CITY'S BORDER CONDITIONS
The research of abstract themes in cities

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I   A WAVE OF VERTICALS

"*Seeing Manhattan from the top of The Rock. Beneath the haze stirred up by the winds, the urban island, a sea in the middle of the sea, a wave of verticals. The gigantic mass is immobilized before the eyes.*"[1]

Image 1: View from On Top of The Rock. Source: *own illustration*

The Complex Projects graduation studio is about New York, Midtown Manhattan. The studio investigates areas that are ambiguous in their development and embedded in the process of change. It focuses on the study of different urban conditions, such as core or peripheral, dynamic or stagnant, traditional or without history and anonymous or famous.[2]

The first question which came to my mind was how to make an architectural impact in such a dense and highly congested area. As Nanne de Ru, founding partner of Powerhouse Company, mentioned: *"if you would like to design something cute you should not be in New York, you have to design something extreme."*[3]

After having read the book 'The Death and Life of Great American Cities' by Jane Jacobs, I was fascinated by the theme 'Border Vacuums' caused by massive single uses in cities.

As Jacobs explains, *"… Massive single uses in cities form borders. The streets that adjoins such a border is a terminus of generalized use. It is bound to be a dead end place with scant users. Understanding the drawbacks of borders should help rescue us from producing unnecessary borders. On the other hand, a big city does need universities, large medical centres and large parks for metropolitan attraction. The point is not to disdain such facilities or to minimize their value, but it is to recognize that they are mixed blessings."*[4]

1   Michel de Certeau, *The Practice of Everyday Life,* trans. Steven Rendall (Berkeley and Los Angeles: University of California Press,1984), 91.

2   Hrovje Smidihen, Jelmer van Zalingen and Manuela Triggianese, *New York Midtown Syllabus 19 Fall Semester* (Delft: TU Delft Department of Architecture)

3   Nanne de Ru, *Projects from Practice* (TU Delft Architecture: Lecture from the Seminar, City of Innovations, October 22nd 2019)

4   Jane Jacobs, *The Death and Life of Great American Cities* (New York: Vintage Books Edition, 1992)

Image 2: The Curse of Border Vacuums caused by Massive Single Uses.
Source: *https://www.citylab.com/design/2017/01/the-complete-guide-to-border-vacuums/512381/*

A border vacuum is not just literal a wall or barrier, but it is something much more abstract which makes it difficult to grasp and understand. How to research such an abstract theme? For me this was a bit of a question and therefore I would like to investigate more in this reflective essay upon:
How can abstract themes in cities, as border conditions, be translated to a more tangible level?

By creating research methodological awareness, it helps me to reflect my approach and to see what is missing or could be investigated more in the future process.
The graduation studio kicked off with a small assignment and in five weeks we produced an immense model with 35 people around six by five metres from the entire Midtown. In the meantime, we started to research the site according to self-chosen research topics. The Lecture Series of Research Methods made me aware to think about what we were doing and I could reflect for a moment. With this I realized how the research has led to my personal fascination.
These realizations and reflections will emerge in the next chapters when the relevance and effects of the research methodologies are discussed.

II   THE RESEARCH ON THE EFFECT OF BORDER VACUUMS
During the process I used two research methodologies. The first one is based on a more tangible level, the morphological approach. The second one is more from a mentally point of view to do research on the users in the area, the praxeological approach.

II.I Morphological approach
The term morphology is Greek and refers to the word *morph*-, which means 'shape or form'. Urban morphology is the study of change in the physical form and shape of settlements over time. Differences in street and block patterns, the arrangement of buildings within the plots and the shapes of buildings that create different environments.[5]

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[5]   Arnav Saikia, "Urban Design Dimensions: 1.Morphological Dimension", last modified September 28, 2015, http://www.vasturaag.com/urban-design-morphological-dimension/

By making the morphological map of the area, the Nolli map, I could distinguish the massive single uses in the area on the Eastern side, seen in the image below.

Image 3: Nolli map - Lower East Midtown. Source: *own illustration*

This led to my fascination of the dissolvement of the strong grid towards the shore caused by the large institutional areas, shown in red in the image below.

