own project. I have used it as the starting point of chapter 4: habits and habitat, where the habits are analyzed and rearranged based on their desire.

I believe I got to learn a lot during this course, however, I do have a critique on the course structure. I believe that for me (and perhaps also for other students) the course would have been more beneficial if the deadline would have been sooner. Now the Research Plan – to me – is more of a summary of the theoretical framework and methodology, plus a reflection, while I think it could also have been very useful when formulated as an actual research *plan*, right after the definition of the problem statement and research questions.

## /// - RESEARCH STRUCTURE

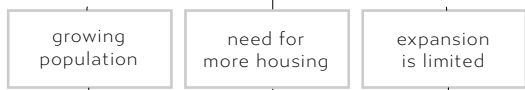
On the following pages the research structure is shown. It presents the connections between the research and design, plus shows what is yet to be completed.



how high can we go?

RELEVANCE

MASS-URBANIZATION



PROBLEM STATEMENT

HIGHER DENSITY REQUIRED

MINIMALISM

HYPOTHESIS & RESEARCH QUESTION

HYPOTHESIS  
"urban housing has to be minimal."

RESEARCH QUESTION  
"How can we optimize minimal housing on both architectural and urban scale in the future scenario of high density living due to mass-urbanization?"

AIM  
develop a new way of high density urban living  
housing in a high density with a fundamentally different approach to the program  
collective spaces, while maintaining the quality of urban individuality

CHAPTER 2  
THEORETICAL FRAMEWORK

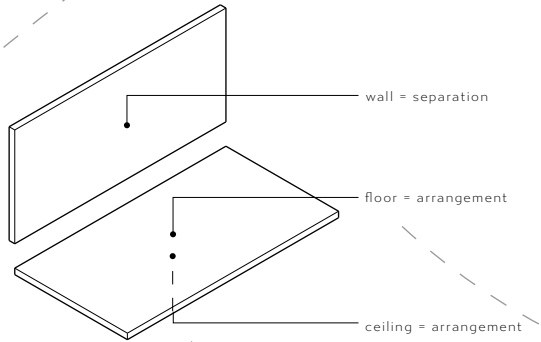
theory of territory (biological & philosophical perspective) - Buchanan, Uexküll, Deleuze  
territory and architecture - Grosz  
territory and interiors/furniture - Cache

CHAPTER 3  
DEFINING MINIMALISM

3.1 spatial quantities  
3.2 spatial qualities  
3.3 case studies & McLuhan theory

sub-question one:  
Which spatial quantities or qualities are desired and not present in current minimal architecture?

functional vs expressive based on theory by Deleuze



what is a wall / floor / ceiling in my project?

reference study



used space - functional habits  
unused space - expressive habits



in minimal architecture, expressive spaces (dining room / guestroom) are cut due to lack of space.  
but we do want those expressive spaces even though we hardly ever use them...







GRAHAM HILL - SOHO STUDIO

a lot of program, thus a lot of flexibility. Results in a lot of spatial limitations in terms of furniture, thus has limited allowance for personal territory.



MKCA - ATTIC TRANSFORMER

medium program, thus limited amount of transformations possible. Results in less spatial limitations in terms of furniture, thus allows for personal territory.

CHAPTER 4

HABITS AND HABITAT

- 4.1 habitat research
- 4.2 habit research
- 4.3 scenarios

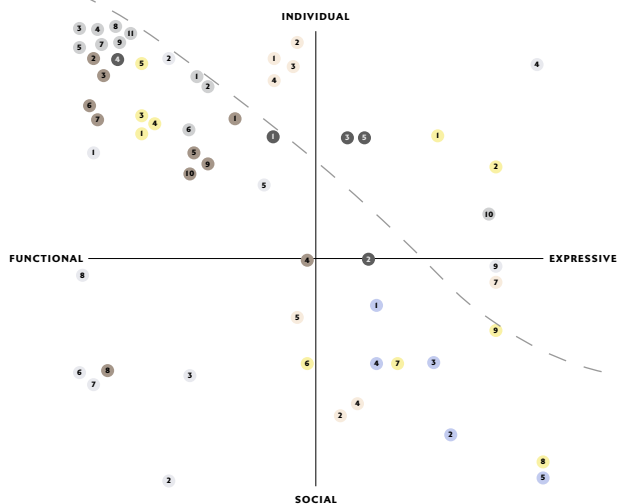
sub-question two:

How can we rearrange the habits and habitats in a way that guarantees the flexibility of the space and allows for personal territory?

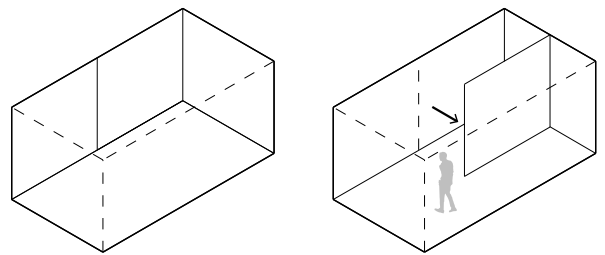
analyzing habits per habitat, rearranging them per desire

