Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	**Femke Snel**
Student number	4713478

Studio	
Name / Theme	Urban Fabrics - Embracing plurality – growing porosity
Main mentor	Maurice Harteveld	Urban Design
Second mentor	Machiel van de Dorst	Urban Studies
Argumentation of choice of the studio	The studio theme Embracing plurality – growing porosity, really appeals to me because I am interested in social- and spatial challenges in the field of urbanism. Working on the small scale and eye-level perspective to observe how people live in the city and make use of the public space.

Graduation project	
Title of the graduation project	**Everyone's safety or Inclusive safety** Enhancing Perceived Safety through Urban Design in Schiedam Oost and Oud Mathenesse

Goal	
Location:	Oud Mathenesse and Schiedam Oost in Rotterdam and Schiedam
The posed problem,	Schiedam Oost and Oud Mathenesse are vulnerable urban area in the Netherlands facing lower liveability and safety levels compared to the national average. This neighbourhoods stand out due to their diversity. Given the presence of gentrification trends in Schiedam Oost and Oud Mathenesse, a more inclusive and equitable approach is essential to enhance perceived safety and mitigate the impacts of gentrification.
research questions and	How can *urban design strategies* improve *perceived safety* in Schiedam Oost and Oud Mathenesse in a *hyper-diverse society*? **Sub question 1| Social and perception** How does the social environment influence the perception of safety for people?

	Sub question 2 | Physical and perceived safety
	How does the physical environment influence the perceived safety in Schiedam Oost and Oud Mathenesse?
	Sub question 3 | Social and physical
	How are the spatial and social qualities of Schiedam Oost and Oud Matheneese related regarding the perceived safety?
	Sub question 4 | Integration
design assignment in which this result.	[Design Assignment]

The thesis design assignment involves proposing recommendations to enhance perceived safety in Oud Mathenesse and Schiedam Oost through urban design. By using the pattern language, the research findings will be translated into design implications, connecting these patterns to specific locations within the neighborhood perceived as unsafe. These patterns will provide a visual representation of how these places could be transformed. Operating on various scales, the patterns offer both a broader strategic vision for improving perceived safety and specific interventions for smaller public spaces.
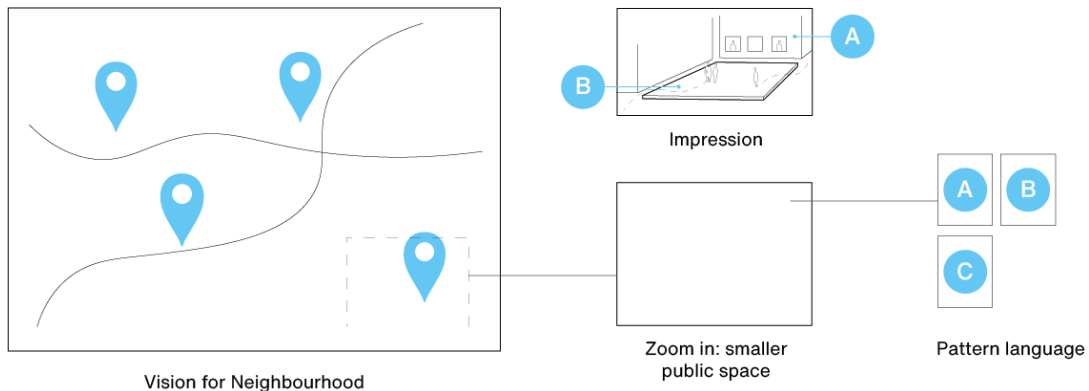

Vision for Neighbourhood

Impression

Zoom in: smaller public space

Pattern language

Figure 01 | Diagram of preliminary design assignment

Process

Method description

This research thesis will take form through a mix of methods. By using quantitative and qualitative methods, the relations between social environment, physical environment and the perceived safety will be explored. It is important to grasp the subjective experience of the residents in this research. The methods will be focused on collecting the subjective experience and combine them in an inter-subjective collection of results. Intersubjectivity is when two or more people agree on a given set of meanings or share the same perception of a situation. (Wikipedia contributors, 2023) Intersubjectivity is referred to the common-sense,

Literature review

To start the research first a literature review will be conducted to gather information about the social environment in relation to the physical environment and the relation between the social environment and perceived safety. The information provided through the literature review will create a general understanding of the topics. It will be a first step for further research because the perceived safety and social environment are context specific. Further research is necessary to understand the situation in Schiedam Oost and Oud Mathenesse.

