



NO TUNNEL VISION

The safety experiences of young women in train underpasses by night

Masterthesis Human Geography

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Preface

In the beginning, I was particularly interested in how women experience fear in public spaces and how they would express this. That interest instigated this research, which was conducted from a solidarity point of view to give different women a voice. At first, I thought there would be a general and convergent view for underpasses and how women perceived safety there. But as it turned out, the safety perception in and around underpasses could differ significantly.

With this research I have tried to show that a space can be interpreted in many different ways.

With every underpass the first night I observed I was a bit nervous and did not know what to expect. Yet after surpassing the first night, in the days that followed it became clear how the space was used and what to expect exactly, so I became more comfortable. Although there were still various instances where I did not feel comfortable at all. There were several people who made me feel unwelcome by staring at me or by making taunting or sexual insinuations.

When telling my friends what my research was about and how I performed the research, for instance by standing alone in an underpass in at night, they were mostly shocked. In their own words: "I would never do that, that's terrifying". And they were right, more often than not. A lot of nights I thought to myself what am I doing here? Or why did I choose this kind of study? These thoughts were especially true at nights when it was raining and hardly anybody came through the underpass. But seeing how detailed the results were and what information I got from it, made it all worth my while. These results even made me forget the number off hours I spent alone in de dark watching people pass.

All in all, I am especially thankful for the people that stood by my side. I am thankful for my parents who made this research financially possible. Especially my mom who stood by my side and always had to listen to my insecurities and problems. I called her quite often during the research when I felt uncomfortable and needed to hear a loving voice. While writing my thesis I lost my grandpa who has been a very important person to me throughout my life. It hurts me that such an influential person will not be there to see me get my master's degree. In the past I would frequently go by his house so that he could help me with my homework. School was very important to him, and even though he was struggling the last years with dementia I know he would have been proud of me.

Abstract

The last couple of years, more attention is given as to how women feel in public space. Research shows that, compared to men, women have a higher risk to get sexually assaulted and therefore they experience higher levels of fear. Especially during the night. The main goal of this research is to show how different young women experience the same place during the night. This research is focused on three underpasses in Utrecht: LeidseveerTunnel, DaalseTunnel and van SijpesteijnTunnel. Both the physical, as well as the social environment of the underpasses are included within the research. The following research question will be answered: *How do young women experience the safety of train underpasses in Utrecht during the night?*

To be able to answer this question, three methods were used: observation, street interviews and walk-along interviews. This research took place inside and around the underpasses themselves, during the night. The researcher observed how the underpasses were visually represented and how they were used during the night. For the street interviews, respondents were approached on the evening itself, and they were asked about their perceptions and experiences of the underpasses. The walk-along interviews were planned beforehand; a route was taken through the three underpasses, whilst questions about the young women's spatial patterns were asked.

The results showed that every woman experienced the underpass differently due to a variety of reasons. It depended on the frequency of use, the way the underpass was used (by bike or by foot), and if one used the underpass individually or in the company of others. The confidence of a woman also played a role, but this was affected by the number of times a woman had already experienced street harassment in general. Most of the women did not like the looks of the underpass and the people who hung around in the underpass. They did not feel comfortable there during the night, but there was no other way to return home. However, there were also women that never experienced anything bad in the underpasses, they experienced an underpass simply a non-pleasant public space.

It turned out that women experienced the underpasses quite differently from each other. This should be taken into account when making a plan for a certain public space in the future. The experiences of the young women were influenced by both the social and the physical aspects of a public space. Because young women all have different kinds of experiences, opinions and needs, it will tremendously complex to create a safe environment for all women. The fact that all these aspects have to be taken into account constitutes there can be absolutely no tunnel vision.

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1 Introduction

This chapter describes the introduction for this research. First the motivation will be discussed. Second, the research problem will be elaborated on, followed by the research questions in the third paragraph. The fourth paragraph will explain the academic relevance, followed by the social relevance in the fifth paragraph. Finally, the sixth paragraph will discuss the thesis outline.

1.1 Motivation

Recent research done by 'Statistics Netherlands', stated that two out of three young women have been experienced harassment on the streets in the year 2020-2021 (Reep, Akkermans & Kloosterman, 2022). In particular young women between the age of 18 and 21 experienced the most street harassment. Another research on this topic concluded that 71% of young women in the Netherlands do not go out alone at night (Kamphuis, 2021). Street harassment comes in many different forms, from being whistled to or yelled at, to physical harassment (Arndt, 2018). In addition, research by the Central Bureau of Statistics (CBS) in 2022 mentioned that the level of street harassment is higher in urban environments than in non-urban environments (CBS, 2022). There are still a lot of young women in urban environments that do not feel safe in public spaces. The perceived safety of these young women can lead to them avoiding public space or even exclusion (Soraganvi, 2017). This should be prevented, because a public space should be a place where everybody is welcome and feels safe (Anderson, MacDonald, Bluthenthal & Ashwood, 2013).

The United Nations proposed 17 Sustainable Development Goals to make the world better and more sustainable. According to numbers five and eleven, there should be gender equality and safe, inclusive and resilient cities (United Nations, 2022). In essence this means that women should have equal access and rights to both the city itself as well as to the public spaces within the city. First of all, women should be able to move anywhere, at any given time. Secondly, women should be able to loiter in public spaces of the city and not feel uncomfortable or experience any form of harassment (Mahadevia & Lathia, 2019). According to Spratt (2021) the discussion pertaining women's safety in public space is critical, and urban design plays a significant role here. In 2020 the horrendous event Bibaa Henry and Nicole Smallman had a huge social impact. The two sisters were killed in a park in London, which led to increased discussions about systemic violence against women and girls. The campaign 'Our Streets Now' brings awareness to sexual harassment of women in the city. Cities are not designed for, nor designed by, women. This must change (Kern, 2021).

Various municipalities in the Netherlands conducted research into street harassment. Commissioned by the municipality Utrecht, research from 2019 showed that 46% of the inhabitants faced street harassment in the past year. Of the people that faced street harassment 57% were women and 67% were young women (18-25 years old) (Gemeente Utrecht, 2021b). In the Netherlands, street harassment such as yelling, whistling, calling out and staring are not illegal since people have freedom of speech. Until the law changes in this respect, equality between men and women will stay in place. In court, the municipalities are not able to resolve this issue (Verbaan, 2022), which ensures that the gender-based hierarchy persists. That is why in this research, the focus will be on what experiences women have when it comes to the social and physical environment at the municipal level. Since this is something municipalities actually can change in order to improve the experiences of women and by doing so minimize street harassment.

1.1 Research problem

Safety and fear are abstract words, meaning they can be interpreted in many different ways. Studies have found that women have different levels of fear than men. Even when you take a specific group, such as young women, there can still be differences in the ways a woman feels unsafe or what kind of experiences a woman has been through (Loukaitou-Sideris, 2010; Stark & Meschik, 2018) within that group. According to Nasar, Hecht & Wener (2007), women also act differently when they fear crime. Some call a friend while travelling home and others avoid certain routes. Especially during the night, these different perceptions of fear are seen amongst women (Haans & Kort, 2012).

The relation between the physical and social aspects of a place could bring more insights into the effects. Qualitative research brings these different perceptions and experiences to life (Camic, 2021).

1.2 Research questions

The main question of this research is: *How do young women experience the safety of train underpasses in Utrecht during the night?* To provide answers the following sub questions have been formulated:

- What does the social and physical environment of the train underpasses look like and how does it look at nighttime?
- In what ways do people make use of the social and physical space of the train underpasses during the night?
- What are the perceptions of young women when it comes to the safety of the underpasses by night?
- What emotions do young women experience when they use the underpasses during the night?
- What are the spatial patterns of young women in the underpasses during the night?

1.3 Academic relevance

Academic research has already found that the constructed environment can have an effect on the perceived safety in public space. Especially a feminist perspective shows that environmental design can have an impact on a woman's sense of unsafety. This perspective also highlights that the environmental design is usually man made (Drake, 1988; Kern, 2021). Existing literature on the perceived safety of women during the night used a quantitative research method in studying how women feel in public spaces such as neighborhoods and transport services. These quantitative studies were usually done through surveys (Ceccato, 2016; Wilson & Little, 2008; Yavuz & Welch). This research will add a qualitative perspective on how women experience public space. With this approach, adding the experiences of women will lead to a more detailed exploration of how a specific place is experienced which is more grounded and situated in comparison to the quantitative approaches (Streule, 2020). What is also missing in existing literature, is the focus on a specific enclosed public space in the night and the effect that space has on women. Existing literature focuses on the effect of a transport mode or a neighborhood (Bennett et al. 2007; Timperio, Veitch & Carver, 2015). Because this research is done in a specific place, both the social and physical aspects of a public space can be explored simultaneously. The social and physical environment influence the experience and frequency of someone visiting a certain environment. Physical environment refers to both the built (manmade) as well as to the natural environment. The social environment refers to culture, society and relationships that the individual interacts with. Combining these two gives more insight in what experiences women have, most studies focus on one but they can both influence each other (Leung, Chung, Wang & Liu, 2018).

1.4 Social relevance

At the moment many cities are reorganizing and redeveloping parts of their cities. The main driver behind this redevelopment is to attract people to the city and benefit economically from this. This redevelopment is also called the 'beautification of the city' which means that the city has a more inviting and attractive feeling, also after dark (Seshadri, 1997). When people feel safe to go outside in the evening this can have yield significant economic benefits. For instance, people would easier attend concerts, go to restaurants, and visit cinema's by night (Santen, 2006).

Because cities are focusing on 'beautification of the city' there is also more attention for how different groups in society experience public space. At the moment, the feeling of safety of women in public space is an actual subject for researchers and governments (Logan, 2015). Cities are rising in popularity which has led to the expansion of certain cities. In Utrecht, the municipality is expanding its city center and scheduled to add an extra city center neighborhood named the Beurskwartier. This new quarter is located on the other side of the main train station Utrecht Centraal (Gemeente Utrecht, 2021a). This will lead to a rise in the use of the three rail underpasses (StudioSK, 2020). Underpasses are called an enclosed space, since there are limited exits and people can be attacked outside the visual range of others, especially in the evening (Heing & Maxfield, 1978). It is of relevance to the municipality of Utrecht to understand how women feel using these underpasses. When they develop the new city center, they should take these findings into account and where need be adjust the underpasses accordingly. This can further increase the economically benefits related to the development of this new part of the city.

1.5 Thesis outline

First, the existing literature about the effect that both the physical space as well as the social influences have on young women in particular will be summarized. Secondly, the methods will be substantiated, in particular which methods have been used and in what manner. Third, the results of the observations, street interviews and walk-along interviews will be shown. Fourth, the results will be linked to the existing body of literature. Finally, the conclusions and discussion will be presented.

2 Theoretical Framework

First, it will be explained what the effect of the physical environment and social influences is on the experiences of young women. A narrow, enclosed space has an influence on perceived safety (Ceccato & Tcacencu, 2018; Loukaitou-Sideris, 2005). Secondly, the definition of perceived safety will be described (Blöbaum & Hunecke, 2005). In particular the effect of the night and enclosed spaces on people and women's perceived safety, and what differences exist between genders when it comes to perceived safety. Not only the difference between men and women, but also the difference amongst women, intersectionality, will be discussed (Menih, 2020; Navarrete-Hernandez, Vetro & Concha, 2021; Segovia, 2010). At the end of this chapter the focus will be on the coherence of the existing literature, whereby the relation between public space and perceived safety will be summarized.

2.1 Feelings in Public space

There is no city without public spaces, these spaces are vital for cities. Public spaces, in any shape or form, offer human interactions and places to feel at home. Nevertheless, public spaces can feel different for every person and can also become a place where people become a victim of crime (Ceccato & Nalla, 2020). How a human being feels about a certain public space can have an effect on the usage of the space (Carmona, 2010). The sense of safety can be useful information for urban planners. When one understands what factors influence the sense of safety, one can change places to increase people's feelings of safety (Machielse, 2015).

Places are attractive for people when they are imageable, give a sensory experience and are of good quality. Lynch (2015) says that people make mental images of places in the city. When a place is imageable it provides joy to the user. In addition to this, places are also imageable when they have negative attributes (Mehta, 2014). Women also make mental images of urban spaces, which can lead to them avoid certain places. Because street harassment, women do not fully relax when they are outside and it makes women anxious. The fear that women feel in public spaces is mainly related to male violence. This fear is fueled by the media, parents and other caretakers (Shamma, 2017).

In this thesis, a public space is a place to which everybody has access to. According to Mehta (2014) a public space is: *'a space that is not controlled by private individuals or organizations, and hence is open to the general public'* (Mehta, 2014, p. 54). Within public spaces different social groups can meet, which can be seen as one of the concepts of expressing democracy (Arendt, 2018). Within public space, different citizens can meet and perform their daily practices. Public space is vital for democracy and should be open for everyone and not be handed to capitalist ventures (Göle, 2013). In 1990, the place-based crime prevention theory became popular which aims to remove the opportunity for crime at specific areas where the frequency of crime is high. It makes sure that offenders do not want to commit a crime anymore at that specific place (Luo, Ren & Zhao, 2016). This can be accomplished by making the place less attractive to offend a crime by making it harder to commit the crime (Eck & Guerette, 2012). According to place-based crime prevention, situational condition can prevent crime and have a huge influence on someone's perceived safety. But it is still not completely clear what makes a public space safe (Ceccato & Nalla, 2020).

2.1.1 Perceived safety

Public spaces can have a lot of positive effects, it is a connection between built space, like offices with housing, and it brings different kinds of social groups together. But one of the biggest concerns of public space is safety (Van Winsum-Westra & De Boer, 2004). Safety can be measured objectively though facts and figures of crime. But the safety of a place can also be measured subjectively, by noting how people express their perceived safety. Perceived safety is a subjective measurement of safety and

it is a degree of feeling safe (Hale, Pack, P & Salked, 1994). When a person feels unsafe in certain areas, it can lead to them avoiding that place. How safe a person feels depends on physical components of the build environment and on social factors of the individual itself (Maas et al, 2009).

