REFLECTION

The relationship between research and design.

Two ends of a spectrum
Design and research within the field of architecture are two aspects that appear to be on two ends of a spectrum. The dichotomy of design and research resembles that of the intuitive and the analytical mind. As students of architecture, we are taught to distinguish between these two modes of thinking, but also to understand that they are inseparable in the way the one feeds into the other.

The intuitive and the analytical mind
The process of design is comparable to the act of putting together a puzzle without knowing how it would look like in the end. In the beginning, most of the puzzle pieces are missing, or have the wrong shape. Often enough the intuitive mind would start to suggest the shape of certain puzzle pieces – the massing of the building, for example – which remain vague. Research, which engages the analytical mind helps to correct the shape of these pieces, which would lead to changes in the intuitive ideas. The design intuition answers the question of "how do I want it to be?", while the analytical research tells us "why do it this way?" and "how can it be achieved?". As a designer, I often find myself favouring the intuitive mind, which acts as the source of inspiration and resembles the 'me' in my designs. However, in my current stage as a designer, the architectural intuition is still in its infancy. Intuition is however, a design tool that develops overtime to become sharper through the accumulation of experience and know-how, much of which comes from not only the act of design, but rather the act of research. Not only does research tell us the how and why on specific occasions, but ultimately changes who we are as designers, on an intuitional level. In this sense, the analytical and intuitive mind are separated but constantly influenced by the other.

Looking back at the design process, I identify three elements that have influenced my design the most: Guiding theme, functionality and the genius loci.

Guiding theme (intuitive)
During my design processes, intuitive ideas would often accumulate into what is referred to in the architectural theory as a 'guiding theme'. A narrative or core idea that threads most if not all aspects of the design together, acting as a guide for the seemingly infinite number of choices throughout the design. In this project, the guiding theme is 'synergy', synergy between the traditional creatives/creative age and the new, digital creatives/creative age. The idea of creating a synergetic environment was an intuitive idea that occurred at the very beginning of the design process, but it was not until a couple of weeks before the P2 that it was recognized as the guiding theme. The research on the target group and collectiveness was in great part what turned an intuitive idea into a fully defined strategy.

Functionality (analytical)
As architectural designers we are not only subject to our own will, but even more so to the will of the ones we design for. We need to make sure that we know the behavioural, mental, physical and spatial requirements of the users and that the design meets these requirements. This responsibility necessitates us to educate ourselves on these topics in order to refine our ideas and to guarantee a design that functions according to the needs and wishes of its users.

Genius loci (analytical/intuitive)
A building is never a stand-alone entity, but is tied to its surroundings. This is the context behind the design and should be used to inform the design in any way possible. Think of sun-orientation, wind, climate, soil, all of which are topics of research. The genius loci also includes social-ecological topics such as the local municipal vision and the local creative economy, which were especially important for this project. In addition to its function as a primary source for analytical data, the genius loci can also function as a source of inspration for the intuitive mind. A source of information that cannot be interpreted in numbers, but rather by an accumulation of senses, a feeling. It's the taste of salt in the air, the sounds of a bypassing train, or the way the wind caresses the skin, all of which engages the intuitive mind. Personally speaking, this abstract source of insipration is

perhaps where the the true essence of the genius loci lies, but ideas that come forth from it are often seen as subjective and spontaneous. And not only is it subjective by nature, but also very difficult to be linked to or supported by the analytics. Thus the relationship between the intuitive part of the genius loci and the other design elements becomes a one-way-road, whereby it solely exerts influence and is unable to be influenced by elements other than itself.

