



Master's thesis

Urban Studies and Planning

A post-occupancy evaluation of a neighbourhood park:
using PPGIS methods for mapping users' experiences in Hyväntoivonpuisto Park

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Abstract			
<p>In densely built areas, neighbourhood parks have a close relationship with the residents and are an integral part of their everyday activity. However, the presence of the park itself does not ensure its use. Some of the major factors that affect park use are park facilities, proximity, location, environment quality, and park design. Despite all, the extent to which the park is used can only be determined once the park comes to use. Therefore, this thesis aims to research the factors that affect the park use and park activities based on users' activity and their experiences in the park environment by conducting a post-occupancy evaluation in Hyväntoivonpuisto Park in Jätkäsaari. By analysing the questionnaire data collected in Jätkäsaari, Helsinki, Finland in 2022, through the PPGIS method, this thesis aims to examine what kind of activities take place in Hyväntoivonpuisto park, and how do the park location and design facilitate these activities. The types of activities in the park will be discussed in terms of Jan Gehl's categories of activities. Additionally, this thesis aims to research the relation between users' aesthetic experiences, their perception of safety, and their activity in the Hyväntoivonpuisto park. Furthermore, it aims to reveal the collective public image of Hyväntoivonpuisto park by operationalising Kevin Lynch's theory of 'the city and its elements'.</p> <p>The data for this study was collected using the PPGIS (Public participation Geographical Information Systems) method using Maptionnaire. The PPGIS study website consisted of 11 pages, with mapping tasks, open-ended questions, and general non-spatial questions. The data collection for the study was conducted between 17th March and 12th April 2022. There were 218 survey participants, among which responses from 200 participants were suitable for analysis. The survey participants marked a total of 934 locations. The data analysis was done using QGIS (Quantum GIS) and Microsoft Excel.</p> <p>This thesis found that the location and the design of the park do influence the type of activities that take place in the Hyväntoivonpuisto park. The aesthetic value of the park has a stronger influence on park activity in park areas that are left open for spontaneous activities and has a smaller impact on park facilities with specified uses. When people's perceptions of their safety are positive, they had a beneficial impact on park use, but when they were negative, they had little impact on park activities. Additionally, the design features strongly influence the public image of the park, and especially nodes and landmarks strongly define the identity of the park.</p>			
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Table of Contents

1. Introduction.....	1
2. Background and theoretical framework	3
2.1. Neighbourhood Park	3
2.2. Park uses and activities	5
2.2.1. Introduction to Jan Gehl’s categories of activities	6
2.3. Perception of parks	8
2.3.1. Aesthetic experiences	9
2.3.2. Perception of Safety.....	10
2.4. Collective image of the park.....	12
2.4.1. Introduction to Lynch’s city image and its elements.....	13
2.5. Conclusion on theoretical review	14
2.6. Research objectives.....	16
3. Site area and its characteristics.....	16
3.1. Context	16
3.2. Site surroundings and accessibility	19
3.3. Design Intent	22
4. Methods.....	24
4.1. Post-occupancy evaluation	24
4.2. Data collection.....	26
4.3. Questionnaire design	28
4.4. Study participants	30
4.5. Data analysis.....	31
4.5.1. Data preparation.....	31
4.5.2. Data sub-categorisation.....	33
5. Findings.....	36
5.1. Participants and their frequency of park visits	36
5.2. Park uses and activities	39
5.2.1. Necessary activities.....	40
5.2.2. Optional (recreational) activities	42

5.2.3. Social activities	47
5.3. Perception	55
5.3.1. Aesthetic experiences	56
5.3.2. Perception of safety	63
5.4. Collective image of the park.....	69
5.4.1. Operationalising Kevin Lynch’s city image and its elements	69
6. Discussion and conclusion	72
7. References	78
8. Appendix.....	87
Appendix A	87
Appendix B	95

List of Tables

- Table 1. Graphic representation of the connection between outdoor quality and outdoor activities (Gehl, 2010). 7*
- Table 2. Screenshot of Excel sheet ready to export in QGIS. 32*
- Table 3. Number of survey participants by age group and gender. 36*
- Table 4. Age group distribution: total population of Jätkäsaari compared to survey participants. 37*
- Table 5. Frequency of park visits by survey participants. Comparison between “time spent in the park” and “time of the day”. 38*
- Table 6. Park activities seen in Hyväntoivonpuisto. 39*
- Table 7. Pie chart showing relation between participants perception of safety and aesthetic experiences. 55*
- Table 8. Survey participant’s aesthetic experience in the park. 56*
- Table 9. Survey participant’s perception of safety in the park. 63*

List of Maps

- Map 1. Location map of Jätkäsaari. 17*
- Map 2. Map showing density of routes used by the passers-by. 41*
- Map 3. Map showing density of routes used for recreational walking. 43*
- Map 4. Map showing adults engagement in physical activities other than walking. 45*
- Map 5. Map showing clusters where people prefer to spend time alone. 46*
- Map 6. Children's engagement in physical activities in the park, marked by their parents. 48*
- Map 7. Map showing clusters of places where people like to spend time with friends and family. 49*
- Maps 8,9,10 and 11: Maps showing clusters of places where people like to picnic, relax, and restore, sit, and converse and enjoy the view (left to right) while spending time with friends and family. 50*
- Map 12. Map showing cluster of places from where park users like to observe other people and the surrounding. 51*
- Maps 13 and 14: Comparison between maps showing clusters where people like to spend some time alone and places from where people prefer to observe people and surroundings (left-right). Red circles represent the reference point to compare similarities and differences between two maps. 52*
- Map 15: Map showing clusters where people often tend to meet other people. 53*
- Map 16: Map showing places that participants think are suitable for communal activities. 54*

Map 17: Map showing clusters of places people find aesthetically pleasing. 57

Maps 18, 19, 20 and 21: Maps showing clusters of places that people think are aesthetically pleasing because of trees and plantation, landforms, views, park design (left – right). 58

Map 22: Map showing clusters of places people find aesthetically displeasing. 60

Maps 23, 24, 25 and 26: Maps showing clusters of places that people think are aesthetically displeasing because of uncleanness and maintenance, asphalt pathways, park design and incompleteness (left – right). 61

Map 27: Map showing clusters of places people perceive to be safe. 64

Maps 28, 29, 30, and 31: Map showing clusters of places people perceive to be safe because of openness, availability of people and lighting, fenced playground, proximity (left to right). 65

Map 32: Map showing clusters of places people perceive to be unsafe. 67

Maps 33, 34, 35, and 36: Map showing clusters of places people perceive to be safe because of openness, availability of people and lighting, fenced playground, proximity (left to right). 68

Map 37. Operationalizing Kevin Lynch’s theory of city elements to identify park elements that forms the collective public image of Hyväntoivonpuisto park. 70

List of Images

Image 1. Northern entrance of the Hyväntoivonpuisto. 18

Image 2. Children biking in the park. 18

Image 3. View of the park while entering from the bridge. 18

Image 4. Hillock during winter where children sledge. 18

Image 5. Masterplan of Hyväntoivonpuisto park (designed by VSU Architects). 18

Image 6. Children playing in kindergarten playground. 20

Image 7. Children playing in open playground. 20

Image 8. Children playing with parents in sports field. 20

Image 9. Open playground from the walkway intersection. 20

Image 10. Park users enjoying sun during winter. 21

Image 11. Art retaining walls representing cliffs. 21

Image 12. View to a construction site where another park (Southern part of Hyväntoivonpuisto) is being built. 21

Image 13. View of the park from Southern end of the park. 21

Image 14: Example of the PPGIS survey questionnaire for the study of Hyväntoivonpuisto park. 28

Image 15. Survey Questionnaire Page 1: Survey Introduction, consent, and language selection (English and Finnish). 87

Image 16. Survey Questionnaire Page 2: Background information of the survey participant. 88

Image 17. Survey Questionnaire Page 3: Park introduction and questions regarding the frequency of use. 88

Image 18. Survey Questionnaire Page 4: Park activities. 89

Image 19. Survey Questionnaire Page 4: Pop-up questions related to “engage in physical activities”. 89

Image 20. Survey Questionnaire Page 4: Pop-up questions related to “spend some time alone”. 90

Image 21. Survey Questionnaire Page 4: Pop-up questions related to “tend to run into new people” and “observe people and surrounding”. 90

Image 22. Survey Questionnaire Page 4: Pop-up questions related to “places that gives opportunity for communal activities”. 91

Image 23. Survey Questionnaire Page 5: Pop-up questions related to “draw routes you typically use for recreation in the park”. Same as “draw routes you use for running errands”. 91

Image 24. Survey Questionnaire Page 6: Aesthetic experiences. 92

Image 25. Survey Questionnaire Page 7: Perception of safety. 92

Image 26. Survey Questionnaire Page 8: Park are used by children for playing. 93

Image 27. Survey Questionnaire Page 10: Additional background questions. 94

Image 28. Survey Questionnaire Page 11: Request for sharing the survey link. 94

Image 29: Posters in English and Finnish. 95

Image 30: Poster hung in children’s playground fence.95

1. Introduction

The neighbourhood parks in a densely built environment have a close relationship to local daily life (Van Herzele & Wiedemann, 2003) as they are the fundamental unit that acts as the neighbourhoods' recreational and social focal point (Mertes et al., 1995). The neighbourhood park often contains multiple diverse facilities—playgrounds, picnic tables, sports fields, green spaces, and shade trees—allowing residents of all ages to recreate there on a routine basis (Cohen et al., 2016). However, the mere presence of a park does not guarantee its use, even when many facilities are usable (Cohen et al., 2016). As a result, this thesis aims to do a post-occupancy evaluation of a park to understand and analyse the factors that affect park use and park activities.

There are many factors that could facilitate people's activities in parks such as accessibility (Sheng et al., 2021), aesthetics (Kaplan, 1979), environmental quality (Nasar, 1988), perception of safety (Iqbal, 2021; Sreetheran & van den Bosch, 2014), and proximity (Zhai & Baran, 2016). Kaczynski et al. (2014) found that the park proximity and wide variety of park facilities were associated with both park use and park-based physical activities among diverse gender, income, race, and age groups. Additionally, to ensure that the diverse range of interest groups benefit from the park, the development of a neighbourhood park should also seek to achieve a balance between active and passive recreation (Mertes et al., 1995). Furthermore, sometimes the park's design may be perceived as undesirable, deterring users from visiting. Therefore, the design of the park itself plays an important role in its use. Nonetheless, if the park environment is negatively perceived, no matter how close it is or the diverse facilities it has, people will be highly discouraged to use the park. Therefore, for successful, user-friendly, and high usage of the park, consideration of users' perception of the park is extremely important (Gobster, 1995). Although there are many factors that affect the user's perception of the park, the ones that highly affect the usability of the parks are attractiveness (Lee et al., 2019) and safety (Deasy, 1985).

Furthermore, users' perceptions of the park environment and the activities they witness or conduct in the park connects them to the park, both physiologically and psychologically in their own individual ways. This connection with the physical environment creates a mental image of the park. When this image is further overlapped with several other individuals' images, it creates a collective public image of the park. This collective image of the park is important for the park user's perception as it encompasses notions such as visual image, reputation, sense of place and park identity.

In recent years, the location's qualities, the neighbourhood's socio-demographic structure, and inhabitants' preferences have been extensively studied to create a better park that is well used and well perceived. Despite all, the extent to which the park is used can only be determined once the park comes to use. In fact, park use, especially the open areas left for spontaneous activity can constantly evolve depending on how users choose to use it. As a result, the post-occupancy evaluation of the park helps to understand the users' behaviour in the park setting and the factors that affect park use. Since post-occupancy evaluation is based on people's perceptions and their experiences of the area, it requires data collection. The most common approach used by researchers seems to be questionnaire survey and behaviour mapping. Although post-occupancy evaluation of parks and open spaces are not as common as that of a building, there is a fair amount of research that has used this method. However, there have not been many post-occupancy evaluations of a park done using PPGIS (Public Participation Geographic Information System), which facilitates the collection of both spatial and non-spatial data.

Therefore, this thesis aims to research the factors that affect the park use and park activities based on users' activity and their experiences in the park environment by conducting a post-occupancy evaluation in Hyväntoivonpuisto Park in Jätkäsaari. By analysing the questionnaire data collected in Jätkäsaari, Helsinki, Finland in 2022, through the PPGIS method, this thesis aims to examine what kind of activities take place in Hyväntoivonpuisto park, and how do the park location and design facilitate these activities. The types of activities in the park will be discussed in terms of Jan Gehl's categories of activities. Additionally, it aims to research the relation between users' aesthetic experiences, their perception of safety and their activity in the

Hyväntoivonpuisto park. Furthermore, it also aims to reveal the collective public image of Hyväntoivonpuisto park by operationalising Kevin Lynch's theory of 'the city and its elements'.

The following is how the thesis is structured: the upcoming chapter provides the background and theoretical foundation for this thesis, with an emphasis on neighbourhood parks, their usage and activities, and users' perceptions of a park based on aesthetic experiences and perceived safety. Additionally, it also introduces Jan Gehl's categories of activities from his book *Life between Buildings: Using Public Space (2010)* and Kevin Lynch's theory of 'the city and its elements' that he mentioned in his book *The Image of the City (1964)*. Furthermore, at the end of this chapter, it clarifies the research questions of this thesis. This chapter is followed with a section explaining the site characteristics and design intent of the case study area. Chapter Four explains what methods are used and how the survey was conducted. Moreover, it also explains how questions were designed, how participants were recruited, and what steps were taken to prepare the data for analysis. Chapter Five presents the findings drawn from the survey results with the spatial representations of the data maps. Finally, the last chapter discusses each research question based on findings and concludes the thesis.

2. Background and theoretical framework

2.1. Neighbourhood Park

Park benefits in neighbourhoods have long been recognized and examined extensively in a broad framework in past decades by many influential experts such as Mertes (1995), Cohen (2016), and Deasy (1985). Often, the activities in the neighbourhood are mainly supported by neighbourhood parks that enhance the vividness and liveliness of residential areas (Hami et al., 2011; Pfeiffer & Cloutier, 2016). Thus, these neighbourhood parks in the city have a strong connection with local everyday life (Van Herzele & Wiedemann, 2003) as they are the basic unit that serves as the recreational and social focus of the neighbourhood (Mertes et al., 1995).

A neighbourhood park should be centrally located within its service area and its size is primarily defined by the demographic profiles and population density within the park's service area (Mertes et al., 1996). The neighbourhood park often contains multiple diverse facilities—playgrounds, picnic tables, sports fields, green spaces, and shade trees—allowing residents of all ages to recreate there on a routine basis (Cohen et al., 2016). Neighbourhood parks are essential to link people and the world in which they live, and communities of every age have felt the need to reconcile themselves with their surroundings (Reeves, 2007). Some of the factors that contribute to people's sense of satisfaction with their neighbourhood park are determined by its close proximity (Schnell et al., 2019), variety of activities (Cohen et al., 2006; Loukaitou-Sideris et al., 2016), openness and presence of nature, sense of security (Loukaitou-Sideris et al., 2016), and adequate urban furniture (Deasy, 1985; Gehl, 2011).

Nonetheless, parks are not ideologically neutral spaces, nor are they physically homogeneous; rather, they exist for specific ecological, social, political, and economic reasons – reasons that shape how people perceive and use parks (Byrne & Wolch, 2009). Scholars have pointed out that establishing effective and appropriate designs for urban green spaces requires an entire assessment that can evaluate the effects of urban parks on mental and physical health, quality of life, and life satisfaction (Ayala-Azcárraga et al., 2019; Loukaitou-Sideris et al., 2016; Pfeiffer & Cloutier, 2016). Additionally, the study of demographic profiles, population density and the unique character of the site with respect to the neighbourhood is also vital to a successful neighbourhood park (Mertes et al., 1995). These studies provide information to planners and designers and help them design even better parks. Additionally, it is extremely essential that planners and designers understand, and value people's needs and preferences regarding park usage, and their perception of the park.

2.2. Park uses and activities

The mere presence of a park does not guarantee its use, even when many facilities are usable (Cohen et al., 2016). A lack of variation in a park discourages the visitors to visit a park often (Deasy, 1985). Diverse activities can help to attract a higher degree of park usage. There are many factors that could facilitate people's activities in parks such as accessibility (Sheng et al., 2021; Zhai & Baran, 2016), aesthetics (Kaplan, 1979), environmental quality (Kabisch et al., 2021; Nasar, 1988; Shu & Ma, 2020), perception of safety (Iqbal, 2021; Sreetheran & van den Bosch, 2014), and proximity (Zhai & Baran, 2016). Therefore, making activity areas visible from the perimeter of the park, introducing attractive and flexible landscape components, providing shortcuts through the park, arranging walkways to traverse areas of diverse activity, and providing adequate seating add to an engaging and positive atmosphere that attracts users.

However, not all park users engage in physical activities. Some people use the park for restorative purposes as well. The restoration here refers to the psychological and physiological healing processes evoked by environmental conditions (Joye & van den Berg, 2011). According to environmental psychology literature, natural elements and environments provide a good opportunity for restoration and relaxation (Purcell et al., 2001; van den Berg et al., 2003). Ulrich (2002), for example, found from several studies that simply viewing specific types of nature and garden scenes significantly ameliorates stress within only five minutes or less. Similarly, Bodin and Hartig (2003) found that people perceive running in a park to be more psychologically restorative than running in the urban environment. Therefore, the park should also focus on providing good opportunity to the park users for environmental restoration.

Additionally, how people use the parks differs from person to person. Therefore, to ensure that the diverse range of interest groups benefit from the park, the development of a neighbourhood park should seek to achieve a balance between active and passive recreation (Mertes et al., 1995). Mertes et al. (1995) suggests that active recreational facilities should consume roughly 50% of the park's area and the remaining 50% should be used for passive activities, reserve, ornamentation, and conservation as appropriate.

Furthermore, people also love to observe other people and their surroundings. Deasy explains,

“Any area in a park that generates activity will also generate spectators. If the park accommodates any substantial amount of pedestrian traffic, the benches along the walks will be manned by people watchers, If the park supports a population of birds, there will be bird feeders and bird watchers, and if foods can be purchased in the park there will be people clustered at the food service area” (Deasy, 1985).

Therefore, providing seating near walkways, activity areas and entrances is one way to support passive park users and social activity among them.

2.2.1. Introduction to Jan Gehl’s categories of activities

In the context of different types of activities, Jan Gehl in his book *Life between Buildings: Using Public Space*, published first in the 1970s, mentions that the mix of outdoor activities is influenced by several conditions (Gehl, 2011). He established an approach for practitioners to investigate public life from the perspective of inhabitants by surveying and mapping what types of activities people undertake in public and semi-public spaces (Cerrone et al., 2020). Instead of mapping buildings, streets, and parks according to their designated function, he observed and mapped activities that are taking place on those topologies (Cerrone et al., 2020). He then simplified outdoor activities in public spaces into three groups, each of which lays unique demands on the physical environment: necessary activities, optional (recreational) activities, and social activities (Gehl, 2011).

Necessary activities are those that are necessary for people to do in their day-to-day life (e.g., going to school or work, running errands, shopping). They are an integrated, non-optional part of everyday life (Gehl, 2010). As a result, the quality of the place has little impact on the activity.

Optional activities are largely “recreational” activities that are done just when they are desired, as opposed to necessary activities. Due to their non-mandatory character, the time and spatial environment should be favourable for them to take place, so are dependent on exterior physical conditions. The great majority of the most attractive and popular city activities belong to this group of optional activities, for which good city quality is a prerequisite (Gehl, 2010). Therefore, if the optional (recreational) activities occur in high frequency, the physical environment of the area can be considered good.

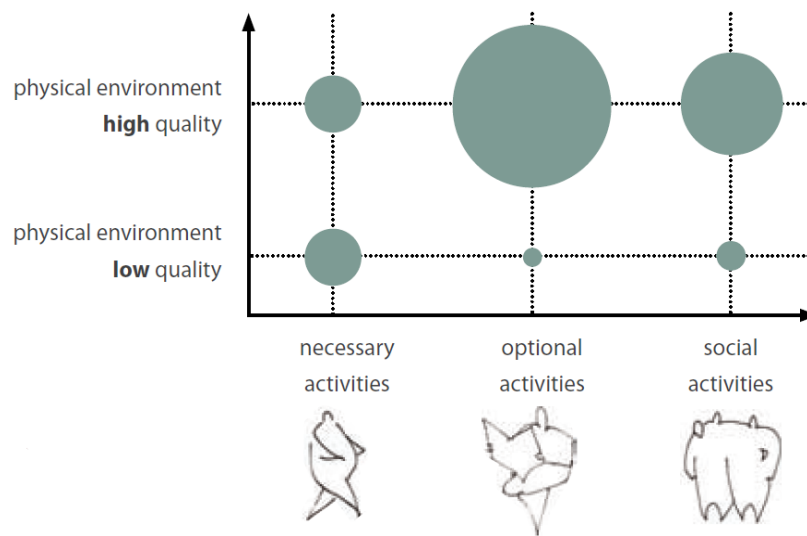


Table 1. Graphic representation of the connection between outdoor quality and outdoor activities (Gehl, 2010).

On the other hand, social activities emerge when people congregate in a place and socialise (Gehl, 2010). These activities are often spontaneous in nature and include all types of communication between people in city spaces (Gehl, 2010). The wide spectrum of diverse activities includes passive “see and hear” contacts (observing people, listening to surroundings, etc), active contacts (greeting, children playing, talking to acquaintances, small talks, etc), and planned common activities (meetings, parades, picnic, demonstrations, etc). The activities are “resultant” because they frequently evolve from activities in the other two categories as people in the same space meet, if only briefly (Gehl, 2010).

Although Gehl’s categories of activities suit all types of public areas, designing a park that provides amenities for all three types of activities would make a park successful for diverse activities and evoke social interactions.

In conclusion, the usability of the park highly depends upon proximity, facilities, accessibility, and the quality of the physical environment. Having said that, if the park environment is negatively perceived, no matter how close it is or the diverse facilities it has, people will be highly discouraged to use the park. Therefore, the usability of the park also highly depends upon how people perceive it.

2.3. Perception of parks

For successful, user-friendly, and high usage of the park, consideration of users' perception of the park is extremely important (Gobster, 1995). Several researchers have drawn attention to the close connection between an individual's behaviour and the built environment. According to Barker (1968), without considering the principles of human experience (the psychological aspect) and the environment (the environmental – spatial aspect), one is unable to improve the living environment. There are many factors that have an impact on people's experiences, use, and behaviour. According to Rachel Kaplan, "when people view a landscape, they are making a judgement that concerns the sorts of experiences they would have, the ease of locomoting, of moving, of exploring, of functioning in the environment they are viewing" (Kaplan, 1979). If the environment is negatively perceived, activities that occur within it may also be avoided and it is quite possible that an individual may be rejecting the environment as much as the activity (Bixler & Floyd, 2016). Sometimes, some aspects of the park's design may be seen as unfavourable by visitors, discouraging visits. Therefore, understanding the users' perception of the park in designing or planning the project is very important.

Although there are many factors that affect the user's perception of the park, the ones that highly affect the usability of the parks are attractiveness (Lee et al., 2019) and safety (Deasy, 1985). Therefore, this thesis focuses on the value of aesthetic experiences and the importance of people's perception of safety in the park.

2.3.1. Aesthetic experiences

Across most landscape components, recreational value is often associated with an aesthetic value (Brown & Brabyn, 2012). The neighbourhood park is an entirely necessary aesthetic and emotional factor in healthy, everyday environments (Cold, 2014). In highly urbanised cities, parks are even more important because it is the everyday landscape for most of the people living in the city. But the aesthetic quality of the park plays a major role in people accepting and using these areas (Nohl, 2001). Sometimes, people might reject the park activity just because they do not like the aesthetic quality of the park. Therefore, intensive landscape planning and landscape design efforts must be made for people to use the park (Nohl, 2001).

In the traditional view of environmental psychology, the aesthetic experiences of laymen differ from those of experts (Kyttä, 2022). An experiment done by (Purcell & Nasar, 1992), concluded that laypeople are influenced mainly by familiarity and emotional experience, while experts are influenced by their aesthetic interest in the formal, outer characteristics and the information it conveys (Cold, 2014). However, there is strong evidence that aesthetical issues are the most important aspects of environmental quality for city residents and workers (Dornbush & Gelb, 1977 as cited in Heath et al., 2000).

Chon and Scott Shafer (2009) identified five dimensions of aesthetic response to the greenway scenes that were interpreted as maintenance, distinctiveness, naturalness, pleasantness, and arousal. Other studies have also found that vegetation and natural areas have positive effects on visual quality (Bjerke et al., 2006; Cengiz, 2014; Schroeder & Anderson, 1984). The research done in the United States and Sweden by Ulrich (1977) revealed that people prefer natural landscape scenes with a relatively high degree of complexity, a clear focal point, an even ground texture, a good depth of field, and a sense that new predictable information is available by moving through the landscape (Balling & Falk, 1982). Furthermore, it has also been determined that visual quality in the park increases with the presence of well-preserved man-made elements, scale, harmony, and colour contrast (Cengiz, 2014).

However, Balling & Falk (1982) argue that people do not visually respond to the natural environment in a unitary way, and there are significant changes in people's preferences. Human responses to the natural environment could also vary because of geographical identity and landscape characteristics (Cengiz, 2014). Therefore, in order to have effective design and management, it is equally essential to understand the local context of the area and the role that parks could play in people's lives.

2.3.2. Perception of Safety

One characteristic that is universally considered to be a fundamental cornerstone of human nature is a concern for personal safety (Deasy, 1985). Neighbourhoods benefit greatly from well-designed and well-used parks and recreation places. However, when parks become hazardous and, as a result, lose their value and service to the neighbourhood, that asset can soon turn into a liability. People become hesitant to use the park (Deasy, 1985). Therefore, maintaining the safety of park and recreation facilities is critical to the welfare of the neighbourhood and has a direct correlation to their use rate. At both personal and societal levels, the experience of being unsafe can be detrimental. (Fabiansson, 2007). Safety can be either subjective or objective. Subjective safety is the sensation or impression of safety, i.e. how individuals subjectively experience risk, whereas objective safety is the actual quantity or danger (Li et al., 2013). To create an inclusive public space, it is important that the various groups of people feel safe and can freely participate in society. Therefore, perception of safety in the park is equally important as actual safety.