Safety is a popular and frequently recurring theme when managing public space. Some authors like Cozens, Saville and Hillier (2005) suggest that control checks of police officers or camera's will lead to a reduction of crime in public space. However, some authors like Roe (2012) say this over-securitization will lead to feelings of unsafety because people will wonder: "why are there cameras? Is this an unsafe place?" (Davis, 1990). In some cases, it helps when there are other people around. Whilst for others, the types of other people present have entirely different effects on how safe a person feels (Altman & Zube, 2012). Furthermore, physical elements such as graffiti and litter can make people feel less safe (Hope & Hough, 1988). This shows that perceived safety and reducing safety is different per person (Mehta, 2014).

2.1.2 Enclosed public space

According to Skår (2010), people prefer places that are open and are uncluttered. But large open spaces can also lead to a certain kind of vulnerability. This fear usually comes up when an open space is deserted, but there are not many deserted spaces in the city (Valentine, 1989). In contrast to this there are enclosed spaces, which are places that have certain boundaries which lead to less visual range. Narrow alleyways, train carriages, unoccupied parks, streets that are poorly lit, are places where people feel vulnerable for crime (Tandogan & Illhan, 2016). Enclosed places can lead to higher threat levels, since there are limited exits and attacks can be made outside the clear line of sight of others, especially in the evening (Heing & Maxfield, 1978). This kind of places can cause a fear that the aversion of danger is complicated in case it materializes. The feeling of safety is in line with how spacious the public space feels (Stamps, 2010). Walls, buildings or green spaces can feel unsafe when they are big enough for a person to hide behind (Fisher & Nasar, 1995). When a public space is enclosed, the feeling of fear can evoke because someone can easily hide (Baran, Tabrizian, Zhai, Smith & Floyd, 2018).

Steinmeitz and Austin (2014) conducted research with university students on the campus of the university itself. The results showed that enclosed walkways did not feel safe because there were no ways to escape and there was low visibility. On this campus there was an underpass where students felt unsafe. The enclosed walkway leads to bad visibility; if you would enter the underpass, you are not visible anymore. This lack of visibility makes the place feel very unsafe. Cities that have enclosed spaces, bad lighting and low visibility give extra barriers for women to enter the public space and this can lead to avoidance (Roberts, Donovan & Durey, 2022)

2.1.3 Gender

In research about how people feel in public space, the distinction is frequently made between genders. When looking at how safe people feel in public space this distinction is also common (Jiang, Mak, Larsen & Zhong, 2017). According to O'Brien (2005), women in public spaces have a lower perceived safety, they see themselves as potential victims and they do not go out alone after dark. Isolated and dark places lead to a lower perceived safety by women. Compared to men, women have a greater fear to be alone and feel frightened where unknown people are hanging around (Madge, 1997). The biggest trigger of the fear women experience in public space is sexual assault. Especially young women have a great fear for sexual assault (Özascilar, 2013). As said earlier, women are afraid in areas where there are no other people around, or only a few. They will avoid places where there is no social control because of the fear of being victimized (Felson, 2014).

2.1.4 Intersectionality

Inclusive urban spaces for women gets a lot of attention these days. New urban paradigms that take all citizens into account are the focus of planners and city governments. Before these new urban paradigms, women's needs were not taken into account. It was not understood that the experiences of women and needs of women differ from the needs of men. Liberal approaches have made progression the last couple of years and did take differences between men and women into account. However, by only focusing on gender one might not give attention to aspects such as education, religion, and culture (Lacey, Miller, Reeves, & Tankel, 2013). To resolve this predicament and create a multifaceted point of view on social inequality as a construct, Kimberlé Crenshaw (1989) coined the term Intersectionality. An intersectional framework can help to look from a broader perspective, and not only from the gender point of view. Physical, social, economic and political aspects of the individuals are taken into account. Various forms of discrimination are taken into account and can overlap or intersect. This term was introduced because it shows how inequalities exist in society. In doing so, categories such as class, race and gender can be better understood as overlapping instead of seeing them as separated from one another (Carastathis, 2014). Gender is not the only way to describe women's identity, also class, age, race and competence are essential aspects to be taken into account into planning. This can lead to different kinds of inequalities even between women. A black lesbian woman has got different opportunities compared to a white straight woman but they are both women. Additionally, between two black lesbian women the religious or education level can differ and this can subsequently lead to different opportunities (Marecek, 2016).

Women are mostly fearful for sexual assault, which is also one of the main determinants influencing how a woman perceives safety in a public space. Especially young women have this fear and they are most likely to become a target of this particular type of crime (Felson, 2014). If a public space has obvious signals of management women feel safer, for example a clean space. When there are other legitimate users of the space they experience less fear. Attackers favor dark concealed areas because here the social control is less prevalent and thus the risk of being caught, and held accountable, is lower. Women avoid the aforementioned types of places more often than men. When a woman feels like she may be in danger in a certain place she would rather avoid said place, men do not display this avoidance behavior as often.

2.1.5 Public space by night

According to Bennett et al. (2007), the perception of safety depends on the time of the day. During the night, women feel more unsafe compared to men. They are more alert because of possible unexpected events and because the chance of becoming a victim of sexual assault is bigger during the night compared to the day (Sreetheran & Van Den Bosch, 2014).

Hardley and Richardson (2021) show that when women do not feel safe, their phone use goes up: they start calling someone or choose to share their 'live location'. Women frequently send their location to friends or family and they call someone when they are walking alone and they feel scared. During the night, places are already seen as less safe compared to the same locations in daytime. There is less visibility and less people out on the street (Hardley, 2019). Women are often made aware of the risks they can face during the night, because of this awareness they only go to places that are well-lit and where there is enough social control (Hardley & Richardson, 2021) When an environment has good lighting it feels more safe because it increases the visibility during the night (Machielse, 2015).

2.2 Women and perceived safety of public space: Physical aspects

A public space has two different components: social and physical. Within this theoretical framework, the main concepts of these two components are summarized. First, the physical aspects will be discussed. The first physical aspect is the effect of incivilities. Incivilities can be: graffiti, litter and vandalism (Cancino, Varano & Schafer, 2008; Robinson, Lawton, Taylor & Perkins, 2003). The broken window theory and the routine activity theory will subsequently be discussed. After having seen what the effect is of incivilities, the focus will be on the existing literature about another physical aspect: the effect of lighting. Lighting also has an impact on perceived safety (Boomsma & Steg, 2014; Rijswijk & Haans, 2018).

2.2.1 Incivilities

The term civility is quite common, but the term incivility is relatively new. Incivilities are mostly linked to feelings of insecurity and fear of crime. Incivilities are disturbance in public orders, they are seen as the seeds of violence in disadvantaged neighborhoods (Muniz & Cecchetto, 2021). But they have a wide variety of behaviors: graffiti, litter, loitering, insults, rudeness etc. Incivilities are visible behaviors that represent breakdowns of order and that interrupt normal appearances (Gayet-Viaud, 2017). Research has shown that incivilities can have an effect on how safe people feel in public spaces. Incivilities that are witnessed by inhabitants in neighborhoods can lead to feelings of fear. When these incivilities are being removed, the feeling of fear lessens. It also improves the daily life of the local residents and improves the quality of life. Incivilities namely produce a lack of concern for public order, it shows that police or other officials cannot manage these problems (Taylor & Hale, 2017).

Incivilities are also signs of community disorder (Taylor, 2018). Community disorders are generally linked to criminal behavior. When a place is full of graffiti, litter or drunks, for the police and caring parents, this place can look like a criminal place, even when there is nothing criminal going on. Incivilities can be seen as an indicator for erosion of standard accepted norms and values. Incivilities can be seen in the physical environment, for example broken windows. But it can also be seen in social actions, for example homeless and loiterers (LaGrage, Ferraro & Supancic, 1992).

In the 1960s, there was more attention for how incivilities in the physical environment can have an effect on urban discomfort and people's perception of crime and victimization (Wilson, 1968). The broken window theory shows that little misconducts in society can lead to fear. Suspicious and unpredictable people can already bring up fear in a person (Wilson and Kelling's, 2015). Hunter even states (1978) that experiences of crime itself are less predictive of fear compared to incivilities that are seen in the urban environment because of the relative frequency. Incivilities do not provoke fear, but they trigger feelings of fear because incivilities are seen as signs of crime.

2.2.2 Broken windows theory

A theory that is used to promote safety in a public environment is called the broken window theory. Broken windows in public space can be seen as disorder, incivilities of an environment and can be seen as a lack of social control, which can lead to a fear of crime (Skogan, 2012). The broken window theory argues that the appearance of the place can say a lot about how a place is being used. When a place has a lot of signs of disorder this can be interpreted as a poorly maintained place. Social and physical incivilities are closely connected and cannot be considered separately from each one another. People act socially uncivil at places that are not commonly used. When a place has a lot of signs of physical disorder, this can be seen as a place where social incivilities also take place (Keizer, Lindenberg & Steg, 2008). The broken window theory therefore goes on arguing that when incivilities are present, crime and incivility could be present, resulting in people avoiding the place which leads to even more

disorderly conduct. To overcome this downward spiral, the visual and physical representation of an environment should be addressed, which will have a positive effect on the perceived safety of the users (Jiang, Mak, Larsen & Zhong, 2017).

2.2.3 Routine activity theory

Compared to the broken window theory, the routine activity theory does not look at the physical and visual appearance of the place but it looks at the social use of the place. How is the place used and by whom and how frequent? Routine activity entails those frequent activities that cover the basic needs of the users. Planners and architects can adjust places to ensure routine activities in a place. For instance, if a bench is meant to be used as a place to sit, but in practice is being used by homeless people to sleep on during the night, the bench can be adjusted with handrails in the middle of the bench. This makes it impossible to keep using the bench for something other than its intended purpose, in this case; sleeping. The bench will then be used as it was meant to be used in the first place: the routine activity. The routine activities will lead to less incivilities, social control, less crime and improves perceived safety (Hollis, Felson & Welsh, 2013). By adjusting the urban space, safety will be promoted and crime will diminish. Compared to the broken window theory, this offers direct effect in the use of the space. Instead of only adjusting the visual appearance according to this theory urban planners try to adjust the use of the place (Jiang, Mak, Larsen & Zhong, 2017)

2.2.4 Lighting

A common detail of everyday life that is sometimes underrated is street lighting. The presence of street lighting can influence how comfortable people feel in a public space (Markvica, Richter, & Lenz, 2019). A well-lit space can be seen as a sign that someone controls and cares about the space and this can lead to a sense of community (Taylor & Gottfredson, 1986). Lighting ensures that people are recognizable and that their surrounding is visible and uncluttered. The attention that planners and architects give to lighting is increasing. Every location requires a specific lightning pattern, this cannot be written down in rules because every location is different. Financial aspects as well as ecological and aesthetic values play a role. When a place has bad lighting, this can facilitate damages to the place itself and it can lead to people avoiding these places (Santen, 2006).

Perceived safety in the night can be lessened by applying lighting in the environment. The brightness of the light and viewability are important to take into account for planners and architects (Fotios, Yang & Cheal, 2015). According to Markvica, Richter & Lenz (2018), the light that causes the safest environment is light that reduces shadows, that does not flicker and is a so called warm light. Lighting strengthens the visibility of people, it leads to better face recognition of others, and it leads to crime prevention. The brightness of the lighting can have an influence on the subjective safety of users of the area (Addy et al. 2004). Painter (1996) showed that when the lighting was improved in certain areas, people felt more safe and the area was visited more often.

In contrast, no lighting can sometimes contribute to a persons perceived safety as well. When walking on a dark path, aside from not seeing possible threats yourself, no one can see you walking there. The person feels safer and less like a victim or prey for others (Machielse, 2015). But the downside is that you do not see where you are going and what is happening around you. Nasar and Jones (1997) looked at the effect of light on pedestrian paths after dusk. They found that people are more afraid in the dark or shadows. People felt safer when a pedestrian path was well-lit.

In recent years, the technology for lightning has improved: lighting can have different degrees of brightness, colors and reflections. (Moyer 2005). Lightning can contribute to the perceived safety of people during the night. There are different kinds and amounts of lighting in different parts of the city. In neighborhoods there is not as much light compared to for instance shopping streets. This contrast

is not necessarily a problem, but balance between the two and connecting the two extremes is of importance. Lightning can, in this sense, be seen as construction material that contributes to perceived safety during the night (Santen 2006).

LED light technology creates a possibility to have all kinds of different shades and colors of light. Normally such colored lights are used for advertisement or for special events. But they can also be used in (urban) environments, such as underpasses, where they can contribute to a sense of security. The use of colored light is relatively new and regulations have not been formulated yet proscribing the use of colored light in public space. Colors can create an attractive look, but it can also mislead people by not showing the existing environment itself. Using colored light can facilitate the creation of a specific atmosphere, for example blue light leads to a feeling of calmness but can be placed in a busy environment (Santen, 2006). The light that is preferable for a certain space can differ. To know what kind of lighting is preferable, additional research will need to be conducted (Nasar & Bakharai, 2017).

2.3 Women and perceived safety of public space: Social aspects

After having explained the physical aspects of a public space that influence the experience of safety of young women in public space, the focus will be on the social aspects. The social aspects of this research focus on the fear of crime of women: when does a woman feel unsafe? (Pain, 2000; Yavuz & Welch, 2010). According to the literature women victimize themselves more often than men. Why women do this and how it works will be explained later (Loukaitou-Sideris & Fink, 2009; Madan & Nalla, 2016). Finally, the prospect refugee theory of Appleton will be explained, which explains that visibility and a good overview of a well-built environment can contribute to a safer feeling.

2.3.1 Fear of crime

According to Ferraro (1995), fear of crime is *'an emotional response of dread or anxiety to crime or symbols that a person associates with crime'* (Ferraro, 1995, p. 4). Fear of crime differs per individual and is fueled by previous memories and experiences (Koskela, 1997). When people feel fear of crime in a certain place, it does not have to be a place where crime has actually occurred (Beckett & Herbert, 2008). However, it is important to know why this feeling occurs and what triggers this fear of crime to be able to reduce this fear (Fanghanel, 2016). Fear of crime is a feeling that can have a huge impact on your life, people can stay away from certain areas or specific locations, not go out alone when it's dark outside or they can even avoid public transport (Bannister & Fyfe, 2001) based on this subjective sense of fear. Factors of public space trigger fear of crime because the space cannot be controlled by the person itself, it is an open space for everyone. This can make the person feel vulnerable, which instigates or augments their fear of crime (Johnston, 2001).