Mapping

To understand the site of Schiedam Oost and Oud Mathenesse mapping will be used. Context specific quantitative data will be collected. By analysing the space through maps, it will be possible to indicate certain physical aspects that are related to perceived safety from the literature review.

Mental mapping and interviews

The perspective and experience of the residents are especially important to really understand the perceived safety in the neighbourhood. For these methods enough data must be gather because one mental map or interview will not give a clear understanding of the safety of an area. Comparing numerous mental maps and interviews is essential to identify overlaps and establish inter-subjectivity. This approach will unveil potential areas perceived as most unsafe and offers insight into elements that can cause this feeling of unsafety. This will eventually give potential areas within the neighbourhood that can be improved through urban design and will give focus areas within the area for further research.

A mental map is a person's subjective perception of their surroundings (Wikipedia contributors, 2023a). Mental maps found their origin in the field of behavioural geography. The research and use of mental maps gained prominence through Kevin Lynch's work, particularly in this book 'The image of the city'. Lynch's research on wayfinding and orientation involved participants drawing maps of their hometowns, highlighting significant aspects. The mental maps are narrative analysis of the urban environment where he tried to connect the space in the city with experiences of the residents. Lynch categorized the results into paths, landmarks, edges, nodes, and districts- physical elements aiding orientation in a city (Lynch, 1960) The maps are a combination of the actual city spaces with abstract thoughts, offering a clear reflection of the visual and mental connections people have with the city.

Fieldwork and observation

Qualitive data will be collected during fieldwork. By visiting the neighbourhoods and observing the social environment by ethnographic mapping. It is important to visit the neighbourhood at different times during the day and different days during the week. Also, the weather will be taken into account.

Ethnographic mapping is a method used in the field of anthropology. It's used to show and understand human interactions and behaviour within a place. Setha Low discussed the importance of ethnographic research in her book "spatializing culture: the ethnography of space and place". Ethnographic mapping involves immersive, on-the-ground research that captures the lived experiences and perspectives of individuals within specific spatial contexts. (Low, 2016) Setha Low encourages researchers to engage with the everyday practices of people in their spatial environments. In the lecture of Leeke Reinders, he mentioned that what people say and what people do are two different things. This means that
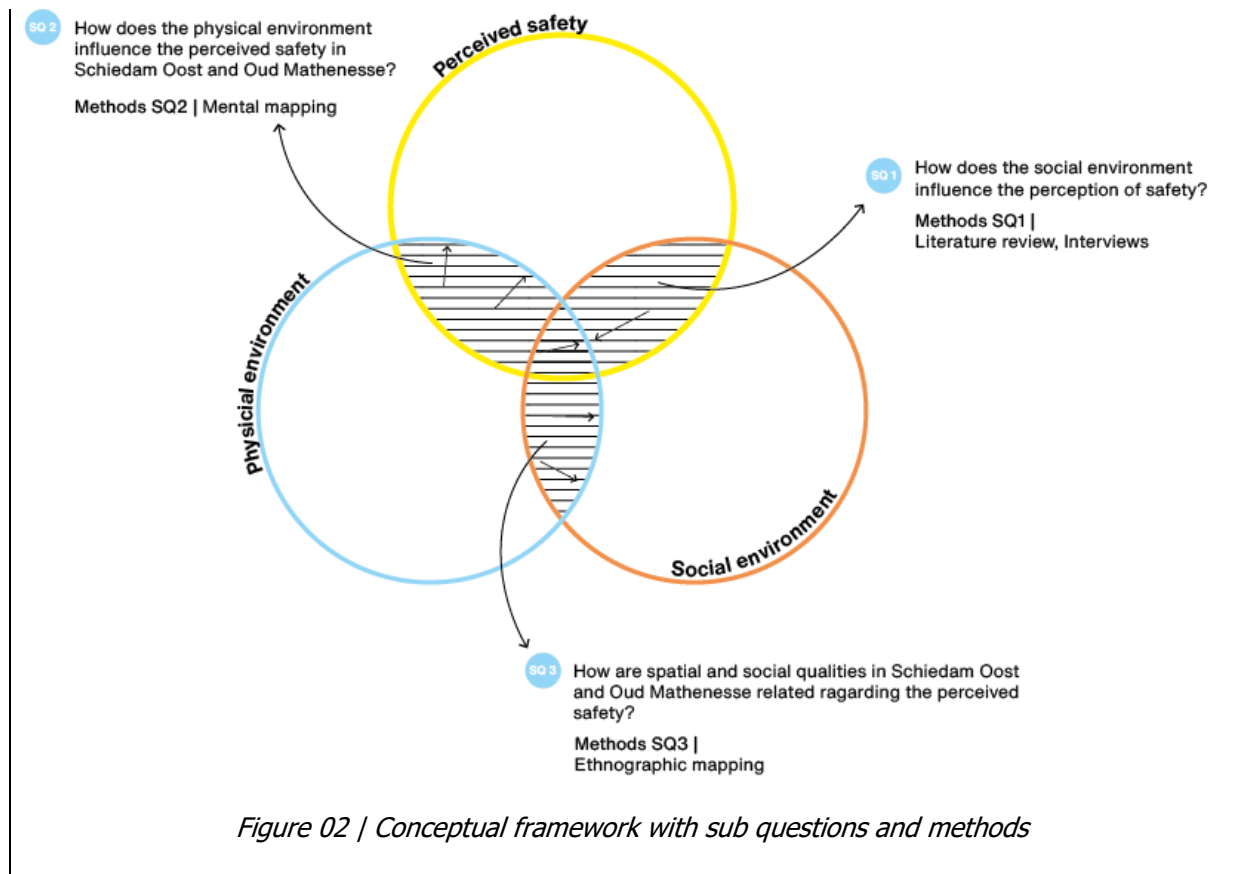
observing behaviour can give insight into the use of public space and behaviour in public spaces and how the public space offers a place for certain behaviour. Using this method next to the mental maps and interviews will give insight into the behaviour that is happening at places that are perceived as unsafe. Also, will give ethnographic mapping insight how certain places create a stage for certain behaviours and help to explore the ways in which space and place shape and are shaped by cultural practises, identities, and social relations. (Low, 2016)

