

NEW YORK, NEW TIMES, NEW GRID?

The perpendicular grid and (a)typical typologies in Midtown Manhattan

Sjors de Haan (4766156)

Chair of Complex Projects

Thesis 'Off-grid typologies in Midtown Manhattan'

I INTRODUCTION

Complex Projects appealed to me because its freedom within the assignment but at the same time the strict organization of the deadlines and products we need to deliver. This is in line to how R. Lucas described architectural research : *'Rather than there being a singular approach, it is clear that there are a great many valid and useful forms for architectural research to take. Architecture is, by its nature, a complex, multifaceted field of study, meaning that no single approach can tell you everything you need to know.'*¹ Because there are many approaches, Complex Projects provides the structure, whereas the students have to choose their own approach.

The studio is also committed to its product based design development. *'Product based design development is a design method being used in Complex projects. By having strictly defined deliverables, with the dense schedule, students are encouraged to constantly produce but develop design in parallel. In this way, the design progress and the final products are much more integrated, but even more important, deliverables are used as a mean to develop, explore and test design.'*² Immediately during the first week it was clear to me what Complex Projects had in mind with this principle. All products have to be good looking, catchy and in the right layout. Within this strict structure there is enough space for own interpretations of the demanding design assignment. However, although this design method may be practical and useful in day to day architectural business, the scientific basis of the design method remains unclear.

Before even thinking of the design of the building, research on a wide variety of topics needs to be done. Elaboration of these topics and combining data of the entire team will lead to a more complete overview of the various issues; the setting, the needs and demands, the possibilities, the options, the changes, the risks. On the end the research from the entire working party will be combined in an umbrella masterplan. Based on the group research we will create a group vision on how the area will develop. What are the major developments in the future? This vision will not be based on pure facts only, but also on assumptions made.

In science there is general research, but while performing scientific work, a personal interest may grow. The individual research starts after the group research. Everyone can discover and develop a personal fascination. Once fascination has started, research questions will emerge. These research questions ultimately lead to everyone's personal project.

In the end all separately developed projects need to fit in the group strategy. In this way it is possible to create an 'narrative'. This way of cooperating and combining the input of all individual team members is extremely important within the chair of Complex Projects. It can be seen as a logical sequence of arguments and it aims to use the collected information as the basis for supporting one's design decisions.

¹ Lucas, R. (2016). *Research Methods for architecture*. London: Laurence King Publishing, p21.

² Chair of Complex Projects (2019). *Fall Syllabus 2019*, p6.

II RESEARCH-METHODOLOGICAL DISCUSSION

We started the MSc3 with +-40 students. The students were divided in 4 groups and each group was allocated to a specific site. This means every group focused on a different area of Midtown New York. Within your group everyone had to work closely together on a general research. Work had to be divided and discussions were necessary to make compromises. Updates and sharing information was important to improve the quality of works in all the four groups contributing.

As mentioned before, Complex Projects offers freedom but at the same time a strict organization. The studio focused in the first weeks on gaining as much knowledge as possible: 'hard data'. At first, one should not try to interpret this data, but merely visualize it as clearly as possible. Therefore, we started to build a large scale model of Midtown Manhattan. Thanks to this model it was easier to understand the site, recognize the different characters and areas of this part of New York, evaluate and appreciate the various building heights and building masses.

We divided this team-research in 5 topics: Character, Mobility, Buildings, Environment and Public. Within the group we discussed everyone's interest and divided the people on the topics. My topic became buildings. The following weeks I collected available data on the buildings: building heights, construction dates, Floor-Area Ratio, air-rights, developers, etcetera. All team members mapped the information (on a product based way) so we could easily inform each other with our findings. In the end we merged all information in an investigation booklet. This booklet is the 'fundament' of further individual research.

The individual research started with everyone's personal fascination. What puzzled the individuals while exploring Midtown Manhattan and what issue needed deeper investigation? I had focused on buildings in relation to the New York grid; the typical pattern of streets and how the city is organized. Although this grid seems artificial, apparently it is considered efficient. However, quite early I realized that the deviations of this grid turned out to be interesting places: Broadway with the adjacent squares, (Columbus Circle/Times Square/Herald Square/Union Square/Madison Square), parks and large sized buildings, being too big to fit within the traditional grid. I spotted a trend that new mega developments did not follow the usual New York grid (Hudson Yards/Riverside Center/Cornell Tech/Hudson Yards/Manhattan West/Essex Crossing/World Trade Center). At Hudson Yards for instance, a large mega development in the west side of Midtown-Manhattan, a new typology of towers is introduced. These towers are free standing, with a large public space in between/around the towers. The traditional character of New York with its endless straight streets and on both sides very high buildings cannot be recognized here anymore. What will the future of the New York grid look like? Will this type³ of architecture with a deviant grid be a new standard in New York?

This clarifies my main research question: What is the relation between the New York grid and the typologies (of buildings) it can accommodate?

³ Jacoby, S. (2015). Type versus typology Introduction. *The Journal of Architecture*, 20(6), 931-937.