Fear of crime is felt two to three times stronger by women than by men (Reid & Konrad, 2004; Yavuz & Welch 2010). There are a number of explanations. According to Skogan and Maxfield (1981), women take more risks into account and they feel more vulnerable, both physical and social. When we look at the fear itself, the most common fear is for different forms of harassment and sexual assault (Baur, 2007; Pain, 1995). Another explanation for the difference between men and women is a more biological explanation. According to Valentine (1992), women differ in cognitive processing: when a woman experiences something she generalizes this more often than men do. When a woman has a higher fear of crime, this can have an impact on the freedom and pleasure of her public life, which can in turn reduce socioeconomic opportunities (Loukaitou-dieris, 2005).

2.3.2 Victimization

According to research, by Tandogan and Illhan (2016) the chance that young women will be victimized is in fact lower compared to men. Women are more afraid, and they spend their time in places they feel safe (Gilchrist et al, 1998). Men have a higher risk tolerance and feel less often that they should avoid certain places out of fear. This is the reason they have a higher chance of becoming a victim. However, women do have a higher chance to become a victim of sexual assault and rape (Ferraro, 1996).

Environmental conditions lead to opportunities to offend and victimize. Environmental conditions such as dark spaces or places with low supervision offer such opportunities. To minimize the aforementioned opportunities, proactive measures should be taken. For example, by placing camera's or having the police patrol every now and then (Clarke, 1997). According to Cohen and Felson (1979) people who go out often and do not think about risks, have a greater risk of becoming a victim of crime. When someone experiences victimization for the first time this can be due to a lack of environmental conditions and the routine of the person experiencing victimization. But when someone experiences victimization more often, this can be attributed to their personal daily patterns. When people experience less crime, this can be explained based partly on the avoidance of dangerous places, which we can see as avoidance behavior or risk aversion.

2.3.3 Appleton's prospect refuge theory

According to the prospect-refuge theory by Appleton (1975), people prefer an overview of an environment (prospect) but do not want to be noticed themselves (refuge). Prospect and refuge are connected and have an impact on the perceived safety of a person (Ramanujam, 2006). The prospect-refuge theory is built upon the Habitat Theory of Appleton (1975). According to the Habitat Theory a place should give esthetic pleasure and satisfy the biological needs of a person. The place should look attractive to a person and should feel like a person could survive there. The prospect-refuge theory is the basis of a biological need in an environment (Dosen & Ostwald, 2016).

The core message of Appleton's prospect-refuge theory is that a well-built environment can help people to feel safe. To make people feel safe they should be able to have a good overview of their environment, whilst people prefer not to be seen by others (Doğrusoy & Zengel, 2017). Appleton states that being able to see others without them being able to see you leads to a higher perceived safety. Crimes are mainly being carried out in places where the visibility is low (Friedrichs, 2015). So for instance, during the time of night, visibility is lower as in comparison to during the time of day. Therefore proper installed lighting can improve visibility. When looking at the refuge aspect, darkness could lead to better hiding options, but when comparing this dark place to the prospect aspect, the visibility is low. Therefore, one could argue that a place with an acceptable prospect and refuge is a safe place (Dosen & Ostwald, 2016).

3 Methods

Various methods were used in this study. First, a literature review was conducted to explore existing theories related to this theme. Subsequently, extensive observations were made in the research area. The data collection is finally complete after conducting various street interviews and walk-along interviews. The considerations and explanations with regard to the choice of these methods are explained in this chapter.

3.1 Type of research

Because young women (aged 18-25) are not all the same and there are different degrees of safety, it is useful to understand how a place is used, how it looks and what people think about it. A distinction is made between the physical and the social aspects that can have an effect on how a women experience a place. For this research, qualitative fieldwork methods are used to understand how young women feel during their use of the three underpasses. Three methods are being used: observation, street interviews and walk-along interviews. Different sub questions will be answered:

Observation

1. What does the social and physical environment of the train underpasses look like and how does it look at nighttime?
2. In what ways do people make use of the social and physical space of the train underpasses during the night?

Street interviews

3. What are the perceptions of young women when it comes to the safety of the underpasses by night?
4. What emotions do young women experience when they use the underpasses during the night?

Walk along interviews

5. What are the spatial patterns of young women in the underpasses during the night?

The first and second sub-question were answered by means of the observation method. Observing distinguishes what people say they do and what they actually do (Musante & DeWalt, 2010). In a field journal, notes were kept of what was going on in the underpasses and what people did in the underpasses. Daily events were described mentioning how the space was used. The researcher must spend much time in the field to understand how people experience the place themselves. The observation method helped to gain insights in how people use the environment.

According to Gorman, Clayton, Shep and Clayton (2005), observation studies involve '*the systematic recording or observable phenomena or behavior in natural setting*' (Gorman, Clayton, Shen & Clayton, 2005, p. 40). While observing, the researcher can take on different roles. In this research, I took on the role of complete observer, which means that the researcher is present at the place but does not interact with the users of the environment, this is often referred to as 'fly on the wall'. The researcher listens to conversations as they occur in the field and observes how the environment is used. When

overhearing conversations or seeing certain behavior, the researcher takes notes and uses his/her/their own interpretations while observing. There is no possibility to ask the users questions (Bakeman & Quera, 2011). Therefore, this method is usually used in combination with other methods (Baker, 2006). That is why in this research also street interviews and walk along interviews were conducted.

The third and fourth sub-question are answered with the results of the street interviews. Through this method the perspectives and the emotions of young women who use the underpasses are discovered. The street interviews with users of the underpasses took place at the underpasses by night. According to Bernard (1995), street interviewing is: *'The researcher just tries to remember conversations heard during the course of a day "in the field"'* (Bernard, 1995, p. 209). But even though the intention is to go into the conversation blindly, the researcher will always have the research questions in the back of her mind. Because of this, the conversations are naturally directed towards the research questions (Whyte, 1984). Young women are randomly approached and asked whether they have the time for a few questions.

The fifth sub-question will be answered with the results of the walk-along interviews. Walk-along interviews are more in depth and they are used to understand the experiences of women. Women can illustrate their answers by pointing to certain elements in the environment where the interview is taking place (Evans & Jones, 2011). During the walk-along interviews, questions were asked to get an insight into the experiences of women who walk through underpasses. Walk-along interviews are good to explore informal networks in public spaces. It places the researcher in the everyday life of the participant. The results show the reflexivity of the participant's engagement with the place (Kusenbach, 2003).

3.2 Research area description

This research is carried out in three train underpasses located in Utrecht. All three underpasses are located north of Utrecht Centraal, the main train station. From south to north the three underpasses are: DaalseTunnel, LeidseveerTunnel and van SijpesteijnTunnel. The main train station is one of the biggest stations in the Netherlands. Train rails need to be crossed over using either a bridge or underpass, this is due to the many train tracks next to each other. In Utrecht they also call this the 'rail river' of Utrecht, which needs to be crossed when travelling from the western parts to the city center. The railways in Utrecht are elevated, therefore one needs to pass the train tracks underneath, using an underpass (StudioSK, 2020).

3.2.1 Van SijpesteijnTunnel

The first underpass is the van SijpesteijnTunnel. This underpass is closest to the train station. This underpass is used daily by thousands of travelers. As can be seen in figure 1, the underpass has a sidewalk on the left-hand side, next to this is a bicycle lane that accommodates bicycles to go both directions. The following lane is another sidewalk, next to this is a low wall and behind that wall is water. There is lighting on both sides of the walls. One side has white/yellow light, and the wall is covered with tiles. The other wall has different colors of light (purple, blue, green, red). This wall is made of cement and is not painted. Above the sidewalks there are two lights strips that have been placed through the entire length of the tunnel. The light stripe is interrupted by dark plates.



Figure 1: van SijpesteijnTunnel

3.2.2 LeidseveerTunnel

The LeidseveerTunnel is not far from the van SijpesteijnTunnel. In the middle of the LeidseveerTunnel there is one big road which is used by busses/taxi's. The car lane is separated from the bicycle lane by the wall with holes, as can be seen in Figure 3. Next to the bicycle lane there is a sidewalk for pedestrians to walk both directions. Above the bicycle lane there is a LED light strip placed on the ceiling.



Figure 2: LeidseveerTunnel

3.2.3 DaalseTunnel

The DaalseTunnel is a big underpass. In the middle of the underpass is a bit lower and cars can go through from both sides. On the left and right side of the underpass there are bike paths and a sidewalk. The bicycle lane is more on the inside and the sidewalk is more on the outside. Cyclists and pedestrians can go both directions. Above the bicycle lane there is light, which is interrupted by blank spaces.



Figure 3: DaalseTunnel

3.3 Data collection

To collect the data, three methods were used: observations, street interviews and walk-along interviews. The data collection took place in the evening, when it was dark. The sun went down around 21:00, all three methods were executed after sunset in the months April and May.

Observation was conducted during a three-week timeframe. Every week one single underpass was observed, three evenings per week: Monday, Thursday and Friday. Each evening two timeslots were observed. The first one from 21:30 until 22:15 and the second one from 22:45 until 23:30. These timeslots were chosen because it was expected that around these timeslots young women would return home from having dinner with friends and young women would go out to party. This meant that the underpass would be used frequently during that time. Whilst observing notes were taken of what was happening in the underpasses.

Observation was performed dynamically rather than static. It was required to spatially adjust to the weather and also make sure not to scare people. This meant it was needed to move regularly and take notes on a mobile phone to be less noticeable, had a different digital medium been used such as a notebook, people might have been triggered to start behaving differently, which is also known as the observer effect. When people would have inquired what the exact purpose of the observation was, a transparent explanation about the research would have been provided. However, the latter did not happen.

During the street interviews, users of the underpasses were asked whether they had time to answer a few questions. These short conversations were not recorded but were noted in the fieldwork journal. A total of sixty street interviews were conducted. Immediately after the interview more detailed notes and quotes derived from the interview were written down. If everything would have been transcribed during the conversations, it could have led to distraction (Phillippi & Lauderdale, 2018). The conversations were not recorded because permission is necessary to record interviews, which could lower the number of participants willing to take part in the interviews. (Schneider, 2018).

During the walk along interviews, participants were approached beforehand and asked to participate in this research. Two weeks were taken to conduct these walk-along interviews. Beforehand, the appointment was planned and the participant knew what the walk-along interview was about. The respondents received a consent form in which they agreed to participate in the interview. The participants were gathered with the snowball technique through social media, mainly Instagram (Dean, 2016). A total of eight walk along interviews were conducted, who all use the underpasses frequently. For the walk-along interviews, a topic list was made beforehand. With each participant a specific route was taken through the underpasses (figure 5). The time and place were agreed upon with the respondents and the route started and ended at the same place (G). The walks were carried out during the evening, when it was dark. If the participant did not feel comfortable with this setting, the interview was carried out after dinner when there was still a bit of sunlight. The purpose of the interviews was communicated transparently to the participants. Personal information such as name and age of the participants will not be mentioned in the research (Kinney, 2017). For the quotes used in the result section pseudonyms were used.

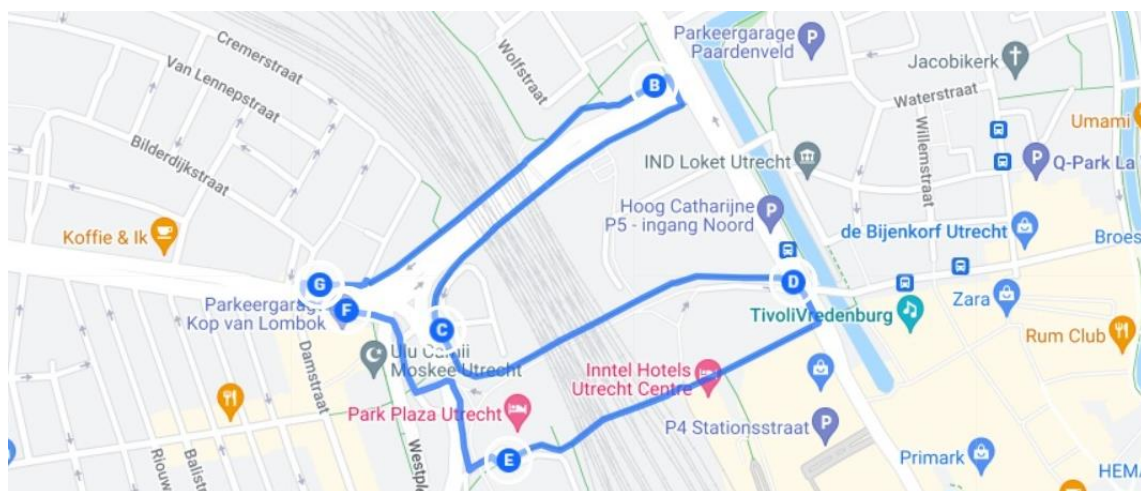


Figure 4: Walk along interviews route - Source: My maps (2022)

3.4 Positionality

A researcher doing qualitative research has to take into account that their presence has an impact on the results of the research. Perceptions and interpretations are structured by the previous assumptions of the researcher. Such assumptions are made by his/her own personal and academic disposition (Hennink, Hutter & Bailey, 2020). But as England (1994) mentions: *'Reflexivity can make us more aware of asymmetrical or exploitative relationships, but it cannot remove them'* (England, 1994, p. 250). Therefore, this part will consist of the positionality/reflexivity of the researcher. The researcher is his/her own research instrument, how this researcher is positioned in the field has an impact on the research. Personal knowledge is limited and because of this there is no impartial judgment (Finlay & Gough, 2008).

The research is influenced by who the researchers are and the relation they have with the research subject. Usually, the researcher is seen as an insider or an outsider, but this classification is not as binary as it may seem. This is because the researcher's position is often in between these two extremes (Kusek & Smiley, 2014). In case the researcher is a young woman herself, who also uses the same underpasses, she could feel like an insider. Quite possibly, male friends do not worry so much about being out alone at night. I sometimes get frustrated by my own fear and I annoy my friends with my anxieties. I was raised by my mother and she is a real feminist, she always tells me to not be scared.

Because of my Human Geography background I mostly walk through a city and wonder what I could adjust to make me feel more safe and comfortable. Once, when I was biking through one of the underpasses, a man yelled at me and wanted to know where I was going. This was the basis for my thesis

3.5 Data Analyses

Qualitative data that is derived from interviews and observations leads to a large and unstructured corpus of material. This ensures that there is no straightforward way to analyze these materials. The main themes of the data were uncluttered, ordered and clustered (Hennink, Hutter & Bailey, 2020). Then, the similarities and differences became clear. Eventually these findings gave answers to the sub questions and these results were compared to the literature.