A well-designed park serves the needs of the users, is diverse in nature, lessens the fear of crime, and gives them a pleasant image and experience. People's perceptions of safety and willingness to use a space can be influenced by the park design (Deasy, 1985). The physical qualities that the

park users identify with negative experiences generally are low lighting, a complex layout, poor visibility, limited access to help, poor maintenance, physical and acoustic isolation, and vandalism. Over the years, various researchers and practitioners have studied ways of making safer public spaces. Thus, there are things that can be done to create situations that are inherently less subject to criminal activity (Deasy, 1985) and several different interventions for people's perception of park safety (Jacobs, 1992). Some of them that have been repeatedly mentioned by many researchers are:

Natural surveillance: The more people there are, the more surveillance there is (Deasy, 1985; Jacobs, 1992). Concentrating activities in limited areas can also result in the concentration of people. This increased natural surveillance and interactions between diverse groups of people within a community can reduce crime (McKay, 1998) and increase the perception of safety. (Jacobs, 1992).

Park entrance and Foot traffic: An active and visible park entrance will stimulate use while also creating a perimeter of security for the park. An active edge can improve park accessibility for users who may feel more unsafe in the park's interior and have limited mobility, such as children, older individuals, and persons with impairments. Additionally, providing a shortcut to an important destination such as a bus stop, shopping district, or school (Deasy, 1985) can generate foot traffic in the park and promote regular use. This can be enhanced by adding activities and features that make walking through the park more attractive and welcoming than walking down the street, either at the intersection or closer to the pathway.

Visibility: In terms of visibility, the perception of safety is often associated with openness, long views (Hur et al., 2010; Schroeder & Anderson, 1984), signs of development, nearby populated areas (Schroeder & Anderson, 1984), and adequate amount of lighting in dark times (Nasar & Bokharaei, 2017). Overgrown trees and vegetation play a significant role in negatively affecting people's perceptions of safety. They can not only block the view but also create a place for ambush. To increase space accessibility and safety, such barriers need to be eliminated (Gehl, 2011). Improved lighting, on the other hand, will allow for more night-time surveillance and enhance people's perception of safety.

Additionally, protected play areas for young children (Deasy, 1985), park furniture which works as a source of creating surveillance and social connection (Iqbal, 2021), and a strong feeling of ownership among users (Deasy, 1985), and proper maintenance automatically generate perceived safety.

2.4. Collective image of the park

How users perceive the park environment and what activity they observe or perform in the park connects them with the park in their own individual ways. This connection with the physical environment, the way they experience it, creates a mental image of the park.

Lynch (1964) in his book *The Image of the City* writes that nothing is experienced by itself, but always in relation to its surroundings, the sequences of events leading up to it, and the memory of past experiences (Lynch, 1964). These experiences, as well as the sum of beliefs, ideas, and impressions that people have of a place, creates a mental image of a place (Kotler et al., 1993). This image is the result of a two-way process between the individual and his environment (Lynch, 1964). But when these numerous numbers of individual images are combined, a collective public image of a place is formed (Lynch, 1964). This image of a place is important as it incorporates concepts including visual image, reputation, the sense of place, and the identity of the people (Clouse & Dixit, 2018).

Likewise, identifying the collective public image of the park is important as it encompasses notions such as park identity, sense of belonging and visual image, which can affect users' perception of the park.

Operationalising Lynch's theory (1964) of 'the city image and its elements', from his book *The Image of the City* should help identify the collective public image of the park and how the elements of the park can be classified.

2.4.1. Introduction to Lynch's city image and its elements

The city, according to Lynch (1964), an urban planner and a writer from United States, is all about how people perceive it. In his book *The Image of the City*, he writes:

“There seems to be a public image of any given city which is the overlap of many individual images. Or perhaps there is a series of public images, each held by some significant number of citizens. Such group images are necessary if an individual is to operate successfully within his environment and to cooperate with his fellows. Each individual picture is unique, with some content that is rarely or never communicated, yet it approximates the public image, which in different environments, is more or less compelling, more, or less embracing.” (Lynch, 1964, p. 46)

Some elements of the city help an individual paint a unique image of the city. These elements are referred to as paths, edges, districts, nodes, and landmarks.

Paths: Paths are the channels along which the observer customarily, occasionally, or potentially moves (Lynch, 1964). Streets, canals, and railways are some of the examples of pathways. They are a significant element of the city because the people observe the city while travelling through these paths.

Edges: Lynch (1964) defines edges as the boundaries between two phases, linear breaks in continuity: shores, railroad cuts, edges of development, and walls. Such edges can be more or less penetrable barriers that separate one zone from another, or seams, which are lines that connect two sections.

District: Districts are the medium-to-large sections of the city, conceived of as having two-dimensional extent, which the observer mentally enters “inside of”, and which are recognizable as having some common, identifying character (Lynch, 1964). Texture, architecture style, usage, colours, terrain are all physical features that may be used to designate districts. Always

identifiable from the inside, they are also used for exterior reference if visible from the outside (Lynch, 1964).

Nodes: Nodes in the city, according to Lynch (1964), may be primarily junctions, places of a break in transportation, a crossing or convergence of paths, or may also be simply concentrations, which gain their importance from being the condensation of some use of physical character. They act as a reference point for observers. Some of these concentration nodes are the focus and epitome of a district, over which their influence radiates and of which they stand as a symbol (Lynch, 1964).

Landmark: Landmarks are another type of point-reference, but in this case the observer does not enter within them, they are external (Lynch, 1964). Landmarks are distinguishing features that stand-out from their surroundings and are easily recognisable. They are usually a rather simply defined objects such as building, sign, store, or mountain (Lynch, 1964), often visible from distant and used as reference.

2.5. Conclusion on theoretical review

From the literature review, it is clear that a neighbourhood park is a fundamental unit that supports both recreational and social activity in a neighbourhood. It is often located in the centre of the neighbourhood and has diverse facilities suitable for all age groups. However, even when several facilities are available, the sheer presence of a park does not ensure its utilisation.

While planning a neighbourhood park, it is important to strike a balance between active and passive recreation to ensure that the park serves a wide variety of interests. Additionally, close proximity, accessibility, presence of nature, sense of security, and suitable urban furniture are some of the aspects that contribute to people's contentment with their local park. The park's immediate users, however, are not the only ones who can benefit from it. If the park facilitates indirect users, such as passers-by, the frequency of the park users will increase the park's activity for the majority of the time. Therefore, a park that facilitates all three types of activities

mentioned by Gehl (2010): necessary, optional (recreational), and social, will result in a park that is successful for a variety of activities and elicits social connections.

Additionally, the environmental quality and how users perceive the park also affects the use of a park. If the environment is negatively perceived, despite having good facilities, people might get discouraged to use the park. Although there are numerous aspects that influence a user's perception of a park, the aesthetics and safety of the park have a significant impact on its usage. Some of the features that enhance users' aesthetic experiences which can be summarised from the literature review are naturalness, pleasantness, maintenance, cleanliness, harmony, clear focal point, and colour contrast. On the other hand, some of the park features that can enhance users' perception of safety are natural surveillance, active foot traffic, visibility, social connection, and a strong feeling of ownership.

Similarly, how users perceive the park environment and what activity they observe or perform in the park connects them with the park in their own individual ways. This connection with the physical environment, the way they experience it, creates a mental image of the park. This image, when further overlapped with several other individuals' images, creates a collective public image of the park. Identifying this collective public image of the park is important as it encompasses notions such as park identity, sense of belonging and visual image, which can affect users' perception of the park.

Furthermore, sometimes the park's design may be perceived as undesirable, deterring users from visiting. Therefore, the design of the park itself plays an important role in its use. As a result, in recent years, when a park is constructed, the characteristics of the location, the neighbourhood's socio-demographic structure, population density, and residents' desires have all been thoroughly analysed to assist planners and designers in designing a better park. Despite all of this, the extent to which the park is used can only be determined once the park comes to use. As a result, analysing user behaviour in the park environment is the only way to understand the park's success and activity.

2.6. Research objectives

This thesis aims to research the factors that affect park use and park activities based on users' activity and their experiences in the park environment. For this study, this thesis will be taking Hyväntoivonpuisto park as its focus area and will be conducting a post-occupancy evaluation of the park which will be answering the following questions:

- I. What kind of activities take place in Hyväntoivonpuisto park and how does the park location and design facilitate these activities?
- II. What is the relationship between users' aesthetic experiences, their perception of safety and the activity in the park?
- III. What is the collective public image of Hyväntoivonpuisto park?

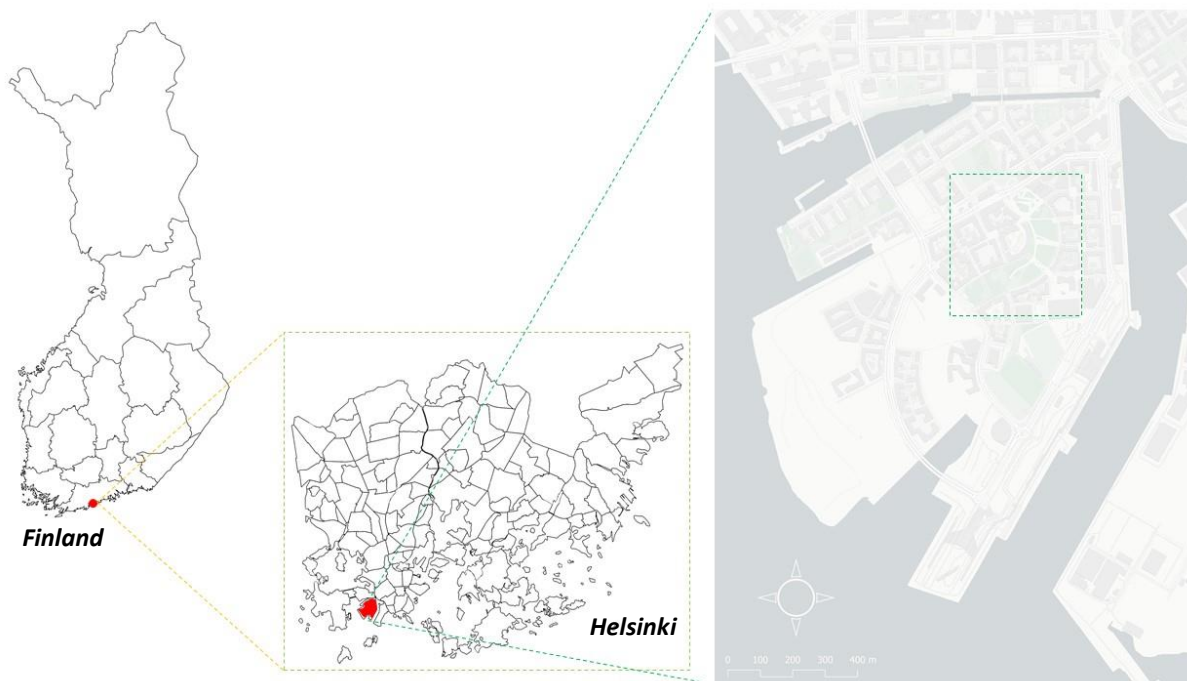
To do the post-occupancy evaluation, a thorough understanding of the characteristics of the Hyväntoivonpuisto park, its physical setting, and design intentions is necessary. As a result, the next chapter describes the context, surrounding areas, design aims and the design principles of the park prior to conducting the post-occupancy evaluation.

3. Site area and its characteristics

3.1. Context

The study area of this thesis is the Northern part of Hyväntoivonpuisto park in Jätkäsaari, in the Länsisatama district. It is a new district in the Southwest tip of Helsinki and is an extension of the inner city by the sea. Jätkäsaari, which earlier was a harbour port, is now a diverse urban district that offers residential, recreational, commercial as well as office facilities. The construction of the whole area has not been completed yet, but there are already more than 14165 people living in it (Helsinki, 2022). Once it is completed in 2030, it is estimated that it will be a home for more

than 21,000 residents (Helsinki, 2021). Since Jätkäsaari is a densely built area, the park Hyväntoivonpuisto is an essential element as the functional and central recreational neighbourhood park (City of Helsinki, 2004). It is a green oasis of eight hectares and is considered the green backbone of the district. Although the park stretches up to one kilometre, Länsisatamankatu cuts the park into two halves which physically separates the Southern part of the park from the Northern. Although the Southern part of the park is yet to be completed, the Northern part of the park was completed in June 2020 and came to use immediately after (Hämäläinen, 2020). Therefore, this thesis will only focus on the Northern part of Hyväntoivonpuisto park.



Map 1. Location map of Jätkäsaari.

The Northern part of Hyväntoivonpuisto park was designed by VSU architects, an architecture firm from Oulu, Finland. The park's primary function is to serve as a year-round recreation space of good quality with a variety of activities that supports the utilisation of the park. The park has been designed to withstand time: everything in the park should last 300 years (Palosaari & Koivisto, 2020).



Image 1. Northern entrance of the Hyväntoivonpuisto.



Image 2. Children biking in the park.



Image 5. Masterplan of Hyväntoivonpuisto park (designed by VSU Architects).



Image 3. View of the park while entering from the bridge.



Image 4. Hillock during winter where children sledge.

3.2. Site surroundings and accessibility

The park is bordered by Vällimerenkatu in the North and Länsisatamankatu in the South. In its Eastern and Western edges, there are mainly residential blocks with their rescue routes opening towards the park. Additionally, many other primary streets that are connected to the park are Malagankatu, Livornonkatu, and Jätkäsaarenkuja on the West, and Juutinraumankatu, Suezinkatu, Kap Hornin katu, Rionkatu and Hyväntoivonkatu on the East and South-East respectively (Google map, 2022). The cycling route, which connects to the park through bridges over Vällimerenkatu and Länsisatamankatu and runs throughout the park, is a fast and unobstructed connection to Ruoholahti and the seafront.

The park area is a large car-free area which is 550 metres long and 88 metres wide, with an area of five hectares. There is one kindergarten yard, two public playgrounds, one sports field in the park, and lots of open green areas for spontaneous activities. It holds underground facilities for car parking and a waste management system which are accessible from Vällimerenkatu and Länsisatamankatu. Although the park is connected to the building blocks, there is an additional traverse route between the park and the buildings. These traverse routes are further connected to its parallel road with the 15 metres wide road.

The Ruoholahti metro station is 10 minutes' walk from the park while the tram stations are quite close to the park. Although elevated from the road level, there are stairs and ramps to the main roads on both sides. They have been designed to be accessible according to the basic level of accessibility of the city of Helsinki, i.e., 1:20 for bikes, and 1:15 and 1:20 for walking. The rescue routes of buildings around the park have been designed for basic levels of accessibility (Heinonen, 2010).



Image 5. Masterplan of Hyväntoivonpuisto park (designed by VSU Architects).



Image 6. Children playing in kindergarten playground.



Image 7. Children playing in open playground.



Image 8. Children playing with parents in sports field.



Image 9. Open playground from the walkway intersection.



Image 10. Park users enjoying sun during winter.



Image 11. Art retaining walls representing cliffs.



Image 5. Masterplan of Hyväntoivonpuisto park (designed by VSU Architects).



Image 12. View to a construction site where another park (Southern part of Hyväntoivonpuisto) is being built.



Image 13. View of the park from Southern end of the park.

3.3. Design Intent

When the planning of the Jätkäsaari district was taking place in 2007, the Northern part of Hyväntoivonpuisto was the first to be designed among the town plans.

“There was nothing when we started the planning and there were no people who we could ask what they would want. We imagined ourselves living there and asked ourselves what we would want in that situation and designed accordingly!” (Outi Palosaari, VSU Architects, 2022)

Long before Jätkäsaari was changed into a port harbour, it was an archipelago where residents of Helsinki enjoyed seasonal activities. Later in 1911, it was changed into a port harbour, which was further moved to Vuosaari in 2008 (Heinonen, 2010). The history of the park and the needs of the future residents of a dense city was the main inspiration for the park design.

“The place and its spirit are the greatest influences on the park’s story. The place, an old harbour, awoke strong associations. This story has been a source of inspiration in the design. In the end, the most important thing is whether the park can be realised and the functionality of the finished park.

“ – Tommi Heinonen, VSU Architects (Heinonen, 2010)

The main design intention behind this park has been to give people a feeling of naturalness and long views from the highland, similar to the environment it provided when it was an archipelago. Additionally, raising the park area above the elevation of the existing terrain on earth fill would enable light traffic bridges to span the main roads (Helsinki, 2009), providing people an unobstructed route from Ruoholahti to the seafront. Therefore, the ground level of the park is the highest point in Jätkäsaari where the level difference of the series of landscapes varies from +5 metres to +12 metres.

The massing of the park was inspired from 18th century English gardens which usually had lots of grass and lawn areas, free spaces for open activities, small hills (*Image 4, pg. 18*), and various sized trees (Heinonen, 2010). Therefore, the park has a variation of both densely planted spaces and open areas. Densely planted areas or forest gardens have a mixture of deciduous, coniferous, oaks, and many other trees to give a forest-like atmosphere and withstand extreme weather conditions (Palosaari & Koivisto, 2020). Meanwhile, open grassy pleasure grounds offer openness and places for spontaneous activities. Accordingly, effort has been made in the vegetation to suit diversity and wholeness (Palosaari & Koivisto, 2020).

The rolling terrain gives a character to the park and the placement of the trees plays an important role in the windy nature of the area, reducing and creating a pleasant microclimate (Heinonen, 2010). The trees are carefully paced on a grid, giving unobstructed long views and a sense of direction at the same time. Bush coverings have been deliberately avoided to enhance the openness of the park and to omit unsafe enclosed spaces (Heinonen, 2010). The connections between different ground covers are on the same level without any obstruction, allowing free-flowing movement of people and encouraging them to use all the areas of the park.

The play areas are well equipped with proper lighting and are placed near the intersections (*Image 6,7,8, and 9, pg. 20*). The circular playgrounds are fenced with steel mesh for children's safety. The surface of the playgrounds is sunken below the grasslands and bordered with RCC (Reinforced Cement Concrete) walls for noise absorption and less disturbance in other parts of the park (Heinonen, 2010). The circular shape and the bright colours on the playgrounds represent oil tanks and colourful containers, reminiscent of the past port harbour (Heinonen, 2010). The concrete art retaining wall (*Image 11, pg. 21*) in both the entrance of the park is both sculptural and functional. Its varying shapes create memories of the beach cliffs previously located in the area (Palosaari & Koivisto, 2020).

Overall, the park has a minimalistic design and functional space which is accessible for all. It is located in the heart of Jätkäsaari and has a good connection to neighbouring areas. It serves as a large courtyard for the adjacent buildings, allowing for a variety of activities. The architects of the park prioritised openness, naturalness, unobstructed long views, safety, multi-functional

spaces, and easy maintenance while designing the park. However, having all these features does not ensure that they have been acknowledged by the users. Nevertheless, conducting a post-occupancy evaluation, analysing survey participants' park usability, and understanding the park from their perspective might help understand whether the park functions and design intent has been fully realised. Additionally, it should also assist in determining how the park's physical characteristics influences park user's activities and perceptions of the park environment.

4. Methods

Since the scope of this research is to create a post-occupancy evaluation of the Northern part of Hyväntoivonpuisto park, this chapter introduces the methods applied and explains the processes of how the research took place.

4.1. Post-occupancy evaluation

Post-occupancy evaluation (POE) is a systematic evaluation of a designed and occupied setting from the perspective of those who use it (Cooper Marcus & Francis, 1998). It utilises a variety of research methods that allow researchers and professionals to develop familiarity with and competence in their use, and helps create a multidimensional image of use, misuse, and non-use within the studied settings (Cooper Marcus & Francis, 1998). Its research techniques are similar to environmental psychology approaches and are based on people's perceptual capacity to rate the quality of the environment. The most significant approaches are the questionnaire and the walk-through method.

Post-occupancy evaluation of parks is crucial to help increase park usage. For people to see some positive meaning in a place, it must resonate with their lives and evoke patterns of use that create bonds with the space (Carr et al., 1995). The more the park matches the main subjectively expressed preferences of the dominant actual and potential user groups and the better planners

understand these preferences, the more we can expect people to welcome such parks (Bahriny & Bell, 2021). Thus, this research method is important for designers and planners as it helps gain a much deeper understanding of how people and places interact. Clare Cooper Marcus and Carolyn Francis in their book, *People Places: Design Guidelines for Urban Open Space* mentioned that undertaking this kind of research can be informative not just to gain understanding, but also to design or redesign a space. Therefore, being aware of people's subjective preferences and perceptions about urban parks is necessary to establish a pattern for their design and development (Bahriny & Bell, 2021).

Although post-occupancy evaluation in parks and open spaces are not as common as that of a building, there is a fair amount of research that has used this method, such as the research done by Zhang et al. (2021b), Tang et al. (2022) and Talib et al. (2015). Since post-occupancy evaluation is based on people's perception and experiences of the area, it requires data collection. There are various approaches taken by researchers to collect data. The environmental psychologist Rachel Kaplan conducted a post-design evaluation on a park using a questionnaire to find out why it was more successful than other parks (Kaplan, 1980). Researchers such as Whyte (1980), Gehl (2011), and Cooper Marcus and Francis (1998) have used a diverse range of tools to record the way people use space, from video equipment to activity mappings, to inform suggestions for better and more inclusive design (Goličnik & Ward Thompson, 2010). Similarly, many post-occupancy evaluations have been done in urban parks using observation and behaviour mapping. Some of these evaluations were conducted to understand the relationships between the design and use of the urban parks (Goličnik & Ward Thompson, 2010), to discuss the public perception in order to determine the problems (Qin et al., 2020), and to understand the sensitivity of children's outdoor activities and environmental characteristics (Cosco et al., 2010). Some other methods used over the past few years include web-based or map-based questionnaires, reviews of internet comments (Zhang et al., 2021a), and even visual surveys.

However, the most common approach used by researchers seems to be questionnaire survey and behaviour mapping. Thus, this thesis focuses on the PPGIS (Public Participation Geographical Information Systems) method for collecting map-based data through Maptionnaire.

4.2. Data collection

The data for this study was collected using the PPGIS (Public participation Geographical Information Systems) method using Maptionnaire. Since Maptionnaire is a participatory online mapping tool that blends traditional surveys with online maps, the survey was done completely in a digital format using digital annotations. Otherwise, there also exists analogue PPGIS which allows participants to identify spatial locations on a hardcopy map, using stickers and markers (Brown et al., 2014). It combines the practice of GIS and mapping at local levels to produce knowledge of the place (Brown & Weber, 2012). The advantage of using a PPGIS tool rather than a traditional survey is that it allows locals to provide both spatial and non-spatial data in the context of their location.

The term PPGIS was established in the National Centre for Geographic Information and Analysis (NCGIA) in 1996 to describe how GIS technology could support public participation in a variety of applications (Sieber, 2006). Since then, PPGIS approaches have been used to understand location-specific human values, place values, perceptions, behaviour, and preferences for future land use and development (Brown et al., 2014; Brown & Weber, 2012; Fagerholm, Raymond, et al., 2021) (Brown et al., 2014; Brown & Weber, 2012; Fagerholm, Raymond, et al., 2021). Similarly, much research has been done with respect to urban parks and green spaces using PPGIS, and Professor Gregory G. (Greg) Brown has made many influential contributions to this field. Some of the many examples are research studies conducted to map visitor park experience and environmental impacts (Brown et al., 2009; Brown & Weber, 2011), to understand the correlation between physical activity and other health benefits in urban parks (Brown et al., 2014), to explore dominant landscape values (Brown & Brabyn, 2012), to identify the relationship between place

attachment and landscape values (Brown & Raymond, 2007), and to assess the multiple benefits of urban parks and green spaces (Brown et al., 2018).

In Finland, various research initiatives have used online mapping to study residents' spatial activity patterns to understand children's environmental experiences and active behavioural pattern (Kytta et al., 2012), to investigate how people's recreational activities, values, and land use preferences are related to the protection level, biodiversity, and cultural heritage values of nature-based tourism areas (Tolvanen et al., 2020), and to understand how residents perceived the change in their outdoor environment during early phases of the COVID-19 and how nature contributed to their subjective well-being (Fagerholm, Eilola, et al., 2021).

Various researchers have done comparative studies between traditional surveys and internet-based surveys. The results showed that data provided by Internet methods are of as good quality as traditional paper-and-pencil methods (Gosling et al., 2004); it does not appear to be tainted or repeated (Gosling et al., 2004); it reaches those who were underrepresented in traditional methods earlier (Brown & Kytta, 2014; Horelli et al., 2010); it has the ability to make customised maps to enhance respondent understanding and engagement (Brown et al., 2014); it reduces data collection costs, increasing efficiency of data entry, and increases precision in the mapping (Brown & Reed, 2012); as well as generates and integrate public knowledge and opinions for decision making (Zolkafli et al., 2017). Additionally, it has the capacity to generate spatially explicit, subjective descriptors of place that can assess the social acceptability of land use planning and management alternatives (Brown, 2017).

However, there is no assurance that PPGIS data would be more influential than knowledge generated through more traditional public participation processes (Kahila-Tani et al., 2019). There are multiple factors that influence the data's quality and usefulness. Sampling design and implementation are critically important factors in assessing the credibility of a PPGIS process (Brown, 2017). Random sampling seems to result in more balanced sample representativeness compared to volunteer sampling methods (Kahila-Tani et al., 2019). In addition to the sampling method, other factors that influence the quality of the PPGIS data include mapping effort, accuracy and precision, and the type of spatial data collected (Soinio, 2021).

4.3. Questionnaire design

Prior to the PPGIS data collection, the usability of the PPGIS website was tested on both cell phones and laptops. As the survey was held both in Finnish and English languages, some spelling errors in Finnish words were noticed and corrected. In addition, technical possibilities regarding the selection of different map layers and drawing tools for drawing routes, among others, were made as easy as possible to give participants a smoother experience to complete the survey. All these mentioned issues were addressed before launching the survey.