Pattern Language

A method that will be used throughout the whole research is the pattern language. This method was created by Cristopher Alexander (1978), an architect that published the theory of the pattern language in his book 'A pattern language' (Alexander, Ishikawa, et al., 1977). A pattern identifies a problem in our environment and outlines a solution that can be applied repeatedly, with each implementation being unique. (Alexander, Ishikawa, et al., 1977) The collection of the patterns creates a pattern language. A pattern language is an organized and coherent set of patterns, each pattern describes a problem linked to a solution that can be used in many ways within a specific context. Patterns can be in confliction with each other or complement each other, this can be made clear in a pattern field.

In this research, residents will express specific needs for particular spaces. The interpretation of these needs varies significantly, influence by personal, cultural, social, historical, economic, and contextual backgrounds. Consequently, needs are subjectively explained and interpreted, introducing potential ambiguity in design processes. Shifting from the notion of needs to understanding what people are inclined to do (tendencies) implies assuming that they will engage in those activities whenever possible. As urban designers we have to make sure that people can do what they are trying to do by making sure the environments allow for it. (Alexander & Poyner, 1966) However, conflicts may arise under certain conditions where tendencies clash. In such conflict situations, relying solely on tendencies is insufficient. Design intervention becomes necessary to rearrange the environment and alleviate conflicting tendencies (Alexander & Poyner, 1966: p 311)

The literature review, observations and interviews/mental mapping will help form patterns and a pattern language. The pattern field will help indicate where there are tensions or potentials between certain patterns/tendencies. Therefore, this method will help to connect the results from the other methods and form patterns to use in the vision and recommendations for Oud Mathenesse and Schiedam Oost. Eventually the full version of the pattern language will be collected in a separate booklet.

Figure 02 | Conceptual framework with sub questions and methods

Literature and general practical references

Kopinsky, M. K., Van Der Voordt, D. J. M., & Van Wegen, H. B. R. (1987). Toetsing van de interim-checklist: sociale veiligheid en gebouwde omgeving. [Part 1], Doel en werkwijze van het veldonderzoek. [Part 2], Deelstudie Transvaal, Den Haag.

