

# TOWARDS A NEUTRAL SPREADSHEET

## The condition of critical quantitative research

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Thesis topic "Dislocation of resources "

## I CONTROLLING THE COMPLEX

As the built environment is becoming increasingly complex, it is of major importance to approach the design process in a scientific, and articulated manner. In order for the designer to operate in this kind of context she needs to be able to reflect on her own actions, as well as the values that lay beneath them. Some say that we can not experience what we can not name. Even though I can't entirely comply with that, I do believe that studying epistemology, and research methodologies is of major significance, when it comes to understanding and directing our own actions. Following the course of Research Methods during the Graduation Studio, made me reflect on the importance of a controlled approach to complex problems.

Lecture Series Research Methods provided me with a vocabulary, which helped me assign a name to what I have been doing previously on an intuitive level. From this perspective, it seems to me as if in my previous education I was mostly questioning and trying to reinterpret every step of the design process. Getting familiar with specific methodologies helped me comprehend and articulate my actions. It also made me aware of the choices I have made, mostly unconsciously, as well as the alternatives I had, and still have. Whatsmore, I found it very relevant to be reminded of how much our actions are directed by our own system of inquiry. As stated by Ray Lucas<sup>1</sup> our actions are very much guided by our own broad assumptions on the nature of reality, knowledge and being.

The lectures offered during the course showed me that a subjective approach is not only equally viable as the objective one, but also can help us break out of the usual dichotomies and determinants. For me, it was very valuable to get familiar with the work of the lecturers. Some of them were presenting examples of the field work they have done, as well as the innovative methods in which subjective research can be conducted. For me it was also very beneficial to see that some of them were very much inspired and guided by literature which did not primarily originate from the field or architecture or humanities, such as the poetry from Fernano Pessoa<sup>2</sup> (mentioned in the lecture of Klaske Havik), which I am also very much inspired with, but never considered in the context of research methodology.

In my thesis, I am addressing resources, as an accumulation of materials, capital, information and other assets that can be drawn on by an individual or organization in order to function effectively. I am looking into the notion of resource dislocation, and studying the physical manifestations of transcontinental flows of resources in/through the city of Rotterdam. Whatsmore, I am looking into how this could change with the shift from a material to data based global economy. Through my research, I aim to find out how future resource storage will be incorporated in the urban fabric of Rotterdam.

When deciding on a methodological framework for conducting research, I aimed to answer the question of what methodological strategy and tactics I can use in order to mitigate the impact of my own system of inquiry. My aim was to gain an understanding of reality, which is unbiased and solid.

## II THE CROSS-SCALE QUANTITATIVE ANALYSIS

I consider the initial phase of my research to be *context led*. Through analyzing Rotterdam I aimed to get an understanding of the *type* of Port cities that were largely shaped by global flows of raw materials and other resources, and primarily serving the energy industry. I divided my research into two parts: Global analysis and local analysis. By doing so, I was investigating the topic of resources and energy, starting from two opposite ends. My aim was to understand the scope of influence that *global* flows have on the *local*, as well as the way in which they are coming together. Taking this cross-scale approach as a starting point, I conducted research, using an aggregation of different methods:

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<sup>1</sup> Ray, Lucas. *Research Methods for Architecture*, p.1-46. London: Laurence King Publishing, 2015

<sup>2</sup> Pessoa, Fernando. *Poems of Fernando Pessoa*, Edited by Edwin Honig and Susan Brown, San Francisco: City Lights Books, 1998.

Heuristics - The analysis started by making a physical model of the site, in the scale 1:1000, as well as the virtual 3d model. Both of these models were made with a group effort of all the members of the graduation studio. This method might illustrate a framework of a constructivist epistemological approach, where knowledge is being co-constructed with participants<sup>3</sup> (the *energy* of the group).

Quantitative research - Data collection, data display, drawing conclusions and verification. By continuing with a *quantitative* approach, I got to know the volume of imported and exported resources, as well as their very nature. Referring back to the *cross-scale* approach, I was looking into data considering both, global resource flows, and information which is Rotterdam specific. This method was chosen in order to identify patterns in the past activities, which enabled me to draw conclusions and speculate on possible future trends. This part of the research dominated my work so far, and I understand it as operating in an objectivist epistemic framework, "Impartially" focusing on the object of knowledge.<sup>4</sup>

Correlational Research - Data collection tactics

Firstly, I mapped the origin of resources arriving to Rotterdam via the Port, as well as the origin of resources used in the energy industry of the Netherlands. Secondly, I was mapping energy production and waste management facilities in the Rotterdam region, in order to understand its deployment and density of the network. By using this tool, I establish a relation between factual, countable information (offered in tables and spreadsheets) and its spatial implications. Placing quantitative rough data on a map helped me understand current interrelations and existing structures of power. I believe that this tactic had the strongest impact on my understanding of the matter.