The guiding theme, functionality and genius loci engage different modes of the mind, but ultimately come together to inform a single design.
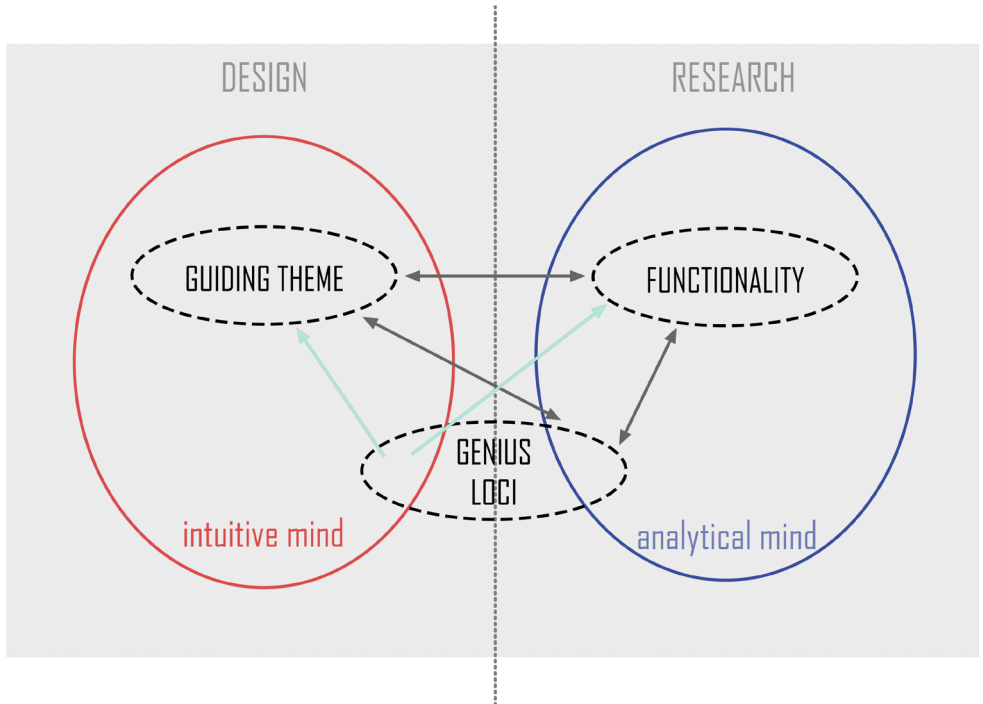
The body of research which has informed the design can be categorised as:

Historical research
Literature research
Case studies
Field research
'Online brainstorming'

This chapter shortly describes the categories of research done and the main findings that have guided the design in an impactful way.

Historical research

As part of the target group study, I delved into the history of the creatives, in particular the history of creative housing and the political history regarding creative housing in the Netherlands. The historical research shone light on the hardships experienced by the creatives in regards to housing, both in the past and the present. It further solidified my motivation to design for this target group and also provided a historical context from which the target group could be understood. The findings pointed to the extreme lack of suitable accomodation for creatives within Rotterdam, with affordability being one of the biggest issues facing the creatives. This part of the research did not result in design decision directly, but made clear what the core issues were to which the design would need to offer solutions to.
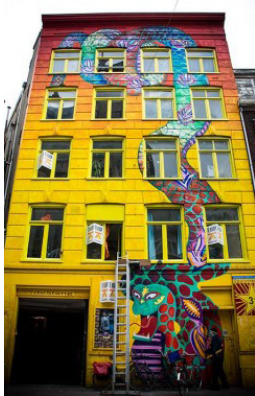
Literature research

After identifying the core issues regarding creative housing, I then looked into the definition of creatives in literature studies. In pursuit of solutions to the affordability issue, I looked deeper into the creative work itself, and the role creatives play within the creative industry. After all, affordability is not only the result of high housing costs, but also the dire financial circumstances creatives find themselves in. The understanding of the structural workings of the creative industry and the different roles of different types of creatives within it was impactful to the design. It led me to see the possibility of dwelling to act as more than simply accomodation, but also as a catalyst for success within the creative industry. This part of the research became the analytical study that would support the notion of synergy and transformed the intuitive idea of 'synergy' into a guiding theme.

Creative value chain/subsectors	Art & Cultural heritage	Media & Entertainment	Creative Business Services
Creation			
Production		Creative industry	
Publishing & Exploitation			
Distribution			
Consumption			

Case studies

Creativity does not emerge from thin air. It is an accumulation or a synthesis of the collective creativity, which are pre-existing ideas embedded in case-studies and literature. Architecture is one of the oldest discplines, in order to avoid reinventing the wheel, it is in our interest to learn as much as possible from what has been done by dissecting and understanding the knowledge buried within the built environment. Therefore, a part of research was dedicated to analysing four existing creative work-live housing projects:
Tree House - Bo-da Architecture
KLEO Art Residences - JGMA
Atelierwoningen Zomerdijkstraat - Zanstra, Giesen & Sijmons
Cheval Noir - L'Escaut + Atelier Gigogne

