REFLECTION PAPER P4

THE GARDEN OF ANTHROPOS

THE CITY AS A PLACE FOR PRODUCTION

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Situated along the northern bank of river IJ in Amsterdam, the industrial area of Zaanstad in Amsterdam Noord is subject to change significantly over the next decades. While the area is today dominated by industry it will in 2050 be an area where people live, work and consume. How can the legacy of the productive character from this industry be maintained in the future city? The project examines how the relationship between production and living will be in the future, by using the future industry of additive manufacturing (3D printing) and takes shape of a large social factory embedded within a garden. A main goal is that an intimate relationship between living and on-demand, customised, individual production provides ground for a more conscious way of production as well as efficiency, circularity, sustainability and even quality of life. The way we have designed and produced over the course of history seems to have been disconnected since modernism by placing production (factories) outside the city, and the time has come to bring it back to human presence, this is perhaps the most important factor of the Garden of Anthropos.

1 | Relationship between Research and Design

The research conducted over the course of the graduation project followed a qualitative research approach very close to interpretive methodologies (such as grounded theory) next to literature searches. The nature of re-examining the data process over the entirety of the research method follows a very similar working method of that of Complex Projects; research is exposing different urban realities, or layers, that is constantly reviewed across scales and roles. Especially the use of collage has been used in the start of the graduation. The reason for choosing this was due to a fascination of the collage and other visual tools to represent scenarios and urban futures and was also inspired by the studio topic of how we can envision a future of Amsterdam in 2050. By working in this manner the data collected was critically reflected in the collage where relationships would appear in a visual, often powerful manner. Emerging theories around these was supported with literature searches that together built a (spatial) narrative. An example of this is that the use or
study of collage or other visual architectural techniques through research can be utilised and create new understandings of phenomena due to its narrative-based character. For me it was a good way of working as a form of inquiry and working in a non-linear and intuitive way, especially in the period where the topic of the thesis project started to take shape. Certainly, there are criticisms on qualitative and abductive research approaches like these due to the speculative nature, but it was for me well used in studio. However, research moved away from the collage to more literature search later on, thus the methodology in a sense worked, but just because it was not used extensively and solely – the literature studies helped a lot and in a sense the way they were used overlapped – in the start the collage was more dominant and later literature became the most used. The research therefore based itself on inductive research (what is so) which then further generates an abductive reasoning (what could be so) in the form of a future hypothetical environment providing a framework for the narrative of the project.

Typological studies also informed the project in determining the architectural approach and manifestation of the building; this ranged from research by design of old palazzos, gardens, columns, classical proportions and courtyards to literature studies on production, factories and urban theory on the hortus conclusus. This informed many of the decisions made during the process. Another determining factor was working with iterations, which helped making decisions on urban implementation and shape of volumes due to existing and imaginary axes and visual relationships; by drawing the same shapes and continuously refining and repeating the process over and over again helped substantiating design choices and bridging the urban and architectural scales.

2 | Relationship between graduation topic, studio topic, master track and master programme (MSc)

The project deals with production in the year 2050 and takes shape as an urban architectural building embodying a spatial narrative where it is predicted that production in the future will be on a much smaller, individual
Iteration-based working during design process
scale and by means of additive manufacturing (3D-printing). This means that technology accommodates a form of producing and making of a wide range of immediately available products, high customisation and a more personal relationship between production and consumption, and challenges how we view the relationship between living and working, producing and buying/selling, self-sufficiency and sustainability. The project’s speculative nature aligns itself with the studio topic of envisioning Amsterdam in 2050 – a future that is distant, but simultaneously not so far. The project’s narrative character responds to the chair of Complex Projects of grounding designs on urban narratives as a result of extensive research – a complex building or complex project touches a multitude of the hundreds of layers of our urban environments, tangible and intangible, and works with them simultaneously; the narrative deals with this in the graduation project by forming a narrative operating at several scales. Thus, my approach to the theme in relation to the chair itself is that Complex Projects works across all scales continuously in order to ask critical questions about our built environment, but also closely upon complexity itself, in the sense of the city containing hundreds of layers interacting with each other in many ways, and how a single architectural project can expose different spatial layers in a meaningful way through architectural narratives.

3 | Elaboration on research method and approach chosen in relation to the graduation studio methodical line of inquiry, reflecting thereby upon the scientific relevance of the work

Similar to the approach of the chair of Complex Projects, data collection, analysis and formulated theory (in Complex Projects often embodied within a narrative) stand close to one another in the research methodology carried out in the graduation project. Next to the individual graduation project research, there is also group work concerning the site and a future vision of the site predicting possible growth. The project also aligns itself with the group strategy done.