Image 4: Grid Dissolvement. Source: *own illustration*

The dissolvement of the grid led to different characters of the avenues created by the urban tissue. The image below shows the transition from smaller blocks to larger blocks.
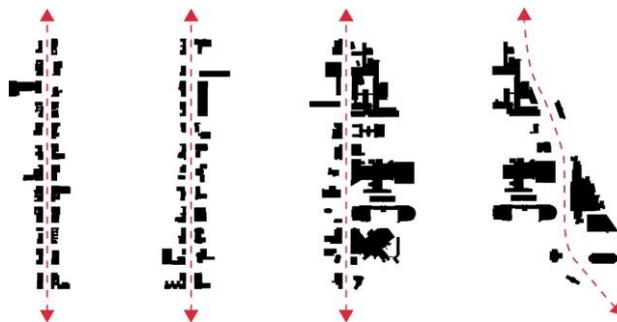

Image 5: Morphological analysis of the avenues. Source: *own illustration*

With this initial analysis, my interest towards the shore started to grow. I used this top-down mapping as my first approach to investigate the area. This first morphological mapping does not imply the character of the area, but the form of the urban tissue already gives me the first hints of what happens where.

II.II Praxeological approach
After the top-down approach from mapping the area, I finally got the chance to visit the site. For me this was of great importance to experience the effect of massive single uses upon the people's behaviour on the streets and the people living next to it. As William H. Whyte explains, "*To transform a border vacuum into a seamless and vibrant public space, you need to take a look at it from street level.*"[6]

On the spot, it showed me the lack of human activities on the streets adjacent to the massive single uses.

Image 6 & 7: Impression 1st Avenue and FDR Highway. Source: *own illustration*

Not only I could see the decreasing human activity going towards the shore but it also opened my eyes to see the most affected area due to the lack of human activity caused by the massive single uses, namely the apartment buildings, the Kips Bay Court.

Image 8: Design Site. Source: *own illustration*

6   Andrew Small, "The Complete Guide to 'Border Vacuums'", last modified January 9, 2017,
https://www.citylab.com/design/2017/01/the-complete-guide-to-border-vacuums/512381/

In the images below, the Kips Bay Court can be seen with security in front of it, no human activity present and there are only a lot of homeless people are around.

Image 9 & 10: Security in front of the Kips Bay Court and homeless people. Source: *own illustration*

Without having walked on the streets there, I was not able to feel the impact of the created border vacuum. In the end, the site visit resulted in my current design site.

III   CHANGE IN THE IMAGE OF THE CITY

The city has often been portrayed and researched for a long time. From the 17th century onwards, the study of the image of the city is described from a morphological point of view.

III.I Morphological approach

Around the 17th and 18th century, cities were usually portrayed as pictorial maps. With a focus on artistry rather than accuracy, pictorial maps provided a detailed bird's eye view of the city which highlights landmarks, buildings and places of interest. As beautiful as they were, these maps were of little use for wayfinding and urban management. An example, the 17th century bird's eye view of Paris can be seen in the image below.[7]

Image 11: A 17th century bird's eye view of Paris.
Source: *https://morphocode.com/figure-ground-diagram/*

[7]   Morphocode, "The figure-ground diagram.", last modified n.d., https://morphocode.com/figure-ground-diagram/

In 1748, Giambattista Nolli chose a different cartographic approach, an ichnographic representation of the city and provided an extremely accurate orthogonal view of Rome, La Pianta Grande di Roma.[8]
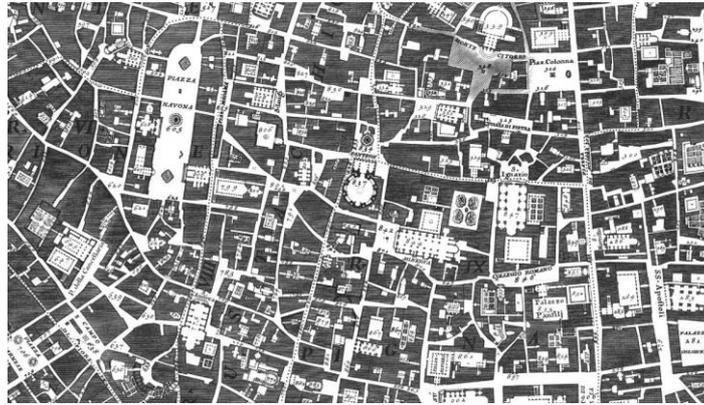

Image 12: Giambattista Nolli's 1748 "La Pianta Grande di Roma".
Source: *https://morphocode.com/figure-ground-diagram/*