The data of the observations and the street interviews were analyzed by noting the main points of the material in the field journal (Mulhall, 2003). The field notes were gathered into one word document and placed in chronological order. After each observation shift, the main findings were written down directly into the results chapter of this document, in order to keep track of what had happened. After finishing the three nights per underpass, the main results and findings of that specific underpass were written down in full. The quotes used in the result section have been transformed from the third person to the first person.

The chronological order of the interview questions is used to answer the sub questions. The street interviews were written down directly after the interview took place. All the answers were gathered in one word document. The answers of the respondents were coded (given shorter explanations) and these gave a clear overview of the answers. This was done per underpass and per question to gain a better overview of the data (Phillipi Lauderdale, 2018).

The walk along interviews were recorded while walking through the underpasses, and they were transcribed directly afterwards. These transcripts were uploaded in Nvivo and were coded open and axial, which led to a code tree (Appendix 3). These themes were used to structure the results (Bryman, 2016). The results of the research will be discussed in detail in the next chapter.

4 Results

In this chapter the main findings of the qualitative research will be displayed. This chapter is structured by type of method and the matching sub questions. First, the appearance of the physical and social environment of the three train underpasses is researched. After that, it is researched how the underpasses are being used during nighttime. Then, the results of the street interviews will be presented. The perceptions and experiences of the young women will be analyzed. Lastly, the results of the walk along interviews will be presented and the spatial patterns of young women during the night in the underpasses will be shown.

4.1 Sub-Question one: What does the social and physical environment of the train underpasses look like and how does it look at nighttime?

What does the social and physical environment of the train underpasses look like at nighttime? Below, the appearance of the three train underpasses during the night will be described. First the LeidseveerTunnel, then the DaalseTunnel and finally the van SijpesteijnTunnel.

4.1.1 Visual appearance of LeidseveerTunnel during nighttime

The LeidseveerTunnel was used quite often and the busyness of the underpass depends mostly on the traffic lights that are placed before the underpass. In the underpass, there was a bright lighting strip. It was a very bright, white light which was painful to the eyes while biking through the underpass, but whilst walking the light is quite doable. The light strip was placed above the bike lane; therefore the light was less bright when you are on the pedestrian road. According to Moyer (2005), light should be uniform to make sure the space feels safe. Indeed, the light in this underpass was uniform but it is not so pleasant for the eyes. Less bright lightning could be better.



Figure 5: Bright light in LeidseveerTunnel



Figure 6: Outside the underpass no street lightning

There was also light placed above the car lane at the other side of the wall, the light was broken and it flickered. This could feel a little strange because suddenly the light goes on and off. Richter & Lenz (2018) say that light that does not flicker contributes to a safe environment. Outside the underpass there was no street lighting, which makes the transition even more dramatic.

If right outside the underpass the lightning would have been brighter, the transition from the brightly lit underpass to the darker area around would have been less extreme. This is also what Santen (2006) pointed out namely that connecting the two extremes is important and should be in balance.

There was a lot of litter on the floor and a lot of graffiti on the walls. The wall with the round holes was sometimes covered with graffiti. The graffiti consisted of names, short words and signatures, blue and black graffiti were mostly used here. This was in line with statements by Metha (2014) pertaining the principle that people make mental images of places in the city, also when there are negative attributes, such as graffiti which is in fact illegal in the Netherlands



Figure 7: Graffiti in Leidseveertunnel



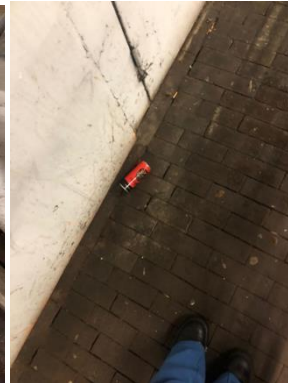
Figure 8: Wooden board on wall



Figure 9: Posters on wall

On the other wall, wooden boards were placed against the walls. This gave a warmer feeling to the underpass. The posters on the wooden board were mentioning festivals, or other gatherings. Here and there, the wooden boards were pulled of or taken away. Here, the dirty tiles were visible. Especially when it was raining, the tiles would become wet even though the dirt would not wash away.

The litter on the floor was usually quite small and existed of plastic parts of packages of food. Also empty graffiti spray bottles can be found in the underpass. Graffiti is illegal in the Netherlands, it is regarded as violating social norms and values (Gayet-Viaud, 2017). A lot of cigarettes and cigarette packages could be found under the underpass. While observing, it was also seen that people smoke and throw their cigarette on the ground. In addition, a lot of empty beer and energy cans can be found on the ground. Drinking in public space is illegal.



Figures 10, 11, 12 and 13: Litter that was found on the floor in the Leidseveertunnel

At the end on the underpass at (Lombok side), there was a leak which caused a big puddle of water on the floor every time it rains. When people bike over it, they sometimes lift their feet. The whole wall gets wet and you can hear the water falling down. During the second observation, there was also a fairly large piece of concrete found lying on the floor of the underpass. It looked like it fell down from the ceiling, which cannot be regarded as safe.



Figure 14 and 15: LeidseveerTunnel gets wet when it rains



Figure 16: Ceiling on floor



Figure 17: Broken ceiling

During the street interviews, the wooden boards were suddenly gone. Revealing the wall consists of tiles and a lot of dirt and graffiti. On the wall there were pictures of closed eyes, it looked as if people were sleeping. Some tiles were really dirty and brownish. There were still some leftovers of the wooden boards present.



Figure 18: Eyes on wall



Figure 19: Dirty tiles



Figure 20: Leftover wooden board

4.1.2 Visual appearance of DaalseTunnel during nighttime

The DaalseTunnel has two underpasses, both are placed at the outer sides on the underpass. Looking at the underpass from the center side (from now on called the right underpass), it is quite busy and frequently used. At the entrance of the underpass, there is a small green space on the right which is quite dark. Before and after the underpass there is well led street lighting which makes the transition pleasant. As Santen (2006) mentioned: the transition should be smooth.

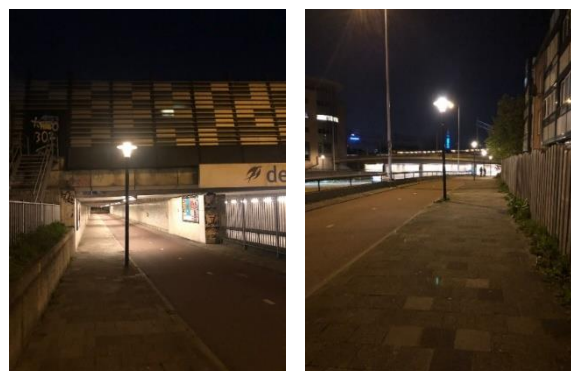


Figure 21 and 22: Street lighting outside DaalseTunnel

The underpass is quite clean and there is not so much litter on the ground. However, both sides of the underpass were defaced with graffiti. This again was a sign of incivility. Removing the graffiti will have a positive effect on the perceived safety of the users (Jiang, Mak, Larsen and Zhong, 2017). In both the left and the right underpasses, the sign of the squatting movement was seen again in red graffiti. This is the sign of a squatting movement. Squatting is illegal in the Netherlands, thus this can also be seen as sign of the broken window theory with erosion of the accepted norms and values (LaGrage, Ferraro & Supancic, 1992).



Figure 23 and 24: Squat movement sign on walls

The left underpass had the same kind of look as the right underpass. The difference is that in the left underpass there was a little less graffiti and there were more pigeons sitting under the underpass. The wall of the underpass did not go up to the ceiling but there was a space where pigeons resided. This caused a lot of bird droppings to end up on the wall and on the floor. The birds did not make a lot of noise, but the amount of bird droppings was quite substantial.



Figure 25: Birds above wall in Underpass



Figure 26: Bird droppings on floor



Figure 27: Bird sleeping above wall

At the ends of the two underpasses there were specific places to hang posters. The only posters that were permitted to hang there were the ones that had a political or social message. While observing, it became quite clear that on the floor there was a pile of peeled off posters which looked dirty. There was also mold on the board. From the looks of it, these boards seem to be used fairly often.



Figure 28: Mold around posters



Figure 29 and 30: Permitted place to hang posters in DaalseTunnel

The light in the DaalseTunnel was more yellow compared to the light in the LeidseveerTunnel. Additionally, there was not just one line of light but the lights are interrupted by black stripes. When riding a bike through the under the underpass, it could be described as different flashlights shining into one's face. The light itself can be experienced as more pleasant and less bright. Addy et al. (2004) explain that the brightness of the light can have an influence on the feeling of safety of users. This light can be perceived as more pleasant since it resembled daylight.

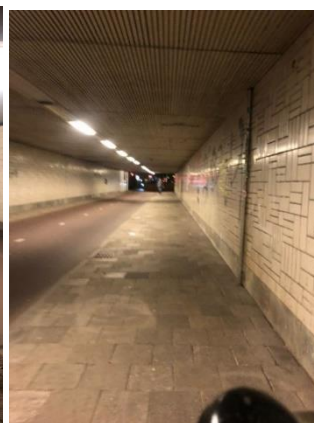


Figure 31 and 32: Warm lightning DaalseTunnel

4.1.3 Visual appearance of van SijpesteijnTunnel during nighttime

On both walls, there was graffiti and posters on the walls, which could lead to an unsafe feeling. Hope and Hough (1988) say that physical elements like graffiti can make people feel less safe. But in this underpass there was less graffiti compared to the LeidseveerTunnel



Figure 33: Tiles on wall



Figure 34: Graffiti on low wall and above the water

The lightning did not follow one straight line. There were two lightning stripes that go through the underpass. Next to the lighting, there were metal boards placed on the ceiling which ensures that the light is distributed. The space itself was well-lit, which gave a pleasant atmosphere. Taylor and Gottfredson (1968) say that this can give a sense of control. On the wall there were different types of color lamps that illuminate the wall with the colors green and red. As Santen (2006) said, colored light can facilitate the creation of a specific atmosphere. The color green can make one feel content, however red can lead to other interpretations of the place.



Figure 35: Lightning in van SijpesteijnTunnel close-up



Figure 36: Lightning van SijpesteijnTunnel

At both ends of the underpass there is street lighting, but at the side of the city center the street lighting was switched off. This manifested a substantial contrast between the underpass and the space outside. Also on the center side there was a bus lane that goes above your head, which was also not lit. Between the bus lane and the underpass, there was an opportunity to go right and to go to the LeidseveerTunnel, but here there was again no sufficient lighting installed. At the Lombok end, there was a street lighting on the left side, but none on the right side. This street lighting was not really bright, which lead to a big shift from lighting in the underpass to almost no lighting outside the underpass. Again here the transition between inside and outside the underpass needs to become more balanced (Santen, 2006). At the end on the left hand side, lighting appeared to be coming out of the wall which was in the shape of old Amsterdam houses (see picture 38), giving off a pleasant vibe.

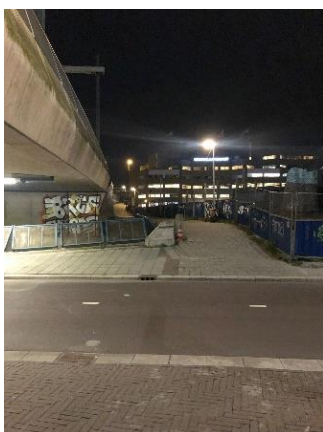


Figure 37: Side exit



Figure 38: Light Houses

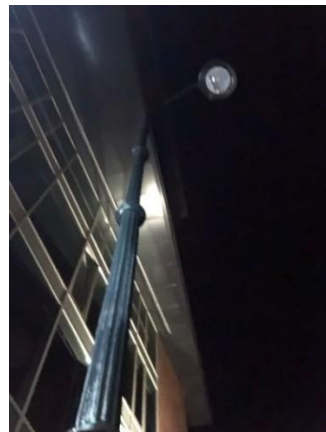


Figure 39: Street lightning switched off



Figure 40: Street Lighting Lombok side



Figure 41 : No street Lightning center side

During the first day of the observation, there was a lot of litter which consisted mainly out of eating packages. There was also a spot just before the underpass with a lot of empty cans, which looked quite bad. Compared to the other two underpasses, this one had the most litter. The presence of litter feels like there is no social control or good maintenance, which lead to perceived unsafety according to the broken window theory (Keizer, Lindenberg & Steg, 2008).

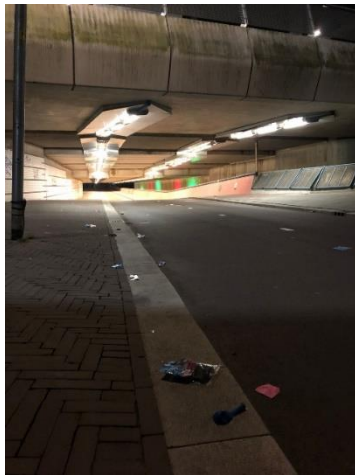


Figure 42: Litter on floor of the van SijpesteijnTunnel

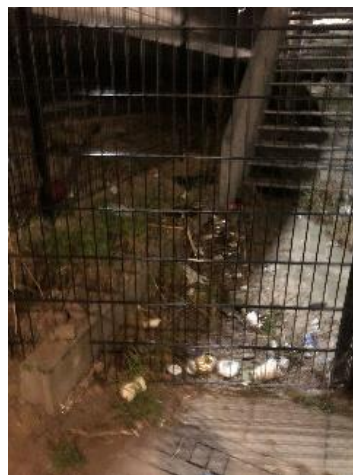


Figure 43: Empty cans at the end of the underpass

At the end of underpass at the Lombok side, a camera was placed. It was hanging on the wall above the water and it was clearly visible. This is the only camera in all of the underpasses. It was remarkable to see it because the other underpasses did not have any camera's at all. Initially the camera was not that easily spotted. But when it is seen, it can instigate someone to have an increased sense of security. In line with what Cozens, Saville and Hillier (2005) claim in their research, being that cameras can lead to reduction of crime.



Figure 44: Camera placed at end of van SijpesteijnTunnel

4.2 Sub-Question two: In what ways do people make use of the social and physical space of the train underpasses during the night?

To answer the second sub-question of this research below the use of the underpasses will be explained. Below, the amount of users and behavior of the users is discussed per underpass.