HABITAT	HABIT	DESIRE	LIGHT	PRIVACY	FURNITURE	TERRITORIAL TYPOLOGY	USE
(1) Bedroom	<ol style="list-style-type: none"> <li>1 sleeping</li> <li>2 relaxing</li> <li>3 reading a book</li> <li>4 watching a movie</li> <li>5 changing</li> <li>6 intimacy</li> </ol>	<p>being rested</p> <p>being comfortable</p> <p>being relaxed</p> <p>leisure</p>	<p>direct daylight in the morning is desired</p> <p>in the evening no daylight (has to be completely dark)</p> <p>artificial light should be flexible, dimmed light or bright light on nightstand.</p>	<p>high privacy</p> <p>relation to the bathroom</p> <p>no direct relation to the exterior in terms of vistas</p>	<p>double bed</p> <p>nightstand</p> <p>closet</p>	<p>Functional (all)</p>	<p>00:00 - 09:00</p>
(2) Bathroom	<ol style="list-style-type: none"> <li>1 take a shower</li> <li>2 take a bath</li> <li>3 general (brushing teeth, using toilet, etcetera)</li> <li>4 getting ready for going out</li> <li>5 getting ready for the night (more relaxed version of general)</li> </ol>	<p>getting clean</p> <p>getting ready to go out</p> <p>being relaxed</p>	<p>either average light or more soft light (when adding)</p> <p>no direct daylight required</p>	<p>high privacy</p> <p>relation with closet</p> <p>no vistas</p>	<p>shower</p> <p>bathub</p> <p>toilet</p> <p>sink</p> <p>mirror</p> <p>closet space</p>	<p>Functional</p> <p>general</p> <p>Expressive</p>	<p>morning routine 30 min</p> <p>evening routine 30 min</p> <p>several times throughout the day 5 min</p> <p>take a bath 1 hr per week</p>
(3) Kitchen	<ol style="list-style-type: none"> <li>1 cooking</li> <li>2 baking</li> <li>3 eating a quick breakfast</li> <li>4 preparing a snack of coffee</li> <li>5 cooking for someone</li> <li>6 preparing for a dinner party</li> </ol>	<p>preparing food</p> <p>preparing food (with company)</p> <p>leisure (for example baking a cake)</p>	<p>daylight desired in the evening: either bright light (functional) or soft light (expressive)</p> <p>leisure (for example together while chatting with a glass of wine)</p>	<p>none required</p>	<p>stove</p> <p>fridge</p> <p>sink</p> <p>4 x cabinets (600 x 600 mm)</p> <p>counter</p>	<p>Functional</p> <p>cooking</p> <p>general</p> <p>Expressive</p>	<p>throughout the day on 5-10 minute intervals</p> <p>morning and evening 30 min</p> <p>duration varies 1 time per week</p>

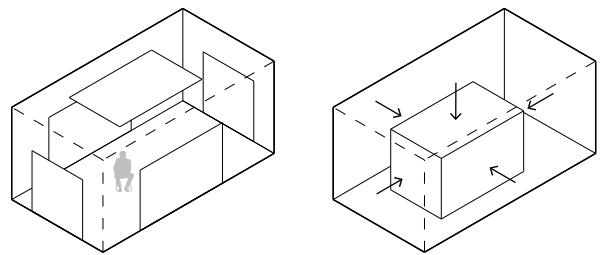
vectors are: light, privacy, furniture, territorial typology and use



what is a wall / floor / ceiling in my project?

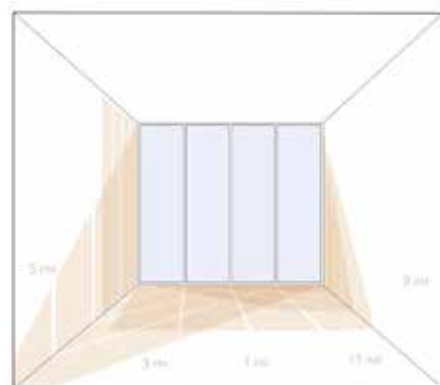


wall - semi separation



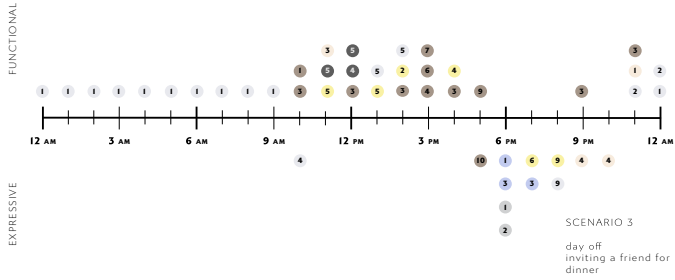
combination - a room in a room n°2

what is a window in my project?  
how does it define the space and influence the scenario based plans?



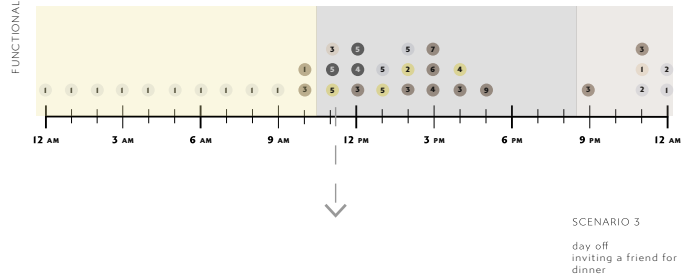
analyzing habits (colour coded per desire) in terms of use. There are 4 timelines set up:

- [1] working from home
- [2] working out
- [3] day-off at home
- [4] day-off going out



This results in the following four scenarios -

- time based setups:
- [1] morning routine
- [2] working from home
- [3] day-off at home
- [4] night time routine



CHAPTER 5  
COLLECTIVE INDIVIDUALISM  
//// work in progress

sub-question three:  
How can we share these expressive spaces and live collectively in cities without sacrificing the urban quality of individuality? Can there be a part-time territory?

PLAN SCENARIOS  
//// work in progress

MODEL  
FORM & COMPOSITION STUDY  
//// work in progress

CONCLUSION

sub-question #1

sub-question #2

sub-question #3

RESEARCH QUESTION  
"How can we optimize minimal housing on both architectural and urban scale in the future scenario of high density living due to mass-urbanization?"

DESIGN BRIEF