This type of map communicates the idea that a city can be experienced as a series of spaces, rather than a series of objects. Nolli decided to show the interiors of public buildings as open, the same as the public streets and access ways around the buildings. The result is that the streets seem to flow into the various public buildings, which gives a sense of how public was understood at that time.[9] Today this type of mapping is known as a 'Nolli Map'.
La Pianta Grande is a milestone in imaging the city. It allows the viewer to explore the intricate build patterns, as well as the system of open spaces that a pedestrian would experience while moving through the city.[10]

At the turn of the 20th century, the Nolli map was still a tool for illustrating the intricacies of urban space. Camillo Sitte, who studied public spaces across Europe, used it in his numerous sketches. His book 'The art of building cities' contains dozens of urban morphology studies, all illustrating public space in a solid-void manner. Later, in the 1960's, as many scholars were obsessed with the notion of space, his work regained popularity along with the figure-ground mapping technique.[11]
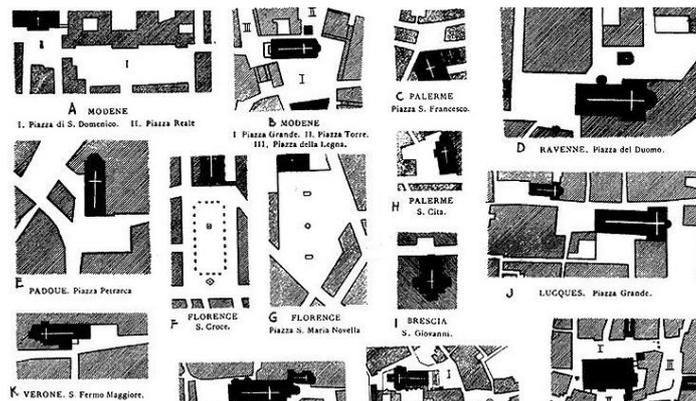

Image 13: From Rome to Las Vegas. Sketches from "The Art of Building Cities" by Camillo Sitte.
Source: *https://morphocode.com/figure-ground-diagram/*

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8 Morphocode, "The figure-ground diagram."
9 Sophie Hamer, "Architectural Drawings, The Figure Ground", last modified 2015, http://portico.space/journal//architectural-drawings-the-figure-ground
10 Morphocode, "The figure-ground diagram."
11 Morphocode, "The figure-ground diagram."

Meanwhile, the modernist movement made little use of the Nolli map. Instead, they promoted order and regulation. The desire to bring back lightness to the congested urban core took the shape of the Ville Radieuse by Le Corbusier. A place where skyscrapers and vast stretches of greenery would provide a healthy lifestyle. While modernist architects produced objects rather than spaces, the Nolli map became an uncommon mapping tool.[12]
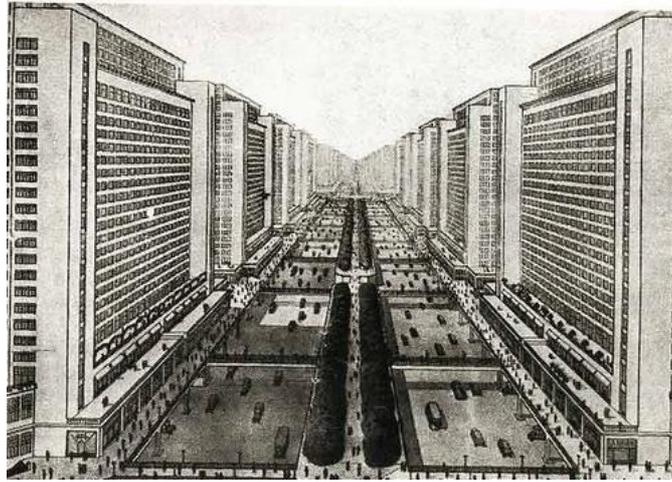

Image 14: Sketch of Ville Radieuse by Le Corbusier.
Source: *https://www.archdaily.com/411878/ad-classics-ville-radieuse-le-corbusier/51fadfbbe8e44ea2b0000010-ad-classics-ville-radieuse-le-corbusier-image?next_project=no*

By the end of the 1960s, modernism reached a critical point. The desire for total planning was replaced by a nostalgic view of the past and a renewed interest in the vernacular. The Nolli map became the perfect pedagogical tool to address the collision between the object-oriented modernist architecture and the historic city.[13]