4.2.1 Use of LeidseveerTunnel during the night

The LeidseveerTunnel was quite often used by cyclists, who mostly travelled in groups because on both sides of the underpass were traffic lights regulating the flow of traffic. Most people were biking by themselves, however on occasion they did travel in pairs. Big groups of people generally do not make use of the underpass, except on Fridays when this anomaly occurs more frequently. While observing the LeidseveerTunnel, the weather was not so good the first two times around, since the temperature was low and rain was pouring down resulting in an even lower perceived outside temperature. Most cyclists were moving fast, which could be an effect of poor weather conditions. On the third day observing, the weather was significantly better compared to the days before, and as a result people were moving at a much slower pace than before.

Most people walking through the underpass were by themselves and most of them were male. People were coming from the city center and walking towards Lombok. When people walked through the underpass, they walked in a straight line and did not stop to take a look at anything in the underpass. When it was raining, people sometimes stayed a while longer. Two men talked for a while in the underpass and it seemed as if they were exchanging something, however any certainties around this cannot be concluded, since it was not clearly visible.

4.2.2 Use of DaalseTunnel during night the night

Right underpass

Here too, most of the people used their bike as mode of transportation through the underpass, without stopping and at high speed. Every night, the same man went through the underpass with a scooter, he smiled at me every time. When walking into the underpass from the center side, before entering the underpass there was a small space of green where people hung around, mostly smoking or drinking. My presence enticed these people's curiosity. The second day of observing a man walked by me five times through the underpass and looked quite peculiar at me, it made me feel tremendously awkward. Because this underpass had in fact two underpasses (left and right) the amount of time spent in each underpass was 50% less compared to the other underpasses. In the right underpass people who were homeless were begging for money. In addition, a woman started an incomprehensible conversation which was of no beneficial value to the research, when she did not respond to her advances it slightly angered and frustrated the woman. One night observing, an unpleasant situation occurred. A man went to the underpass and saw me standing there. He laughed and I reciprocated, then he continued on his way. However, he still kept his eyes on me, and waved. I did not feel the need to wave back because I started to feel unsafe. He stopped his bike and waved really exuberantly to me. Even though there were five more minutes scheduled for the observation, I left due to the fact that I felt unsafe. Even though the man did not do anything specifically infringing, the manner in which he laughed came across as really intimidating. In this underpass, the routine activity theory was clearly visible, people are moving through the underpass without spending much time in the underpass. When people, such as myself, spend more time there this becomes visible and it can lead to unsafe situations (Hollis, Felson & Welsh, 2013).



Figure 45, 46 and 47: Users in the right DaalseTunnel

Left underpass

This underpass was really quiet and barely used. People used the underpass individually, in addition, a maximum of two people using the underpass simultaneously was observed. The lion's share of the time the underpass was vacant. This could be due to the observation that the connecting streets were also scarcely visited. People found it really weird that I was standing there, sometimes I even scared them. In the other underpasses people did pay me a significantly large amount of attention, compared to this underpass. The underpass was deserted, whilst observing I could count the amount of people on one hand. This gave me a bit of an unsafe feeling myself because if something were to happen to me there, chances are hardly anybody would notice. This is in line with what Valentine (1989) said, that when a place is deserted, feelings of fear can come up.



Figure 48 and 49: No users in the left DaalseTunnel

4.2.3 Use of van SijpesteijnTunnel during the night

This underpass was by far the most visited underpass compared to the other two. The underpass was rarely empty. There were more groups passing through this underpass in comparison to the other underpasses, more often than not accompanied by alcoholic beverages.

The absolute amount of people that walked through this underpass was also larger compared to the other two underpasses. Men were more frequently seen walking by, but also women made use of underpass as pedestrians. Most of the people that walked through the underpass were consuming food or having drinks with them, but also shopping bags or groceries were carried. This could explain the amount of waste that was visible on the surface.

Compared to the other two underpasses there were much more people lingering under the underpass. I have observed bums or drunks every night. Sometimes they yell or ask things to people passing by. Personally I was approached in this underpass as well, people asked question or made inappropriate comments. Altman and Zube (2012) concluded in their research, that when a place is visited by other people, it makes the person feel more safe. In this case that was true, because it was so busy that I did not feel very uncomfortable when someone approached me.

The van SijpesteijnTunnel also has a small red wall, this wall is a bit slanted so you can lean against it. People would lean against this wall and smoke. In addition this underpass was occupied by a lot of people begging for money. I was also asked for money a few times. Most of the beggars were walking towards people, but I also observed a person sitting on the sidewalk, against the wall with an empty cup on the floor. If people stand still for a long time in an underpass, it can feel uncomfortable for other users passing through the underpass. This is again in line with the routine activity theory. People are expected to just to go through and when someone stands there for a long time this can lead to an unpleasant feeling (Jiang, Larsen & Zhong, 2017).

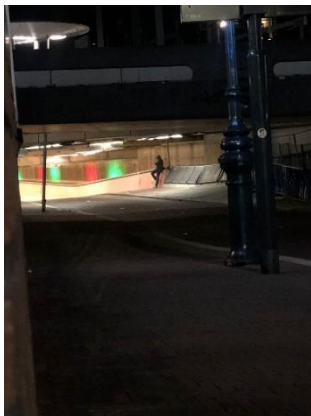


Figure 50: Man standing against wall



Figure 51: Walkers



figure 52: Cyclists

4.3 Sub-Question three: What are the perceptions of young women when it comes to the safety of the underpasses by night?

In this section, the perceptions and emotions of young women who are making use of the underpasses are presented that results from the street interviews. Here the same order will be followed as before. First, the findings of the LeidseveerTunnel will be explained, after that the DaalseTunnel and lastly the van SijpesteijnTunnel.

To understand women's perceptions, questions were asked about how the young women experienced the underpass at that moment, what the underpass means to them, what are the positive elements, what could be done better and their previous experiences in the underpasses.

4.3.1 Perceptions of you women of safety of LeidseveerTunnel by night

The experiences of women in the LeidseveerTunnel were quite varied. Some women never really focused on the surroundings of the underpass. They thought that the underpass was functioning well and they were mainly focusing on the exit or on music instead of looking around. For example Imke said: *'I am more focused on cycling towards the end of the tunnel than the tunnel itself really. The tunnel is quite short and you can see the exit well'* the respondent indicated (p. 16, field notes 26 April 2022 - 21:30-23:30).

Other girls felt a bit scared and thought the underpass was quite dirty. For some the place felt abandoned, cold or grim. The respondents mentioned that especially during the night, there were less people in the underpass which led to an uncomfortable feeling in case someone does show up in the underpass at that moment. This was in line with what Bennett et al (2007) said about the fact that the perception of safety varied throughout the day. Charlotte mentioned: *'The underpass is a bit of a crazy place. Nowhere else in the Netherlands are there so many train rails. I think it's a tacky place that hasn't been paid attention at all'* (p. 17, field notes 26 April 2022 - 21:30-23:30).

In fact, hardly anybody was particularly enthusiastic in their response when questioned about the underpass. The only respondent who had a positive remark was Fien, who stated: *'I experience the underpass positively, I think it is a shame that the cheerful posters are no longer hanging there because it gave the underpass a kind of atmosphere'* (p. 13, field notes 26 April 2022 - 21:30-23:30). She mentioned that she felt that the old posters hanging on the wall were nicer and gave a happier feeling to the underpass since they added color to the appearance.

4.3.1.1 Meaning

The women experienced the meaning of the underpasses quite differently. Many women think that the underpass was essential for their daily movements, as Winsum-Westra & De Boer (2004) said; public spaces bring the built environment together. Without an underpass they would have to cycle around and leave earlier from home. It is an easy place, Fien said: *'I live in Lombok and use this tunnel daily. I think it is a very nice underpass, there is never a fuss or anything'* (p. 13, field notes 26 April 2022 - 21:30-23:30).

But in contrast to the aforementioned statement by Fien, some people do not give a special meaning with this underpass. As can be concluded based on the statement by Lotte, who said: *'I use this tunnel weekly, My boyfriend lives on the other side of the track and when I go to see him I use this underpass. It doesn't really have any special meaning'* (p. 5, field notes 25 April 2022 - 21:30-23:30).

However, most of the women did not feel comfortable and in addition did not see the underpass as convenient. They see the underpass as a cold, dark and awful place that does not get the attention it requires. This is further substantiated by Ziva, who mentioned: *'The existence of the underpass is convenient, but I think it's a really cold place. I think it is time to fix up this place'* (p. 4, field notes 25 April 2022 - 21:30-23:30).

Most of the respondents experience the underpass as dirty and some even mentioned that occasionally men would hang around resulting in them not feeling when that happens. Winsum-Westra & De Boer (2004) also mentioned that the biggest concern of public space is safety. One of the respondents who seem to agree with this is Rosalie, who said: *'I think this can't really mean anything to anyone, maybe it's more of an avoidance place than it really means anything to anyone'* (p. 17, field notes 26 April 2022 - 21:30-23:30).

4.3.1.2 Positive elements

The positive elements of the Leidseveertunnel were that the round circle holes in the wall made the underpass feel spacious. Some women also mentioned that the separation of the buses was quite pleasant. Maria said: *'I like that the circles provide more openness. If something happens, someone on the bus might see me and call for help'* (p. 17, field notes 26 April 2022 - 21:30-23:30).

Stamps (2010) mentioned that the feeling of safety is in line with how spacious the public space feels. The holes in the wall can lead to a more spacious feeling and thus to a safer feeling. Furthermore, some respondents were positive about the light in the underpass, everything can be seen clearly because of

the lighting situation. Sibel said about the light: *'I like that there is light in the tunnel and because of this I can always see everything well both day and night'* (p. 11, field notes 26 April 2022 - 21:30-23:30).

But there exist different views pertaining lighting, some women said the light was too bright, hurting their eyes when looking into it or because of the brightness the contrast with the outside was too big. For example, Sifra said:

I really like that the underpass is well lit. I am just a bit afraid that sometimes someone is standing at the end of the tunnel. Because the contrast with the bright light in the tunnel and outside where there is almost no light is very great (p. 9, field notes 25 April 2022 - 21:30-23:30).

According to Roberts, Donovan and Durey (2022), enclosed spaces together with bad lighting and low visibility can become barriers for women to enter that public space. Fortunately, the presence of bright lighting combined with the holes in the wall resulted in this underpass feeling less enclosed. There were also women that could not mention anything positive about the underpass. They said it was just not pleasant and ugly. And one woman even mentioned that the lack of benches in the tunnel as an advantage so that people could never hang out in the tunnel for very long.

4.3.1.3 Elements that need attention

Most of the people did not appreciate the graffiti on the walls and the litter on the floor. They recommend to have it cleaned and put down trash cans. Specifically pertaining the the graffiti, a respondent named Ziva said: *'I think that nice paintings or works of art should hang on the wall. This would ensure that other people wouldn't spray over the graffiti again.'* (p. 4, field notes 25 April 2022 - 21:30-23:30).

According to LaGrage, Ferraro and Suspancic (1992) incivilities are signs of a community disorder, some respondents also believed illegal things were done inside the underpass. Subsequently, a lot of respondents mentioned they did not really liked the tiles with closed eyes, they found it a bit odd and scary at the same time. About the wall decoration, Lotte said: *'I think the wall with the eyes is a bit crazy, I also do not understand why these eyes are hanging there'* (p. 5, field notes 25 April 2022 - 21:30-23:30).

More colors like green and yellow are recommended. Some respondents even mentioned that the underpass in its entirety should be changed. However, contrary to the belief the entire underpass could benefit from remodification, there were people that claimed that even though it was not a nice place to see, and people moved fast through the underpass, they were primarily convinced there was no real necessity for the place to look nice in the first place. This was based on the premise that the underpass was regarded as a functional space. Yarah stated: *'Yes of course there is a lot to do in terms of appearance. As I just said it does not matter much to me because I only visit the place for such a short time'* (p. 1, field notes 25 April 2022 - 21:30-23:30). Some women did mention that they would love to see camera's to feel more safe and comfortable, as Clarke (1997) also said, placing camera's leads to less opportunities for offending and victimization.

4.3.1.4 Previous experiences

Most of the women proclaimed that they have not really experienced anything odd here, even though they use the underpass frequently, they have never seen or heard anything out of the ordinary. Yarah said: *'In general, I find the experiences positive. Sometimes people smoke under the tunnel or I am startled by people who suddenly shout loudly at me. But I do not have much trouble going under the tunnel'* (p. 1, field notes 25 April 2022 - 21:30-23:30).

Not only respondent Yarah was relatively positive about the underpass. Sibel mentioned that even though she has heard stories about the underpass, but personally never had any bad experiences:

I do feel safe, but you never know. It is a place that is still relatively remote and especially in the middle of the night after going out there is hardly anyone. I am not very scared, but my housemates are a bit more scared and prefer to cycle together. If there are cameras, it already scares people off, I think (p. 11, field notes 26 April 2022 - 21:30-23:30).

There were also women that felt stressed or are a bit scared sometimes when using the underpass. Most of the time these feelings occurred during the night and when there are not a lot of people in the underpass. Also, most of the women mentioned that men make them feel scared when they shout something to them or they whistle. Hester explained how she handles such a situation: *'Men come up to me, drunk, when I walk through the underpass, so then I prefer to call a friend. I also have a bunch of keys in my hands so in case something happens, I have a 'weapon''* (p. 18, field notes 26 April 2022 - 21:30-23:30). According to Hardley and Richardson (2021), the fear of women for urban darkness goes hand in hand with mobile use and awareness of the surrounding. This was also something a lot of respondents mentioned; they usually call a friend or someone else when they feel frightened.

4.3.2 Perceptions of you women of safety of DaalseTunnel by night

People experienced this place as quite narrow and a place where there is a flow of people. The underpass is not that wide which led to Roos saying: *'I think the underpass is an interesting place, I used to hang out in these kinds of places herself. I do have claustrophobia and it feels small, with no holes in the walls. This makes me feel trapped.'* (p. 28, field notes 2 May 2022 - 21:30-23:30).

This is in line with what Skår (2010) said about the fact that people prefer open spaces that are uncluttered. Nobody feels very peaceful here, but everybody is moving through the underpass. Both Jada as well as Alexandra stated: *'I experience the underpass as a stream of people cycling quickly back and forth. It has a kind of rushing feeling'* (p. 32, field notes 2 May 2022 - 21:30-23:30).

