HOW CHILDREN USE URBAN SPACE IN TWO DIFFERENT NEIGHBOURHOODS IN BERGEN, NORWAY

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ABSTRACT

The municipality in Bergen in Norway is now facilitating a compact urban development consisting of high number of dwellings, offices and services on limited available urban space. Both politically and professionally there is a growing wish for families with young children to settle in these central urban areas.

Through in-depth interviews with parents of young children, we have conducted surveys regarding residential qualities and city condensation. An investigation was made on how the parents’ choice of residence, available outdoor space, the qualitative and quantitative spatial morphology of the neighbourhood, social living quality, traffic scape, children’s mobility, proximity, and transport, affect the informants’ quality of life. In addition, we have conducted interviews with a developer, a city planner, and two representatives from the Bergen Municipality Planning Department. The interviews with professional participants highlight the opinions and viewpoints of parents of young children.

Various spatial analyses and registration of the children’s behaviour in urban space of the neighbourhoods Laksevåg and Møhlenpris were carried out. Various types of street profiles, various space syntax analyses, as well as urban micro scale analyses (the topological relationship between private and public space) are carried out, and compared with the static snapshots of children on one sunny Saturday (the first spring day with sun in Bergen) at the same time in both neighbourhoods.

As the results show, the spatial layouts on streets and their adjacent buildings matters, in particular on micro scale level. The available outdoor areas are hardly used in Laksevåg, whereas the outdoor facilities in Møhlenpris are well frequented. Laksevåg has several segregated un-constituted and low inter-visible streets with many topological steps between private and public space. Laksevåg’s types of street profiles facilitate vehicle transport with small or no pavements, making the area child-unfriendly. Møhlenpris has a highly integrated street network, where the northern part has constituted, highly inter-visible streets and short topological depth between private and public streets. Møhlenpris’ street profiles have a balanced use of vehicle transport and pedestrians.

The informants’ choice of residence is not random, but rather based on the residence’s proximity to the inner city and social functions. The informants wish for closeness to the city centre to make use of what it offers. In addition, proximity to destinations and attractions in everyday life were important. Access to outdoor areas is important for families with children. The interviews and surveys show that location, content, and lay-out of the outdoor space are important. The findings show that the
informants care about their neighbourhood and living milieu. Many of them engage personally to
heighten their residential quality through social and practical measures. The informants living in urban
areas with restrictions on vehicle transport or areas sheltered from car traffic give their children more
freedom of mobility, than those who live in an area with heavy vehicle traffic. In short, the research
and the findings indicate that the informants are concerned with quality of living, and choose their
dwellings accordingly.

KEYWORDS
Children, urban space, compact cities, street profiles, urban micro scale analyses

1. INTRODUCTION

There exist two divergent views on how to plan urban space suitable for the presence of children in
public space. On the one hand, Jane Jacobs (2000) claims that sidewalks should be made safe for
children adjacent to their homes. In this way children learn about the world through the presence of
adults and they get the natural surveillance from adults. Playgrounds and parks separates the children
from adults. On the other hand, current planning norms and standards focus on the opposite; to
facilitate the content of playgrounds and parks for children for unfolding themselves in the play for
their development. Recently, suggestions and ideas are also made to use the space on roof as outdoor
activities (Isdahl 2007). The one view focus on the streets or routes between home and activities, and
the other view focus on the places where the children’s activities takes place. What is lacking is
evidence on how children perceive and use urban space, and how parents of small children perceive
their local environment.

Cities in Norway are surrounded by nature, but this nature is not always direct accessible  for dwellers
in central urban areas. Moreover, the private car ownership is high in Norway and the density of the
urbanised areas are rather low in comparison with other cities in Europe. Therefore, the private car is
for most dwellers the most important mode of transportation in Norway, in which causes high car
traffic in urban streets. High car traffic in urban areas affects the way in which families with children
choose dwelling areas and how children are using public space.

Somehow, families with children require larger space than single person households. When the size of
the home is small, the higher the need is to use the outdoor areas in the vicinity for playing. Therefore,
the provision of safe outdoor areas is essential for letting children play in public spaces.