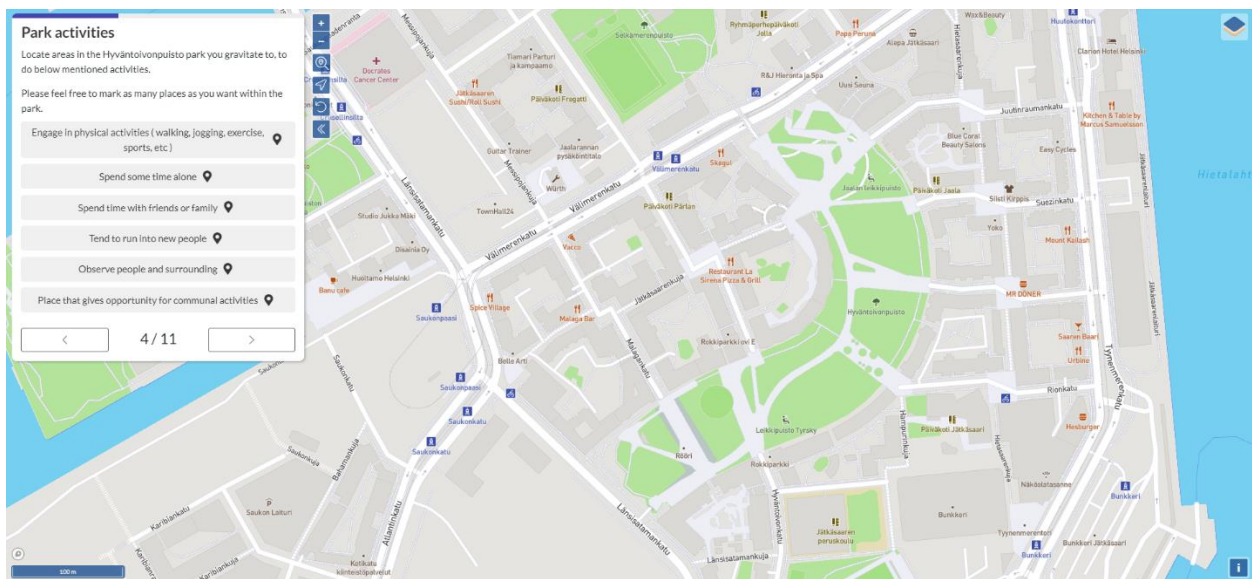


Image 14: Example of the PPGIS survey questionnaire for the study of Hyvääntoivonpuisto park

The PPGIS study website consisted of 11 pages in total, with mapping tasks, open-ended questions, and general non-spatial questions. The screenshots of the entire questionnaire can be found in Appendix A, pg. 87 – 94, Images 15 - 28. An opening screen introduced the purpose of the survey to the participant and asks for their consent to proceed with the survey. The approximate time taken to complete the survey, confidentiality of the participants' answers, and the language selection options were also included on the first page. The following two pages

included a few non-spatial questions regarding their background information (gender, year of birth, having a pet, etc.), and park visit frequency respectively. The rest of the five pages included mapping tasks relevant to this study. These pages opened with the Google Satellite map interface with Hyväntoivonpuisto park (latitude: 60.15; longitude: 24.9) zoomed at the level of 17.5. The interface provided an option to choose the base map between Google Satellite and Mapbox base map, according to their visual preferences. The panel on the left included icons with their descriptions that were expected for participants to locate within the park.

As this thesis focuses on the usability and user's perception of Hyväntoivonpuisto, the questions were structured on different pages accordingly. The mapping tasks first focused on questions about park activities. Although the questions were constructed to reveal the hot spots where different categories of activities classified by Gehl (2010)- necessary, optional (recreational), and social activities - occur, the actual questions asked were kept simple by using common terminology that everyone can understand. It was further recategorized to Gehl's (2010) categories of activities while analysing the data, which shall be explained in detail in following chapters. This approach was taken to avoid explaining what necessary, optional (recreational), and social activities are to the survey participants, which could lead to confusion and a negative attitude towards the survey. Therefore, the locations asked to be marked were places within the park where they want to engage in physical activities, spend some time alone, spend time with friends and family, meet people, observe people and surroundings, and places that give an opportunity for communal activities. The categories were made as diverse as possible because people visit their neighbourhood park for various purposes, ranging from physical activities and social gatherings to restorative purposes. Additionally, each icon, after being located within the park, opened a pop-up question that further asked the reason for their selections and their typical activity in the selected area. This helped to analyse the influence of the built environment on people's activities.

The second mapping task of the survey asked participants to draw the routes they would use for recreational purposes and for running errands (*Image 23, Appendix A, pg. 91*). It further opened a pop-up window with questions about their typical mode of travel on those routes and the reason for their use. These questions about the route were asked to identify the popular

pathways, the reason for their use, and to reveal if the central location of the park helps keep the park active through direct and indirect users.

The subsequent mapping questions were regarding participants' aesthetic experiences and their perception of safety in the park (*Image 24. and Image 25, Appendix A, pg. 92*). These questions were kept simple by asking them to mark places that they find aesthetically pleasing and aesthetically unpleasing in the park. Similarly, they asked participants to mark places that they find safe or unsafe in the park. These questions were followed by an open question which allowed them to give a reason for their choices. The last mapping question was about the popularity of children's parks (*Image 26, Appendix A, pg. 92*). This was specifically asked because children's parks had been observed as the most active areas within the park.

Pages nine and ten included more open questions and additional background questions respectively. The open questions wanted to know the participants' viewpoints regarding what they value the most in the park, what they would change if they had a chance to, and what they think about other people's park usage. On the other hand, the background questions asked more about the participant's level of education, occupation, mother tongue, and effect of weather on their park activity. Finally, the last page included a thank you note and an icon of LinkedIn and Facebook with a request to share the survey on their social media page if they like (*Image 28, Appendix A, pg. 94*).

4.4. Study participants

The data collection for the study was conducted between 17th March and 12th April 2022. Three strategies were used to recruit participants to the survey. The first method was with the help of social media, i.e., by posting the survey URL link on Facebook. The other two were in-person requests in the park and the use of posters.

The PPGIS website URL was posted twice on four private groups of Jätkäsaari residents on Facebook, on Thursday noon, 17th of March, and on Tuesday morning, 22nd of March. These times

were specifically chosen because according to blog posts by social media engagement tools (Statusbrew (2021) and Keutelian (2022)), the best days to post on Facebook is from Tuesdays to Fridays, with higher visibility of Facebook posts being at 9 a.m. and the peak traffic being noticed in the early afternoon between 1 p.m. and 3 p.m.

Another method used to recruit participants was an on-site, in-person request to park users during two sunny weekend afternoons. Most of them were parents of the children playing in the designated playgrounds of the park. The last method was by using posters (*Image 29 and 30, Appendix A, pg. 95*). A poster was designed containing the QR code, as well as the website URL of the PPGIS survey. At first, the posters were hung only on the fences within the park. They were the fences around the dog park and three playgrounds within the park, including the playground of the Jaala kindergarten playground. Later, to receive survey responses from diverse age groups, a request was made to two schools in the surrounding area. Hence, with the help of a teacher from Jätkäsaari Kindergarten, and after getting permission from the principal of Jätkäsaari Primary School, the posters were placed on the notice boards in those two schools.

Overall, the maximum number of survey participants, i.e., approximately 87.5% of 127 participants who completed the survey, had accessed the survey through a URL link posted on Facebook.

4.5. Data analysis

The PPGIS application Maptionnaire allows certain types of analysis like making point maps, heat maps, and charts such as bar graphs, pie charts, and doughnut charts. However, for detailed analysis, QGIS (Quantum GIS) and Microsoft Excel were easier to use. Hence, data analysis was done using these two different applications which will be explained below.

4.5.1. Data preparation

After the completion of data collection, all the data were downloaded from the PPGIS web server. The application allowed the file to be downloaded in two formats, Microsoft Excel open XML

spreadsheet and (.xlsx) and a comma-separated values (.csv) file. The further raw questionnaire data were studied and filtered more carefully in Microsoft Excel before exporting it to QGIS, which is a free and open-source geographic information system application.

The excel sheet consisted of 16 pages with all open questions and answers in one sheet and each mapping question with its coordinates and answers to pop-up questions on separate pages. Each survey respondent had their own specific ID number which was included on every page, which helped to attach an individual's spatial and non-spatial answers in the analysis. Since the survey was made available in both English and Finnish, all the answers that were in Finnish were translated to English using a translation tool in Microsoft Excel. The data whose sum needed to be calculated in further analysis and were in “true” and “false” format was switched to “1” and “[]” respectively. Additionally, to summarise the non-spatial complex variable data, PivotTables were made.

Once the data filtration in Excel was completed, each of the sheets was exported in .csv (comma-separated values) format and imported in QGIS. Excel was then only used to make comparison charts to find relations between different entities in the table.

1	Respondent ID	Publication ID	Submitted	First Active	Publication Consent	Language	Zoom	wkt	What do you typically choose to do here?	Walk	Jog/ run	Exercise/ aerobics	Yoga/ meditation	Sports	Why this place in particular?	Do you generally come alone or have a company?
2									checkbox-list-10rvQqkx	checkbox	checkbox	checkbox	checkbox	checkbox	text-entry-10rug8yg	checkbox-list-10mgxlv6
3	33ae4u4kos37	9t7tlx4gpo4z		2022-03-16 20.25.10	TRUE	en		17,01 POINT (24.91619 60.15728)	[false,false,true,false,false]							[true,false]
4	63uc3xw77sk6	9t7tlx4gpo4z	2022-03-17 07.25.09	2022-03-17 07.18.26	TRUE	en		19,1 POINT (24.918161 60.157428)	[true,false,false,false,false]			1				[true,false]
5	3uv4ff6lx4dvn	9t7tlx4gpo4z	2022-03-17 11.55.26	2022-03-17 11.47.47	TRUE	en		17,5 POINT (24.916472 60.158726)	[true,false,false,false,false]	1						[true,false]
6	68rta9oyb238	9t7tlx4gpo4z	2022-03-17 12.20.02	2022-03-17 11.55.58	TRUE	en		17,5 POINT (24.915462 60.15935)	[true,false,false,false,false]	1					I usually just pass through, I live closeby and my way	[true,false]
7	82za78z3udh7	9t7tlx4gpo4z	2022-03-17 13.02.12	2022-03-17 12.09.02	TRUE	en, fi		17,5 POINT (24.916216 60.15895)	[true,false,false,false,false]	1					Nice view	[true,false]
8	7at8jff3j67	9t7tlx4gpo4z	2022-03-17 12.18.26	2022-03-17 12.14.00	TRUE	fi		16,8 POINT (24.918809 60.15831)	[true,false,false,false,false]	1						[true,false]
9	6ia4agj9r2ca	9t7tlx4gpo4z		2022-03-17 12.17.13	TRUE	fi		17,5 POINT (24.918352 60.158171)	[true,false,false,false,false]	1					That's where I live. I live in the house	[false,true]
10	7b33gy962y23	9t7tlx4gpo4z		2022-03-17 12.22.34	TRUE	fi		17,5 POINT (24.918662 60.157597)	[false,true,false,false,true]		1			1 ☺ next door.	[true,false]	
11	4ph3k3sya2p8	9t7tlx4gpo4z	2022-03-17 12.39.45	2022-03-17 12.26.34	TRUE	fi		17,04 POINT (24.917615 60.15816)	[true,false,false,false,false]	1				Daily everyday mobility route	[false,true]	
12	34z7ek26wpe9	9t7tlx4gpo4z	2022-03-17 12.54.17	2022-03-17 12.51.13	TRUE	fi		17,07 POINT (24.917821 60.157813)	[true,true,false,false,false]	1	1				[true,true]	
13	2y4ywt9ke8w4	9t7tlx4gpo4z	2022-03-17 13.02.26	2022-03-17 12.57.37	TRUE	en		16,65 POINT (24.917742 60.157492)	[true,true,false,false,false]	1	1				[true,true]	
14	8f9xg4y2j4	9t7tlx4gpo4z		2022-03-17 12.58.38	TRUE	en		16,45 POINT (24.91707 60.157794)	[true,false,false,false,false]	1					[true,false]	
15	2d96uak8klu3	9t7tlx4gpo4z	2022-03-17 13.02.59	2022-03-17 12.58.53	TRUE	en		17,5 POINT (24.917437 60.157183)	[true,false,false,false,false]	1					[true,false]	
16	6vu4kup9gei8	9t7tlx4gpo4z	2022-03-17 13.09.19	2022-03-17 13.02.30	TRUE	fi		17,5 POINT (24.918325 60.158127)	[true,false,false,false,false]	1				It's a road ☺	[true,false]	
17	32tia2j2p2ia	9t7tlx4gpo4z	2022-03-17 13.14.00	2022-03-17 13.04.45	TRUE	fi		17,5 POINT (24.918116 60.157578)	[false,false,false,true,false]				1		[true,false]	
18	73spr7us6s97	9t7tlx4gpo4z	2022-03-17 13.41.41	2022-03-17 13.26.03	TRUE	en		16,86 POINT (24.916408 60.156713)	[true,false,false,false,false]	1				This route takes me to the walking route	[true,false]	
19	88s9bliv9jt4	9t7tlx4gpo4z	2022-03-17 13.37.43	2022-03-17 13.26.39	TRUE	fi		16,84 POINT (24.917674 60.157261)	[true,false,false,false,false]	1				Walkway	[true,true]	
20	4mb3ued6ywd3	9t7tlx4gpo4z	2022-03-17 13.36.34	2022-03-17 13.31.53	TRUE	fi		16,82 POINT (24.918793 60.158092)	[true,false,false,false,false]	1					[true,true]	
21	9l4gzx4zh29	9t7tlx4gpo4z		2022-03-17 13.43.47	TRUE	fi		17,5 POINT (24.916673 60.156871)	[true,false,false,false,false]	1				Close, easy to pass through without the hustle and bustle of cars	[true,false]	
22	9yv3fds7mog8	9t7tlx4gpo4z	2022-03-17 14.04.08	2022-03-17 14.00.29	TRUE	en		17,5 POINT (24.917014 60.157025)	[true,false,false,false,false]	1				Good for walking	[false,true]	

Table 2. Screenshot of Excel sheet ready to export in QGIS.

4.5.2. Data sub-categorisation

Both spatial and non-spatial data were exported to QGIS for a more detailed comparative study. For example, the background information of the survey participant was merged with the spatial data they provided, which further helped compare the similarities or dissimilarities between the choice of location based on age, gender, frequency of visits, and others. For this reason, it can be said that this thesis used both qualitative and quantitative methods to analyse the data. Once all the data were exported, and all the layers were turned on, the nodes, the landmarks, the popular paths in the park were easily identifiable. However, as the focus of this thesis was to evaluate the park design based on park users' activity and their perception, reasons behind the popularity and unpopularity of each of the locations marked needed to be carefully analysed. Additionally, as this thesis research also wanted to reveal the hotspots where Gehl's (2010) categories of activities are centred in the park, the data related to park activities were re-categorised into necessary, optional (recreational), and social activities. It was further sub-categorized in QGIS for more detailed analysis. Only then, heatmaps of each category were made.

4.5.2.1. Park uses and activities

There were total of nine questions related to park use and activities asked to the survey participants. While seven among them were about marking locations, the remaining two were about drawing routes. The locations asked to mark places within the park where they want to 'engage in physical activities', 'spend some time alone', 'spend time with friends and family', 'tend to meet new people', 'observe people and surroundings', 'places that give an opportunity for communal activities', and 'park areas where children play'. The routes asked to draw were 'recreational routes' and 'routes for running errands.' In order to reveal Gehl's categories of activities in the park, these nine questions were recategorized into necessary, optional (recreational), and social activities.

While the necessary activities were revealed by the routes drawn for running errands, the optional (recreational) activities in the park were disclosed by the places marked for engaging in physical activities (alone), spending some time alone, and recreational routes. On the other hand, places marked for activities such as spending time with friends and family, children's play area, observing people and surroundings, meeting new people in the park, and park areas suitable for community activities reveal social activities in the park. Some of these activities that have now been categorised under social activities also fit under the categories of optional (recreational) activities. This is because social activities are "resultant" activities as they frequently evolve from necessary and optional (recreational) activities (Gehl, 2010). Therefore, all the activities that congregate people and evoke communication between them have been categorised as social activities.

In addition to questions related to park use and activities, each question further opened with a pop-up question asking for a more precise selection of activity and a reason for it. For example, once the participant marked a location for physical activities, the pop-up question (Image 19, Appendix A, pg. 89). opened with three additional questions to further know about which physical activity they typically do in the park, the reason behind choosing that place, and whether they have company while doing so. The content analysis of the responses to these pop-up questions not only revealed which activities are more popular in the park but also revealed why the activity is conducted in that specific location. Additionally, the reasons given by survey participants also helped create sub-categories for deeper analysis. More about this subcategorization process will be discussed while discussing data sub-categories of perception.

4.5.2.2. Perception

As mentioned earlier, the questions regarding people's aesthetic experiences were kept as simple as possible without any additional pop-up questions other than a single open question where they could explain their selection. From the literature review, it was found that although there are various factors that affect people's perception of the environment they are in, people do not

visually respond to the natural environments in a unitary way (Balling & Falk, 1982), and there are significant changes in people's preferences. If the pop-up question with multiple-choice options were included, the options could limit them from expressing their deeper thoughts and mislead them. For this reason, the sub-categories were later made, while analysing the data, after finding similarities among the reasons given by the survey respondents. The content analysis helped create categories, which further were represented on an individual map. For example, the most common reasons given by the survey participants for locating the place they find aesthetically pleasing were related to plantations, park design, views, and landforms. Therefore, based on the reasons given by the participants, the points in the shapefile of "aesthetically pleasing" were separated into four different shapefiles representing four different categories, i.e., plantation, park design, views, and landforms (*Maps 18, 19, 20, and 21, pg. 58*). This made it easier to create separate maps to visualise exactly where and why the participants find the place aesthetically pleasing. This shall be discussed in the finding section of the report.

A similar process was applied to the locations marked by the survey participants regarding their perception of safety. Each reason given for participant's perception of safety was noted, and further sub-categorised into four different topics on four different maps. This will be discussed in more detail, in the latter sections of the report.

4.5.2.3. Collective image of the park

After understanding and analysing all the survey data related to park activities and perception, some of the important park features were recognized. But in order to form a collective public image of the park by operationalising Kevin Lynch's (1964) theory of city elements, all the data received from the survey participants were overlapped on a single map. Further on, five elements, i.e., paths, edges, districts, nodes, and landmarks of the Hyväntoivonpuisto park were identified.

5. Findings

5.1. Participants and their frequency of park visits

There were 218 survey participants, among which 127 completed the survey till the end and submitted it, 73 partially completed the survey, while 18 did not proceed further than the first question. Since each location marked was very important for this research, and as Maptionnaire auto saved every input data whether it was submitted by the respondent or not, all the locations marked within the park were considered. Only 18 responses were considered inadequate and deleted. Therefore, the total number of responses that were used for research findings was 200. Since the survey was made available in both English and Finnish, among these 200 responses, 45 completed the survey in English, 10 used both Finnish and English languages, and 145 participants used Finnish to do the survey. There was a total of 934 locations marked by all participants. The average time spent completing the survey was between 4 and 12 minutes.

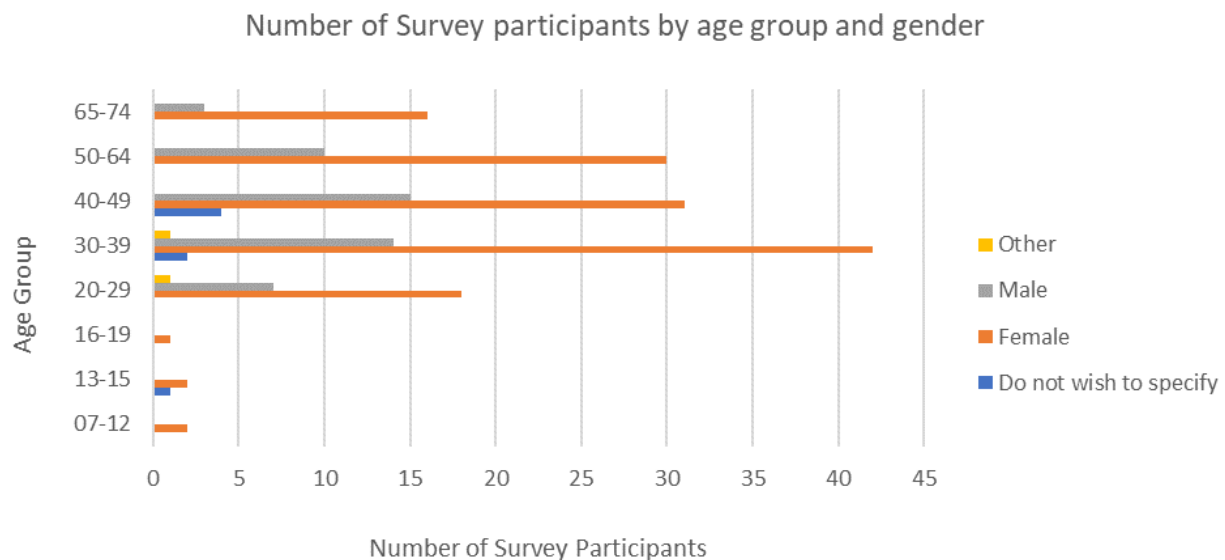


Table 3. Number of survey participants by age group and gender.

Among 200 survey participants, 71% of them were female, 24.5% were male, 1% were "others", and 3.5% did not wish to specify. The youngest participants fell under the age group between 7 and 12 while the oldest in the age group between 65 and 74. The highest number of survey participants were from the age groups between 30-39, 40-49, and 50-64. However, as seen in Table 3, the number of female participants is dominant in all age groups. Therefore, women are over-represented in this survey. According to Facebook user statistics in Finland in 2022 (NepoleanCat, 2022), the majority of users are female. As a result, one reason for the survey's greater female participation rate might be because the majority of respondents were recruited using Facebook. Another factor might be that more female parents were spotted in the children's playground where the survey posters with QR codes were hung, compared to male parents.

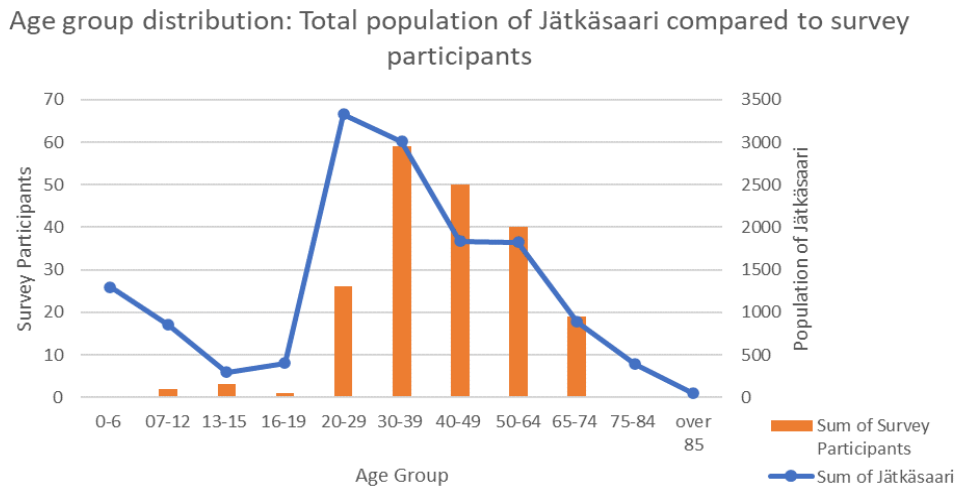


Table 4. Age group distribution: total population of Jätkäsaari compared to survey participants.

To determine if certain age groups were over- or under-represented, a comparison was done between the age groupings of the total number of survey participants and the entire population of Jätkäsaari. In comparison to the overall population of Jätkäsaari, which was 14165 by 2021 (Helsinki, 2022), the number of answers received was just 1.4%. However, table 4, reveals that the ratio of the total number of survey participants to the total population of Jätkäsaari in the age categories 30-39, 50-64, and 65-74 is almost the same. Among the other age groups, the number of survey participants in the age group 13-15, 16-19, and 20-29 is significantly lower compared to the total population of that age group. The under-representation of age groups 0-6

may be due to the survey's requirement of literacy, whilst the under-representation of age group 75-84 may be attributable to the survey's restrictions of only being available in digital format.

Except for 2.5% of the total participants, all of them lived in Jätkäsaari. The majority have full-time jobs and master's degrees. 84% of the participants spoke Finnish, 5% Swedish, 2% English, and approximately 8% spoke other foreign languages.

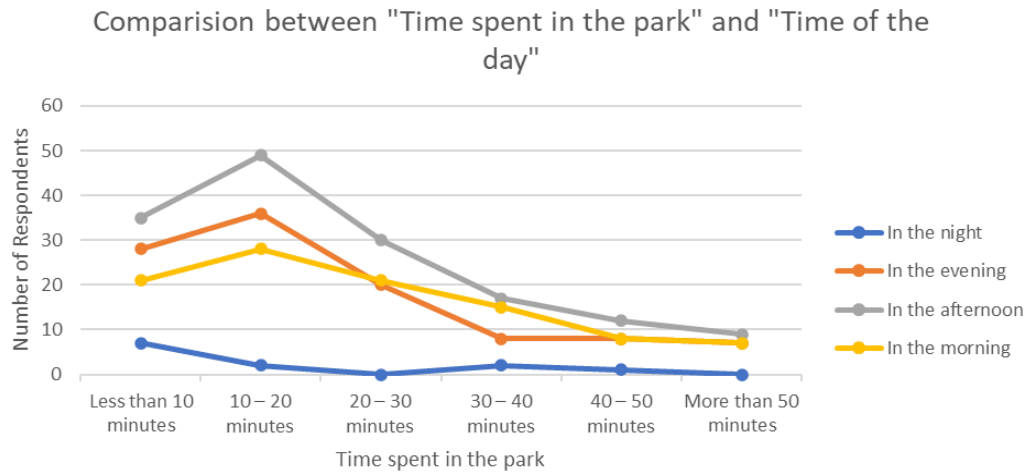


Table 5. Frequency of park visits by survey participants. Comparison between "time spent in the park" and "time of the day"

When asked how often they visit the park, 54% of total respondents said they visit daily or almost daily, 21% said they visit several times a week, 19% said they visit several times a month, and the remaining 6% said they visit once a month or less than once a month. However, the majority of participants spend just 10 – 20 minutes at the park, while the minority spends more than 50 minutes. Almost 40% of them visit the park in the afternoon, 28% in the morning, another 28% in the evening, and only 4% visit at night. When the data for "time spent in the park" was compared to the data for "time of day," the findings still indicated that independent of the time interval, the highest number of participants happened during the afternoon, while the lowest occurred at night. The number of participants spending 20-30 minutes, 40-50 minutes, and more than 50 minutes in the park in the morning and evening are almost the same. Therefore, from Table 5, it can be concluded that the majority of the participants spend less than 30 minutes, mostly during the afternoon, morning, and evening.