Some people (mostly mentioned that men) hang around which makes some women feel quite uncomfortable, even though some women rationally concluded that these men have never done anything wrong. In contrast, some women experienced it as a quite positive and warm environment. Vita mentioned that she likes that the place accepts everybody: *'The place is typically Utrecht, a place where everyone is welcome and is not made for a specific target group. It is open to everyone and everyone can feel at home'* (p. 24, field notes 1 May 2022 - 21:30-23:30). This corresponds with Göle (2013) who says that public space is vital for democracy and should be open for everyone and not be handed to capitalist ventures.

4.3.2.1 Meaning

Most of the women here feel rushed and they do not have a special connection to the underpass. They pass the underpass for a short time so they do not really feel connected to the underpass itself. Some women do not even want to come here and they would appreciate it if they had other options. One of the respondents named Femke mentioned: *'It's a place I do not like to visit, but there is no other way to get under the rails'* (p. 31, field notes 2 May 2022 - 21:30-23:30).

Some others mentioned that if they could avoid the place they would, because they had some bad experiences here. This is also in line with what Felson (2014) said about the fact that women would rather avoid places when they do not feel safe there. One respondent also mentioned that this underpass led to nostalgia. But there are also women that do not give any meaning to this underpass or did not really understand the question.

4.3.2.2 Positive elements

The brightness of lighting installed in the underpass was generally received positive, according to Markvica, Richter and Lenz (2018), warm light which gives a feeling of a safe environment. In line with this, Diana says the following about the lighting situation: *'I really like the light, it's a bit yellow and very calm. But I never really give attention to the environment. I mainly just cycle through it quickly'* (p. 19, field notes 1 May 2022 – 21:30-23:30).

Another positive element as experienced by the respondents was the places to hang your posters. Pertaining this particular subject, Zara mentioned: *'I think the poster places are a good solution, otherwise people will hang posters everywhere and that makes a mess. Only that has been well thought out here'* (p. 30, field notes 2 May 2022 - 21:30-23:30).

Besides the physical elements, there was also a situational positive element that could be identified, being that cars are not allowed in the underpass. This made the underpass less noisy and also increased feelings of safety. Roos even mentioned that she likes that not everything is clean and new: *'I think it is cool that there is a place where not everything is managed by white men in suits where everything is neat and so on. I like that not everything is clean and tight'* (p. 29, field notes 2 May 2022 - 21:30-23:30).

But Roos was not alone in her believe that an urban environment does not necessarily needs to be spotless. A respondent named Tess unknowingly agreed with Roos stating: *'I think it is really urban that not everything is clean, that would be really crazy'* (p. 31, field notes 2 May - 21:30-23:30). Again, this corresponds with Göle (2013), who says that public spaces should not be given to capitalist ventures. But there were also respondents who did not mention anything positive.

4.3.2.3 Elements that need attention

Ceccato and Nalla (2020) say that situational condition can prevent crime and can have a huge influence on someone's perceived safety, the respondents were not that positive about the look. The bird droppings of the pigeons on the floor and the walls were things that a lot of people mentioned. As did Carolien: *'I think the bird droppings are dirty, they really poop often. They also suddenly sometimes fly and that can frighten me, especially at night when it is dark'* (p. 21, field notes 1 May 2022 - 21:30-23:30).

In addition, the light outside of the underpass could benefit from improvement, as could the light inside the underpass which sometimes flickered. Some respondents also mentioned the colors, stating the underpass appeared grey-ish and felt dirty, more colors would give it a nicer look. Nevertheless, some women were fine by how the underpass looked. They did not feel the urge to adjust something. Chiara said: *'it's fine like this, it just costs money to adjust the place'* (p. 29, field notes 2 May 2022 - 21:30-23:30). And Liv said: *'I do not really think that attention should be given to this place because it's just a 'road''* (p. 24, field notes 1 May 2022 - 21:30-23:30). Municipal budgeting and the purpose of the underpass were taken into account by the latter two respondents.

Not only was there critique on what the underpass looked like, but women also commented pertaining the other users that were seen hanging around there. Some people hang around in the underpasses, especially at the Lombok side there is a soccer field where some boys hang out during the night, which does not feel pleasant for young women. This is in line with the routine activity theory, which does not only look at the physical appearance of the place but focuses on the social appearance of the place (Hollis, Felson & Welsh, 2013). Rianne says:

I think that something can still be done about the people who hang out here. At the football field at the end of this tunnel there are often boys standing there. Then I am a bit afraid and cycles fast past it. (p. 27, field notes 2 May 2022 - 21:30-23:30).

4.3.2.4 Previous experiences

Most of the women did not have bad experiences. Most of the women also say they are only in the underpass for a short amount of time. Marielotte says: *'I often cycle through this tunnel when I have to go to study or to visit friends. I usually have music on and sing along. So I'm cycling under it quickly'* (p. 22, field notes 1 May 2022 - 21:30-23:30).

Women prefer cycling through the underpass, since this is a faster mode of transportation than walking. Lauren said: *'I never walk under this underpass. So it is a coincidence that you speak to me exactly today. But I also think that because I do not walk, I probably experiences less'* (p. 25, field notes 1 May 2022 - 21:30-23:30).

Some women also mention that they are being yelled at or whistled. According to Koskela (1997), the fear of crime differs per individual and is fueled by previous memories and experiences. Jasmijn did not have a pleasant experience:

I was once very badly approached by a man in the night in this tunnel, who also followed me. He then caught up with me and then he stopped in front of me. I started running. But he just laughed and luckily didn't run after me. I was frightened by this. (p. 26, field notes 1 May 2022 - 21:30-23:30).

4.3.3 Perceptions of you women of safety of van SijpesteijnTunnel by night

Most of the women said they experienced this particular underpass as being a very busy and hectic one. Aurelia says: *'More people hang out here compared to the other tunnels. Now you have three men standing there with cans in their hands and behind them is a woman on the floor'* (p. 33, field notes 6 May 2022 - 21:30-23:30).

But also, a lot of women mentioned the smell in the underpass, whereas some women noteworthy mentioned that it used to smell vary bad. Some said that nowadays the issue of smell had been resolved. Although at the moment of the interviews there was a very peculiar smell. Doeye said: *'I thinks it is a ugly place, it stinks and it's dirty. The water that goes through the tunnel always smells'* (p. 35, field notes 6 May 2022 - 21:30-23:30).

According to Metha (2014), people can also make images of places with negative attributes, which is clearly seen in the previous quotes. Quite a substantial amount of women felt quite comfortable and experienced the underpass as spacious. Some of these girls were walking with a father or a boyfriend, but there were also girls that cycle or walk alone and felt fine. River said: *'I sometimes walk under here with my boyfriend and do not really experience anything specific here. I usually have a conversation with my boyfriend'* (p. 37, field notes 6 May 2022 - 21:30-23:30).

Some women are stressed or are more alert to their surroundings when cycling or walking under the underpass by night. In relation to the night-time Anne concluded: *'I think it is a scary underpass, in the dark I am a bit wary'* (p. 47, field notes 8 May 2022 - 21:30-23:30). Skogan and Maxfield (1981) say women take more risks into account, they feel more vulnerable.

4.3.3.1 Meaning

The meaning of the underpass here too differs per women. Some women acknowledge the importance of the underpass for Utrecht, and its function. For example, Yasmin said:

I use the underpass often and it is a necessary place for the traffic of the city. Because of this underpass, the station is no longer an obstacle and I can easily walk through the tunnel' (p. 33, field notes 6 May 2022 - 21:30-23:30). Whilst Isabelle also mentioned the following: *'I think the underpass is a nice place and also a place that is important for people who live in Lombok. This makes the route shorter, which also improves mobility* (p. 43, field notes 8 May 2022- 21:30-23:30).

Both statements are completely in line with what Ceccato and Nalla (2020) conclude in their research, stating that public spaces are vital for cities. However, there are also women who feel scared and feel they have to be wary in the underpass, Anne said: *'I find it an exciting underpass, but in the dark she is a bit wary. I always pay attention to who is in the tunnel and who I might encounter.* (p. 47, field notes 8 May 2022 - 21:30-23:30).

Women describe the underpass as shadowy, odd and restless. According to Appleton's prospect refuge theory (1975) when focusing on the prospect, people want an overview of the environment to feel more safe. When looking at the quotes of the respondent this is not the case at this underpass, Janneke said:

Visibility is low and it makes her feel very restless. There are many people, they do not quietly walk or cycle through. Other behavior takes place. It is also the case that the tunnel sort of goes down and up again. Because of this I can't see the exit when I go into the tunnel that is a bit tense. (p. 46, field notes 8 May 2022 - 21:30-23:30).

4.3.3.2 Positive elements

Some women are more positive about the underpass. The only thing different here is that a few women agreed on the fact that something has to be done about the underpass to make it look a bit better. Before, this the underpass was even worse. For example, Zena said: *'I think the colored lights on the wall are funny, but red is a bit of a crazy color it could have been purple or another happier color'* (p. 38, field notes 6 May - 21:30-23:30).

According to Santen (2006) colored lights can lead to specific spheres. It can lead to an attractive look but the perception of colors can vary per individual. Also Aurelia was positive about the colored lighting, but also recommended to use more symbols of Utrecht: *'I like the colored lights against the wall, I also think the luminous houses are funny, but it is more something for Amsterdam.'* (p. 34, field notes 6 May 2022 - 21:30-23:30).

Some women mentioned that the underpass was not so tidy, but also mentioned that it did not bother them as it was part of life in the city. Dunja said: *'I like that the tunnel is not completely neat, it remains one part of a big city with many cultures and you can see that in this tunnel.'* (p. 42, field notes 6 May 2022 - 21:30-23:30). Some others also mentioned the light, although they were neither extremely positive nor expressively negative about it, they merely mentioned that there was light.

4.3.3.3 Elements that need attention

The contrast between the inside of the underpass and the outside of the underpass is substantial, Zena said: *'The transition between under the underpass and out of the underpass is a bit big. Either the light should be slightly less bright in the underpass or there should be better street lighting outside the underpass.'* (p. 39, field notes 6 May 2022 - 21:30-23:30).

Also, the littering on the floor was bothering a few women, Anne said: *'There is a lot of waste, there is also a man on the floor who is begging, but he just needs help. Lately I have seen more beggars in Utrecht.'* (p. 47, field notes 8 May 2022 - 21:30-23:30).

During the day, a lot of women said it was very busy, almost resembling riding in traffic. But during the night, there were less people, which did not give the women a safe feeling. Therefore, they had some recommendations, Janneke said: *'It should be maintained a little better and the graffiti can be removed'* (p. 40, field notes 8 May - 2022 21:30-23:30). They also mentioned that the look of the underpass improved a bit, but more improvements need to be made. Ning said: *'There could be more atmosphere, maybe some background music helps. Or beautiful paintings on the wall or tiles that are in color'* (p. 44, field notes 8 May 2022 - 21:30-23:30).

Because there are only a few people in the underpass during the night, women tend to feel unsafe, about which Sofiya said: *'They really need more cameras or surveillance in this tunnel, especially deep at night'* (p. 41, field notes 6 May 2022 - 21:30-23:30). When considering this statement, the broken window theory is applicable (Keizer, Lindenberg & Steg, 2008). The respondents would like to improve the looks of the environment.

4.3.3.4 Previous experiences

A lot of women mentioned that in this underpass a lot of drunk or homeless people were hanging around and that they did not feel comfortable when these men are here. According to Ferraro (1996), women feel the most unsafe in public space because of sexual assault and rape. Especially when women were alone, they can be approached by men verbally, Sofiya said: *'A man has followed me for a while and talked to me. Also scooters honk at me. That's why I try to avoid this tunnel, but with someone else it's fine.'* (p. 39, field notes 6 May 2022- 21:30-23:30).

Women are more afraid and they spend their time in places they feel safe (Gilchrist et al, 1998). Most of the women do acknowledge that these men did not do anything, but still they get a bit scared. About this matter, Rim argued:

Men sometimes approach me. Then they ask where I am going. I call a friend when I walk so that people are less likely to disturb me and if they would do something then my friend will realize it right away (p. 48, field notes 8 May - 21:30-23:30).

Some women did not have had any bad experience but they keep the possibility in mind, like Doeys: *'If there is so much garbage and graffiti in one place, it means that not only neat people come here'* (p. 36, field notes 6 May 2022- 21:30-23:30). This is in line with the broken window theory (Skogan, 2012). These women also have friends that do not like the place. For example, Julia said: *'Nothing strange for me, but I know that many of my friends who do not come here very often avoid this place. The place is a bit neglected, nothing is new here'* (p. 49, field notes 8 May 2022 - 21:30-23:30). Women mentioned that the underpass is not really long and that it takes very little time to get out of the underpass.

4.4 Sub-Question four: What emotions do young women experience when they use the underpasses during the night?

The women were asked how they feel in the underpass and which emotions they felt. This was all similar per underpass but because some emotions are triggered by certain elements of the underpass, the emotions are presented separated per underpass.

4.4.1.1 Emotions of young women in the LeidseveerTunnel during the night

As can be seen in figure 53, there are a lot of different emotions that came up when women use the LeidseveerTunnel. One emotion that came forward was 'hurried'. In the underpass there is no space for fun, people just move through the underpass. Ziva mentioned that she felt the underpass was cold: *'It's cold, very cold. The Holes in the wall when a bus passes by the wind is very cold. Sometimes water leaks when it rains and that also makes it dirty and cold'* (p. 4, field notes 25 April 2022 - 21:30-23:30).

Also women who were standing there for a while during the interview said that they have not been here for such a long time before. And they also did not like to stand there. This is in line with the routine activity theory: how the place is used, by whom and in which frequency is important (Hollis, Felson and Welsh, 2013). Also the surrounding of the underpass can lead to certain emotions, like Sifra said: *'Anxious, it's crazy that there aren't really houses or places outside the tunnels where people sometimes have to come.'* (p. 9, field notes 25 April 2022 - 21:30-23:30). Some people were afraid for different reasons, however most mentioned the main reason was that the place was not well maintained.

There were also a lot of women who did not feel uncomfortable at all, they just used the underpass a lot and for a short amount of time. The underpass did not really have an impact on how they feel. Participants needed to think for a long time before being able to name the right emotion. They know how the underpass looked and how it works, but they are not really triggered by the looks or the people that they encounter.