In 1972, the American postmodern architects Robert Venturi and Denise Scott Brown carried out an architectural study of Las Vegas, including the 'Nolli Map of Las Vegas.' In this map, Venturi and Scott-Brown isolated and separated several different layers of information about 'The Strip'. The different ways in which they reassembled this information allowed a range of meanings to be extrapolated and connections to be drawn.[14] The goal of the course was to investigate the archetype of the commercial strip through careful documentation and analysis of its physical form. This collaborative research shaped one of the most influential and controversial architectural books of the 20th century, 'Learning from Las Vegas'.[15]
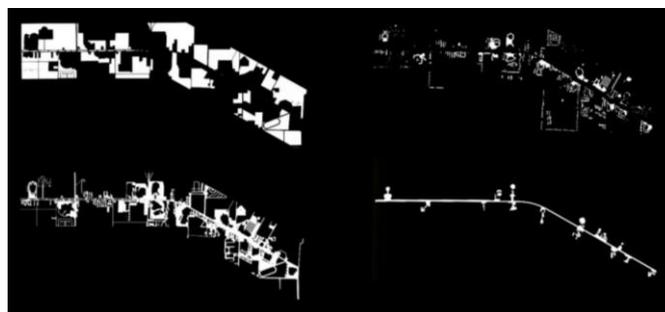

Image 15: Learning from Las Vegas: "Las Vegas is to the Strip what Rome is to the Piazza".
Source: *https://morphocode.com/figure-ground-diagram/*

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[12]   Morphocode, "The figure-ground diagram."
[13]   Morphocode, "The figure-ground diagram."
[14]   Hamer, "Architectural Drawings, The Figure Ground."
[15]   Morphocode, "The figure-ground diagram."

There are multiple ways to communicate information about cities. However, the most important source for information about a city is provided by the city itself, resulting in the Nolli mapping. It is the least manipulable, abuseable and the most honest way. Nolli mapping is a method of abstracting information about cities' expressions. It is surprising how much various information a map, simplified to just black and white areas, can contain. Nolli maps proved to be a great method of directing one's focus from singular expressions onto the underlying meaning of city structures.

A decade ago, creating Nolli maps was still time-consuming work and therefore only created for precise tasks. Nowadays, we do have technology and databases, such as OpenStreetMap (OSM) found in 2006 by Steve Coast the so-called Wikipedia for maps.[16] This makes it a lot easier and faster to provide the most accurate Nolli maps of cities and shows how well used this type of mapping is still being used today.

III.II Praxeological approach

On the other hand, a methodology which is hard to map is the praxeological approach. 'Praxis' and 'Logy' make up the study of human action and conduct.[17]

This study of human action did affect the theory designing according to functions and use in the built environment.

Users are sometimes seen as a thread to architects, because their ability to transform buildings and spaces questions architects' perception of architecture. Consequently, architects' appropriate models of experience such as functionalist theory to imply that architects can predict not only the form but also the use of their buildings.[18]

However, functionalism is no longer the dominant theory of architecture, although it remains important. A possible reason for the partial decrease of functionalism and reappraisal of use is the change in capitalism, from standardisation, homogeneity and production to diversification, fragmentation and consumption.[19] From this change in society the approach in architecture of making flexible buildings arose. "Flexibility is, of course, in its own way a type of functionalism."[20] The suggestion of different types of users, flexibility is a continuation of functionalism, because it assumes that the architect can meet the future needs of the user. Flexibility is based on the principle that a building can absorb or adapt changes in the type of use. The incorporation of 'flexibility' in the design allow architects the illusion of projecting their control over the building in the future.[21]

However, the Dutch architect Hertzberger criticized the flexible set-up. He states that although a flexible set-up adapts to any change, it can never be the best and most suitable solution to any problem. However, it can at any moment provide a solution but only the most appropriate one.[22]

Therefore, Hertzberger argues that a form which has polyvalence is capable of varied uses because it resists to fixed meanings. We must continuously search for archetypal forms which can not only absorb a program, but can also generate one.[23] He associates polyvalence with pure, archetypal forms, such as the square. He incites users to transform a building. "*The skeleton is a half-product, which everyone can complete according to its own needs and desires.*"[24] Rather than having a single use, such as in functionalism, he proposes a single element suited for many uses.[25]

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16 René Mayr and Markus Mayr, "Figure ground diagrams tell stories about cities", last modified August 22, 2016, https://www.citymetric.com/horizons/figure-ground-diagrams-tell-stories-about-cities-2359