The architecture accommodates an industry that is currently in rapid growth and is expected to become more refined, widespread and available in the future. Additive manufacturing has an enormous potential to change how we regard industry; it is highly customisable and available with little manual labour required. It can be asked how this may affect the realm of architecture and design – the first aspect is how architecture can accommodate this type of industry regarding flexibility and permanence. Additive manufacturing provides possibilities for more temporary buildings and parts of buildings, as well as materiality and technical parts and installations. The second revolves around how the architects or designers may design around a framework of labels and/or regulations; How much should be produced and how may it relate to e.g. the European regulatory standards of production parameters?

4 | Elaboration of the relationship between the graduation project and the wider social, professional and scientific framework, touching upon the transferability of the project results

The project explores possibilities of accommodating a type of industry that is currently changing not only how we view production, but also sharing economy. Additive manufacturing provides the user high customization in producing their own goods and blurs the boundaries between supplier and consumer, accommodating more organic market structures and businesses. The production of more precise 3D-manufactured biological tissue may change how we view the medical field, giving opportunities to shorter waiting times and saving more lives. In a wider scientific framework, the project touches within circularity and sustainability issues; Additive manufacturing provides on-demand, highly customizable production available to the public. This could eventually eliminate the need for packaging and transportation of goods, thus reducing cost and harm of the environment. In relationship to the discipline of urbanism and urban design the project’s close relationship with the rest of the city offers potential for self-sufficiency and hyperlocal production, reducing packaging and transport emissions even further. Additionally, it can act as a cat-
alyist for local independency; the shape of the building volume around a central garden makes it a city block, as well as a typology that can be repeated in a similar manner elsewhere in the city and the rest of the country.

Another framework of consideration is how this will operate together with the role of technology in the future – in this project it is determined by building ownership but accommodates that production units might become independent. Therefore, the Ground floor acts simultaneously as a business incubator with flexibility for production spaces to become shops, workshops, outlets or small markets. However, the industry of additive manufacturing might as well also become deterministic or top-down planned with regulatory standards. How much focus should be given to individual flexibility and how much to regulatory frameworks is a question of how widespread this type of technology will grow. Also, depending on how far this technology can go, one can ask if this kind of industry is ‘owned’ by the people or by the state. To be able to mediate between the individual (sharing economy) and the community (market economy) is thus of importance regarding what can be produced and what can not.

5 | Discuss the ethical issues and dilemmas you may have encountered in...

(i) Doing the research
(ii) (if applicable) elaborating the design
(iii) Potential applications of the results in practice

(i) Issues have revolved mainly in the representation of the speculative and predictive through visual representation tools that is at the same time grounded in a well-defined theory that is gradually emerging within the project. It was difficult to work with, which is why literature search helped alongside it to support the emerging theory that were emerging later on, defining the urban narrative as a solid backbone for the graduation project.

(ii) Another aspect is if my emerging theory is (still) adequate enough to be ‘grounding’, which is why one always need to go back and re-evaluate the collected data and research and find new meaningful connections. It should therefore be added that an important part of the research has revolved around that the power of the architect is in the visual nature of the profession; the multitudes of spatial narratives that does not give definite answers to definite problems, but propose questions that inform the complexity of the urban environments that we live in.

(iii) The third aspect is how can this new type of industry – depending on its growth and application – affect the economy? If the refined technology of additive manufacturing provides possibilities to produce anything you want at any given time, economy might become affected to such a point that there might be much less market driven economy and more towards shared economy. While this might impact threats on large and established companies that rely on more traditional manufacturing processes (unless they themselves also accommodate this type of industry) sharing economy points towards a more liquid economy structure better suited for creativity and personal freedom and less defined on social differences and capital income.

Lastly, this project has explored how what this new type of industry means to architecture, given the availability of on-demand 3D printing putting lots of emphasis on temporality. But how can architecture further accommodate and mediate the relationship between temporality and permanent through design; will for example the way we regard interiors change, with inter-changeable building parts, or will entire temporary buildings dominate our built environment. Another aspect is the regulation and control of what should be produced and what should not; for example what can be produced regarding health, safety and environment. Therefore education might play a larger role in terms of the needs of issues of licenses and certifications for certain types of productions. This is why the building contains Research and Development facilities that can mediate these kinds of ethical issues.