Figure 53: Emotions felt in in the LeidseveerTunnel

4.4.2 Emotions of young women in the DaalseTunnel during the night

Based on the word-map as can be seen in in Figure 54, the underpass triggers different kinds of emotions. One of the most common emotion was 'generated'. Women did praise the light in the underpass, it gave them a warm feeling because the light was yellow, Roos said: *'It reminds me of the old times when had no worries. The light also gives a nice atmosphere that makes me feel a bit at home'* (p. 29, field notes 2 May 2022 - 21:30-23:30).

People who used the underpass a lot and do not experience that much in the underpass felt familiarity. In contrast to this, there were also a lot of women who do not feel at ease in the underpass at all, especially in relation to the football field where young men hang out causing this feeling of unease according to Mila: *'Most of the time I am very observant. I always have my phone with me. My friends also have my phones location, so if something happens, someone can always see where I am.'* (p. 20, field notes 1 May 2022- 21:30-23:30).

Some women got a sad vibe from the underpass like Chiara: *'if you look at it purely for looks I would say it is a bit sad but also interesting. It's a pretty old tunnel, I can see that right away. It can use a touch up.'* (p. 30, field notes 2 May 2022 - 21:30-23:30). This is in line with the broken window theory, that concluded that the physical environment should be adjusted to stimulate socially desirable behavior, which will have an effect on the perceived safety of the users (jiang, Mak & Zhong, 2017). The darkness outside made the women feel uncomfortable. There were less people outside which also did not feel as good as during the day. According to Felson (2014), women are afraid when there are no other people around, or only a few. Therefore, they will avoid places where there is no social control

because of the fear of being victimized. Hardley and Richardson (2021) say that social control is necessary during the night to make women feel safer.

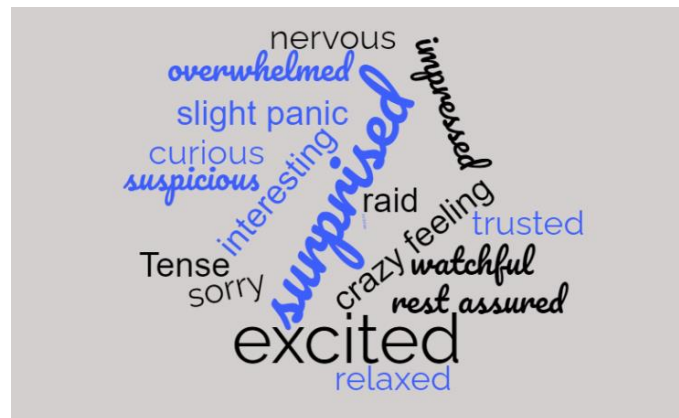


Figure 54: Emotions felt in in the DaalseTunnel

4.4.2.1 Emotions of young women in the van SijpesteijnTunnel during the night

Different kinds of emotions were experienced by women in the Van SijpesteijnTunnel. As can be seen in Figure 55, most people feel anxious and distrustful. According to Staeheli and Michell (2004), if a public space is obviously being well and regularly maintained women feel safer. But when these signs of management are not there it makes women more fearful. This was mainly due to the people that hang around in the underpass. Gabriëlla also feels like this: *'Tense, I walk quickly through this underpass. There are always a lot of drunk men here who can perform crazy actions. Also bums who sleep on the floor but you never know what they'll do when you walk by'* (p. 38, field notes 6 May 2022 - 21:30-23:30).

In addition to the people in the underpass causing various forms of distress, also the littering on the floor and the graffiti on the walls had an impact on how women feel. They are focused on their surroundings, like Cay: *'Attention, constantly looking around me and my eyes are always aware'* (p. 50, field notes 8 May 2022 - 21:30-23:30).

In this instance, once again, there are women that feel at ease, Amber said: *'I feel comfortable here, not that much is going, yes it is dark but yes there are enough lights here so if something were to happen that it would be easy to see for bystanders'* (p. 35, field notes 6 May 2022- 21:30-23:30). Some people appreciate the spaciousness of the underpass.



Figure 55: Emotions felt in in the van SijpesteijnTunnel

4.5 Results walk along interviews

In the last result section, the results of the walk along interviews will be displayed. Based on the codes resulting from the analysis with Nvivo (see Appendix 3), the most important findings will be described below.

4.5.1 What are the spatial patterns of young women in the underpasses during the night?

In this section of the results and spatial patterns of young women who use the underpass frequently are shown. How do the users use the underpass? What is the effect of the night? Which environmental factors of the underpasses have an influence of the perceived safety of women? Would an underpass exist in an ideal city? And how do women feel about safety in general and in the underpasses?

4.5.1.1 Use of the underpasses

All the respondents, except for one, did not really like the underpasses the first time they visited the underpasses. Luca even said: *'I think Lombok is a super nice neighborhood but shit I have to go through those tunnels every time. It is less attractive, it also makes it seem as if Lombok is much further away than it actually is'* (p. 18).

But because they use the underpass every day, the respondents now experiences the place as less freighting, but they are still alert. Every respondent used the underpass daily. This was mostly because study, friends and most of the amenities are located on the other side of the station. The underpass is a must for people to carry out their daily routine. Sophie said: *'Every day, several times. Yes, my study is in the center, several friends live on the other side of the track so I think I will go twice anyway'* (p. 38).

Also every respondent mentioned that they mostly use the underpass alone, Annelie said: *'When you go chill with friends. Everyone lives on the other side. Only very occasionally with housemate, but mostly alone. Unless someone takes you home'* (p. 2). Luca did mention that when biking with others though the underpass she is less alert compared to when using the underpass by herself: *'I am more alert when I cycle alone through the tunnel at night than usually during the day'* (p. 18). All the respondents had a favorite underpass, mostly the reason for the underpass was that it is the quickest way to their home, taking into account the amount of traffic lights as well, and there was no reason for them to take a longer route.

Most of the respondents use the underpass by bike, there were only exceptional reasons not to bike. But during the night almost nobody walks through the underpass. The respondents also mentioned that they feel safer on a bike. Annelie said: *'Yes cycling makes me feel safer, I am faster. You are and you can maneuver faster. And also the feeling that they can look at you for less time because you cycle through it as quickly as possible.'* (p. 4). One respondent even said she never walked during the night and if she needed to, she would rather take a taxi, Luca: *'No, then I would take that taxi. If I had to walk home through the tunnel, that would feel less pleasant. Because on the bike you will then make more speed'* (p.17).

4.5.1.2 Underpasses by night

Every respondent agreed that they felt more unsafe during the night compared to during the day. Most of the respondents mentioned the lack of social control. This is in line with Dosen and Ostwald (2016), for example Susan said:

At night, more happens, I am aware of that, so my alertness and thoughts also go there. Your vision is also limited. It is quieter on the street so how do you estimate the situation if someone attacks you? If 10,000 people are walking here then I think he would not dare, whilst if there is no one there you think 'help'. So that's definitely a factor (p. 49).

The effect of the night was clearly felt by the respondents, but the underpass had an even bigger effect on some. The enclosed space has a low visibility and the underpass also has less passengers, like Steinmetz and Austin (2014) showed in their research about safety on university campus. Annelie said: *'But only in the evening you're vulnerable in a tunnel. I'm just paying a lot more attention in a closed environment such as this one, more than in an open space'* (p.3). Luca further substantiated the claim by Annelie by mentioning the following: *'In the evening there are fewer people on the street, so you will feel if something has happened, no one will notice it or less quickly, especially in a tunnel where there are even fewer people passing by.'* (p. 15).

But Noor even compared it with the city itself and said she feels more unsafe in the underpass during the night:

It really depends on the location. When I ride through a very busy city I worry less because then you have a form of social control. But if there aren't many people, as is the case in this tunnel, I do pay extra attention in the evening (p. 22).

Hardley and Richardson (2021) said that women are made aware of all the risks they could face during the night, that is why they rather go to places with enough social control.

4.5.1.3 Beginning/middle and end of underpass

The respondents also make a transition in how they felt while using the underpass. Almost every respondent mentioned that at the end of the underpass they felt relieved and happy, but at the beginning most of the respondents felt a bit anxious. Annelie said: *'Yes, at the end I feel safest. At the beginning you still have to go through the tunnel and then you really see the people coming. At the beginning you see much more and much more attention.'* (p. 5).

Doğrusoy and Zengel (2017) mention that people want a good overview of the environment, to feel in order to feel more safe. One respondent did not feel different in different parts of the underpass and there was also one respondent who did feel unsafe at the beginning and the end of the underpass because there are places where people hang/chill, Pien said: *'So I do think that at the beginning or at the end there are more groups there uhm that maybe that's why I feel less safe'* (p. 31). However, Isa said she felt most unsafe in the middle of the underpass: *'Yes, in the middle it is the most unsafe because then going back is just as far as walking through'* (p. 11).

The visibility when entering the underpass was sometimes blocked, some women mentioned this. For example, Susan said the following about the Left DaalseTunnel: *'it has a bit more of a curve, so you can't see the exit. I do not like that bush at the end of the tunnel that blocks my view'* (p. 48). In addition to this statement, Isa said: *'Well it's with this one you really go down and really have to get back up. This again ensures that I cannot see the end of the tunnel, which I find sometimes scary, especially at night'* (p. 12). This is in line with Roberts, Donovan and Durey (2022) that show that unknown sight makes a place feel very unsafe.

4.5.1.4 Environmental factors that have an influence.

There are different types of environmental factors that have an effect on how the young women felt in the underpasses. How well maintained the underpass was, had an effect on them as well. The littering, graffiti and dirty walls showed that nobody actively cleans the underpass. Annelie said: *'if something doesn't look well cared for then you don't know it already feels a little less how do you say yes for me it's just a less pleasant environment.'* (p. 5). This is in line with the broken window theory (Jiang, Mak, Larsen & Zhong, 2017) which suggest that when the environment is not well-maintained, this can lead to feeling unsafe.

The amount of people in the underpass also had a big influence on how safe the respondent felt, this corresponds with Altman and Zube (2012) who says that the amount of people in a place can lead to unsafe feelings. Most of the respondents did not mind a lot of people, sometimes it was just annoying and it felt like they were in traffic but they did feel safe. All respondents mentioned that during the night when there were only a few people in the underpass and they were subsequently standing still inside the underpass, this gave the women an unsafe feeling. Luca said:

You know if there are just a lot of other people cycling and stuff then I find it more chilled and pleasant. But suppose I cycle on my own but there are a few people hanging around there halfway through the tunnel then I think oh I'll keep pedaling (p. 18).

Not only the amount of people, but also the type of people present can have an influence. The most common types of people hanging in the underpasses were: blowers, bums and loiterers, Noor said: *'So yes, because in the evening you see more smokers and bums, just more loiterers. If people hang around for any reason other than to hide from the rain, I quickly wonder what you're doing there' (p.23).*

As Sreetheran and van den Bosch (2014) mentioned, women are more alert because of unexpected events at night. Also, every respondent indicated they felt less comfortable around men than around women. This feeling was even stronger when multiple men were in the underpass, Sophie even said:

It depends on what kind of man he is, but with a group of men I'm a bit more alert, especially when it's nighttime then it's just why are you here. Actually men are not allowed on the street we should just make a women's tunnel (p. 43).

Also Susan said that seeing a man in the underpass is more frightening compared to when a man is sitting on a bench on the street: *'In a tunnel you can't go left or right. On a street you think there is a scary man there so I take the left here.'* (p. 48). Annelie even said it was unfair for women: *'It's so stupid that we always have to be on our guard when it really isn't every man but we just don't know which man is and which man isn't, and that is.'* (p. 2). According to Shamma (2017), this fear of male violence is fueled by the media, parents and other caretakers.

4.5.1.5 Ideal city

During the walk-along interview the question was asked if in an ideal city, underpasses would still exist. Most of the respondents replied they could not think of a better alternative, but they said if everything was possible then they would prefer to have no underpasses.

Some suggested that the underpasses are fine but the way they are being used must be changed, Susan said: *'I think it's fine that there are two walls with a roof that you can stand under and that you have to go through it's just how it is used I think yes I wouldn't want that'* (p. 50). And Noor also said: *'Better for cars than for cyclists, I think. I'd rather not cycle through a tunnel than I would. If it was a choice then rather not, but infrastructural that is not an option'* (p. 23). Some suggested to build a bridge, but they also do not want to climb a hill with their bikes. One respondent suggested to make the railways under the ground.

4.5.1.6 Safety

The respondents have quite the same definition of safety: when someone is at ease or does not have to worry or think about risks. To be able to go where you want whenever you want, feeling comfortable. Safety was very important for every respondent. Most of the respondents also have certain measures they take when they do not feel safe or when they want to feel safer. For example, calling a friend, sending their live location and turn down the music to be more alert. Isa said: *'Yes sometimes I call to feel safe. That's when I already see someone who I think I don't know if I find this so*

chill. Then I'm going to call someone and then I'm cycling here' (p.10). Hardley and Richardson (2021) wrote that fear of urban darkness goes hand in hand with mobile use. But also, the way they dress is taken into account by a few respondents. When they return from hockey training, they do not want to ride their bikes with a short skirt and a tight top.

The women shared that their parents do not want them to bike alone during the night. One respondent was bothered by the fact that she was being treated differently by her parents than her brothers, Noor said:

I think it's bad that it has to be said because I think we keep it in place by pretending that women are more vulnerable. But on the other hand I'm glad they said it because I was also more vulnerable and I was also pulled off my bike and I couldn't have solved that alone. I think; stop thinking women are more vulnerable. Speak to each other and stop the whole stigma. But I also think like, yes the fact that parents still have to say something like that, and you grow up with the idea of being a woman makes you more vulnerable (p. 26).

So even though Noor understands that her parents are right, she still thinks it is unfair. Shamma (2017) already wrote that fear of male violence is fueled by the media, parents and other caretakers. Most of the respondents have experienced street harassment. Mostly it was verbal harassment on the street, Luca said: *'Uhm yes just being called after or whistled at that happens often'* (p.14).

Almost every respondent is aware of her safety while using the underpass. As Skogan and Maxfield (1981) mentioned, women take more risks into account, they feel more vulnerable, both physical and social. Isa said: *'I always cycle very fast and even faster under the tunnel. And when I walked, I always walked at a high pace. And when I used it, it was often late in the evening and early in the morning.'* (p.8). But for most, the unsafe feeling only occurred during the night, as for Noor: *'In the evening there are really a lot of bums and then it is dark and grim and then I really do take off my earphones just to be active in my environment. But that's only in the evening.'* (p.21).