Bergen municipality in Norway want to densify in existing urban areas and to facilitate to get families
with children to live in the city centre (Bergen Kommune 2017). Bergen city has a large population
growth, and the recent policies is to prevent urban sprawl into the countryside. The high population
growth and a shortage of dwelling contributes to high prices in the central areas. A lack of recreation
areas for children, high prices on dwellings and heavily trafficked streets contribute to that couples
tend to move out from the city centre as soon as they get children or when the children are getting to
an age where they want to explore the world outside the home.

During the last years, the aim has been to enhance urban dwelling areas for families with children. It
is even stated in the Norwegian planning and building law to make good urban areas for children.
However, what is lacking is knowledge on how children use urban space, what kind of spatial
parameters on various scale levels is perceived as ‘good’ urban areas to live in for families with
children, and how do families with children choose their home in cities.

For this purpose, we revealed current guidelines regards planning for children in urban areas and
literature on this topic regards urban space. We also interviewed families with children living in
different types of urban areas adjacent to the city centre the purpose is to identify their perception of
their neighbourhood and the reasons as to why they choose to live in this particular neighbourhood. In
addition, we interviewed one planner, a project developer, and two representatives from Bergen
municipality’s planning department for revealing their opinion on available tools for ensuring good
spatial qualities for children in urban areas. We performed various spatial analyses on different scale
levels for these two different neighbourhoods Møhlenpris and Laksevåg. Finally, we conducted
registrations exactly at the same day and timeslots in both neighbourhoods how children and adults
use urban space. These results were connected to space syntax analyses, urban micro scale tools (van Nes and López 2010), degree of function mixture (MXI) analyses (van der Hoek 2009) and types of street profiles/functions (Eldijk 2014).

As the findings in this inquiry show, spatial parameters on micro scale and spatial integration on local scale matters on how children behave in urban areas. Indications on these issues are also found in the interviews with families with children living in centrally located neighbourhoods.

2. DATASETS AND METHODS

We approached this topic with the following four different methods; review of the literature in the field, in depth interviews of eight families with children and urban planners and project developers, registrations on how children and adults use space during one day, and various spatial analyses.

For the literature review, we focused on the relation between children and urban space. We soon found out that there is a lot written on normative suggestions on how to make playgrounds, but little on the relation between children and urban space. Due to the requirement in the Norwegian planning and building law to ensure safe environments for children, we reviewed national and the municipality’s policies on children and urban space.

Two neighbourhoods, named Møhlenpris and Laksevåg, adjacent to Bergen centre with very different spatial layouts are chosen as case studies. For this purpose, we interviewed in depth 13 adults with children. We had a qualitative approach with semi-structured interviews using an interview guide to structure the interview while letting the informants speak freely about their neighbourhood, why they choose to live there, good and bad qualities, how they use the vicinity and how they perceive the outdoor areas. We wanted to know their moving pattern, their reflections on their vicinity and feeling of safety for their children, their opinion about the facilities offered in the neighbourhood. Four of the adults are living in Møhlenpris, seven are living in Laksevåg, and two of the informants are living in Åsane which is a suburb of Bergen. The topics of the interview guide were moving pattern, the informants’ opinions about their dwelling, city centre and vicinity, their perception on safety and outdoor spaces, and the provision of activities.

We conducted also semi-structured in-depth interviews with one planner, one project developer, and two representatives from the municipality’s planning department with purpose to get their view on how to facilitate families with children to live in urban areas in new housing projects. We wanted to investigate obstacles they meet for realising safe environments for children in urban areas, seen in light with their ideas about densification, planning and their opinion for creating dwelling areas in urban areas for families with children. For ethical reasons, all informants’ names and addresses were anonymised.

The interviews was recorded and transcripted. From the written transcripts our analysis first centered around a meaning condensation analyses with categorisation of various themes. We made the following categories: choice of dwelling, qualities and lack of qualities of the public spaces in their neighbourhoods, social aspects related to dwelling milieu, and urban space, the use of the city centre, traffic, children’s mobility, and transport related to adjacency. Within the themes the analysis was further carried out as hermeneutical analyses. Gaining in depth insight into the informant’s beliefs, feelings and choices on the topics.