5.2. Park uses and activities

Based on the survey responses, the most common activities in the Hyväntoivonpuisto park are walking, spending time with friends and family, and children playing in the playground. Among 934 locations marked by 200 survey participants, 435 locations marked were for park activities done in the park. 28% of the total mapped locations were places where participants engage in physical activities, 23% were places where participants spend time with friends and family, 24% were places where children play, 10% were places where participants like to spend some time alone, 9% were places from where they like to observe the people and surroundings, 4% were places where they tend to meet new people, and remaining 4% were marked for places which offer communal activities.

Likewise, the total of 229 routes were drawn by the survey participants and, among which, 49.7% were routes for running errands and 50.3% were recreational routes.

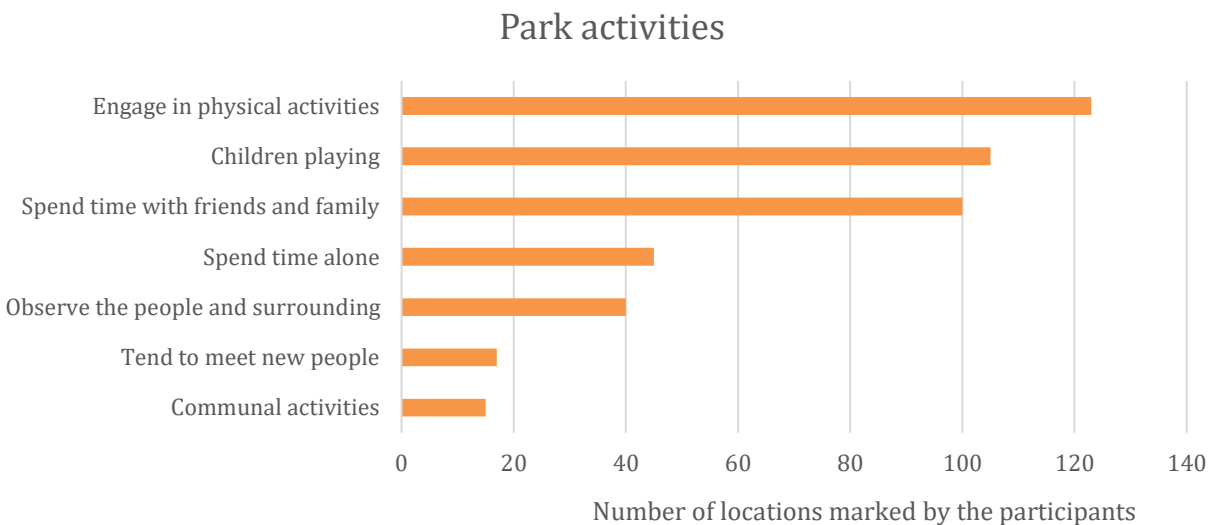


Table 6. Park activities seen in Hyväntoivonpuisto

Each of these activities was then looked separately to identify the hotspots and understand how park design supports these activities. All the data related to activities will be discussed in terms of Gehl's (2010) classification of activities: necessary, optional (recreational) and social activities.

5.2.1. Necessary activities

Necessary activities extend from the survey participants who pass through the park for running errands. Among 114 participants who use the park for necessary activities, almost 79% of them walk through the park, around 10% walk as well as use bikes, only 2% use only bikes, and remaining 9% only drew the route without mentioning their typical mode of transport while travelling along it. The majority of them either used the park in the morning or in the afternoon. Additionally, when the routes drawn in the responses for recreation purposes and for running errands were compared, it was found that 47% of the survey respondents visited the park for both purposes, while the remaining 53% only used it for errands, i.e., necessary activities. This shows that the park also attracts indirect users who otherwise do not use the park. Some of the most common reasons given by survey respondents for choosing to walk through the park for running errands were:

"I use this route when walking to a metro station or to the shops of Ruoholahti." - 9lj8vj6nee38

"I'll get the mail package from the R-kioski." - 6mu3kvo4jsx6

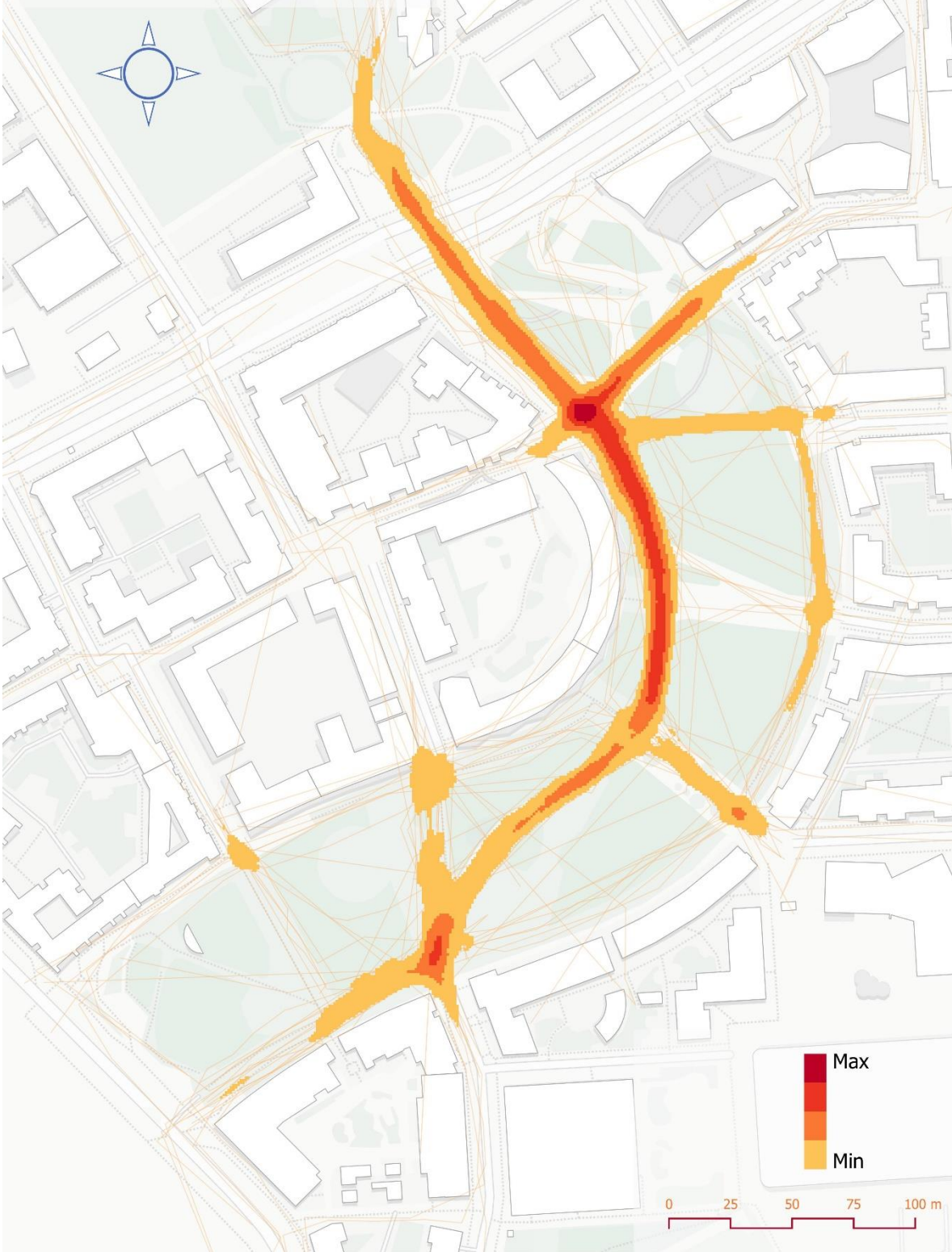
"I typically go to the store this way." - 4rg2rm6ft2n7

"For picking up my child from day-care." - 29o6xxr2unp4

"The shortest route to the tram stops." - 7y2cf48jes34

Most of these reasons mentioned, such as going to school, grocery shopping, metro station, office, etc are the non-optional part of everyday life (Gehl, 2010). These reasons suggest that the centrality and the connectivity of the park attract these passers-by. Additionally, the infrastructures, as well as the functions of the surrounding area, play an important role. In Map 2, it can be observed that the busiest nodes are on the pathways connecting to other neighbourhood facilities such as tram stations, kindergarten, shopping centres, and metro stations. However, the availability of infrastructure and functions of the surrounding area might not always be the reason. The Southern end of the park is closer to the other tram station and a

Routes used by passersby



Map 2. Map showing density of routes used by the passers-by.

shopping market as well, yet the popularity of these streets on the Southern end seems to be much lesser compared to the Northern end. This behaviour could also suggest that the people are either more attracted to the shortest routes or attracted by the presence of other people. However, deeper research with a higher number of participants would be required to support this conclusion.

There were two survey participants with mobility difficulties who used the park for necessary as well as optional (recreational) activities. This shows that the ramps included in the park design makes the park more accessible and that accessibility does facilitate people's activities in the park (Sheng et al., 2021; Zhai & Baran, 2016).

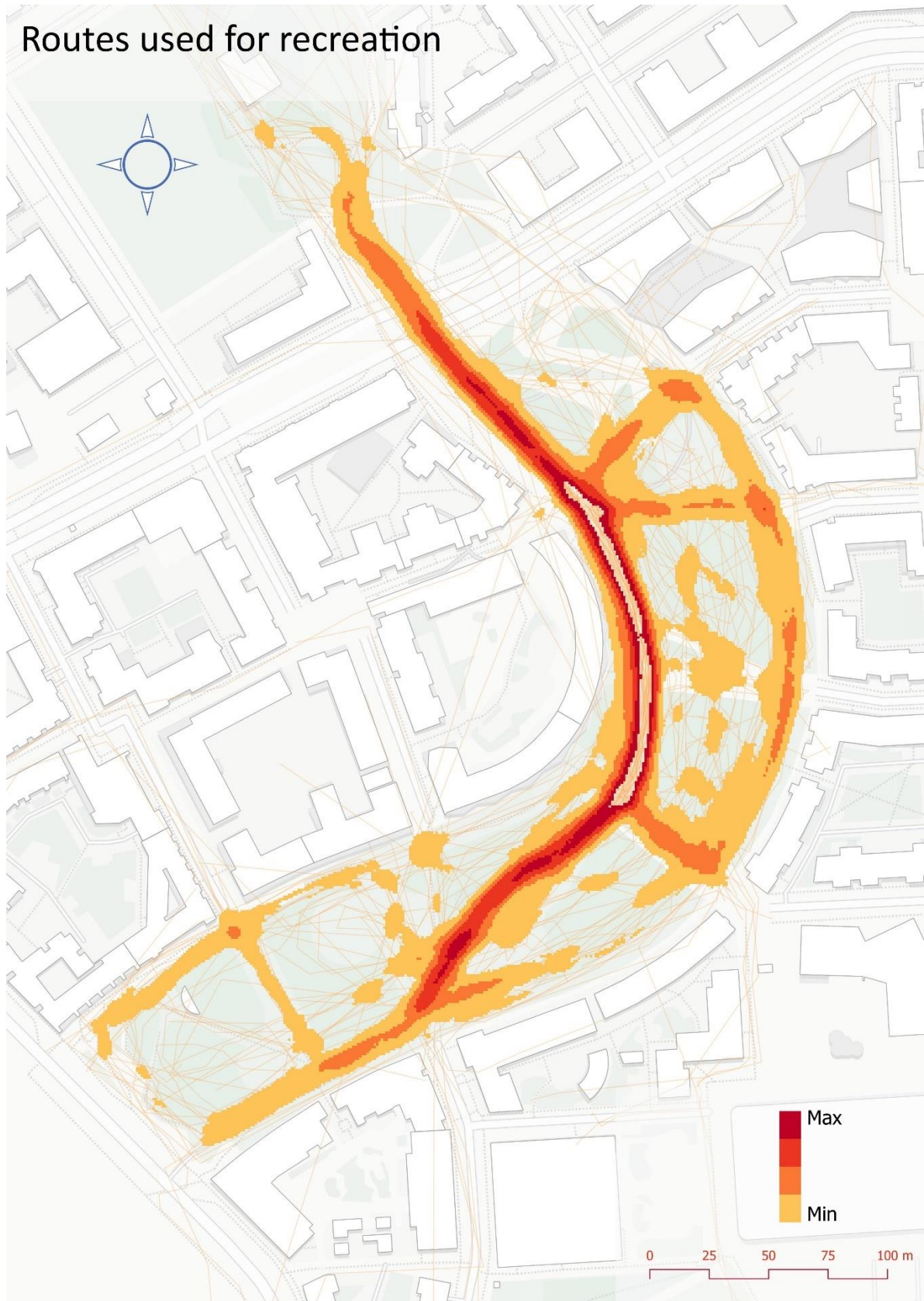
Although weather does not usually affect necessary activities according to Jan Gehl (2010), in this research, the weather does seem to have a notable effect. 40% of the participants said that the weather does affect their activity, 34% said it somewhat does, and only 11% said it does not affect them. This could be due to factors related to park use during winter, which will be addressed while discussing the perception of safety further below.

5.2.2. Optional (recreational) activities

As earlier mentioned, the optional (recreational) activities in the park were revealed by the places marked for 'engaging in physical activities' (alone), 'spending some time alone' and 'recreational routes.'

Walking in the park is the most popular optional (recreational) activity in the park, with 61% of 122 participants claiming that walking is their main physical activity in the park. A similar pattern of dominance was observed when the survey respondents were asked to draw routes for their recreational activities. Among 115 participants who mapped their routes for recreational purposes, 97% of the participants walk in the park, among which 10% ride their bikes as well, while only 2% of the total participants use only bikes for recreational purposes.

Routes used for recreation



Map 3. Map showing density of routes used for recreational walking.

This demonstrates that the majority of participants prefer walking as both their recreational and physical activity in the park.

Map 3 shows the density of recreational routes. Compared to the previous map which showed the density of routes drawn by survey participants for running errands, the movement in this map is free-flowing and not restricted within the pathways. The main light traffic route is still more dominant, but people also use a considerable portion of the grass and hillocks for walking. Furthermore, when compared with the route density map of passers-by, the traverse paths between surrounding buildings and the park appears to be used more for recreational purposes rather than errands. One possible explanation is that the participants are less inclined to rush while coming for a recreational walk and have time to loop around the park for longer walks.

The following are some of the most prevalent reasons why survey participants choose to walk in Hyväntoivonpuisto park for recreation:

“The walls with multiple angles and heights are great for running.” - 2hl3kt8uyw89

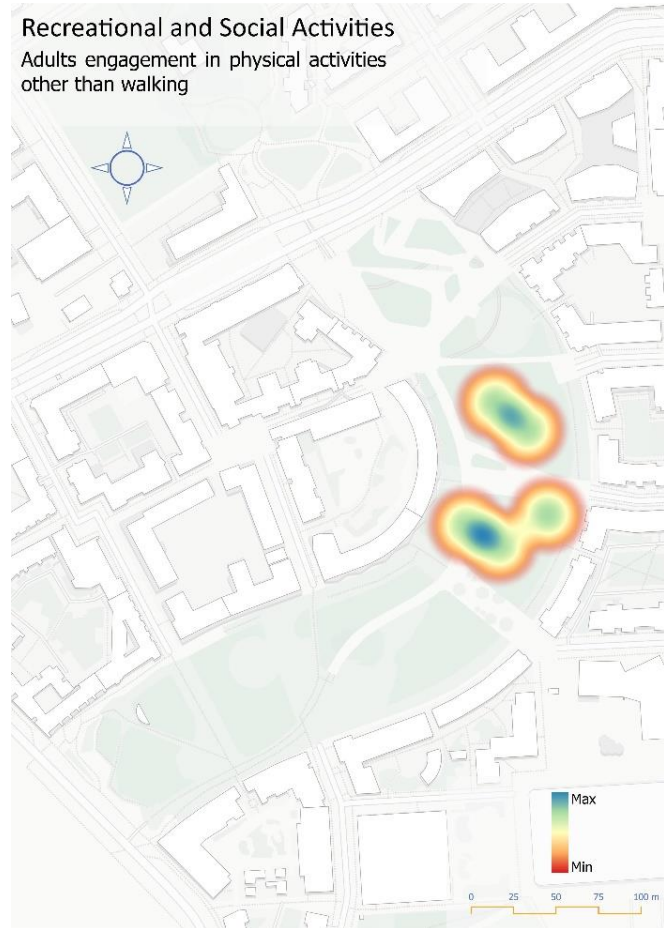
“There's nothing else to do in the park than to walk through.” - 3np7c6r3z3i7

“I'm going to walk from here to Ruoholahti and make some runs through it.” - 6ti7lfa3zfz9

“Near home, benches where you can sit in summer, the sun shines, you see people.” - 6rv8sp79c8x7

Many people choose to walk alone in Hyväntoivonpuisto park because it is closer to their homes and there are not many other green areas nearby. But the physical presence is not the only reason they choose to walk here. Some of the reasons they gave also showed that their choice of route is also affected by the presence of urban furniture, the variation in landforms, the presence of other people in the park, views, and openness, as well as its clear connection to other green areas in Ruoholahti and Hietaniemi. This also suggests that people walk in the park for restorative purposes and simply to be in nature.

On the other hand, participants also stated that they only walk in the park because they do not have any other options. This is evidenced by the fact that only 13% of the 122 participants claimed they engage in other activities such as exercising, yoga, and sports in addition to walking. The Map 4 shows the cluster of places mapped by this group of survey participants which is concentrated on the hillocks and green areas. Having said that, the park was always observed to be more active where the children's playground is located; this was not evident in the survey results when physical activities were mapped because adults made up 97% of the total participants. Fortunately, the survey included a question in which participants were asked to map their child/ren's activities



Map 4. Map showing adults engagement in physical activities other than walking.

and preferences of the play area within the playground. This filled the gap in the survey for child/ren, who were underrepresented. Additionally, it also helped achieve a rational image of physical activities in Hyväntoivonpuisto park. Since child/ren's activity in the playground mostly involves other child/ren or their parents, it evokes interactions and communication between the users. Therefore, this will be further discussed in social activities.

Another optional (recreational) activity seen is to spend some time alone in the park for relaxation and restoration. 45 survey participants out of 200 plotted their favourite places in the park to be alone. This shows that people do not only see the park as a place for physical activity but also as a restorative place. The density of places mapped by these participants is depicted on Map 5.

The following are some of the reasons they gave:

“The sun is shining, and the views are far away.” - 4b8dcw2z9e88

“I live on the edge of it.”- 4lhw43rgj8ja

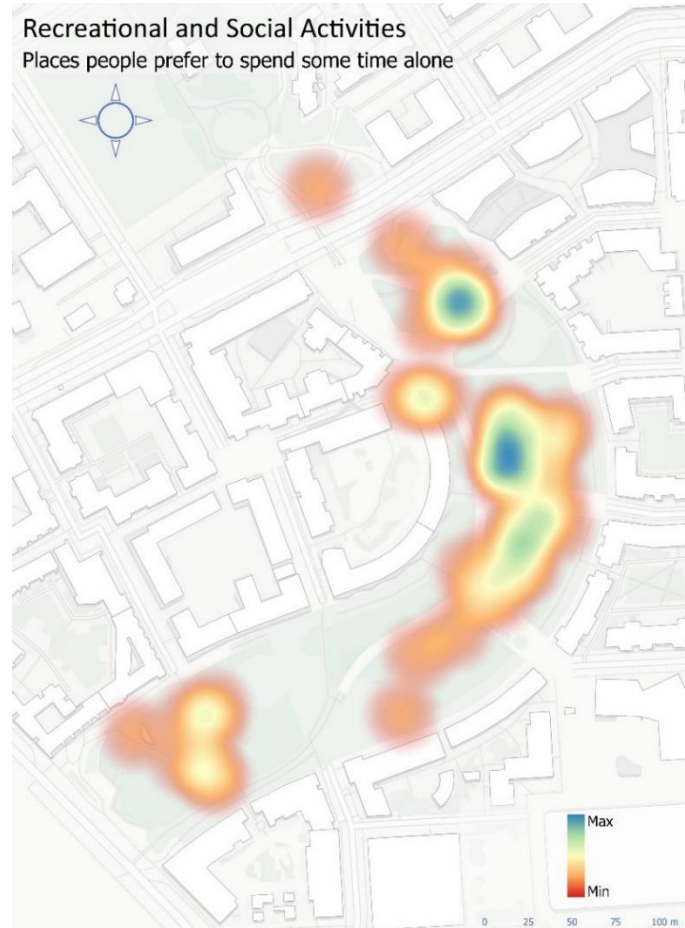
“Extensive grassland area.” - 9aa6cs7hn3u9

The view from the area, the proximity of the place to their house, the presence of trees and plantations, the availability of a café and seats in the park, as well as the presence of sunlight, were some of the key reasons they mapped these places.

The highest concentration is seen in the Northern areas of the park, one which is closer to the entrance and the other in the green field closer to the hillock. One

reason could be that there are more benches in these places. The concentration of people at the Southern end of the park was likewise scarcely visible during prior activities. But in the heatmap of “spending some time alone”, the concentration of markers where participants choose to spend time alone is seen to be high as well. Many among those who marked mentioned that they prefer to spend time there since it is less crowded and has less noise. This is proven to be true by other maps which showed the least activity on the Southern side of the park.

The majority of these concentrations were similarly detected closer to the streets and junctions where people’s mobility is higher, as predicted by the prior findings. This revealed that individuals, although wants to spend time alone for restoration, may have chosen these locations in order to have passive contact (“see and hear”) with other people and the environment.



Map 5. Map showing clusters where people prefer to spend time alone.

5.2.3. Social activities

The locations marked by the survey participants for the activities such as ‘spending time with friends and family’, ‘children’s play area’, ‘observing people and surroundings’, ‘meeting new people in the park’, and ‘park areas suitable for communal activities’ revealed social activities in the park.

As the park has three designated children’s playground and one sports field, the most dominant social activity seen in the park is child/ren playing in the park. 53% of the 122 participants who mapped their own physical activities in the park, also mapped the places where their child/ren prefers to play in the park. The playgrounds appear to have stimulated both recreational and social activities, both among parents and children, as many survey participants said that they play with their children on the playground as well as chat with other children's parents. The following are some of the most prevalent reasons survey participants gave for their children’s play area preference:

“Lots of nice play and climbing elements.”- 9xg7r947jsf8

“We're always going to play here when we're going to go to kindergarten.” - 32tia2ljp2ia

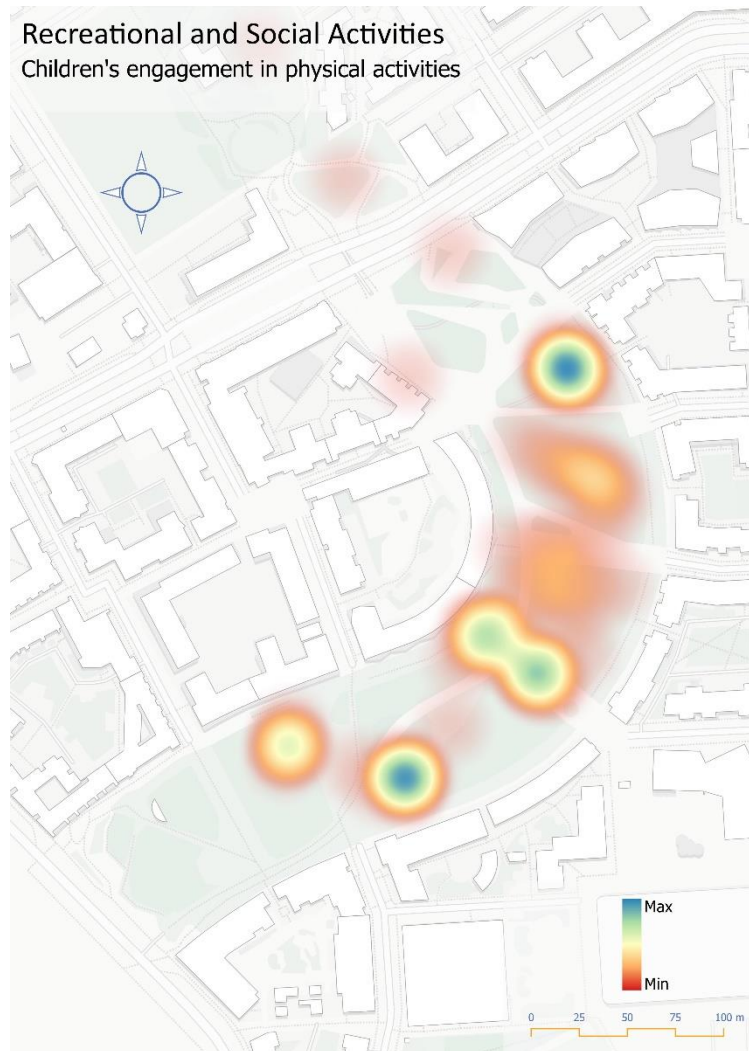
“Nice design elements for climbing and playing, lots of flowers and butterflies around.” - 9xg7r947jsf8

“Play equipment is interesting.” - 4ph3k3sya2p8

“Nice hill for playing, climbing and sledding.” - 9xg7r947jsf8

Among 105 places mapped where child/ren prefers to play, 39% were the open playground which is at the intersection. They appreciate the diversity of play equipment on the open playground, such as the spinning disc, which was mentioned by 10% of the participants’ particularly. Others chose to play in fenced playgrounds, with 26% preferring the kindergarten playground and 30% preferring the other. However, based on the participants’ responses, it appears that many would

prefer the kindergarten playground if it was available to the public during school hours as well, since the equipment there is more suitable for toddlers and pre-schoolers. As seen in Map 6, among other open green areas in the park, the hillocks and retaining wall sculpture were specifically mentioned for sledding in winter and wall climbing, respectively.