5 Conclusions

In the previous chapters, it was discussed that public space is anything but a neutral space. Different people exert influence on public spaces; on the design, use and users of this space. Previous research focused more on the perceived safety of women in their own neighborhood or a transport mode such as a train carriage. These quantitative studies were executed with surveys. The goal of this research was therefore to supplement the knowledge about experiences of young women in underpasses during the night in a qualitative way. The social and physical aspects of the underpasses have been explored simultaneously. In this concluding chapter, the empirical and theoretical insights are presented.

A qualitative research is executed in three underpasses in Utrecht: LeidseveerTunnel, DaalseTunnel and van SijpesteijnTunnel. These underpasses connect the eastern part of Utrecht with the western part and the center of Utrecht. A new center is expected in 2023 at the east side of Utrecht and then the underpasses will be used even more frequently. Research shows that young women more often feel unsafe at night and this feeling often occurs in enclosed spaces such as an underpass. That is why this research focused on the experiences of young women in the underpasses during the night.

To gain insight into how the underpasses look and how they are used, I have observed them and its users. The following conclusion can be drawn: The underpasses all have their differences and similarities. A big difference between the three underpasses is the lighting: all three have different sorts and forms of lighting and this results in different kinds of perceived feelings. In the literature it was described as well, that lightning has an effect on how women feel during the night. People mainly use the underpasses to go from one side of the train station to the other side and they do not really stop within the underpasses unless they are hanging around.

The results from the street interviews gave more insight into the perceptions and emotions of the young women. The result was a mixed variety of results. Some women use the underpasses daily and others just sometimes. Therefore, the frequency of usage led to a feeling of familiarity. . This also led to different insights into the perceptions of young women in the underpass. Some women were feeling very comfortable, which is contrary to the information in the existing literature. But others were more scared and more aware of their surroundings. The darkness is one of the main things that triggers how people feel in the underpasses, the night and the enclosed space was a recurring theme. This is due to the amount of people that visit the underpass, but also the visibility and the lightning.

The results of the walk along interview gave more insight into the spatial patterns of young women. Safety is important to every respondent, all of the women took measurements to feel more safe which is in line with the fear of crime theory. However, not every respondent felt unsafe in the underpasses, which is not in line with the victimization theory. The type of people that use the underpass has a major impact on how the women feel when they use the underpass. Mainly men, drunk people or bums were the type of persons that made women feel unsafe this because their use of the underpass was not in line with the behavior of the women who mainly use the underpass as a street. This in turn can be linked to the routine activity theory. Bad maintenance of the underpass was also something the respondents addressed, placing garbage bins or renewing the underpass leads to a better appearance of the place, which is in line with the Broken window theory.

This research sought an answer to the main question: *How do young women experience the safety of train underpasses in Utrecht during the night?* The results of this qualitative research shown that a specific public space can be experienced quite different per women. This is due to usage with bike or walking, but also frequency and previous experience which is in line with the intersectionality theory. Every woman is different and has different backgrounds, experiences, tastes and opinions. This is also good to take into account when making a plan for a certain public space, because of this variety of backgrounds it is hard to make a safe environment for all.

6 Discussion

The goal of this research was to understand how young women experience underpasses in Utrecht during the night. The response group of the walk along interviews consists exclusively of high educated young women, without having been selected in advance. This was due to the fact that my own network was used to reach respondents. As a result, the response group is very homogeneous in terms of education level. This may have influenced the results of this study. By means of follow-up research with a more representative response group, the encounter behavior in the public urban space can be mapped out even more comprehensively. The meeting behavior of young adults was also investigated in this study. For a more complete picture of encounters on the Oudegracht, it is also interesting to interview other age groups in order to map out the differences in the wishes of users of public space.

One common thing that triggered a lot of women, was that they were a bit scared because of the street interview itself. Some asked me why I was doing the research and some even suggested that something happened there to a woman. I made sure that I comforted the respondents but this had an influence on the emotions the women said they had and how they felt at the moment. The women also told me that it was not common for them to stand in the underpass, they usually move so that also gave them at the moment a strange feeling, most of the women did not even pay attention to the underpass up until now.

The results shown was something that was not really expected beforehand. The literature shows that women are more scared in the dark and they victimize themselves. Of course this was also seen in this research, but this was not the only result that came forward. Some women did not feel scared and they were glad that there was an underpass. Every woman is different and had different experiences and therefore also feel different. This is something that is really important to notice, and did not really come forward in the existing literature.

6.1 Recommendations

Most of the women did mention that some improvements could be made when looking at the physical environment of the underpass, It was quite dirty and not tidy at all. So for future reference it would be advised if more attention will be given to the underpass, to address the point brought up by women that mentioned about the visual appearance. As an example, some suggested more bright colors, newer materials and garbage bins to reduce the waste. Some also recommended to make wall art on the wall also to reduce the amount of graffiti.

Because the research methods were all conducted in the underpasses itself, the women did have more time and could see more things that they would like to change. If a woman really noticed things during her normal use this would be a stronger statement as a result. So for further research it might be useful not to administer the method in the underpasses themselves because then they really have to use their memory and derived from their previous use of the underpass. Focus groups, for example could also be a good method to see how women speak about their experiences with each other and bring their memories of the place together.

7 Time schedule

14 to 25 February - Research proposal
17 February - Feedback Rik Huizinga
23 February - Feedback Rik Huizinga
25 February - Research proposal deadline
28 to 9 March - International fieldtrip preparations
9 to 13 March - Theoretical framework / contact participants/organizations walk along interview
14 to 20 March - Theoretical framework / contact participants/organizations walk along interview
21 to 27 March - Theoretical framework / contact participants/organizations walk along interview
28 March to 3 April - Theoretical framework / Methodology / Introduction to research site(s) / formulate interview questions / Make a fieldwork planning / plan interviews with participants
30 March - Feedback Rik Huizinga theoretical framework and methodology/fieldwork planning
4 to 10 April - Observing during night > write down findings in morning
11 to 17 April - Observing during night > write down findings in morning
18 to 24 April - Observing during night > write down findings in morning topic list made and checked by Rik
25 April to 1 May - Street interviews by night > Transcribe interviews in morning
2 to 8 May - Street interviews by night > Transcribe interviews in morning > analyse
3 May - Mid-term Presentation
9 to 15 May - Walk along interviews > transcribe directly afterwards
11 May - Feedback on topic list walk-along interviews
16 to 22 May - Walk along interviews > transcribe directly afterwards
23 to 29 May - Analyze data of ethnographic fieldwork (observations and street interviews) main findings
30 May to 5 June - Analyze data walk along interviews main findings
6 to 12 June - Conclusion/Discussion
12 June - Feedback Rik Huizinga on concept version
Stockholm: Monday, June 13th (8 AM) thru Friday, June 17th (6 PM) 2022. (this means that you need to arrive in Stockholm at the latest on June 12th; the earliest opportunity to go home is by taking a very late flight on June 17th)
Stockholm: Time to save for finishing assignments afterwards: June 20th thru June 22nd, 2022.
20 to 26 June - Processing feedback
24 June - Appointment with Rik Huizinga on campus
27 June to 1 July - Check spelling, bibliography, lay-out, words etc.
1 July deadline thesis 00:00

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9 Appendices

9.1 Appendix 1: Topiclist street interviews

1. Hoe beleef je deze onderdoorgang?
2. Wat betekent deze onderdoorgang voor je?
3. Wat zijn positieve/aantrekkelijke elementen van deze plek?
4. Welke elementen van deze plek hebben nog aandacht nodig?
5. Wat zijn je ervaringen in deze onderdoorgang?
6. Als er op dit moment een emotie bij de tunnel zou kunnen passen, welke zou je dan kiezen en waarom?

9.2 Appendix 2: Topiclist walk along interviews

Achtergrond informatie:

Kun je iets over jezelf vertellen?

Hoe oud ben jij?

Wat is ja beroep?

Sinds wanneer woon je in Utrecht?

Waar woonde ja voordat u naar Utrecht verhuisde?

Hoe vaak maakt je gebruik van een van de onderdoorgangen?

Waarom gebruik je de onderdoorgangen?

Welke van de onderdoorgangen gebruik je het meest?

Gebruikt je de onderdoorgangen vaker alleen of met anderen en zo ja, met wie?

Veiligheid:

Wat is jouw definitie van veiligheid?

Hoe belangrijk is veiligheid voor je?

Hoe vaak denk je aan veiligheid als je door deze onderdoorgangen loopt?

Voel je je veilig als je door de onderdoorgangen loopt/fietst? (Waarom niet?)

Heb je in deze openbare ruimte iets meegemaakt met betrekking tot straatintimidatie?

Heeft deze ervaring invloed gehad op uw gedrag op straat of in de onderdoorgangen?

Welke maatregelen neem je om je veiliger te voelen?

Als er naast de onderdoorgangen alternatieve manieren waren om te komen waar je heen moet, zou je dan nog steeds de onderdoorgangen gebruiken?

Op welk tijdstip van de dag maak je het meest gebruik van de onderdoorgangen?

Is er een bepaalde periode waarin je je meer of minder veilig voelt?

Wat voor dingen kunnen er veranderd worden om jou een veiliger gevoel te geven in deze onderdoorgangen?

Per onderdoorgang:

wie, welke, waar, hoe, wat en waarom

fysieke aspecten

Kun je deze omgeving in je eigen woorden omschrijven?

Welke aspecten van de onderdoorgangen springen er voor jou uit?

- Licht
- Donker
- Afval
- Graffiti
- Kleuren
- Lawaai

In hoeverre beïnvloeden deze aspecten je gevoelens?

Welk gevoel krijg je bij deze aspecten?

Wat zou een goede verbetering zijn aan deze onderdoorgangen?

Zouden er in een ideaal stadsplan deze onderdoorgangen bestaan of zouden de fysieke aspecten van deze wegen totaal anders zijn? (bijvoorbeeld een open plan)

Sociale aspecten

Vindt je dat deze onderdoorgang goed wordt onderhouden?

Heb je het gevoel dat het type mensen invloed heeft op hoe je je voelt?

Hoe vaak gebruikt u deze onderdoorgang?

9.3 Appendix 3: Codebook walk along interviews

Walk-along interviews

Name	Description
Aanpassen tunnels algemeen	
Meer kleur	
Schoner maken	
Vernieuwen	
Algemeen tunnel	
Benauwend	
Geen sociale controle	
Ongezellig	
Overgang van buiten naar binnen tunnel is groot	
Weinig vluchtopties	
Daalsetunnel	
Aanpassen Daalse	
Camera's ophangen	
Materialen vervangen	
Meer kleur	
Meer open maken	
Schoner maken	
Aspect Daalse	
Afval	
Goed verlicht	
Graffiti	
Grijs en grijs	

Name	Description
Lang en dicht	
Smoezelig	
Viezig	
Daalse links	
Eerste keer in tunnel	
Iets schoner	
Leeg	
Nog nooit geweest	
Tunnel heeft een curve	
Veel vogelpoep	
Gevoel Daalse	
Benauwend	
Grimmig	
Intens licht	
Koud	
Licht is wel fijn	
Niet fris	
Onprettig	
Rommelig	
Wel oke	
Gebruik tunnel(s)	
Eerste ervaring	
Effect tijdstip gebruik tunnel	
Avond	

Name	Description
Avond tunnel	
Overdag en avond	
Frequentie gebruik	
Gebruik alleenandere	
Gevoel in tunnel beginmiddeneind	
Meegemaakt tunnel	
Snelste route	
Verschil fiets of lopend	
Voorkeur tunnel	
Waarom gebruik	
Ideale stad	
Alleen als alternatief even snel of sneller is	
Brug prettiger	
Eerder eroverheen	
Iets prettiger maken	
Liever tunnels alleen voor auto's	
Minder afhankelijk van dit soort onderdoorgangen worden	
Nee dit is prima zo	
Schuilen voor regen is handig	
Spoorwegen onder de grond	
LeidseveerTunnel	

Name	Description
Aanpassen leidseveer	
Fel licht	
Geen camera's	
Leuke muurschildering toevoegen	
Meer kleur	
Niet schoon	
Windvlaag door bus	
Aspect leidseveer	
Groter en ruimer	
Iets cleaner	
Licht is wit	
Vies	
Gevoel leidseveer	
Breder	
Bussen heftig geluid	
Gevoel is goed	
Goor	
Lichter	
Omgevingsfactoren invloed op gevoel	
Camera's	
Negatief over camera's in tunnel	
Positief over camera's in tunnel	

Name	Description
Functionaliteiten om tunnel heen	
Dichtbij station	
Huizen dus meer mensen snachts	
Kantoren savonds dus niemand	
Goed onderhouden	
Mee eens	
Oneens	
Achterstallige bouw	
Brokstukken op grond	
Graffiti	
Ook geen prullenbakken	
Posterschraapsels	
Veel vuil	
Vogelpoep	
Omstanders	
Liever veel mensen	
Sociale controle is fijn	
Type mensen	
Blowers	
Dronken mensen	
Hangjongeren	

Name	Description
Junks	
Mensen die er overnachten	
Zwervers	
Weer	
Schuilen als het regent	
Winter minder mensen want koud	
Zonnig is drukker	
Zicht	
Onverwachte gebeurtenis	
Beginnt te regenen	
Duif vliegt respondent schrikt	
Jongens schreeuwen	
Meisjes plakken poster op	
Viezigheid onder schoen	
Persoonlijke informatie	
Huidige woonplaats	
Jaren wonend in Utrecht	
Leeftijd	
Plek opgegroeid	
Studie	
Van Sijpesteijntunnel	
Aanpassen van Sijpesteijn	
Meer kleur	

Name	Description
Nieuwer maken	
Opleuken	
Rood fietspad maken	
Water stinkt	
Aspect van sijpesteijntunnel	
Breed	
Fijn licht	
Kleuren licht niet fijn	
Lampen niet fijn	
Mensen hangen hier het meest	
Stinkt	
Gevoel van sijpesteijntunnel	
Iets vrolijker	
Prettig	
Veel hangjongeren is nadeel	
Veiligheid	
Angstig gevoel man	
Belangrijkheid veiligheid	
Definitie veiligheid	
Link veiligheid tunnels	
Oneerlijk man/vrouw verhouding	
Straatintimidatie openbare ruimte	

Name	Description
Veiligheid opvoeding	
Voorzorgmaatregelen veiligheid	