For the two neighbourhoods, the following spatial analyses methods are used: Space Syntax, the urban micro scale method, street profiles and MXI. Space syntax calculates how each street segment relates to all others in terms of through-movement and to-movement potentials. We wanted to investigate how these spatial potentials relate to the perceptions and use of public space for families with children. Likewise, the urban micro scale tools, developed by van Nes and López (2010) shows quantitatively how the spatial relationship is between private spaces inside buildings and public streets. We wanted to investigate how these micro scale spatial aspects affect families with children perception and space use in urban areas.

Traffic safety for children is a concern of all parents. Therefore, we conducted analyses of street function related to street profiles. Four categories of street profiles were registered: pedestrian only streets, balanced use between pedestrians and vehicles, vehicle dominated roads, and vehicle only roads. Finally, we made a rough MXI analyses of both neighbourhoods with purpose to check out how mono-functional versus multi-functional areas influence perception and space use.
The registration of space use of both neighbourhoods was done with the static snapshots method. At the same day with the same weather conditions, registrations took place simultaneously in both areas. The registrations took place on a spring day in March with sunny weather. Bergen is known to be the rainiest city in Europe, with an average of 200 rainy days per year and rainfall with 2000 mm per year. On a sunny Saturday, we could get a sufficient number of children and adults of all age groups in both areas through the static snapshots registrations. The time slots between 10 am to 3 pm was used, because this is the time where most children are outside. Every hour we took a round in each neighbourhood and registered adults and children using public space. The last round was taken between 2-3 pm. We made a difference between small children from 0-5 years, large children from 6-10 years and adults. Moreover, we also made a difference between children accompanied with parents and children that were without adults.

Mohlenpris is an old working-class neighbourhood, constructed for more than 100 years ago. During the 70’s the area went through an urban renewal with purpose to improve the living conditions for its inhabitants. The outdoor areas were upgraded and small apartments were joined together for improving the quality of the dwellers. The area has an orthogonal street pattern with apartment buildings shaped by the streets.

Laksevåg is also an old working-class neighbourhood with freely standing buildings containing four apartments, row houses and single-family houses. Currently, Laksevåg scores low on the social living conditions. Bergen municipality aims to upgrade this area in the near future. Laksevåg differs a lot from Mohlenpris in terms of building morphology, street pattern and street profiles. Figure 1 shows images from both neighbourhoods.

3. RESULTS FROM LITERATURE REVIEW

Through history the children’s’ place in the city has changed. Changing planning ideals has influenced children’s’ participating in the urban life in cities, but children playing outdoor has always been a part of the street life in urban areas. During the industrial revolution, several families moved to the cities. The effect was poor living conditions, such as over-crowded dwellings, poor sanitary conditions, and unhealthy dwelling areas. These urban changes contributed to new ideas on how to plan healthy urban areas safe for children. Several ideas were developed from well know architects such as Le Corbusier’s and Eberneze Howard (Arup 2017). Their ideas were to separate the dwelling areas from the industrial polluted areas, and to let the dwelling areas be surrounded by parks and green areas. After the Second World War, there was a housing shortage in Norway and these modernist ideas were easy to implement in Norway (Roald 2010).

After the 1960’s the private car ownership exploded, and suburbs were constructed as an effect of that most people could travel longer distances between home and work. The traffic increased in the city.
centres, and the streets became dangerous to play in for children. As an effect, families with children moved to the suburbs in Norwegian cities. These suburbs are mono-functional, with a lack of working places and urban street life. The idea to create a separate playground for children were institutionalized. The suburbs are criticised to be “dwelling machines” and did not have good dwelling qualities, special for the children (Brantenberg 1997). However, for families with children, the suburb offered a better alternative than the old city centre with old run-down apartments and streets congested by vehicles. During the 60’s and 70’s, the idea was that it was healthier for children to grow up in the suburbs than in city centres.