III RESEARCH-METHODOLOGICAL REFLECTION

My research question consists of two parts: the New York grid and the associated typologies. First I tried to define the grid. What are the positive/negative aspects of the grid? Why did New York choose for this perpendicular grid? Is the New York grid totally different than the grid of other cities? Is there a difference between the grid of American cities and the grid of other cities in the world? Doing an internet search on grids of cities around the world opens the eyes. Developments during the last two centuries, when cities expanded all around the globe, have not been the same everywhere. In some cities enlargement is limited by natural boundaries, e.g. the ocean, mountains or rivers. Some towns grow slowly, some grew very fast. Some extensions are happening “natural”, people build within governmental outlines or plans, whereas in other cities enlargements are planned in a structural way. These issues are not always clear, but I tried to find historical explanations on the reasons cities chose for enlargements and the way they grew.

The second part of my research concerns the type of buildings in New York. This directly led to the concomitant question: ‘What are (building) typologies and how to categorize and compare these?’

Julien-David Le Roy was central to a modern conception of architecture that developed ideas of typal and typological abstraction through historic processes of cultural and diagrammatic reduction. He stated: ‘A figure, even a small one, will better transmit an understanding of a building and will more promptly communicate its disposition than the most thorough verbal description.’⁴ This sentence explains my approach to categorize the building typologies. Through mapping the building heights, the function of the buildings and how the buildings look like, I was able to create a new zoning map (Figure 1) based on 8 defined typologies. There was no option I could achieve the same result with only words. Mapping⁵ is a very effective way to clarify what you want to show because it reduces complexity. However, complexity itself can sometimes be very useful to develop the research even further.



Figure: 1, Own illustration. Zoning based on architectural typology; numbers reflect the types described in Figure 2.

‘Plan des églises les plus remarquables bâties depuis l’an 326 jusqu’en 1764’ from Jean-François de Neufforge⁶ shows the typology of churches. The churches were not mapped to be classified but the investigators explored why these buildings had the same name although differences were abundant. During the research I realized how hard it can be to define the different typologies. How to define a

⁴ Jacoby, S. (2015). Type and typology reasoning: a diagrammatic practice of architecture. *The Journal of Architecture*, p943.

⁵ Moneo, R. (1978). On Typology. *Oppositions*, p22.

⁶ Jacoby, S. (2015). Type and typology reasoning: a diagrammatic practice of architecture. *The Journal of Architecture*, p944.

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skyscraper? What is the difference between a high-rise building and a skyscraper? For instance: skyscrapers built 50 years ago can nowadays be classified as low-rise, because the newer buildings that surround them are much higher. This ensures that it is not possible to make a map of skyscrapers like Jean-François de Neufforge did with the different types of churches. A church is always recognizable, while the interpretation of a the name 'skyscraper' also depends on the surrounding buildings.

After this discovery, I changed my strategy. I did not look at each building separately anymore but (due to the equal sizes of plots within the strict perpendicular New York grid) I was able to compare the plots (figure 2). My new strategy was in line with what R.A. Gorny explained in his lecture about typology: *'In a static scene you miss the opportunity to understand from which/what conditions it actually evolves.'*⁷ We do not learn from the classification of things but through the changes that render.