Historical research - tactics of contextual evidence.

Investigating the changing relation between water and land, primarily looking into its shifting border (edge). Conclusions were drawn based on a comparative analysis of historical maps, originating from year 1800 until the present day.

Correlational Research - Tactics of multivariable analysis - Typological analysis.

Reducing the previous analysis to studying the physical manifestations of resource flows, I started conducting broad typological research of resource containers and industrial landscapes.

My research methodology is predominantly quantitative, based on a scientific system of inquiry, operating as a cross-scale correlational analysis. The information acquired is then treated as a factual background for a critical discourse analysis, from where I drew conclusions and defined my position. When it comes to more subjective systems of inquiry, research was planned but not conducted, due to the unexpected occasion of education being offered online and me not being able to fully engage with the immediate context. Therefore, I am planning on continuing with these methods in the following phase of the design process.

Referring to the notion of the *emic* and *etic* by the linguist Kenneth Pike<sup>5</sup>, I believe that my research perspective can relate to both. My position was *emic*, as most of my initial research is based on objective, factual analysis, acquired from primary sources of information. At the same time, my perspective is *etic*, as my access was sometimes limited and I relied heavily on subjective impressions and intuition. This may also refer to the two systems of inquiry: *science* and *myth*. In this case, the *science* system of inquiry relates to the dominant cross-scale quantitative research, whereas the *myth* system relates to personal feelings of the place. When it comes to the utilized patterns of reasoning, that helped me understand the context and project a possible future scenario, I employed both *induction* and *deduction*.<sup>6</sup>

Induction / In the initial phase, I had a clear idea of the *what* (the energy industry) and a *result* (resource related urban processes and dynamics). This allowed me to understand the *how* (how the transformation has taken place).

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<sup>3</sup> Groat, N. Linda. and Wang David. *Architectural Research Methods*, 2nd ed. New York: Wiley, 2013.

<sup>4</sup> Groat, N. Linda. and Wang David. *Architectural Research Methods*, 2nd ed. New York: Wiley, 2013.

<sup>5</sup> Ray, Lucas. *Research Methods for Architecture*, p.1-46. London: Laurence King Publishing, 2015

<sup>6</sup> Groat, N. Linda. and Wang David. *Architectural Research Methods*, 2nd ed. New York: Wiley, 2013.

Deduction / following up on this, I named a clear what (data industry) and the previously induced *how* in order to get an idea of the possible result (future urban dynamics and transformations).

### III OBJECTIVITY OF THE OBJECTIVE APPROACH

The issue of quantitative research, based on a scientific “objective” system of inquiry, is that factual data is hardly ever truly factual, and that it is not very likely that one will end up having objective, unbiased research and conclusion. As some might claim, people's behaviour is largely driven by personal emotions and intuition, and only to a smaller extent by facts.<sup>7</sup> When it comes to scientific research, one can argue that there is no such thing as an objective approach. Even though there are certain modes of inquiry we consider unbiased, some claim that a neutral spreadsheet or a neutral database does not exist, as the very act of acquiring and sorting information presupposes a certain position.

As it is undoubtable that there were many scholars in the 20th century tackling the issue of systems of inquiry, not that many were actually referring to its relation to architectural practises. In “*Notes on the concept of an architectural position*”<sup>8</sup> R. Landau contributed by tackling the issue of belief systems that lead architects into producing a certain output. By introducing the notion of architecture as a historical construction, he states that a cultural system comes together, bounded by the conversations and the interests of the individuals, and that it is dependent on the major debates of the time. As he states, *this domain might include dominant debates of the time, the cult leaders and their works, the acknowledged figures who exert influence from concealed positions, the critics who openly fight to create opinion, the journals which dominate over spheres of influence, big patrons with their power to suppress and so on.* To continue on this, I would point out the influence of social media, as one of the major producers of public opinion in democratic political systems, which then as a consequence also frames the way in which we organize and present factual data.

Therefore I turned to cross scale, controlled research guided by acknowledged methodologies, in order to try to partially mitigate this already established personal system of inquiry. I wanted to explore if by looking at the problem on both *global* and *local* scale, in addition to *immediate experience* of the place, we reduce the risk of starting the design process with flawed premature assumptions.