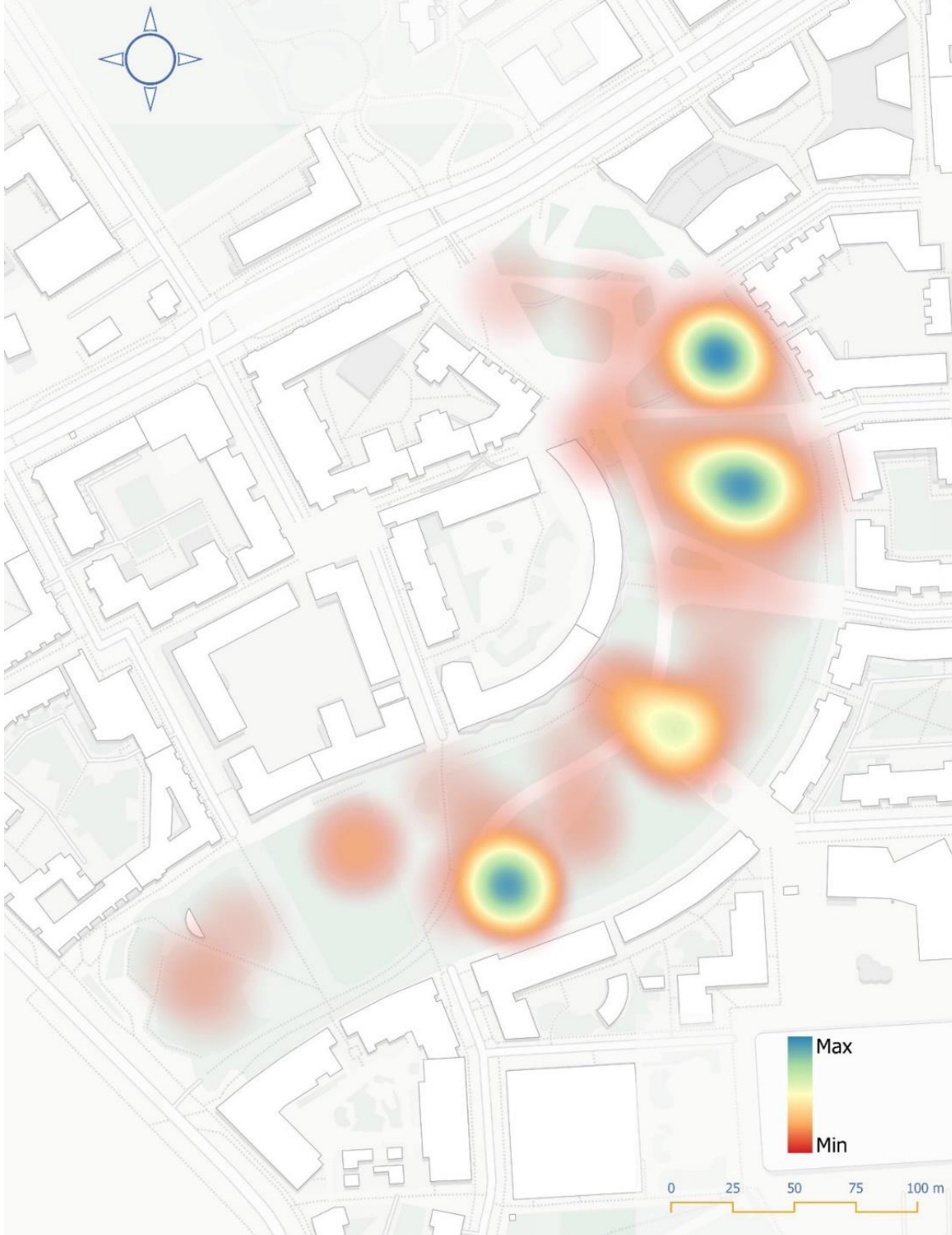


Map 6. Children's engagement in physical activities in the park, marked by their parents

The second most popular social activity in the park is spending time with friends and family, but it was noticed that this category was highly dominated by parents spending time with their children in the playgrounds. Among 99 survey participants who responded and mapped places for this question, 51% had child/ren, and 16% of them had both pets and child/ren. As a result, the largest concentration was once again detected in the playgrounds. To avoid repeating the above-mentioned playground analysis and to learn more about how participants spend their time with friends and family in the park, the data that mentioned playground activity were separated and the remaining ones were divided into four categories based on commonly mentioned reasons, such as places where people chose to picnic, relax, and restore, sit, and converse, and enjoy the views.

Recreational and Social Activities

Spend some time with friends and family



Map 7. Map showing clusters of places where people like to spend time with friends and family.



Picnic

Relax and restore

Sit and converse

Enjoy the views

Maps 8,9,10, and 11: Maps showing clusters of places where people like to picnic, relax, and restore, sit, and converse and enjoy the view (left to right) while spending time with friends and family.

The following are some of the most common reasons given by survey respondents for their selection of places for spending time with friends and family:

"Close and big enough hill, from high you can also see faraway." - 734ays8zii36

"Good, even grass, far enough from all play-areas so it's calm, nice views from the hill." - 7rt4egg6d7ia

"Meet the neighbours on the way to kindergarten or school. Nice seats."- 7se8yj9spf73

"I play in the playground with my child and meet other parents there." - 9xg7r947jsf8

In Maps 8, 9, 10, and 11, although the first hillock has the biggest concentration of survey participants' markings, all three series of hillocks appear to be dominating in comparison to other parts of the park. These places are all open and provide long views. At the same time, the landscape and pine trees give it a more natural atmosphere. Despite the fact that the major concentrations on all four maps appear to be fairly similar, the Map 8, where the picnic is mapped, only has a concentration in the first hillock. The park's Northern portion is less windy than the park's Southern section, which might be one reason. While those who simply "enjoy the

view" appeared indifferent, a picnic being a pre-planned activity, individuals who picnic at the park remain for a long time and hence would seek out a less windy location. It also appears that the concentration of markings where "relax and restore" and "sit and converse " have been mapped are the places where park benches are available. All of these elements show that the park's physical characteristics, urban furniture, and environmental quality have an impact on its utilisation.

Furthermore, 20% of the total participants mapped observing people and surroundings as their activity in the park. Map 12 illustrates the density of locations that people choose for this activity. It is observed that most of the places survey participants marked were closer to the children's park, areas with benches, and on a bridge. Some of the reasons survey participants gave for marking their choice of place for observing people are surrounding are:

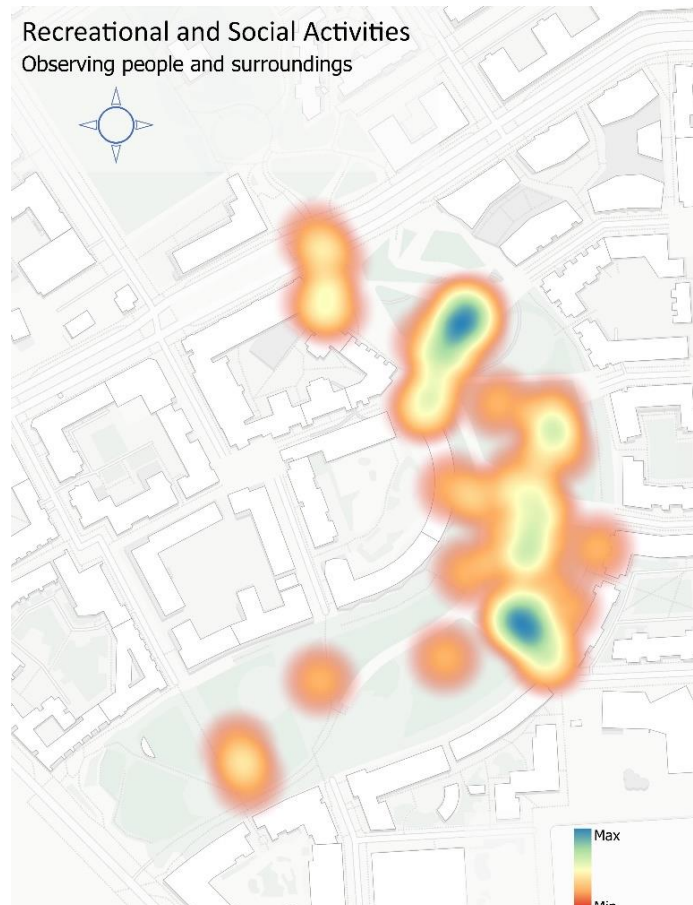
"Close by a skate spot, nice to take photos and enjoy the view." - 3sg77n7y6wj3

"It's nice to sit in peace, but it's still in the middle of people." - 2bz76dc8tyh8

"Nice benches that's sunny." - 6ui7p6nb97xn

"The whole park is actually suitable for watching other people: walking and sitting, but there is a nice life, sound and joy around the playgrounds." - 734ays8zii36

This demonstrates that every place in a park that generates activity also generates spectators (Deasy, 1985). Additionally, placing benches near pathways, activity areas, and entrances has attracted viewers and encouraged

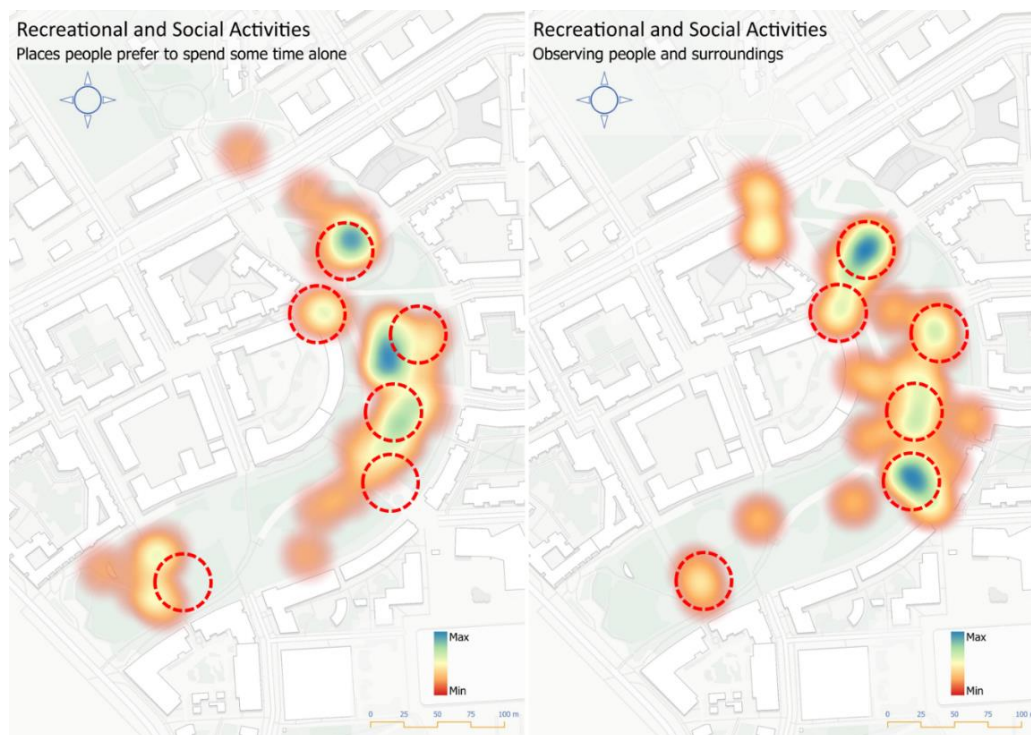


Map 12. Map showing cluster of places from where park users like to observe other people and the surrounding.

social interaction. When the view is fascinating, people pause to look about, and the urban vista from the bridge near the park seemed to have piqued their curiosity.

Additionally, the map depicting clusters of places mapped by the participants where they prefer to spend time alone was compared to the map depicting clusters of places from where they like to observe people and their surroundings. This step was taken to test if the prior findings about people spending time alone in the park, choosing location in order to have passive contact (“see and hear”) with other people and the environment was valid. A striking resemblance between the two maps was noticed.

Although only 5% of them were the same participants who had marked places where they spend time alone, there was a striking resemblance in the clusters created between the places marked by these two groups of participants. This proves that the majority of the people who come to spend time alone in the park still prefer to be in an active surrounding, which indirectly indulges them in a social activity such as “see and hear” contacts.

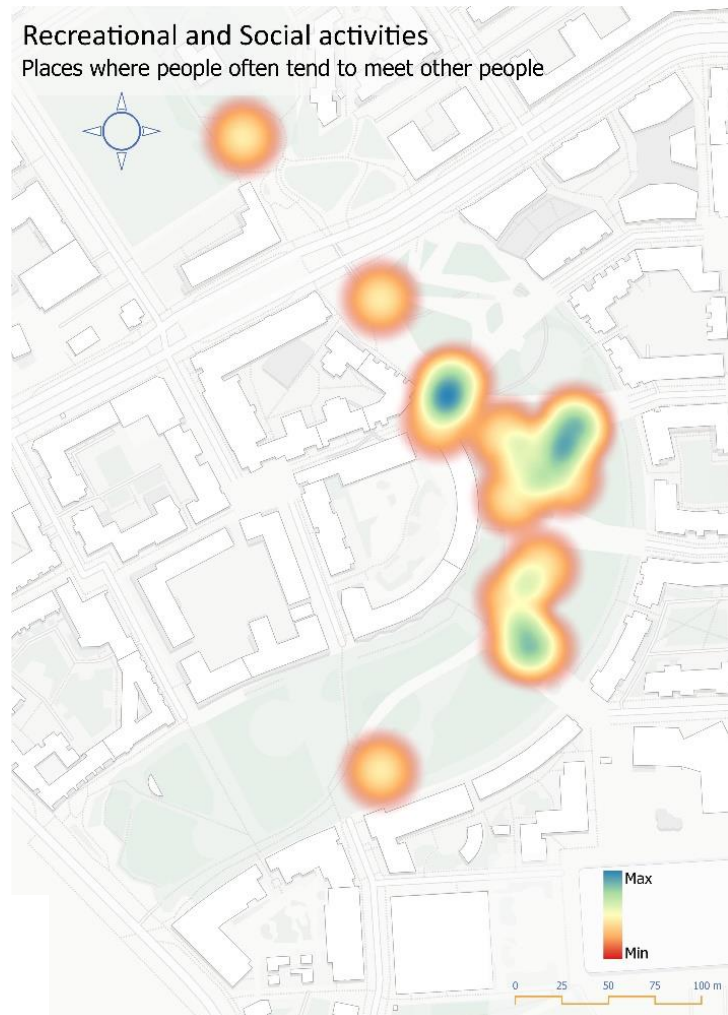


Maps 13 and 14: Comparison between maps showing clusters where people like to spend some time alone and places from where people prefer to observe people and surroundings (left-right). Red circles act as the reference point to compare similarities and differences between two maps.

The other social activity survey participants engage in at the park are greeting or talking to acquaintances and getting involved in communal activities with the neighbours or any other park users. Some of the reasons mentioned for mapping places where they tend to meet acquaintances were:

“I think it is due to people coming from the bridge, not many alternative routes and a nice place to say hello or help someone out who is lost.” - 7rt4egg6d7ia

“It's really nice to meet other dog walkers: it's good for the dog and yourself.” - 734ays8zii36



Map 15: Map showing clusters where people often tend to meet other people.

The survey participants were also asked if they engage in communal activities and which areas in the park, they think can hold such communal activity. Some of the reasons mentioned for the locations they marked were:

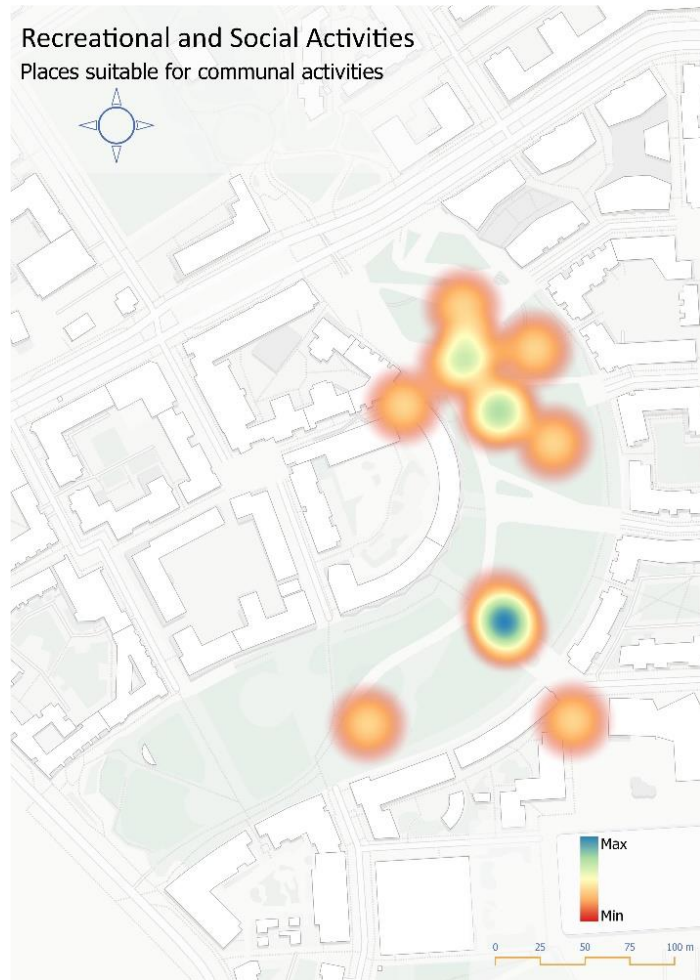
“Nice place with benches and play equipment for sitting, chatting, hanging out, drinking coffee and eating ice cream.” - 9xg7r947jsf8

“In winter, an ice castle has been built here from stained ice bricks so that people make bricks in their homes and bring them here.” - 8ek6bs9mh4s8

Additionally, the kind of communal activities they expect to see in the park are:

“Yoga, outdoor exercise, football, skiing, sledding, building snow castles, picnicking, outdoor concerts.” - 9xg7r947jsf8

“Wood workshop, outdoor gym.” - 6ui7p6nb97xn



Map 16: Map showing places that participants think are suitable for communal activities.

These social activity clusters were found in the same park locations where other optional (recreational) and necessary activities were concentrated, i.e., the children's playgrounds and the crossroads. In fact, the arguments mentioned show that these social activities are natural and involve all sorts of interactions between people and the park. Therefore, in this dataset, all three activities typically occur concurrently.

5.3. Perception

The analysis of the survey participants' perception of the park was informative and straightforward as most of the participants painted a clear pattern of their positive and negative experiences by specifying the reason for mapping the places. Hyväntoivonpuisto park is aesthetically pleasant and safe, according to the majority of participants. Although few of them believe the park to be unsafe, it was noticed that they are the ones who also believe it is visually unappealing. Therefore, this showed that there is a close relation between participant's perception of safety and their aesthetic experiences (Table 7).

However, the findings show that the participants' perception of the park did not highly affect the frequency of their park use. More details will further be explained in the following subchapters.

Relation between Perception of safety and Aesthetic experiences

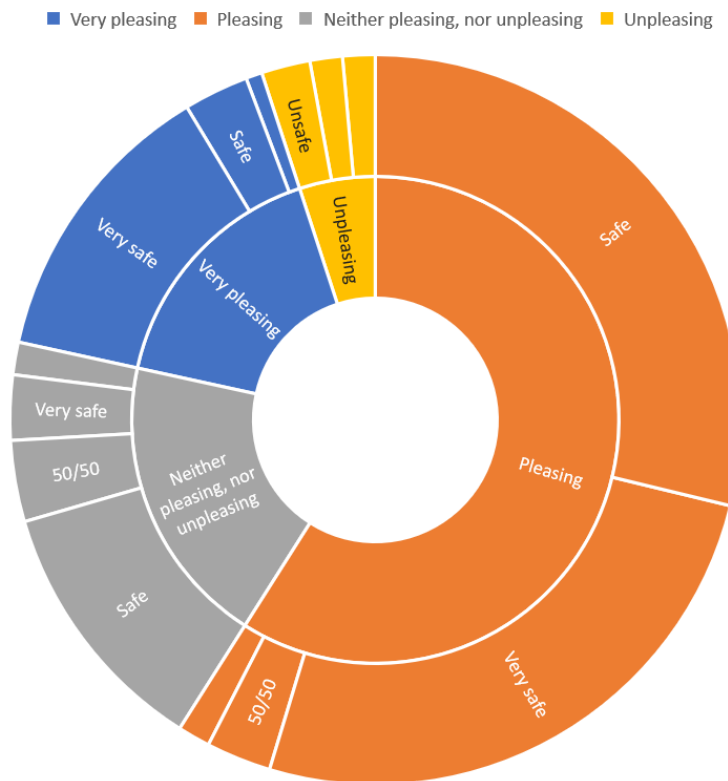


Table 7. Pie chart showing relation between participants perception of safety and aesthetic experiences.

5.3.1. Aesthetic experiences

Among 200 survey participants, 149 shared their aesthetic experiences. Among them, 15% finds their aesthetic experiences in the park to be very pleasing, 60% finds it to be pleasing, almost 19% finds it to be neither pleasing nor unpleasing, and around 5% finds it to be unpleasing. There were none who found the park to be very unpleasing. Regardless of their general view on the aesthetics of the park, most people have mapped both aesthetically pleasing and unpleasing places within the park. Therefore, the number of locations marked are not the same as their answers to the general experience in the park. This suggests that despite having aesthetic preferences in particular locations in the park, it was still possible for people to like the general image of the park. It was also noted that the ones who find the park neither pleasing nor unpleasing, visit the park only once a month or even less.

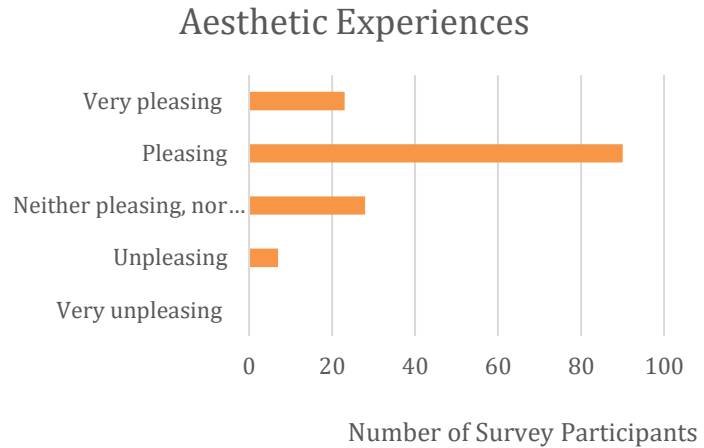


Table 8. Survey participant's aesthetic experience in the park.

5.3.1.1. Aesthetically pleasing

Among 140 places marked by the participants as aesthetically pleasing, 99 places had reasons included for their preferences. Some of them were as follows:

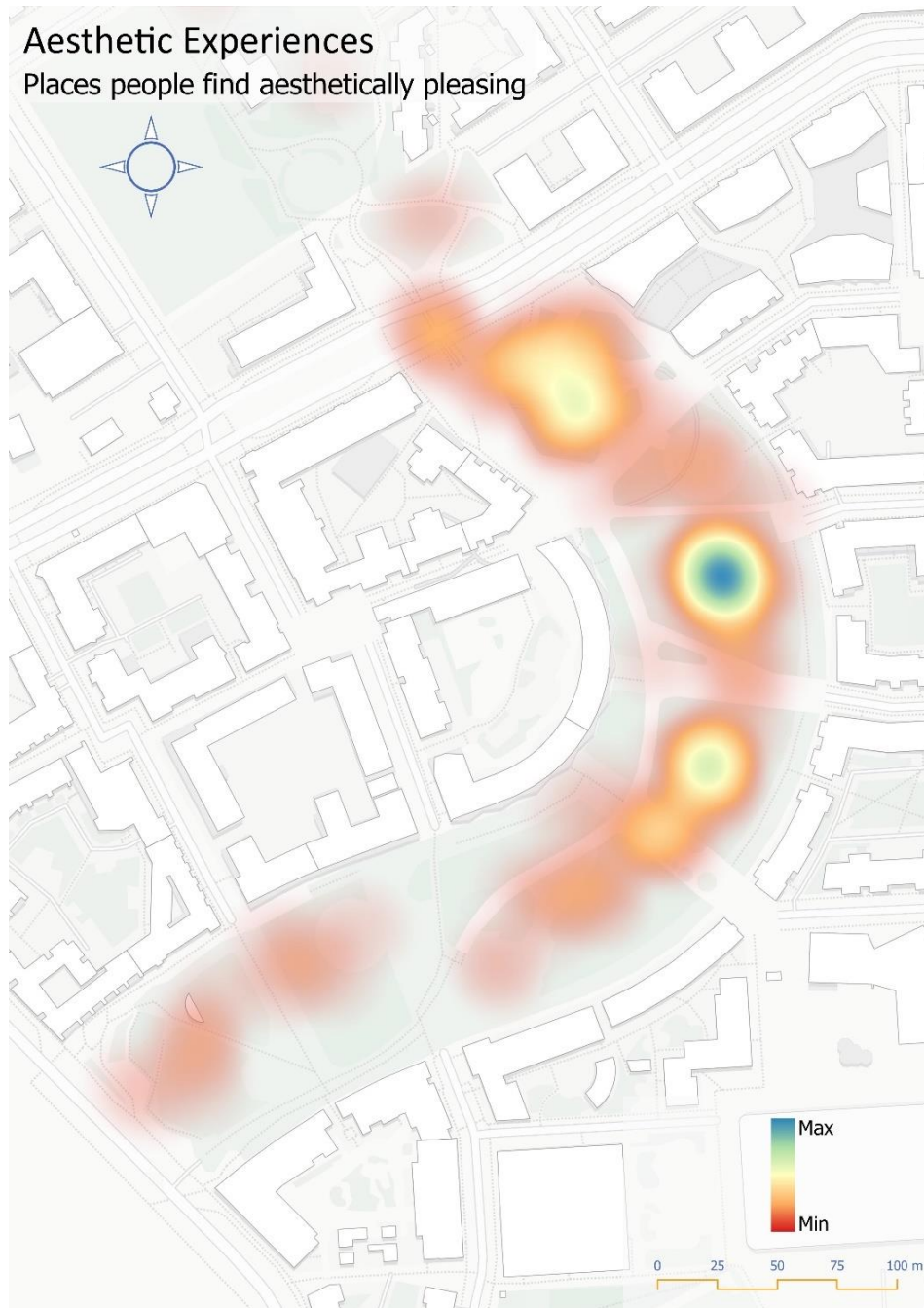
"Beautiful planting that changes colour from summer to autumn!" - 29o6xxr2unp4

"It's nice when there are also ups and downs on the ground in the surroundings." - 8mu4xph3grz3

“Well and architecturally designed entry into the park, where the plantations are beautiful, especially in the autumn in brown colours.” - 96ksa2pfr7x9

“The park shapes and colours are minimalistic but functional.” - 2h13kt8uyw89

“The bridge is a landmark and brings colour to the neighbourhood.” - 68rta9oyb238



Map 17: Map showing clusters of places people find aesthetically pleasing.