All projects were analysed on the aspects of circulation, live-work configuration and routing. The Tree House and KLEO Art Residences for example, utilise the corridor typology, which contributes to the space-efficiency and affordability. This led to the choice for the corridor typology as the main circulation type within the design. The other two case studies showed how the gallery typology in combination with height variations within the same apartment would allow the creation of atelier studio's which are neccesary for the design to accomodate a wider variety of creatives. A design goal that came forth from the guiding theme. This is one of the many examples of the cycle of influence between the intuitive and the anlytical minds. The intuitive idea of 'synergy', the literature research and case study findings came together to determine the circulation typology and very much defined the concept of the interior layout of the design.
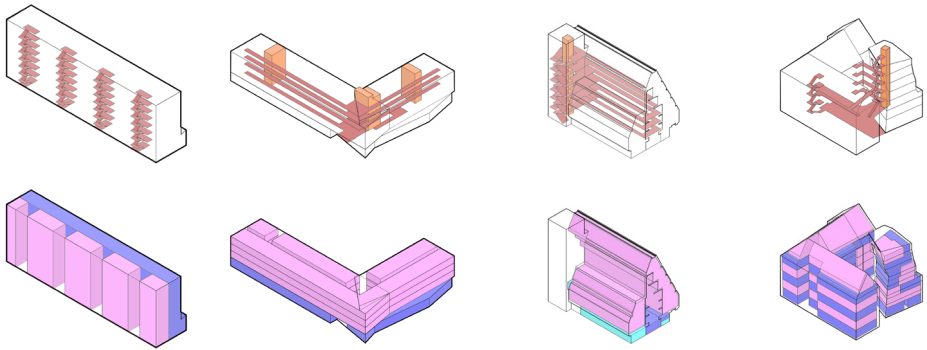
Field research
Field research was conducted on several occasions at three locations:
Strijp S - Eindhoven
Blaak - Rotterdam
M4H - Rotterdam
The field research on Strijp S was at the beginning of the studio as a way to familiarise ourselves with dwelling design, where we looked at the typologies, urban setting and the atmosphere in order to formulate a urban masterplan for M4H. Looking back, this part of the research has had a huge impact on the final design. By allowing the students to design the urban setting, it enabled us to define and modify to a certain extent the genius loci, which is normally predetermined. Although in our assigned quadrant we decided

to double down on the existing genius loci (creative zone with Atelier van Lieshout and Roosengaarde), the possibility was there to change it all. The designed genius loci in our case (quadrant A) gave form to the conceptual massing of my building and was partly responsible for my choice for creatives as the target group.

The field research done at Blaak focused on the notion of collectiveness within dwellings. The findings pointed to the crucial role of circulation in a design which aims to promote collectiveness. In the sense that collectiveness is related to the number of circulation nodes present, the degree of public accessibility and the specification of adequate dimensions of circulation elements. These findings acted as valuable input to the circulation design, where I tried to limit the number of direct access points to and from the public domain as much as possible while maximizing the number of potential circulation nodes.
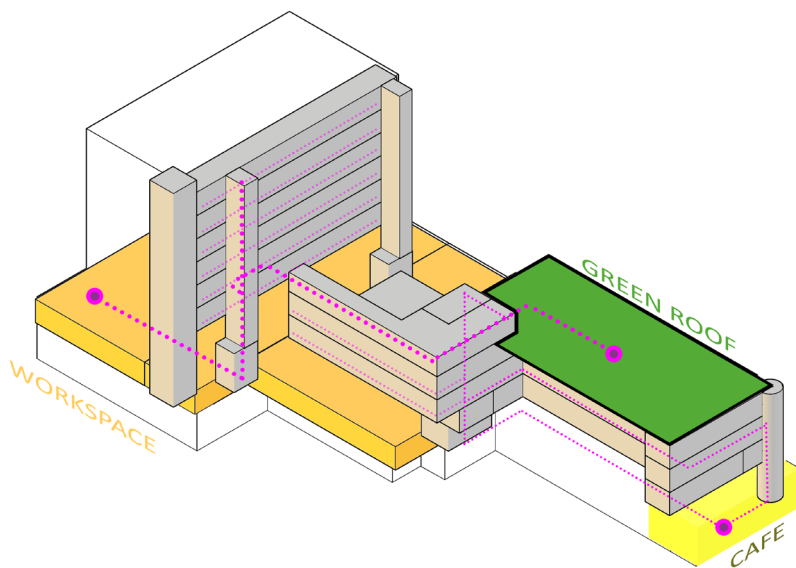
Hotspots encourage movement through the building

'Online brainstorming'

During the design process, I encountered countless problems, some big, some small. They would range from suffering from a major designers' block, or simply not knowing the dimensions of a brick in 'waal formaat'. For many of these issues, I turned to the internet, with Google as a starting point. I would spend hours scrolling through search results while evaluating their trustworthiness or simply look at images on Archdaily hoping for a spark inspiration. This form of research is by no means academic, but it allows for quick problem solving, whether its fulfilling the need of a reference, or to quickly fill in a knowledge gap. And speed is of the essence here. I often hear architects being decribed as a jack of all trades, but a master of none, with which I identify to a certain extent. As architecture touches on so many disciplines it becomes practically impossible to fully understand all aspects of a design, thus when it comes to solving non-crucial questions or problems, we choose to sacrifice precision for time. Personally, this form of research has fed both the intuitive and analytical mind and has been essential to the progression of the design, but there is also a downside to it. Aside from it being non-academic, this form of research comes with other drawbacks as well. The information obtained may be skewered, outdated or flat-out incorrect. It is often difficult to determine the trustworthiness of unverified sources. Another drawback is that it does not guarantee results, as its unstructured research that may or may not lead to a convincing conclusion. I cannot recall the countless hours I have spent scrolling through seemingly interesting articles and images, not realising I was essentially procrastinating in the name of research.