#### Cross-scale

20th century philosophers, ethnologists and anthropologists elaborated on the importance of a cross scale, holistic approach to contextual thinking. According to Levi-Strauss<sup>9</sup>, every city is undergoing two types of processes. The first one is segmenting and egalitarian, while the second one is globalizing and hierarchical. As he states, these are the two potentials of every city, which are assuming a certain deterritorialization in relation to the initial territorial codes. Somewhat later, the French anthropologist Marc Auge<sup>10</sup> states that ethnology always has to deal with at least two spaces: that of the place it is studying (village, neighborhood, factory) and the bigger one in which this place is located. He claims that the latter one is the source of influences and constraints which are not without effects on the internal play of local relations, such as tribe, kingdom, nation state. As he states, the ethnologist is doomed to methodological strabismus: he must lose sight neither of the immediate place in which his observation is carried out, nor of the pertinent frontiers of its external marchlands. Translating this into the architectural discourse, the architect should be able to equally understand both processes, as only then she can act in a just manner.

#### On immediation

In order to mitigate previously established belief systems I believe that among others, it is important to indulge in an immediate experiential relation with the space one observes. In 2018, Erin Manning

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<sup>7</sup> Sinek, Simon. *Start with why: How Great Leaders Inspire Everyone to Take Action*, London: Penguin Publishing Group, 2009.

<sup>8</sup> Landau, Royston. *Notes on the concept of an architectural position*, pp. 111-114. London: Architectural Association School of Architecture, 2015.

<sup>9</sup> Deleuze, Gilles. and Guattari Felix. *Capitalisme et schizophrénie, Mille plateaux, Minuit*, pp. 532-534, 538-542. Paris, 1980.

<sup>10</sup> Auge, Marc. “non-place”, *Introduction to an anthropology of supermodernity*, London: Verso, 1995.

published the text "*Toward a Politics of Immediation*"<sup>11</sup> in which she explores ways of designing and decision making that occur without inserting a mediating gesture at the heart of an (architectural) experience. In her opinion we need to try to challenge the human-centered, colonial history that framed today's perception of what counts as knowledge and what counts as value. She states that what we tend to forget in the context of mediation, is that it has also given us the very category of knowledge itself. Testing her ideas, she is practising art, conceptualizing and organizing workshops, which are intended to give her an immediate experience of her surroundings.

During my Bachelor studies in 2014 at the University of Belgrade, I attended a workshop, conducted as part of the bachelors curriculum, by architect Ivan Kucina. The aim of the workshop was to gain a not-mediated experience of a certain urban space (in this case Kosancicev venac in Belgrade). The participating students were asked to choose a location on site, and spent two hours there, not significantly changing their position nor indulging in conversations with anyone. As the students did not have a clear idea of what they were supposed to experience, participants ended up getting a very personal and sensory experience of the place, which was not facilitated by any presumptions.

#### IV IMMEDIATION AND ATMOSPHERE

The issue of quantitative research, based on a scientific "objective" system of inquiry, as opposed to subjective systems of inquiry, is, as mentioned before, largely questioned. Some might argue that we are never actually starting a research from scratch, but building upon an existing belief system. In her lecture on Praxeology, Marieke Berkers also tackles the issue of the subjective or objective nature of systems of inquiry. Dwelling on the work of the ethnographer, she points out that she is never actually an objective observer as such.

The cross-scale approach is something that I have elaborated on before, as a valuable strategy for conducting analysis in a controlled and organized manner. Graduating in the Chair of Complex projects already, to some extent, implies following a clearly defined method. However, this method does allow a lot of freedom, especially in the initial part of the research, so therefore I do see the very beginning of my research as being context led. Rotterdam was taken as a case study of a type, which means that through analyzing Rotterdam I aimed for getting an understanding of the type of Port cities that were largely shaped by global flows of raw materials and other resources. The studio has the approach of focusing on urban investigations and typological studies, within the context of a changing urban and political environment. Taking the city of Rotterdam as a case study, the Chair targets all scales of architectural thinking. This means that in the Graduation studio, a certain topic is taken through various scales: from the globe and region, to the city, building and architectural detail.

Reflecting on the notion of immediation, I can draw a parallel to some of the writings of Klaske Havik. In the Lecture Series on Research Methods, Klaske Havik has pointed out the importance of exploring site-specific atmospheres, when it comes to understanding a certain territory. As she states, these atmospheres are vague and impossible to measure, and therefore we need to find other ways to acknowledge them and take into account during the design process. Connecting to that, Marieke Berkers also stresses the importance of observation as a research method, commonly utilized in sociology and anthropology. However, she concludes that if we aim to understand how people behave (move, laugh, play) in a certain space, we need to find an adequate technique of mapping, which would allow us to capture the essence of the experience in an operable manner. Relating this back to the workshop of architect Ivan Kucina, the aim is to try to find a way in which we can experience the dynamics of the space, the existing flows of air, people and energy, which will allow us to act accordingly.