Luten, I. (2008). Handboek Veilig ontwerp en beheer/ druk 1: sociale veiligheid in buitenruimten, gebouwen en woningen.

Blokland, T. (2008). Oog voor elkaar: veiligheidsbeleving en sociale controle in de grote stad. Https://doi.org/10.5117/9789089640437

Altman, I. (1975). The environment and social behaviours: Privacy, Personal Space, Territory, Crowding. Monterey, Calif.: Brooks/Cole Publishing Company.

Van Dorst, M. (2005). A sustainable living environment: Physical conditions for privacy regulation [Een duurzaam leefbare woonomgeving: Fysieke voorwaarden voor privacyregulering]. Delft: Eburon.

Reflection

1. *What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?*
   My thesis revolves around the theme of perceived safety in the urban environments within diverse neighbourhoods in Schiedam Oost and Oud Mathenesse. One of the aims is to employ human-

centred methods and establish a connection between social sciences and urban design. By utilizing specific methodologies, the aim is to gather subjective insights into the neighbourhoods and understand how people perceive the built environment.

The topic of the studio Urban Fabrics is 'embracing plurality – growing porosity,' which emphasizes embracing diversity and fostering increased porosity within the urban fabric. Regarding my thesis embracing plurality can be related with the hyper-diverse quality of the neighbourhoods Schiedam Oost and Oud Mathenesse. Growing porosity can be seen as a vision in designing the urban fabric. How can we design porous cities is something that does not have a simple answer and therefore research and methods how to do design for this porous and open cities is becoming more central in the field of urban design. Hopefully, my thesis will be a small addition in embracing plurality and discovering how to design for this plurality.

Within the Master track Urbanism interdisciplinary research and methods are key elements. This thesis touches, sociology, anthropology, environmental psychology and uses mixed methods to comprehend this different research fields. The shaping of cities and other areas carries implications for variety of issues, making urbanism a dynamic field that continuously evolves. As we navigate different time periods, the methods, designs, and approaches within urbanism must adapt. While the theme of my thesis addresses and enduring need (safety), the way in which designers respond to it have evolved over time, reflecting the changing societal landscape.

2. What is the relevance of your graduation work in the larger social, professional, and scientific framework.: In the pyramid of Maslow, safety is included as second most important need. This pyramid outlines a hierarchy of human needs, each level building upon the next one below. The idea is that individuals must satisfy the lower-level need before moving on to the higher-level needs. (Mcleod, 2023) According to the pyramid of Maslow people will seek safety before meeting social needs. The social and physical environment plays a big part in establishing a safe environment and making people feel at home. In cities where the population density is getting higher, creating a safe environment for everyone is complex. In the area in Schiedam and Rotterdam more than half of the residents is non-western. Professor Paul van de Laar of History, Culture and Communication stated that cities been changing so much that it is difficult to say who is majority and Rotterdam is become a city of minorities (Wat betekent superdiversiteit in en voor Rotterdam?, z.d.). He mentioned that when a population is so diverse with so many minorities it is difficult to make policies. The same can be said about designing for this diversity. According to Professor Paul van der Laan, the social equality must be focus and where more equal opportunities are necessary. There are three crucial elements that can improve the equality according to Paul van der Laan, these three elements are equal employment opportunities, education, and *the quality of public space*. Therefore, one of the aims of this thesis is to use human-centered methods to enhance the understanding of user experiences, preferences, and needs in various contexts and of a diverse range of user groups. By doing qualitative research in the form of interviews, observations, and mental mapping it tries to capture the subjective safety of the residents.

Regarding the scientific relevance this thesis contributes to the existing knowledge regarding the design of social environments and the perception of safety. The current body of knowledge on social safe design and perceived safety is there, yet there is a lack of empirical evidence about the effects of the physical environment on the perceived safety of people. Often design strategies for a safe urban environment are developed more top-down as result a generic approach on safety. This thesis will try to investigate more bottom-up methods in the research field of urban design, where the focus is on the experience of the user (residents). Most of the literature about physical environment and perceived safety is from the 1990s and is still being used, however societies and cities have changed since then, and it is important to research if they are still applicable for the cities nowadays. Our current society and cities are changing to more hyper-diverse societies and

the cities are denser then ever. Therefore, it is important that the way we do research also becomes more diverse.