Based on the reasons given by the participants for their mapped aesthetic preferences, the data was subdivided into four categories: trees and plantations, landform, long views, and park design. Map 18, 19, 20 and 21 shows the clear hotspots in the park for each subdivision.



Maps 18, 19, 20 and 21: Maps showing clusters of places that people think are aesthetically pleasing because of trees and plantation, landforms, views, park design (left – right).

Trees and plantations are regarded to be visually attractive in 44% of the 99 areas mapped. The plantings at the entry ramp from Välimerenkatu are highly valued, as seen on Map 18. Similarly, naturalness and the pine trees on the hillocks are deemed to have a higher aesthetic value. This corroborates that vegetation and natural green areas have positive effects on visual quality (Bjerke et al., 2006; Cengiz, 2014; Schroeder & Anderson, 1984). Although hillocks in the park appear to be something that the respondents like in terms of naturalness and long views, 25% of the participants also stated that they love the shift in landform because it adds value and creates areas for fun and spontaneous activities.

31% of the survey respondents mentioned that the view and openness of the park is what they find aesthetically pleasing. Apart from the view from hillocks that has earlier been mentioned, the clusters in Map 20 shows that the participants enjoy the view from both the Northern and Southern edges of the park. The explanation for this might be that the elevated park provides various lengthy urban vistas of Jätkäsaari.

Furthermore, 20% of the participants appear to regard the park's design aspects to be visually pleasant. The highest clusters can be seen on the bridge, the entrance to the park in Vällimerenkatu, and the open playground. Participants who mapped the bridge praised its vivid and modern colours and its status as a landmark in the neighbourhood. The entrance is liked for its retaining wall with varied geometry. The open playground, on the other hand, is considered to be aesthetically beautiful since it is colourful and intriguing. Furthermore, the same heights of all the adjacent buildings with each other providing visual balance is also mentioned to be aesthetically pleasing. Nevertheless, it was interesting how the comments made about park design were always related to certain physical elements rather than the whole park as a single entity.

5.3.1.2. Aesthetically unpleasing

A total of 68 aesthetically unpleasing locations in the park were mapped, with 55 of them including reasons. The following are some of the most prevalent reasons provided by survey participants:

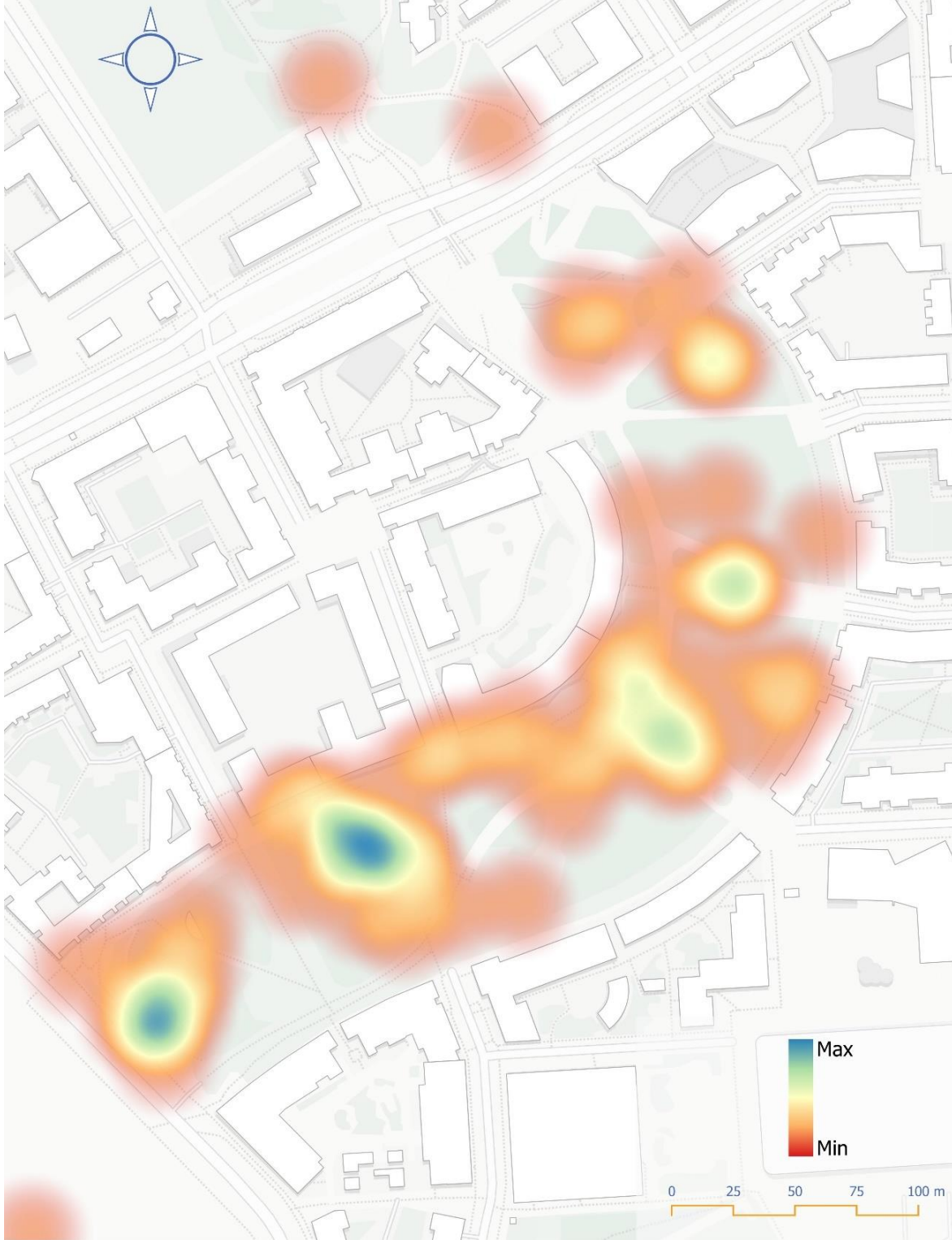
“A huge asphalt field that glows with awfully heavy heat in the summer heat. I'm sorry why so much asphalt was put on when the green beautiful natural meadow could have gone further. It would be more pleasant to have greenery for the children in the playground.” - 29o6xxr2unp4

“Horribly bright colours, strange bike racks, spoil the organic atmosphere.” - 72kmn63m7te4

“It's a bit of a boring-looking spot in the park. I see that at this end of the park there are no people who are spending their time at this end of the park yet. Jätkäsaarenkuja's café and other restaurants in the vicinity attract more people to the other end of the park.” - 93edm8jsb484

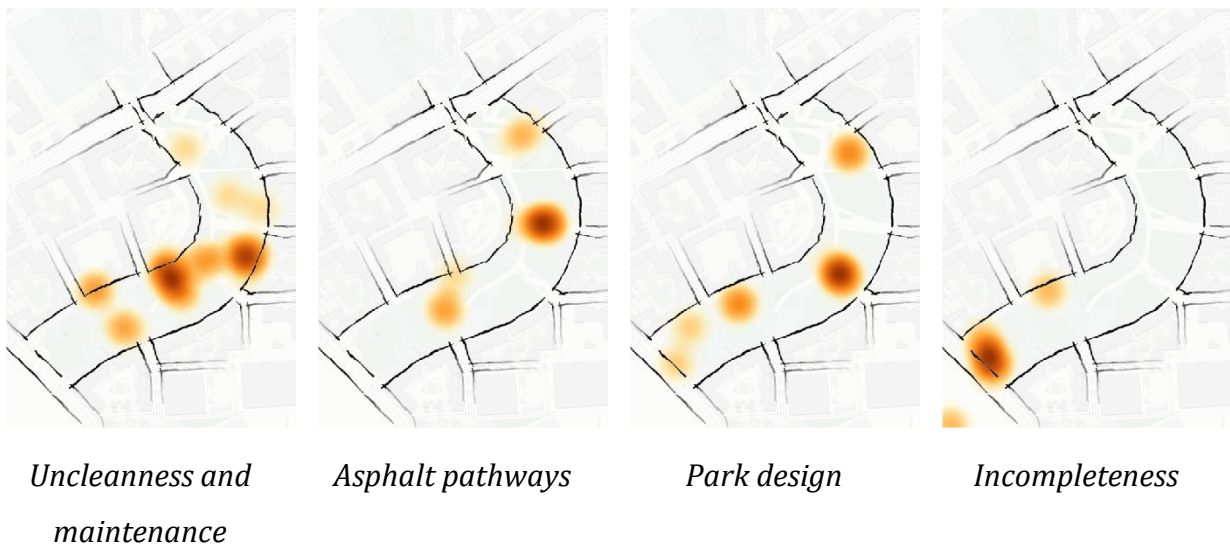
Aesthetic Experiences

Places people find aesthetically displeasing



Map 22: Map showing clusters of places people find aesthetically displeasing.

One of the clearly visible contrasts between the heat map of aesthetically pleasing and aesthetically unpleasing places in the park is that most of the places mapped as pleasing are on the Northern end while unpleasing on the Southern. After reviewing all the comments, the most common reasons for people finding their marked place aesthetically unpleasing were categorised into four groups: walkways covered with asphalt, lack of cleanliness and maintenance, incompleteness of the Southern end of the park, and design characteristics.



Maps 23, 24, 25 and 26: Maps showing clusters of places that people think are aesthetically unpleasing because of uncleanliness and maintenance, asphalt pathways, park design and incompleteness (left – right).

The most common reason for participants' dissatisfaction with their aesthetic experience, i.e., 36%, was the park's uncleanliness and maintenance (Map 23). The majority of them indicated that dog owners in green areas do not pick up their dogs' droppings. Some people blamed their annoyance on the muddy walkways between the park and the buildings, while some said the park's grasses had not been properly cared for. This shows that cleanliness plays a major role in their aesthetic response.

18% of the participants expressed dissatisfaction with the extensive use of asphalt on the pathways. Because the park also holds adjacent buildings' rescue routes, some of the key linking walkways are as wide as 15 metres and are built of asphalt to resist fire vehicles. However, this appears to have an aesthetic impact on participants' perceptions, as they claim it generates a lot of heat in the summer and smells unpleasant.

Despite the fact that many participants considered the park's design to be modern and simple, roughly 18% of the participants found some design features to be visually unpleasing. Certain people believed the playground colours were overly bright, while others thought the sculptural bike racks and some playground equipment were impractical and underutilised.

Furthermore, 11% of the participants blamed their aesthetic displeasure on the park's Southern end being incomplete (Map 26). One reason might be that the Southern end of the park, which has a large number of underground facilities, lacks the same variety of topography as the Northern end, and is much flatter. Another possibility is that the park's main plan included a café on this end which hasn't been built yet. The neighbourhood might become much livelier and more inviting once some additional activity is included on this end. Additionally, the view from the Southern end is of a park-site that is under construction which participants associate with incompleteness and unpleasantness.

Some other features of the park that participants associated with their aesthetical unpleasantness include the smell of the meadows and undefined boundary, which occasionally permits automobiles to pass across it.

5.3.2. Perception of safety

The survey participants, in general, perceive the Hyväntoivonpuisto to be a safe place. Among the 125 who responded to the question about their perception of safety in the park, 45% considered the park to be very safe and 44% considered the park to be safe. Only 4% of the survey participants considered the park as not very safe, and 7% thought it was neither safe nor unsafe.



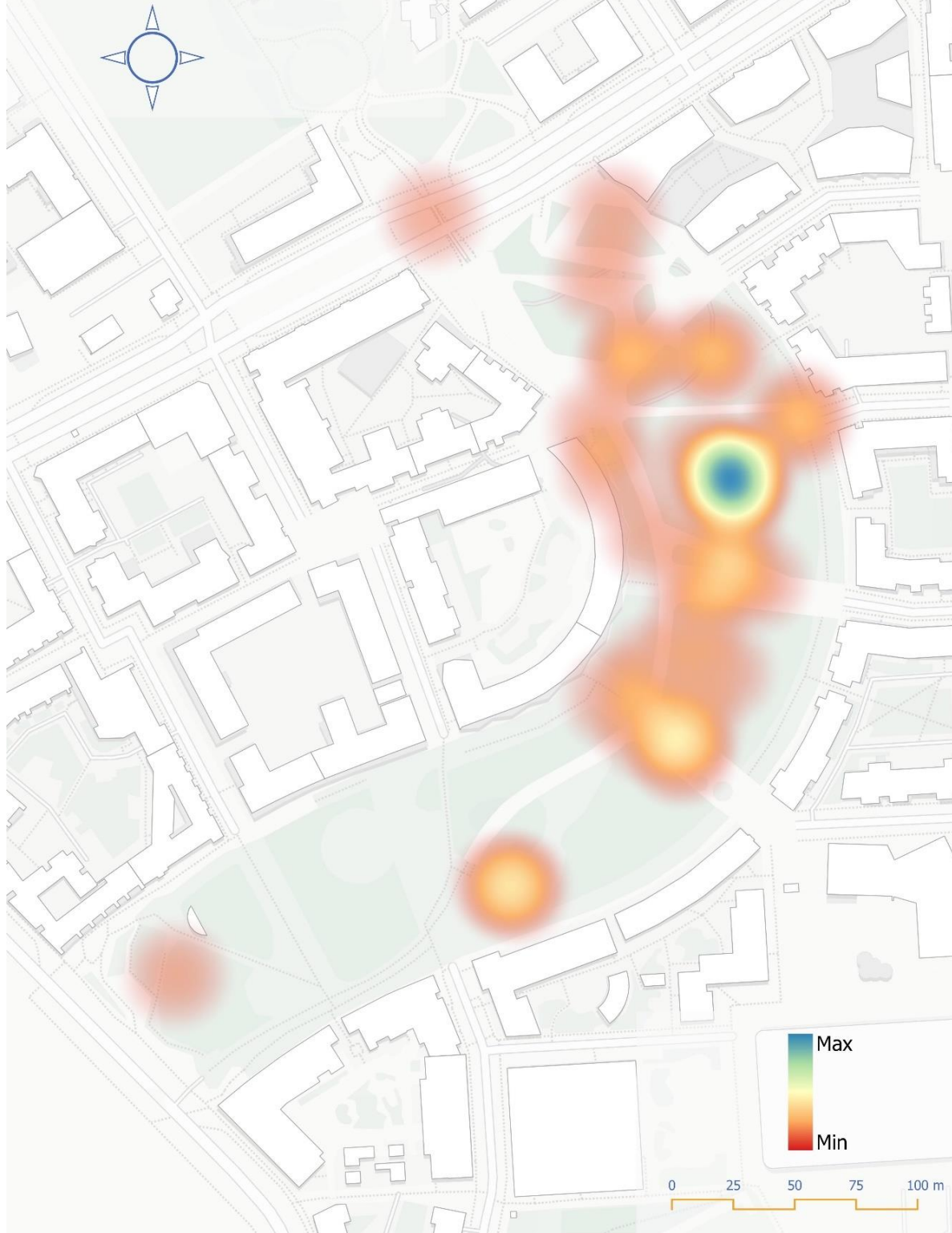
Table 9. Survey participant's perception of safety in the park.

When asked to locate the places regarding safety in the park, there were 37 places marked as safe and 41 places marked as unsafe. However, 27 of the places marked as unsafe were marked by the ones who in general think the park is a safe or a very safe place.

5.3.2.1. Places perceived to be safe

Map 27 illustrates the clusters in the park that participants perceive to be safe. Overall, most of the Northern part of the park, especially the hills and the playgrounds, are clearly considered to be safer compared to the Southern end of the park. When this map was compared with the map showing previous findings regarding activities and aesthetic preferences, the clusters were tentatively in the similar areas. For example, the hillock in the Southernmost part of the park, around which, highest concentration of various activities was noticed, is also the place that is considered to be the safest in the park. This depicts the link between park activities and users' perception of safety. Additionally, the majority of the people who perceived the park as safe also considered it to be aesthetically pleasing. This shows that the user's perception of safety is associated with their aesthetic experiences.

Perception of Safety: Places people perceive to be safe



Map 27: Map showing clusters of places people perceive to be safe.

The reasons were also mentioned by the participants in 28 of the 37 areas deemed safe. Some of them included:

“Close to home, visibility in different directions.” - 4rg2rm6ft2n7

“Clear view and plenty of space.” - 3sg77n7y6wj3

“Fenced playground feels safe.” - 836b6v4n4t67

“There are almost always people on the move at the beginning of the park and the lighting is better than at the end.” - 96ksa2pfr7x9

The similarities in the reasons for the participants feeling safe in the park led to four primary conclusions: openness and long views, proximity from home, presence of fences around the playground, and presence of other people and the streetlamps.



Maps 28, 29, 30, and 31: Map showing clusters of places people perceive to be safe because of openness, availability of people and lighting, fenced playground, proximity (left to right).

Because of the openness of the location, which allows long views, 20% of the participants believe the park is safe. The clusters on Map 28 can clearly be seen only on the top of the first hillock. One factor might be the presence of people and lightings in the surrounding region, as seen on

Map 29. The other explanation might be that the landscape architect, focused on these aspects, positioned the trees in a three-metre straight grid, providing users with an unobstructed view. Another reason might be because the hilltop is situated in such a way that both ends of the park are visible from here. It was also observed that all who mentioned this also tend to spend a longer time, i.e., 40-50 minutes in the park.

21% of the participants mentioned they feel safe because of the availability of people and lighting. The map depicts the clusters of these locations around the same intersection where a high level of activity was seen with cafés, playgrounds, and benches nearby. This also was the intersection with the highest amount of mobility. This shows that the increased natural surveillance and interactions between diverse groups of people enhance the feeling of safety (McKay, 1998) in the park.

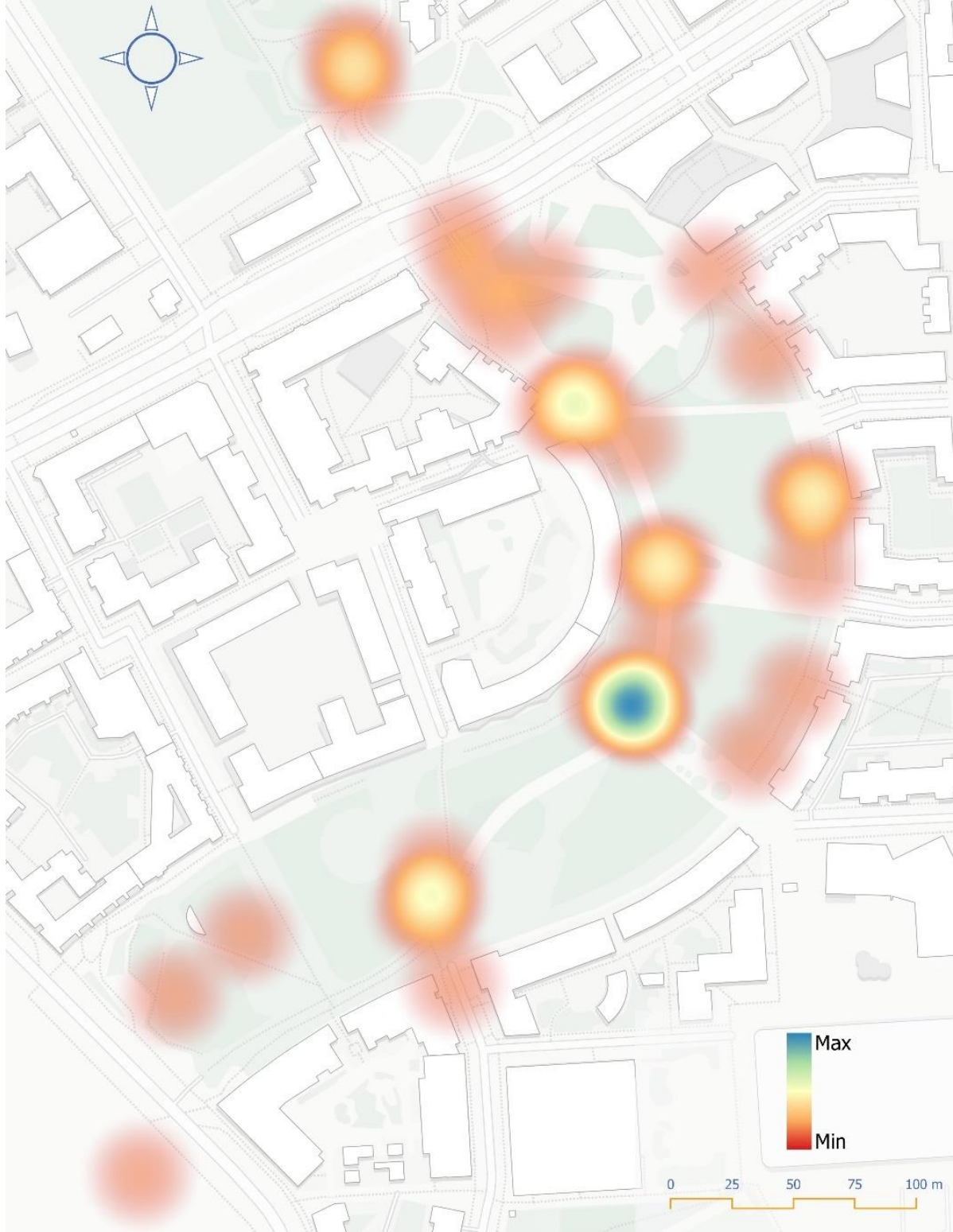
As seen on Map 30, in the clusters around the children's playgrounds, 14% of the participants felt safe as it was covered with fences around it. It was also noted that everyone who mentioned it had children. This demonstrates that their sense of safety extends not only to themselves but also to their loved ones. The remaining 20% indicated they felt safe because the park is near their home. Some have also said that it is an adult's living room, implying that they have a sense of ownership over the park, which aids their perception of safety.

5.3.2.2. Places perceived to be unsafe

41 places were mapped on the map where the participants felt unsafe. On Map 32, it can be noticed that the majority of the clusters are either on the intersections between the pathways or somewhere closer. 38 of the participants who mapped these locations had added these reasons:

"Cars (taxis, food delivery drivers) disregarding road laws and driving through the park without regard to pedestrians." - 73spn7us6s97

Perception of Safety: Places people perceive to be unsafe



Map 32: Map showing clusters of places people perceive to be unsafe.

“In winter, the whole park is just ice, no one sands the streets!!!” - 32tia2ljp2ia

“Kids safety: Often kids riding e-scooters recklessly on an area where toddlers are running around (playground).” - 3sg77n7y6wj3

“At the end of the park, the lighting is weaker. In general, the lighting in the park could be further increased.” - 96ksa2pfr7x9

Four significant explanations were identified based on comparable reasons for feeling unsafe: bike traffic, car traffic, poor winter maintenance, and inadequate street lighting.



Maps 33, 34, 35, and 36: Map showing clusters of places people perceive to be safe because of openness, availability of people and lighting, fenced playground, proximity (left to right).

The highest concern was seen to be related to the light traffic lane, with 42% of the 38 participants stating that they feel unsafe. The largest cluster may be observed on Map 33, where there are children's playgrounds on both sides of the pathway. It was also noticed that 3/4 of those who reported this had child/ren. The clusters that follow up to the bridge also suggest that bike traffic disturbs people largely on that end. One explanation might be that the road slopes down from the bridge to the park, causing individuals riding bikes or scooters to accelerate. The other possibility is that the curving pathway creates concerns related to visibility.

The other 23% of the 38 participants who added reasons for their markings, felt unsafe due to car traffic at the intersections. The intersection of the park and Jätkäsaarenskuja, as well as Hyväntoivonkatu, appears to be the most problematic. Similarly, 18% felt unsafe due to inadequate lighting on the Eastern edge of the park. Additionally, 13% expressed worry about winter upkeep; many routes are left un-sanded and highly treacherous with frozen ice, increasing the risk of an accident.