During the 1970’s 90% of all new houses were constructed in the suburbs in Bergen. As an effect of increased wealth, more families started to move from the flats in the suburbs to single family houses with own garden at the end of the 70’s and the 80’s. The single-family house has been so far the best alternative for Norwegian families with children (Guttu 2003). Therefore, the Norwegian ideal dwelling model consist in that everyone should have the possibility to buy instead of renting their dwelling. The estate marked was strict regulated up to the 1980’s, in which gave a moderate price development. After the deregulation of the estate marked, the marked started to play a larger role.

During the 70’s and 80’s several research projects were conducted with background in psychology, sociology and ethnology, with purpose to find an answer on what is good dwelling milieu. No concise answers were found, but these studies contributed to put focus on children and their needs. Many of these reports criticised the suburbs. The concept “local milieu” was used. The local environment has the dwelling as basis, but includes the local vicinity. These aspects are important for people who are less mobile and has no other alternatives than what the vicinity offers. In particular small children and their needs were a significant focus in these reports (Henriksen et.al 2010).

Several reports were made during the 70’s. and 80’s. Guidelines for planning were quickly proposed in these reports, such as requirements for play grounds, separation of traffic and playing possibilities, access to services, variation in dwelling and housing morphology, working places, services and possibilities for social contact. The requirement to protect children’s needs in planning proposals were put in the Norwegian planning and building law in 1985. However, all these guidelines are made on rather weak evidence on how children behave and perceive urban space.

During the 80’s first improvements of upgrading old urban areas with focus on families with children were carried out. Due to a lack of space for implementing playgrounds, some streets were made car-free and converted into playgrounds. Old buildings were improved. The Møhlenpris area in Bergen is an example of this area. Urban living became popular during the 90’s. But after the increasing property prices in urban areas, and lack of outdoor areas to play, the number of families with children are still decreasing in urban centres the last decades.

For many families, their social ties to the neighbourhood is created through social networks, the school, and playmates ( Gabrielsen and Isdahl, 2005). The trend the last two decades has been that couples living in urban areas tend to stay there after they get their children. The demands for good and traffic safe outdoor spaces for children in urban areas are increasing (Kvinge et.at 2012, p.83), but tools are lacking to implement them.

Through history, the urban space has been the most important meeting place (Asplan Viak and Spacescape 2016, p. 103). In dense urban areas, the possibilities for using public space has reduced for children in many Norwegian cities since the 1960’s (Isdahl 2007). In an investigation of newly build housing areas in Norwegian cities, the results show that the quality of the outdoor spaces was poor for children. As the report concluded, there exist no elementary knowledge on good public space in current planning practice in Norway (Schmidt and Guttu 2008). There is a lack of playing areas, the connections between the parks and activities are not safe for children, and large parking areas and trafficked streets destroys the possibilities for children to play in urban streets (Asplan Viak and Spacescape 2016).

Jane Jacobs argued in the 1960’s that children need space to play adjacent to their homes. She suggests that the sidewalks to be the most ideal space to play for children. Here the children getting their upbringing, and they get surveillance from parents and neighbours. The sidewalks need to be broad, and the streets must have low flow of vehicles. Here the children learn to be part of society. Jacobs claims that the parks and playgrounds are not ideal, because they are separated from the daily milieu of the adults and lacks surveillance (Jacobs 2000, p. 91).
Likewise, Jan Gehls has through his observations shown that lesser vehicles in streets creates more activities of adults and children (Gehl 1971). Gehl emphasize that the private car has destroyed the quality of urban life between buildings, and contributes to less people in streets and less social activities. The effect is that children has lesser possibilities to explore their own neighbourhoods than their parents and grandparents (Björkid and Nordstrøm 2007, p.394). The reasons are a lack of safe outdoor areas and heavy car trafficked streets and roads function as a barrier for children. The effect is that parents do not let children walk outside alone, and the children’s action radius is reduced (Russen Jago et.al 2009, p. 107).

To conclude, the literature review shows that the quality of the public spaces adjacent to the home, and the quality of the routes between home and activities matters for families with children. These aspects are important for children’s mobility and their action radius in central urban areas.