Further reflections

The relationship between the graduation topic, the studio topic, the master track, and the master programme.

The studio topic addresses the creation of an inclusive city, where people of all classes, race, profession, ideals can co-exist in harmony. For the creatives however, Rotterdam has not been nearly as inclusive as it could be. Rotterdam markets itself as one of the most creative cities in the world, but lacks in available work and live spaces for creatives. By choosing creatives as the target group, and focusing on creating suitable and affordable work-live dwellings for them within Rotterdam, a strive is made towards the inclusive city.

Elaboration on research method and approach in relation to the graduation studio methodical line of inquiry. Reflections on the scientific relevance of the work.

The research methods and approaches were in line with those proposed by the studio, which strictly speaking could not qualify as scientific in its entirety. Parts of the research focused more on anecdotal data whereby the number of entries were insufficient to produce repeatable results. For example the research on collectiveness or the online surveys targeting creatives. The results could only be analysed qualitatively. However, if we would bundle and organise all the research on similar topics throughout the years, the outcome may besomething that can be considered to be truly scientific.

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

The issue of creative housing is multi-dimensional. It encompasses not only the achitectural discipline but also the fields of real estate management, politics and social-economics. The architectural design itself is simply the manifestation of a possible solution. The project results are not transferable when it comes to the physical aspects such as massing and material, as they are based on the genius loci and the designer's subjective

choices. However, the conceptual idea of an environment which promotes individual growth may be applicable outside the scope of the current project.

Discussion on the ethical issues and dilemmas encountered during research and design elaboration phases. Discussion on potential applications of project results in practice.

The necessity of creating affordable housing has lead to the design of extremely small apartments of around 9m2. With this came a question of ethics: As a designer, is it virtuous to offer extremely small living spaces when circumstances demand it? Or is it sinful to even consider creating such miniature living spaces that many would consider unfit for long-term living? Such small apartments are not unprecedented, they can be found in many highly densed areas. Which is also why I believe such aparments may have a bigger chance of being realised in cities that have higher densities. It does beg the question, if such a design would become reality in Rotterdam, would this indicate a shift in the Dutch living-culture? I believe the project challenges the status quo in this specific aspect, pushing the boundaries of miniature living.
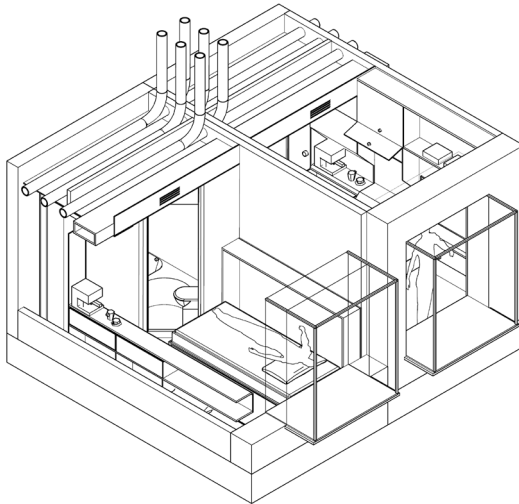
Reflections on a side note

Designing with limitations & The move towards the practical

Throughout my architectural studies, most design processes could be described as 'free-handed', with relatively few limitations. In contrast, the Dwelling Studio required designing with exceedingly more limitations than before. These limitations in the form of regulations, spatial requirements, target group needs/wants, costs have played a big role throughout the decision-making process. The design experience could be described as a constant battle between creativity and rationality. The urge to design freely clashed against the growing number of limitations, which became increasingly important to-wards the final design. In regards to the design, we often see research as a means to a solution. However, during this studio, research has brought up just as many problems as solutions, as research constantly births more questions, which often result in limita-tions for the design. Research in this case acted as a reflective tool. I often found myself stuck within the analytical mindset, thinking and re-thinking ideas and their possible out-comes before actually producing anything. Each new idea would immediately lead down a rabbit hole of internet searches and contemplation. If design and research were two sides of the same coin, I'd be looking at the side of the proverbial coin for hours on end. Reflecting back on these moments I would like to remind myself it's not always possible to find answers to all the questions and that sometimes, taking a step back is the best way to move forward.