5.4. Collective image of the park

5.4.1. Operationalising Kevin Lynch's city image and its elements

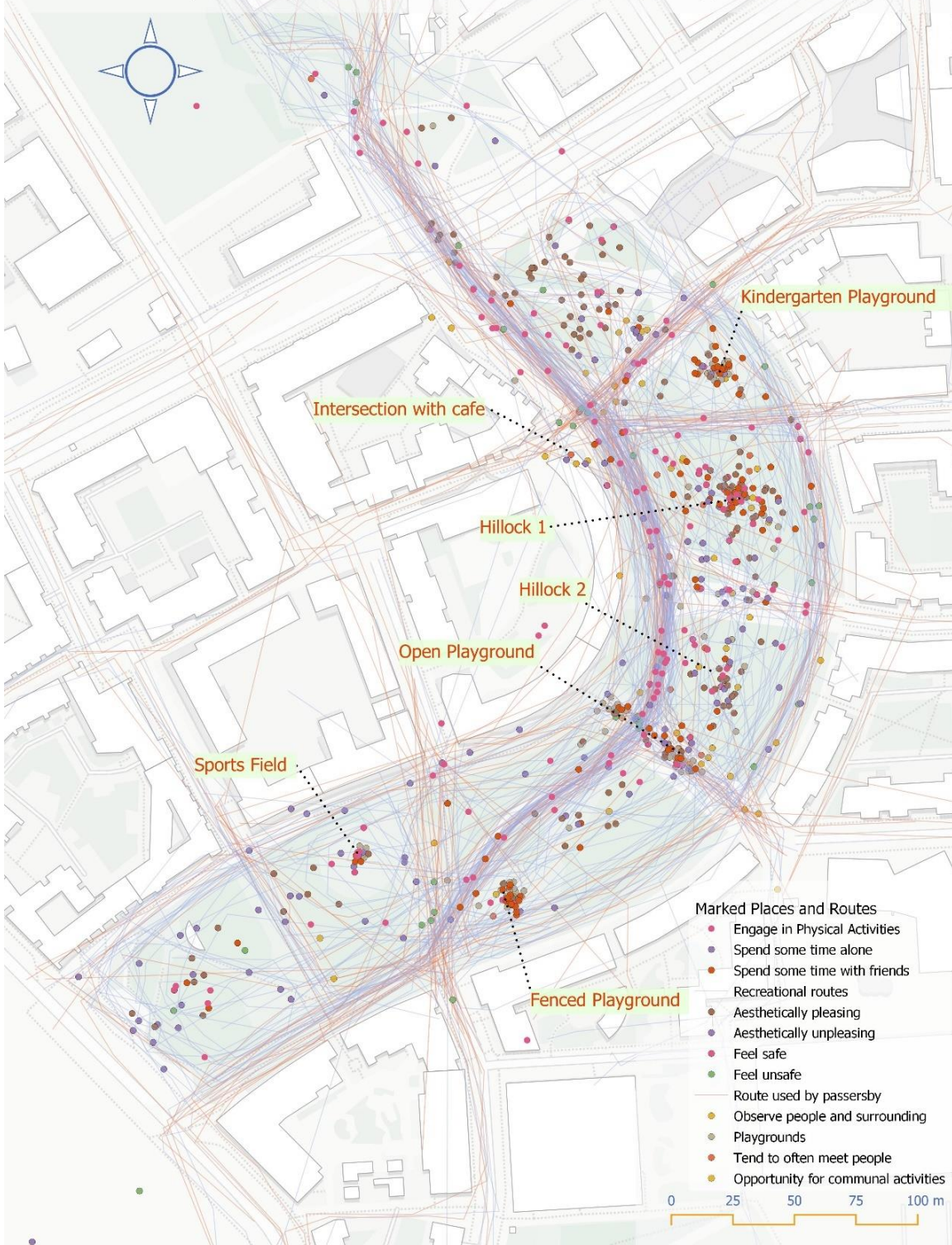
From the survey findings related to park use, activities and users' perception, certain features of the park were recognized. But operationalising Kevin Lynch's (1964) theory of city elements, on a map (*Map. 37, pg. 70*) where all the data provided by survey participants were overlapped, the five main elements which forms a collective public image of the park, i.e., paths, edges, districts, nodes, and landmarks of the Hyväntoivonpuisto park were identified. They were as follows:

Paths: There are various paths within the park that connect the park to its surrounding areas. However, the centrally located, blue-coloured light traffic road, which consists of both a bike lane and a walking lane, clearly is the predominant path within the park. All the other paths available in the park are connected to this route. Whether for recreation or for running errands, a maximum number of people use this pathway. Additionally, with many designated park functions placed closer, the intersections that fall in this pathway seem busier and livelier.

Edges: Although there are no physical boundaries defining the edge of the park such as fences or closed gates, the surrounding buildings, and roads on both ends of the park are clearly defined as the edges of the park, since most of the locations and routes marked by the people are within them. They do not act as a barrier and are penetrable from all directions yet form a generalised image as the edges of the park.

Operationalising Kevin Lynch's city elements

An overview of park image based on locations marked by people in all categories



Map 37. Operationalizing Kevin Lynch's theory of city elements to identify park elements that forms the collective public image of Hyväntoivonpuisto park.

District: There are some locations and routes that were marked outside of the park, even though survey participants were clearly asked to mark areas only within the park. This could be because the physical characteristics such as forms, texture, topography, activities, and colours are similar to the Selkämerenpuisto Park (after Välimerenkatu on the Northern end of Hyväntoivonpuisto), as it was designed at the same time. Therefore, because of common identifiable elements of the park, the park area perceived by some participants is bigger than it actually is. This bigger area can be related to the image formed by participants as a park district.

Nodes: In Hyväntoivonpuisto Park, the nodes were simply identifiable with the location clusters marked by the survey participants. It was clearly visible in the pathway intersections. However, a higher concentration was also seen in the children's park and on the top of the hillocks. Some of these concentration nodes are the focus and epitome of a district, over which their influence radiates and of which they stand as a symbol (Lynch, 1964). While children's parks gained importance because of their use and their functions, the higher concentration on the hillocks could simply be because of their empowering physical character, its openness, and the view from the top. Based on Lynch (1964) theory of elements, these nodes can be defined as the core of the park.

Landmark: The bright orange bridge over the Välimerenkatu, connecting Selkämerenpuisto Park and Hyväntoivonpuisto Park, clearly seems to be the landmark of the park. It is an external point of reference which is visible from a distance and marks the beginning of the park. Although not completely visible on this map, many of the survey participants have discussed it to be a significant element while answering the survey.

6. Discussion and conclusion

This thesis aimed to research the factors that affect park use and park activities in Hyväntoivonpuisto park. More precisely, it did a post-occupancy evaluation of Hyväntoivonpuisto park to analyse how park design facilitates park activities and how users' aesthetic experiences and perception of safety affects their activity in Hyväntoivonpuisto park. Since the analysis was completely based on park users' survey answers regarding their activity and experiences in the environment setting, this thesis was also able to identify the important park elements that forms a collective public image of Hyväntoivonpuisto park.

The first research objective was to observe the kinds of activities that take place in Hyväntoivonpuisto park and understand how the park design facilitates these activities. The survey results indicated that the park activities were directly affected by its proximity, its central location, designated park functions, and the infrastructure and services present in the surrounding area. The park design facilitated all three types of Gehl's (2010) activities, i.e., necessary, optional (recreational), and social activities. Based on the survey results, the most common activities in the Hyväntoivonpuisto park are walking, spending time with friends and family, and children playing in the playground. Walking was seen as the most popular option for both necessary and optional (recreational) activity.

Necessary activities extend from the survey participants who pass through the park for running errands. More than 50% used it only for running errands. This shows that the park also attracts indirect users who otherwise do not use the park. The busiest nodes are the pathways connecting to other neighbourhood facilities such as tram stations, kindergartens, shopping centres, and metro stations. These reasons suggest that the centrality and the connectivity of the park attract these passers-by. Moreover, the various connecting pathways facilitate a shortcut for the park users, which makes them frequent users of the park. There were two survey participants with mobility difficulties who used the park for necessary as well as optional (recreational) activities. This shows that the ramps included in the park design make the park more accessible and that accessibility does facilitate people's activities in the park (Sheng et al., 2021; Zhai & Baran, 2016).

Although according to Jan Gehl (2010), the weather does not affect the necessary activities, it did affect Hyväntoivonpuisto park because of the slippery pathways during winter and the availability of alternate routes which does not necessarily pass through the park.

For optional (recreational) activities in the park, the survey results showed that walking is the most popular type of recreation for adults. Park users move more freely in the park and are not only restricted within the pathways. The unobstructed connection between the pathway, the grass lawn, and the hillocks facilitates this free flow of the users. Additionally, from the recreational routes drawn by the survey participants, it was noticed that they mostly loop around within the park rather than walk on the sidewalks or streets, and this behaviour has been encouraged by the presence of multiple parallel walkways in the park. The other park features that promoted recreational walking were the presence of urban furniture, variation in landform, the presence of other people in the park, naturalness, openness, and the park's evident links to adjacent green places. This also means that the park's physical environment has an impact on park visitors' behaviour and relaxation, even for basic activities like strolling and being in nature. On the other hand, walking in the park also promoted social activity as most users mentioned they tend to meet their neighbours, especially while walking around the pathway intersections and on hillocks.

It was also noticed that only a few adults, i.e., 13% of the total survey participants were involved in other physical activities in the park such as exercising, yoga, or sports. Another optional (recreational) activity seen is to spend some time alone in the park for relaxation and restoration. 45 survey participants out of 200 plotted their favourite places in the park to be alone. This shows that people do not only see the park as a place for physical activity but also as a restorative place. The highest concentration is seen in the Northern areas of the park but there was some concentration on the Southern end as well. Many among those who marked mentioned that they prefer to spend time there since it is less crowded and has less noise. This is proven to be true by other maps which showed the least activity on the Southern side of the park. The majority of the reasons for their choice of place were view, proximity from home, the presence of trees and plantations, the availability of a café and seats in the park.

The most popular social activities in Hyväntoivonpuisto park are spending time with friends and family, and children's playing in the park. Among the survey participants who marked their child/ren's activity, the highest concentrations were seen particularly on the designated playground. But it was also noticed that the different design of the playground and the play equipment facilitated different age-groups of child/ren. The open playground was mostly liked for its interesting use and sculptural look, and its use suggested that the target group is school-aged children, while the other two fenced playgrounds appeared to be popular with toddlers and pre-schoolers. As child/ren of this age group generally required guardians, these playgrounds appear to have fostered both recreational and social activities among both parents and children, as many parents play with their child/ren as well as chat with other parents. Among the other open park areas, child/ren also seem to enjoy the hillocks and retaining wall sculpture for sledding in winter and wall climbing, respectively.

Spending time with friends and family, spending time alone, observing people and surroundings, and participating in communal events were other frequent recreational and social activities witnessed at the park. This shows that all park users do not engage in physical activities. Some people use the park for restorative purposes as well. This presence of other activities in the park suggests that Hyväntoivonpuisto park has tried to achieve a balance between active and passive recreations that ensures it benefits a diverse range of interest groups (Mertes et al., 1995). Majoring of these activities either took place where the highest concentration was seen in other activities, or in open green areas which were left for spontaneous activities. These activities are often spontaneous in nature and include all types of communication between people in city spaces (Gehl, 2010). For example, places, where people were marked for observing people and surroundings, were detected closer to the streets, junctions, and the playgrounds where people's mobility was higher, as predicted by the prior findings. This demonstrates that every place in a park that generates activity also generates spectators (Deasy, 1985). Additionally, placing benches near pathways, activity areas, and entrances has attracted viewers and encouraged social interaction. Similarly, many of the places marked for spending time alone were closer to the other activities as well, which reveals that individuals may have chosen these locations to enjoy the passive social contact ("see and hear") with other people and the environment. The

selection of other locations marked by individuals who spend time alone, as well as many places marked by those who spend time with friends and family, is heavily influenced by their perceptions (Kaplan, 1979; Nasar, 1988) and proximity (Zhai & Baran, 2016) of the areas within the park.

The second research objective was to see if users' aesthetic experiences and perceptions of safety have an impact on the park's usability. The findings support the generally held beliefs that aesthetics (Kaplan, 1979), perception of safety (Iqbal, 2021; Sreetheran & van den Bosch, 2014), and environmental quality (Kabisch et al., 2021; Nasar, 1988; Shu & Ma, 2020), encourage the activities in the park. The research also showed that there is a close relation between participants' perception of safety and their aesthetic experiences, as those who thought the park to be unsafe also thought it is aesthetically displeasing.

The places that people find aesthetically pleasing, based on survey results, have the presence of trees and plantations, offer long views, and have variations in landforms. Some of the park's design features such as bright coloured bridges, geometric-shaped retaining walls, and sculptural play equipment are also considered to be aesthetically pleasing. On the other hand, places that people find safe are related to the openness of the place, availability of other people, sufficient lighting, the presence of fences in the playground, and the proximity of the park from their home. The clusters of both categories were highly seen in the Northern half of the park where the recreational and social activities were also seen to be higher. The hillocks which were associated with higher aesthetic value and good views were also perceived to be safer because of their openness and visibility. Additionally, these were also the places where park users want to spend time with friends and family. The places around the parking node where most of the activities took place were also considered to be safe due to the presence of people. Likewise, places with high aesthetic value in terms of trees and plantations were also the ones where people liked spending time. All these factors show that park activities are associated with users' aesthetic experiences and their perceptions of safety.

On the other hand, the places people find aesthetically displeasing were related to the uncleanness of the place, incompleteness, use of asphalt, and colours used in park design. The

use of asphalt on the walkways and usage of bright colours in the children's playground, which is considered aesthetically unappealing, had no discernible effect on user activity.

Additionally, park users rejected the park's Southern end, which is visually unappealing due to its incompleteness. It attracts relatively few people since the view from there is to a construction site, the function of the area is undefined, it is flatter and deemed monotonous when compared to the other end of the park, indicating that the aesthetic value of this location has an impact on user activity. Only a few of the participants who spent some time alone in the park and desired some peace and quiet away from the crowds were the ones who noted their activity there and particularly praised for the expansive views it provides. This shows that the aesthetic quality plays a major role in people accepting and using these areas (Nohl, 2001). As a result, it can be stated that the park's aesthetic value has a greater impact on park activity in sections that are left open to spontaneous activities and may be used for several purposes. The aesthetic value of a designated space such as a children's playground, with defined purposes, on the other hand, is less influenced.

The last research objective was to understand what the collective public image of the Hyväntoivonpuisto park is. After analysing the survey data, it is understood that the park is an integral part of the Jätkäsaari neighbourhood. The residents highly value the presence of this large open green area in their densely built urban neighbourhood. The naturalness of the park with the presence of a variety of trees and plantations, varying heights in the landscape, its openness, central location, and accessibility are the main factors that residents value the most.

Operationalizing Kevin Lynch's (1964) theory mentioned in *The Image of the City*, on the overall survey result, five of the important park elements that plays significant role in the collective image of the park were identified. The bright orange bridge marks the beginning of Hyväntoivonpuisto and is the landmark of the park. The light traffic lane that runs through the park connecting it to Ruoholahti is the most dominant path in the park for both recreational use and running errands. Additionally, with many designated park functions placed closer to this path, the intersections that fall in this pathway seem busier and livelier. Because of their physical characteristics, these intersections attract a large number of park users, forming the nodes within

the park. The highest concentration always being on the hillock and the children's park makes them the core areas of the park. The surrounding buildings and roads on both end of the park clearly define the edges of the park. However, in the collective park image formed by the users, the park district seems to be bigger than the actual park area and it extends up to Selkämerenpuisto Park due to the similarity in physical characteristics such as forms, texture, topography, activities, and colours.

In conclusion, this thesis found that the location and the design of the park do influence the type of activities that take place in the Hyväntoivonpuisto park. The aesthetic value of the park has a stronger influence on park activity in park areas that are left open for spontaneous activities and has a smaller impact on park facilities with specified uses. When people's perceptions of their safety are positive, they had a beneficial impact on park use, but when they were negative, they had little impact on park activities. Additionally, the design features strongly influence the public image of the park, and especially nodes and the landmark strongly define the identity of the park.

7. References

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8. Appendix

Appendix A

Screenshots of survey questionnaire.

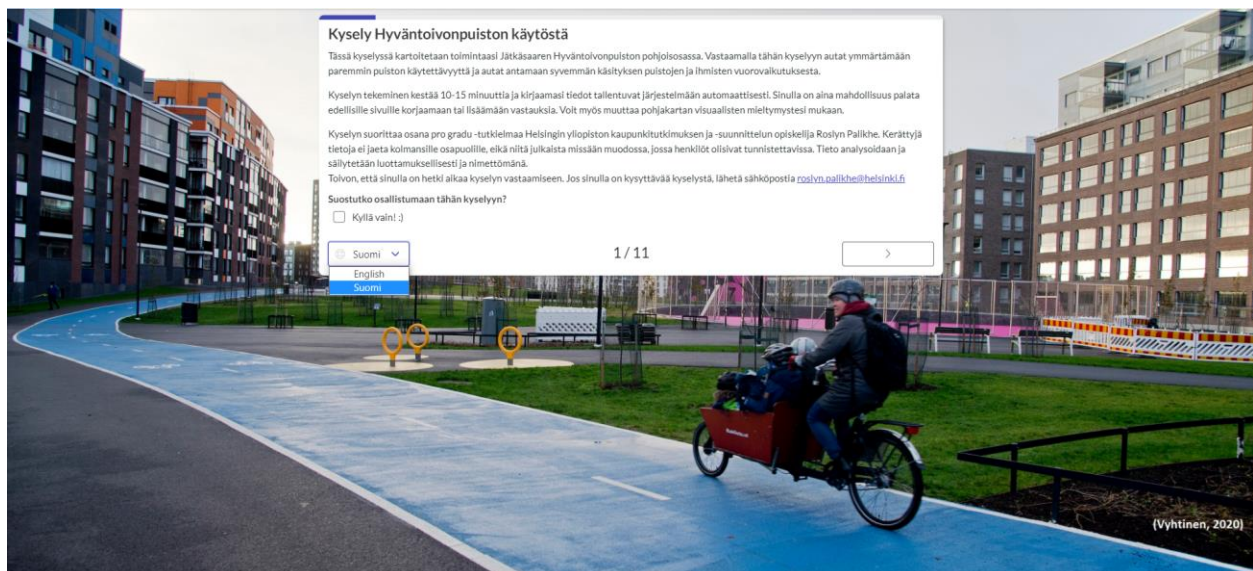
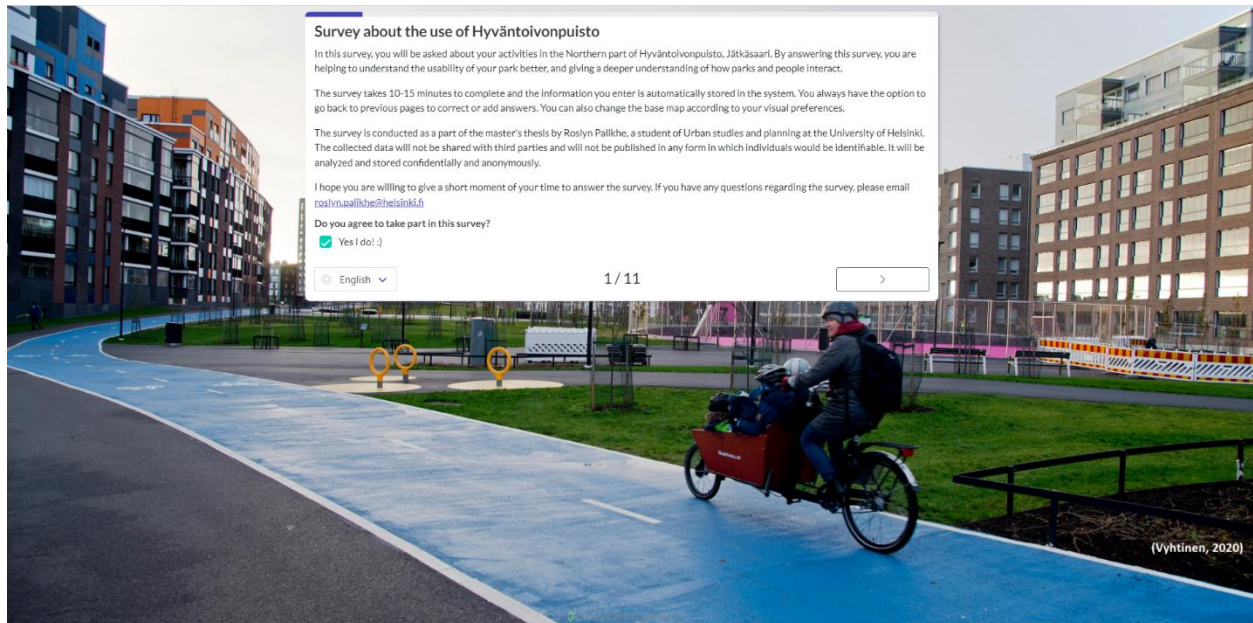


Image 15. Survey Questionnaire Page 1: Survey Introduction, consent, and language selection (English and Finnish)

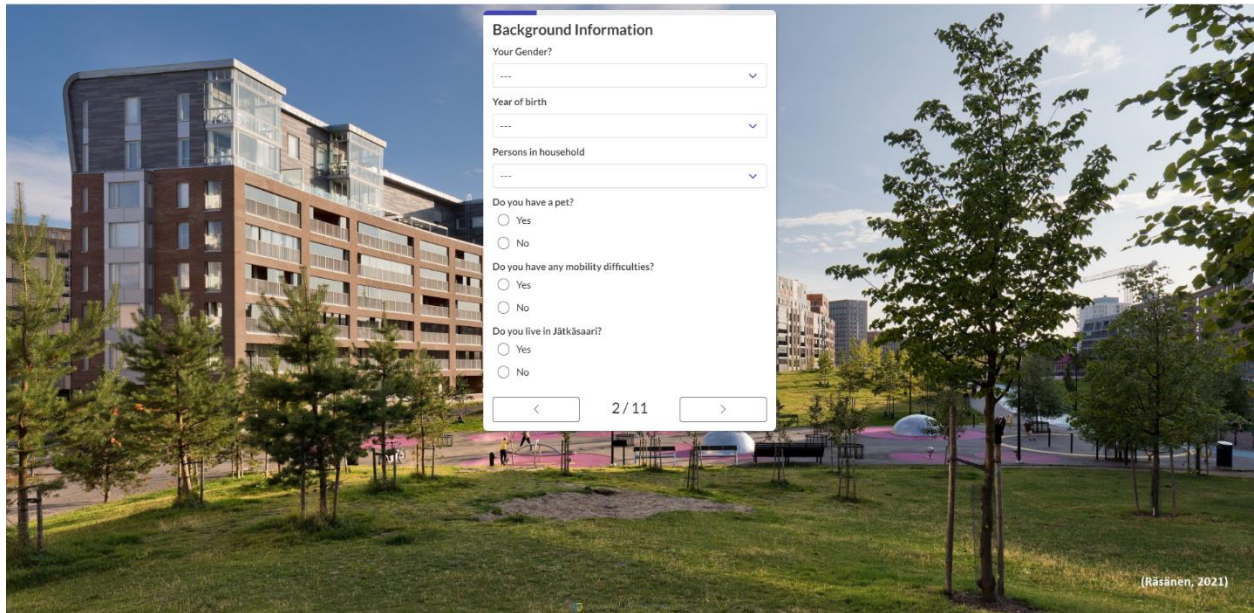


Image 16. Survey Questionnaire Page 2: Background information of the survey participant.

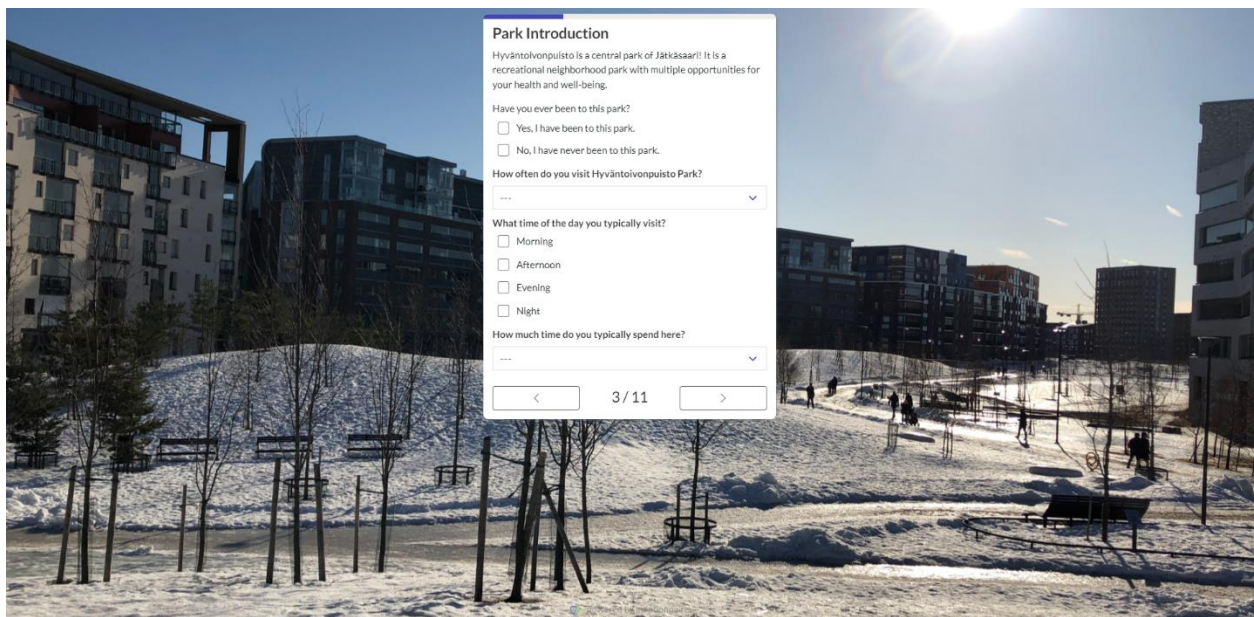


Image 17. Survey Questionnaire Page 3: Park introduction and questions regarding the frequency of use.



Image 18. Survey Questionnaire Page 4: Park activities.

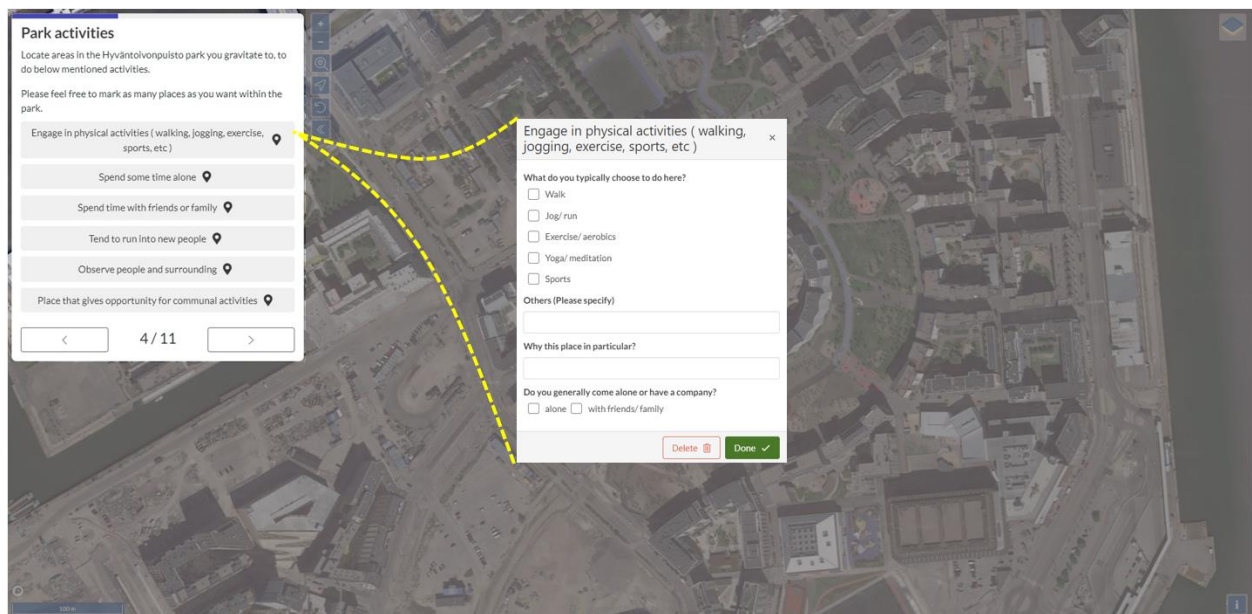


Image 19. Survey Questionnaire Page 4: Pop-up question related to “engage in physical activities”.