4. RESULTS FROM THE FIELDWORK

4.1 The results from the interviews

From the interviews with the families, the following results are summed up.

The choice of dwelling is influenced by the wish to live adjacent to the city centre with all its opportunities, but the dwellings needs to be affordable. Living close to the city centre implies less time spend on commuting to daily activities, and opens up for the possibilities to walk or bicycle to work.

All informants stress the importance to have access to a large variation of outdoor areas, playing grounds, parks, nature and whenever possible to have an own garden. Especially the playing grounds need to be adjacent to the homes and have good qualities and large variation of facilities. The park in Mohlenpris is identified to have very good qualities, while the qualities of the park in Laksevåg is less positive. All informants expressed negative views on using a roof as a playground for children and had general negative opinions about outdoor areas on the roofs.

Social aspects of the vicinity and the possibilities to meet other families with children is important. However, half of the interviewed parents expressed a want for more meeting places in both neighbourhoods. Contact with the neighbours, adjacency to variation of attractions and activities for children are important.

The older the children of the informants is, the greater their mobility range. However, vehicles occupying the urban streets and roads limits the children’s mobility range. In both neighbourhoods all the interviewed parents expressed worries about the road and traffic. Parents with children have worries about living closed to roads with heavy car traffic. All the interviewed parents wish that when their children got older, they could play safely outside without surveillance of adults.

Observations shows that the location of the dwelling in relation to the spatial qualities of the vicinity and degree of traffic flow of vehicles affect the parents’ perception of their own neighbourhood. Reduction in the feeling of safety affect limitations of their children’s mobility. The larger perception of an unsafe vicinity, the lower mobility and action radius for these parent’s children.

Table 1 shows a comparison of the results from the literature review and the analyses of the transcriptions of the interviews of the families with children. The six categories of topics are used in the table.

Table 1: Comparison of the results from the literature review and the results from the interviews.

<table>
<thead>
<tr>
<th>Theme</th>
<th>The literature review</th>
<th>Analyses of the transcriptions from the interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choice of dwelling</td>
<td>Not random. Adjacency to the city centre</td>
<td>Adjacency to the city centre, facilities, and a wish to have own garden</td>
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</tbody>
</table>
Two urban developers and two planners from Bergen municipality were interviewed. The urban developers stress adjacency to schools and kindergarten, to reduce car traffic on streets and traffic safety for families with children. The urban developers claim that the planning tools the municipality offers do not secure good living qualities for families with children. The planners from the municipality claims that there is a lack in the precision on what is good qualities for families with children in current handbooks and planning laws. They claim that there is a lack of knowledge of the needs from families with children that want to live in central urban areas.

Therefore, we made some spatial analyses of the two neighbourhoods for identification of the spatial parameters of Møhlenpris and Laksevåg. How can space syntax and other spatial analyses of these two neighbourhood provide precision on the spatial parameters?

4.2 The results from the space syntax analyses

Space Syntax analyses of whole Bergen are carried out. Figure 2 shows a segment integration analysis with a high metrical radius of Bergen centre with the location of Møhlenpris and Laksevåg. Both areas are working class neighbourhoods. Møhlenpris is located closed to Bergen centre and consist of closed urban blocks with 3-4 floors buildings with apartments. Its orthogonal grid pattern is well connected and adjacent to a large park between the city centre and the neighbourhood. Laksevåg consists of single buildings with two floors, consisting of 4 apartments and with a common garden. There are some single-family houses in the area.
The integration values are higher in Møhlenpris than in Laksevåg. A steep hill with the park contribute to separate Møhlenpris from the city centre, whereas Laksevåg is connected to Bergen centre through the bridge Puddefjordbrua.

Figure 2: Global segment integration analysis of Bergen centre with the location of Laksevåg and Møhlenpris neighbourhoods

Figure 3 shows angular choice analyses, with both low (500 meter) and high (5000 meter) metrical radius for both neighbourhoods. The angular choice analyses with the high metrical radius highlight the main routes. In Møhlenpris, the main routes go around the neighbourhood, whereas in Laksevåg they go through the neighbourhood. The main routes in Laksevåg is dominated by vehicle transport. The families in Laksevåg complained about this traffic dominated road. In Møhlenpris the parents felt safer than Laksevåg to let their children moving outside without being guided by an adult.