17 Marieke Berkers, *Praxeology* (TU Delft Architecture: Lecture Series Research Methods), September 12, 2019

18 Jonathan Hill, *The Use of Architects* (Centreville: Carfax Publishing, 2000)

19 Jameson, 1991, p. 21, in Hill, *The Use of Architects*

20 Collins, 1965, p.234 in Hill, *The Use of Architects*

21 Forty, 2000, p.143 in Hill, *The Use of Architects*

22 Hertzberger, 1998, p.146 in Hill, *The Use of Architects*

23 Hertzberger, 1998, p.149 in Hill, *The Use of Architects*

24 Hertzberger, 1998, p. 157 in Hill, *The Use of Architects*

25 Hill, *The Use of Architects*

Still when designing a polyvalence design, the architect must fully use his imagination to be able to identify himself with the users to understand how the design will come across to them and what they will expect from it.[26]

This theory from functionalism to flexible buildings influences my design process of choosing a suitable program which is appropriate to tackle the created border vacuum. As Gensler Architects states, how a mixed-use environment unlocks the possibilities of a diverse urban lifestyle and will breathe new life into cities. A mixed-use development blends in many different activities will work to revitalize the area and stimulate vibrancy.[27]

IV   TOP-DOWN AND BOTTOM-UP APPROACH

For me, both aspects, a more top-down morphological approach and bottom-up praxeological approach, provided different insides concerning the image of the city. The top-down approach opened my eyes to an area of interest and a research theme, while a bottom-up approach resulted in the discovery of my design site and program.

The fact that Nolli decided to show the interiors of public buildings as open, results in that the streets seem to flow into the various public buildings. Giving a sense of how public was understood and occupied the city at the time. I adopt this statement because you see what is closed off and accessible. From this the large institutional areas pop up and dead-end places appear which indicates the border vacuums in the city.

The fact that in my opinion modernist architects questioned the Nolli map was a mistaken decision. Still if you would produce an object, from the modernistic point of view, rather than a space, the object will still be situated in the context. From this the Nolli map could still be useful to show the radius between public and private. The approach of the modernist by taking the blocks out of the context and placing them in big voids, such as Ville Radieuse by Le Corbusier, made these plans unrealized and did not appropriate to the context at all.

The use of the bird's eye view of the city might not be appropriate to use to navigate properly through the city, but in my eyes it will tell different aspects, such as three-dimensional shapes, buildings heights, typologies, architectural character and it is not just a flat map from above. In my personal process, I think the use of drawing perspectives is lacking and could be investigated more in the upcoming process.

Concerning the program, the lecture of Berkers about praxeology made me aware of the difference in the 'design user' versus the 'actual user'. The target group of the design might change. However, by studying the 'praxis' of architecture one can develop an eye for the actual users of the building and not the imagined ones. Also, according to Berkers, just as Hill and Hertzberger, a shift in architecture and its users takes place. Craftsmanship is lost and everything becomes global and technology focused. As Berkers mentioned: "*Far more eye of diversity is needed, flexible housing projects and buildings are needed.*"[28] For example, a library does not only function as just a library anymore, but contains different types of functions and can alter the needs of the current users.

Still no matter if the building will be a flexible project, as mentioned before by Hill, the architect must use his imagination to the full to be able to identify himself with the users and to understand how the design will come across to them and what they will expect from it. In the end to understand the city and the built environment the architect should look from it from the people's perspective and not just from above.

Related to Jorge Mejia Fernandez approach concerning research methodology, research implies everything you do while studying architecture and not only the appointed 'research' part of the design

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26   Hill, *The Use of Architects*

27   Gensler, "Are Single-Use Spaces Becoming Obsolete?", last modified n.d. https://www.citylab.com/sponsored/gensler-design-forecast-2018/are-single-use-spaces-becoming-obsolete/217/

28   Berkers, *Praxeology*

process. The following steps, research question, design, building technology and presentation are all types of researching the topic.[29] The aim of the studio Complex Projects is to imply research not just as the starting point, but throughout the entire process. Every tutoring session you have, every step you do and every presentation you give is about researching the topic.

And thereby, I would like to conclude that researching abstract themes in cities, such as border conditions with the help of both the top-down approach from a morphological point of view and the bottom-up approach by praxeology provide different insights of the border conditions which are present in cities.

With both research methodologies, the approach from Mejia Fernanzed related to the aim of the studio and writing this reflective essay gave substance to formulating my personal fascination.

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29   Jorge Mejia Hernandez, *Epistemology* (TU Delft Architecture: Lecture Series Research Methods), September 5, 2019