Going back to my initial research question, of what methodological strategy and tactics can be used in order to mitigate the impact of one's own system of inquiry, I believe that it is never fully

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<sup>11</sup> Manning, Erin. *Toward a Politics of Immediation*, Front. Sociol. 3:42, edited by: Nandita Biswas Mellamphy, Ontario: University of Western Ontario, 2019.

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possible to do so, as the investigation will always be influenced by a biased belief of the researcher.<sup>12</sup> Even though a research is highly controlled, following a strict method, tactics or tools this might not be sufficient to conduct unbiased research. To a certain extent, prejudice will always determine the research.



Figure 01. The energy industry of the Port of Rotterdam. Image of the author, 2020

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<sup>12</sup> Cross, Nigel. *Designly Ways of Knowing*, Basel: Birkhäuser, 2007.

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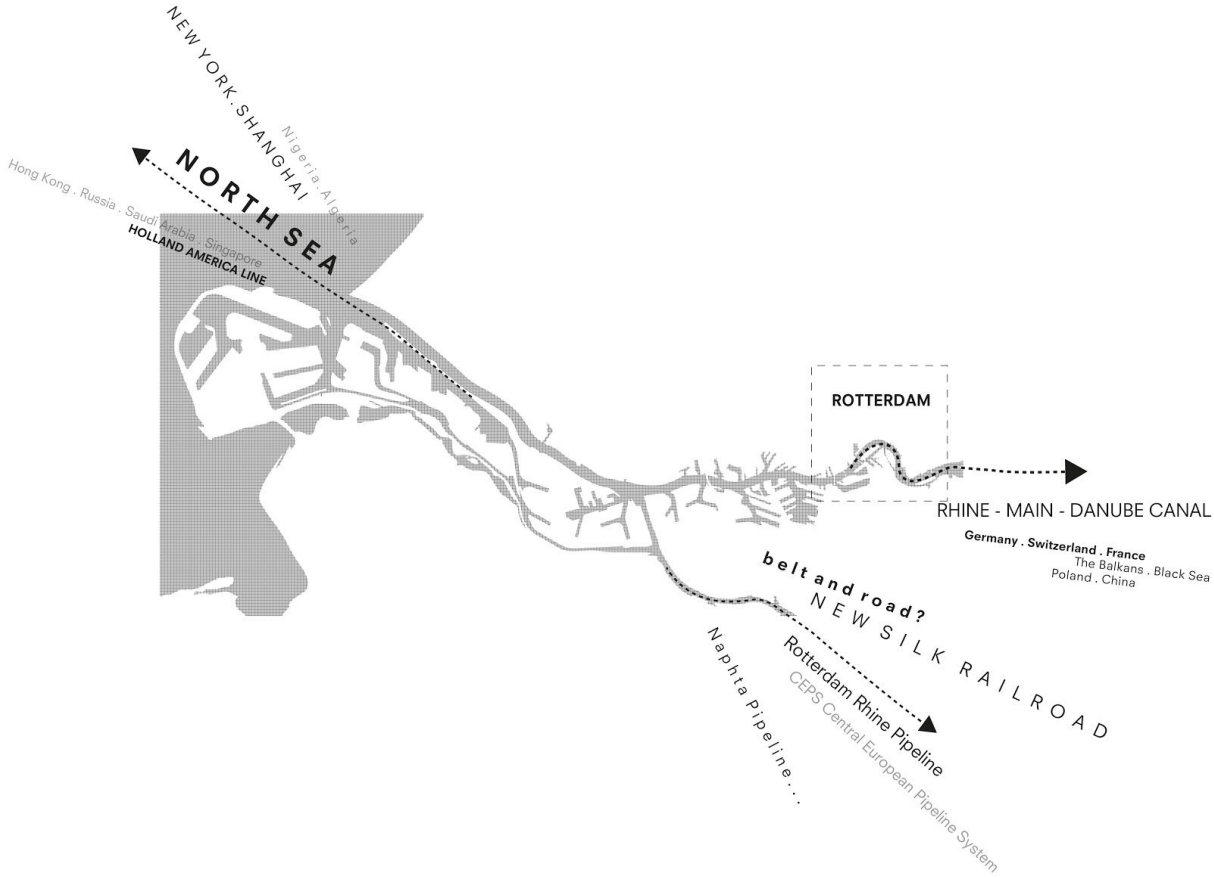


Figure 02. Strategic position of the city of Rotterdam. Image of the author, 2020

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