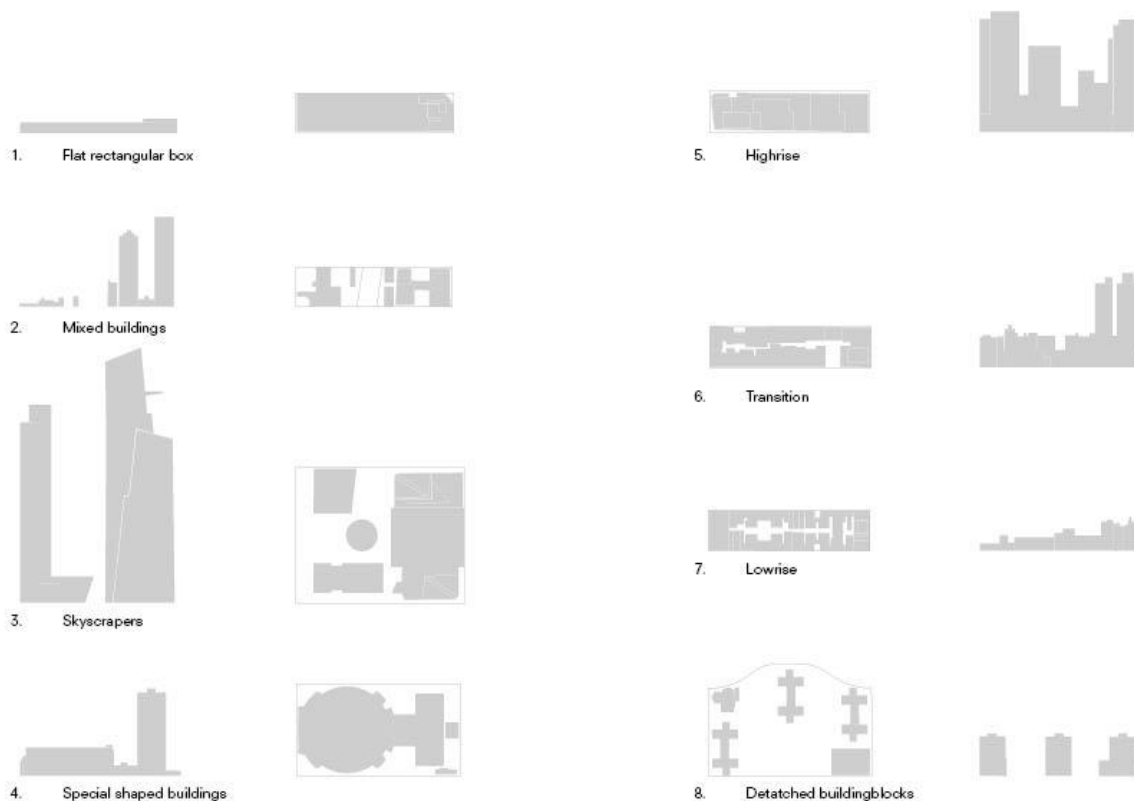


Figure: 2, Own illustration. Eight different types of architectural plots

R.A. Gorny also mentioned that the research is not about the 'things' but the research should be about 'how to change things' and 'how the understanding of previous changes could facilitate and understand the changes to come'. This is what my research is actually about. I try to find a relation between the New York grid and the (building) typologies it can accommodate. The grid is designed and realized in 1811. Is this grid now, +-200 years later, still the grid the city needs? Buildings became bigger and higher like the new skyscrapers in Hudson Yards. These skyscrapers are freestanding in a park. Plots are merged to facilitate this new type⁸. Will Hudson Yards be an exception or is this indicative for the changes of the grid in near future?

⁷ R.A. Gorny (2019), Lecture series on research methods, On types and Typology: A critique of typological thinking

⁸ Moneo, R. (1978). On Typology. *Oppositions*, 13, p27-28.

IV POSITIONING

The chair of Complex Projects actually directs to doing quantitative research. Hard data has to be collected and processed. Results can easily be combined, put together and presented statistically. The research is applied to Midtown New York. Due to deductive research, general ideas and theories move ahead and when combined with fascination, a narrative develops. The research is in that way not objective since it reflects a range of personal interests, group assumptions and ambitions.

To process the hard data into a map, for instance a function map, the researcher needs to check all buildings separately to see which function it has. It will take too long when one tries to do this for all buildings in Midtown Manhattan. That is why we use the data from different (internet) sources. Unfortunately, these sources are sometimes hard to verify. During the group research the group created a vision and thus predicted what will happen in the next 15 years. By creating a new vision, based on the quantitative research, assumptions are made. These assumptions cannot be verified which makes the research less scientific.

Diagrams are an essential way to show certain findings within Complex Projects. Diagrams are a simplification of reality and make results easier to understand. However, when using diagrams in presentations this has to be taken into account. A vague or unclear diagram can provide a wrong interpretation.

The typological research has similarities with the literature and especially after R.A. Gorny's lecture on typological thinking⁹, things became more clear to me. Every situation needs its own approach. This is captured in the definition of typology: *'Study of types; attempting to frame a systematic approach to types. The idea is that by beginning with a type you can describe the scope of variation and common ground.'*

Research done so far has focused on the traditional New York grid and the newly designed buildings that may not fit in this 200-year-old pattern of streets. Are today's requirements for modernization of metropolitan areas different from those ages ago?

One aspect you cannot find in literature is sentiment. The high buildings on both sides of the streets gives the city its character to the city. Hudson yards feels different. At Hudson yards there is, for New York's understanding, a lot of car free public space. Because the buildings are freestanding in a park, you do not feel the typical New York character anymore. By changing the grid, the identity of the city will change. The bigger picture must be taken into account next to research into possible building types and the way it will affect the area.

Times have changed. Issues such as the massive traffic, huge mobility of crowds in public transport and private cars, and its associated pollution, cause problems and have a detrimental impact on cities. Aspects of sustainability are a growing concern during the last decades. Modern architects have to deal with, all these important issues, nowadays and in the upcoming era. The citizen of today (and the near future) will require more space to relax, more open parks, more free air to get rid of the stress and the associated complaints of the workload one is encountering. In addition housing needs to be affordable, enjoyable and sustainable.

Therefore, the research we need to undertake as architects should take all of the above issues into account. On one hand, the perpendicular grid gives a certain sentiment since it is 200 years old, with typical narrow streets and surrounding high buildings. On the other hand, the world is moving and changing. It is interesting to investigate why one should aim for typologies suitable for the current grid, instead of looking for a grid that suits the contemporary architecture and typologies.

⁹ R.A. Gorny (2019), Lecture series on research methods, On types and Typology: A critique of typological thinking