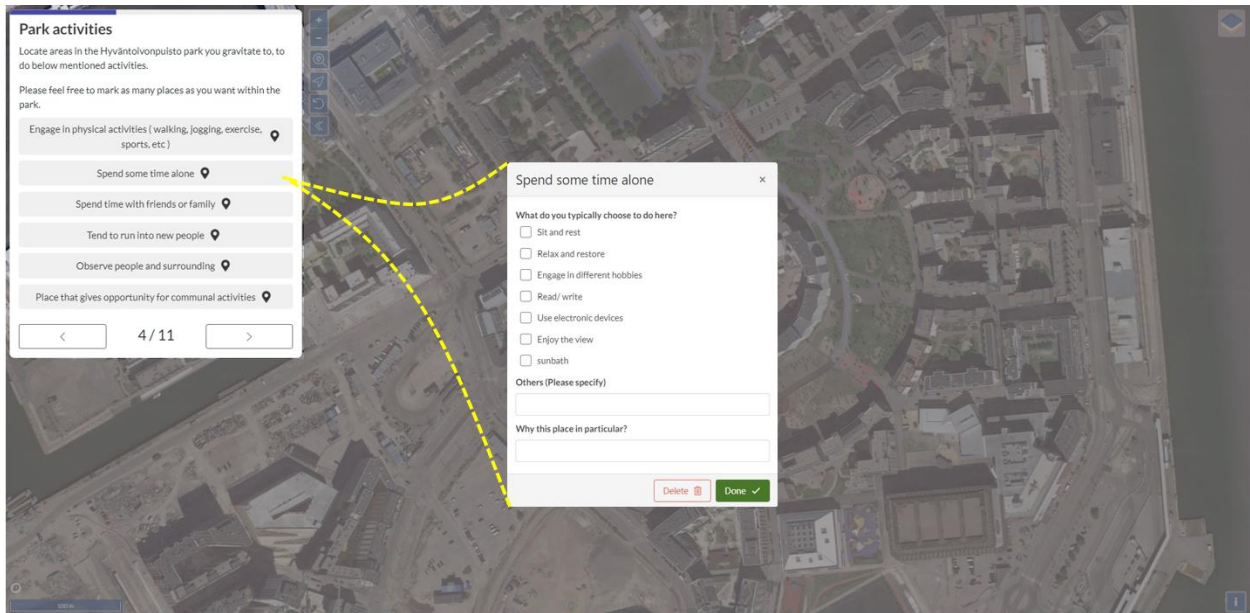


Image 20. Survey Questionnaire Page 4: Pop-up question related to “spend some time alone”.

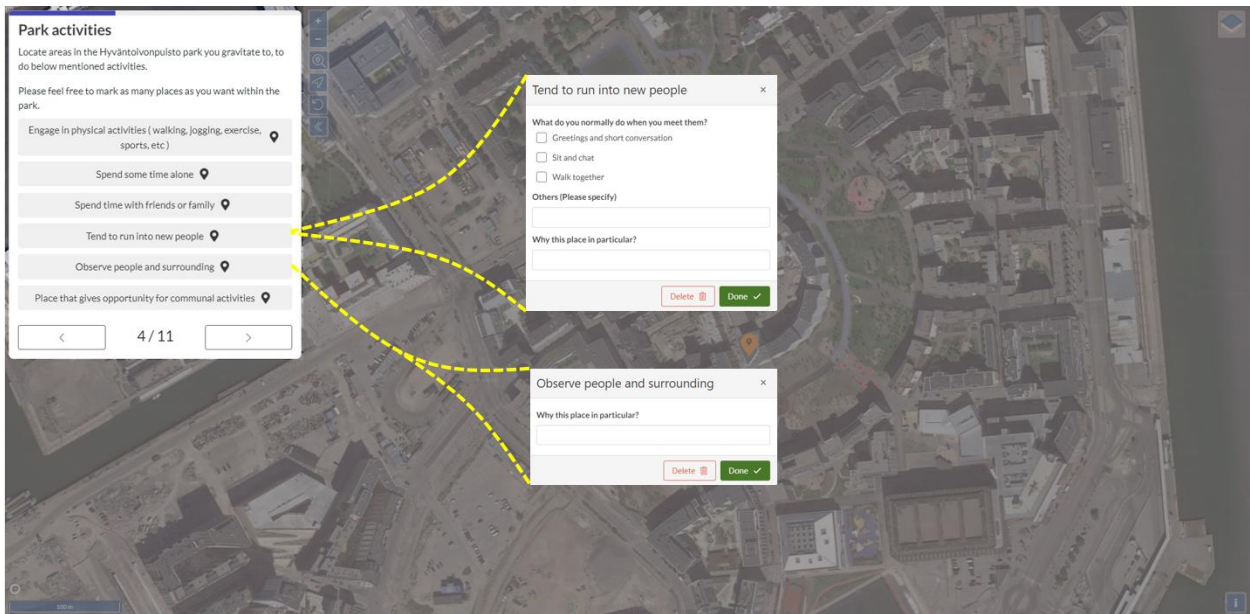


Image 21. Survey Questionnaire Page 4: Pop-up question related to “tend to run into new people” and “observe people and surrounding”.

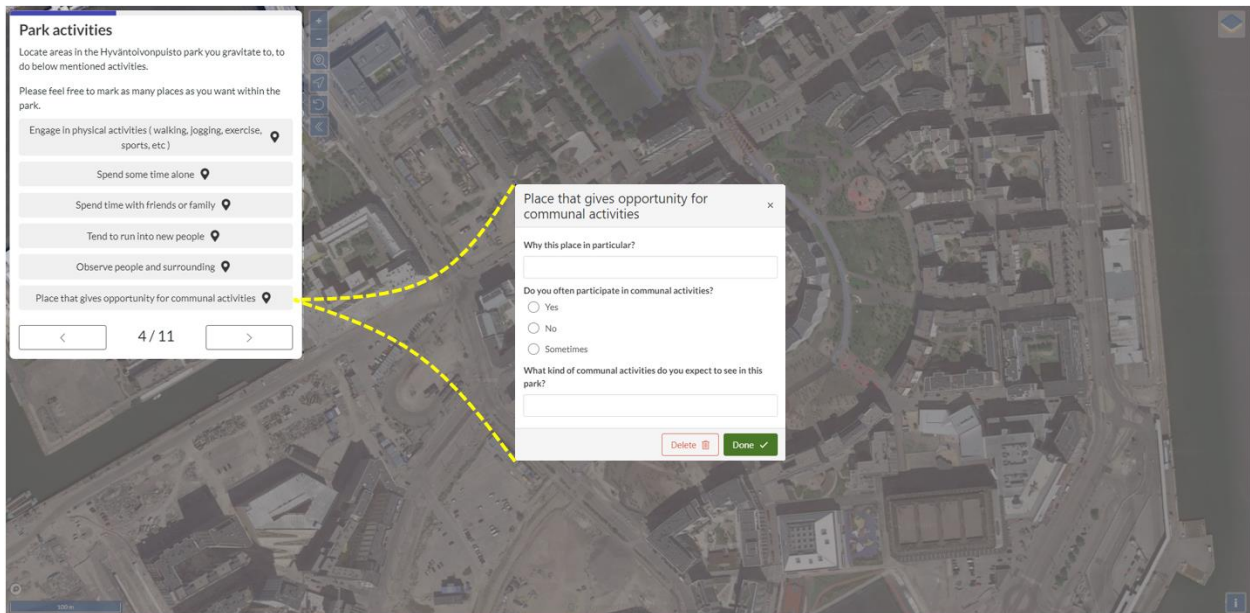


Image 22. Survey Questionnaire Page 4: Pop-up question related to “places that gives opportunity for communal activities”.

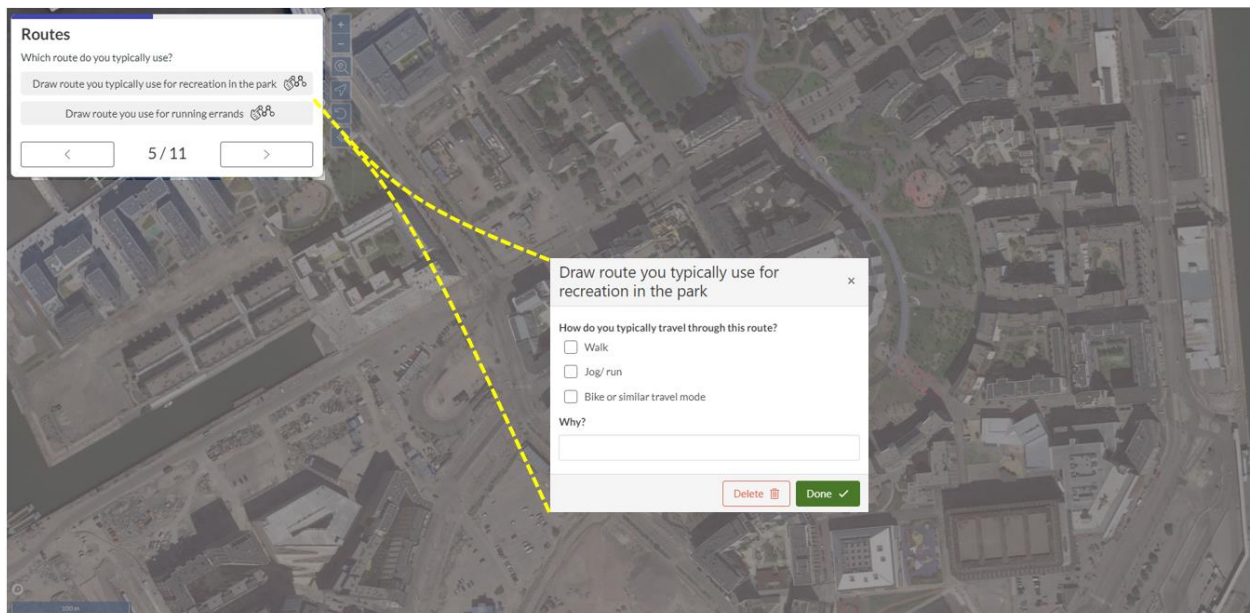


Image 23. Survey Questionnaire Page 5: Pop-up question related to “draw routes you typically use for recreation in the park”. Same as “draw routes you use for running errands”.

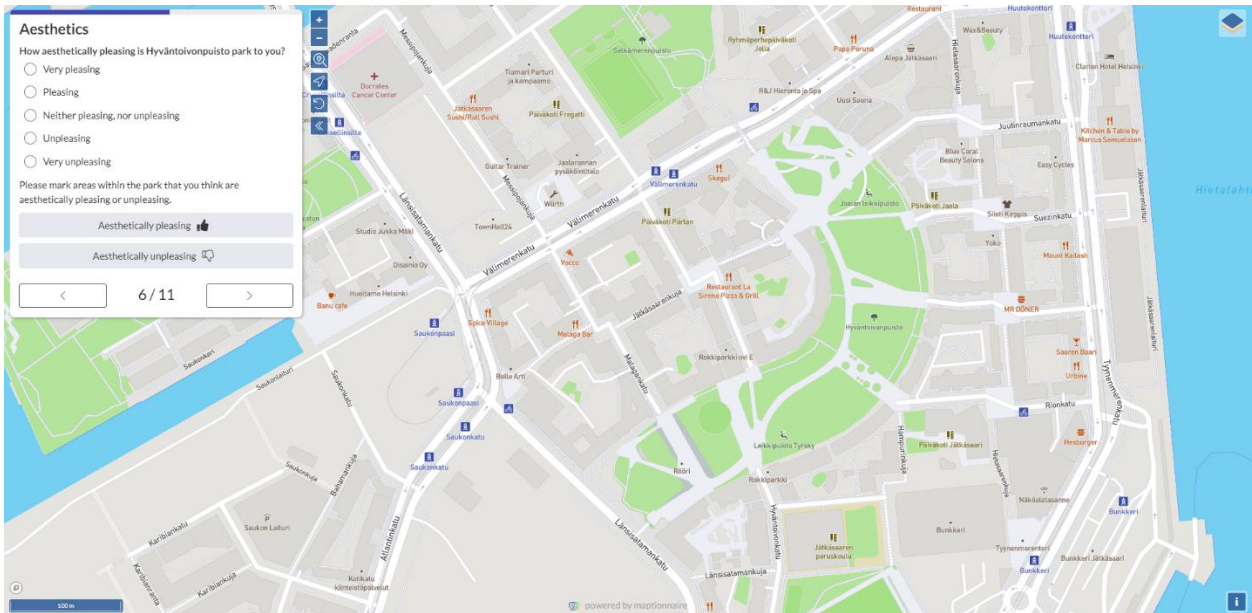


Image 24. Survey Questionnaire Page 6: Aesthetic experiences.

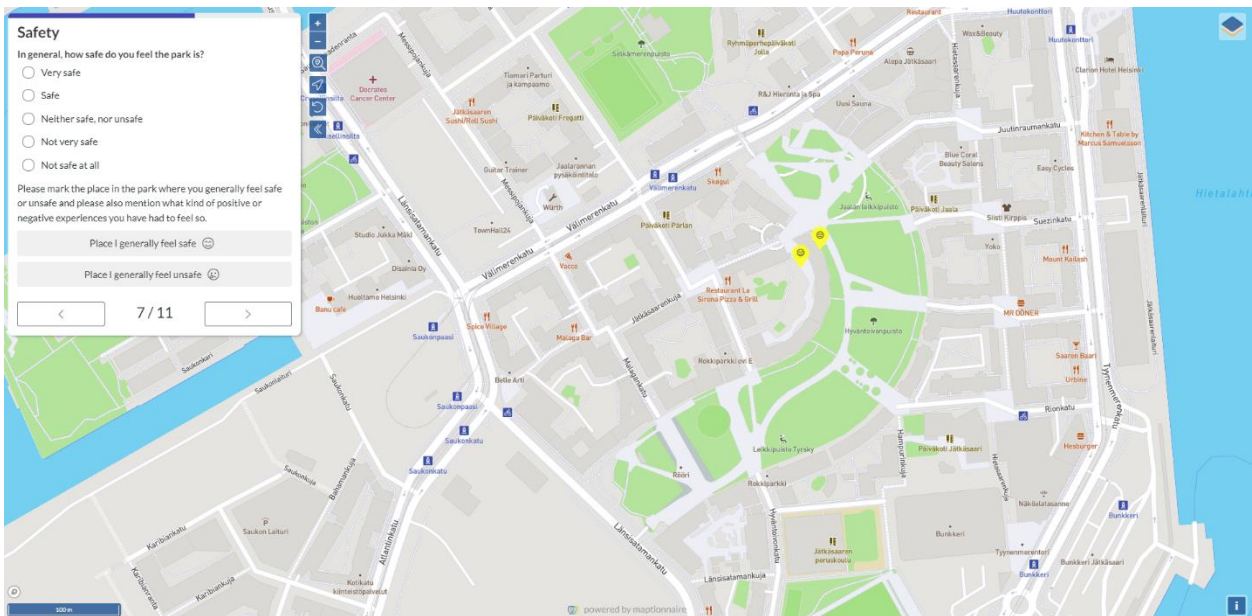


Image 25. Survey Questionnaire Page 7: Perception of safety.

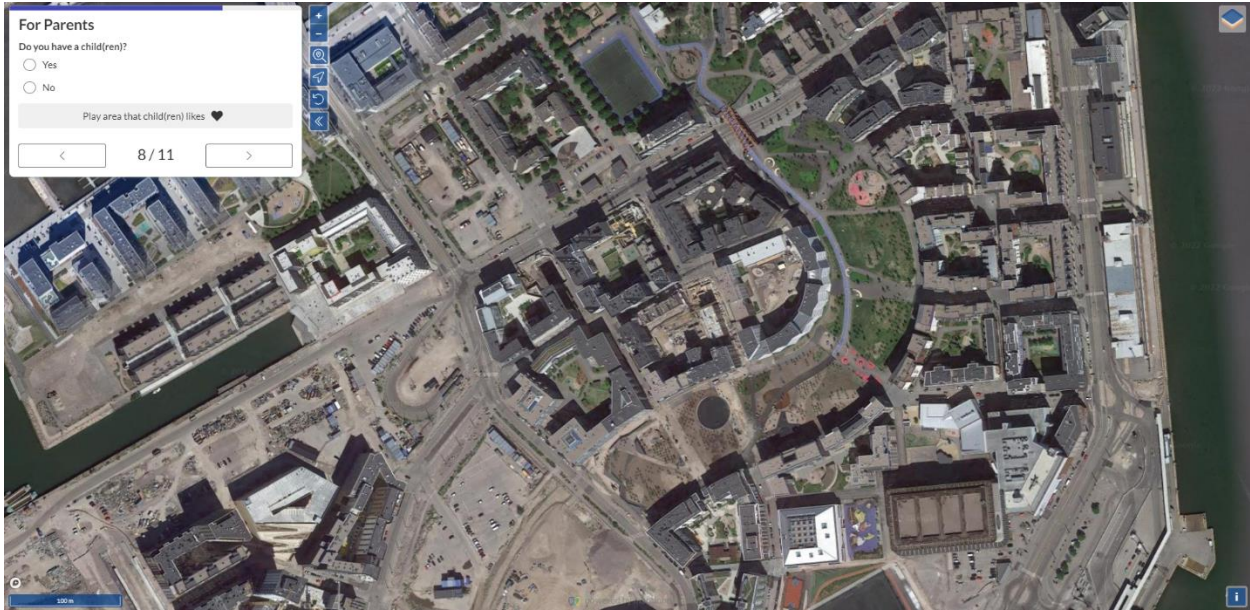


Image 26. Survey Questionnaire Page 8: Park are used by children for playing.

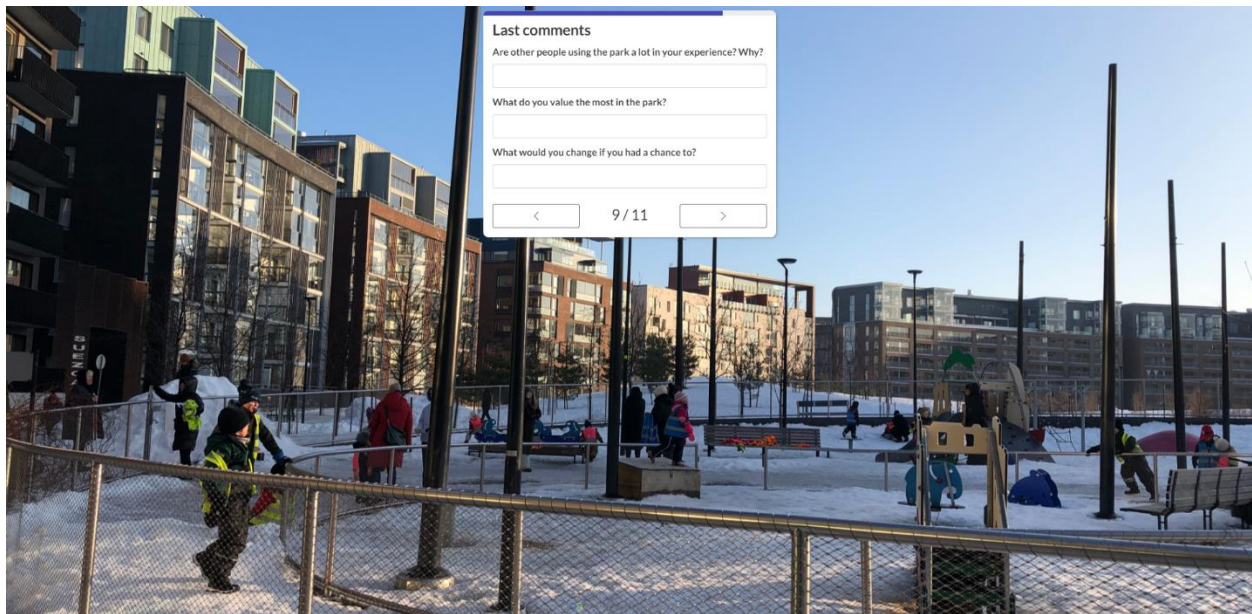


Image 27. Survey Questionnaire Page 9: Open questions for personal views and last comments.

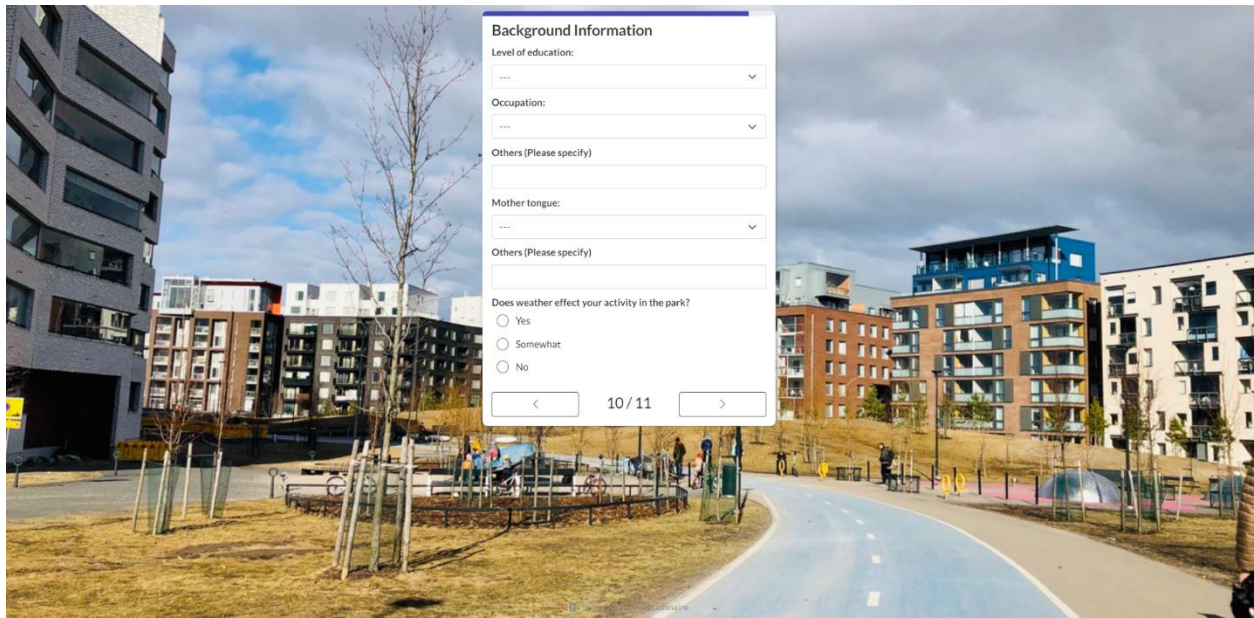


Image 27. Survey Questionnaire Page 10: Additional background questions.

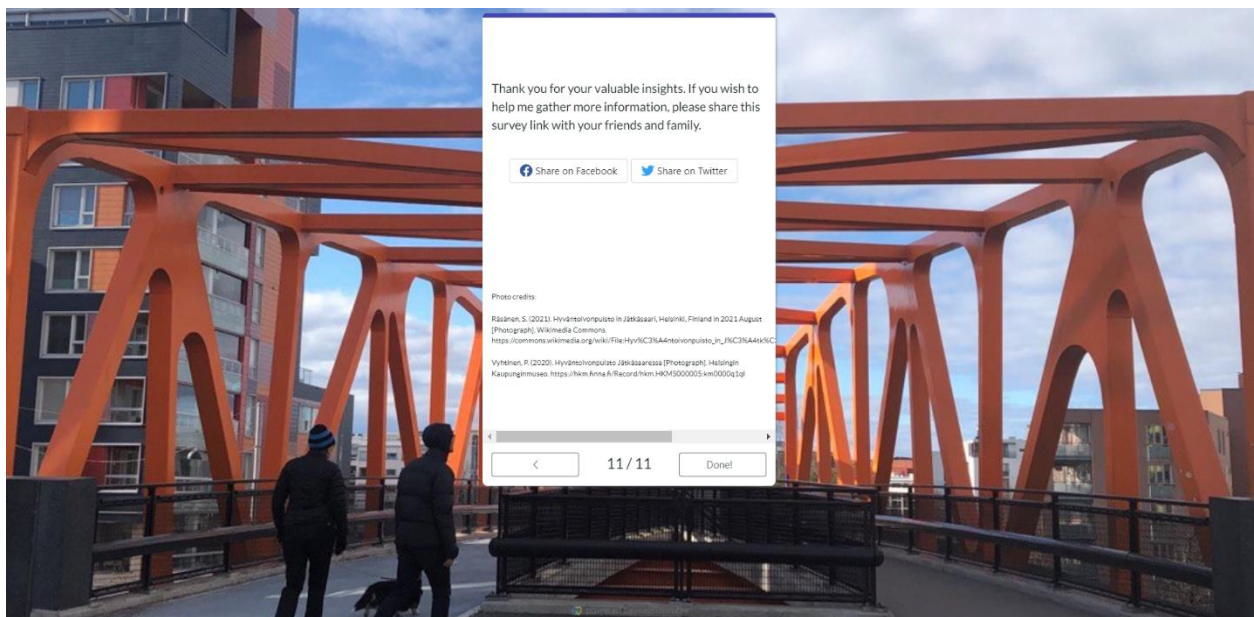


Image 28. Survey Questionnaire Page 11: Request for sharing the survey link.

Appendix B

Posters with QR code and URL of the survey questionnaire.



Image 29: Posters in English and Finnish.



Image 30: Poster hung in children's playground fence.