The angular choice analysis with a low metrical radius shows the vitality of the neighbourhood. It is very low in Møhlenpris and average in Laksevåg. A space syntax analyses of the street network does not show all the spatial qualities. Therefore, other spatial analyses tools were needed to describe the spatial parameters of the build environment.
Figure 3: Angular Choice analyses of Laksevåg and Møhlenpris

4.3 The urban micro scale tools and degree of function mixture

The urban micro scale tools reveal the spatial relationship between private and public space (van Nes and López 2010). We wanted to reveal how the position of building entrances in relation to public streets affect the quality of urban public space. Figure 4 shows the street inter-visibility of both neighbourhoods. An inter-visible street is where buildings have entrances and windows on the ground floor of buildings and that they are located on both sides of the street. As can be seen in figure 4, most dwelling streets inside Møhlenpris have high inter-visibility, whereas it is very low in Laksevåg. Only a small part of the main route through Laksevåg has high inter-visibility. It is the only road segment in Laksevåg that have individual shops, and is the local centre of Laksevåg.
Figure 4. Inter-visibility of Møhlenpris (top) and Laksevåg (below)
Due to the height differences, the streets in Laksevåg tend to have walls on one side with steps to the buildings on the upper sides of the streets. Figure 5 shows the degree of street constitutedness for both neighbourhoods. Most dwelling street are constituted by entrances with windows on ground floor.
levels for both neighbourhoods. But the entrance density is slightly lower in Laksevåg than in Møhlenpris.

The interviewed parents in Laksevåg expressed concern about the quality of the streets and the car traffic dominance in Laksevåg’s streets. When making a registration of the street profiles of both neighbourhoods, shown in figure 6, Laksevåg’s streets and road are heavily vehicle dominated. The local dwelling streets lacks pavements, and the main routes have small pavements. In Møhlenpris the streets have a balanced profile between vehicle transport and pedestrians. Some of the interviewed families in Møhlenpris expressed that they feel it is safe to let their children walk to school without an adult.

Figure 6: Street profiles of both areas
All of the interviewed parents emphasised the importance to have services and facilities adjacent to their dwellings. Figure 7 shows a function mixture (MXI) analyses of both neighbourhoods. The degree of function mixture is divided in the following four categories: mono-functional dwelling, mono-functional working, mono-functional amenities, and mix use.

Figure 7: MXI analyses of Møhlenpris and Laksevåg
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The degree of function mixture is higher in Møhlenpris than Laksevåg. The old harbour area in Møhlenpris is transformed into apartments, cafes and offices. In Laksevåg, the areas along the waterfront are mono-functional harbour activities. Only the small local centre has mix of functions. In general, the functions are more divided in Laksevåg than in Møhlenpris.

4.4 The static snapshots – registrations on how children use urban space

We wanted to know how children use urban space, and to identify the spatial features on their behaviour pattern in a current urban context. We also wanted to register where children are visible in public space and where are they visible without adults. In this context, we conducted static snapshots analyses on Saturday 18 March 2017. It was the first sunny spring day in Bergen. Figure 8 shows the results from the static snapshots registrations of Møhlenpris and figure 9 shows the registrations of Laksevåg from 10 am to 3 pm. As the results from the registration show, most people are seen in streets with high degree of inter-visibility, and streets with a balanced streets profile.

In Møhlenpris it is relatively silent between 10-11am. The activities started to increase from 11 am. The highest peak is from 1 pm, with families with both small and large children. Everybody seems to know each other and people are standing and talking to each other. Most children are found in dwelling streets with low or no car accessibility, on playgrounds and in the park. The adults frequent the areas close to the water. Some small children are playing in streets without a present adult. During that day, it was an event for children in park. After 12 o clock the park got very crowded, so we did not conduct registrations in the large park. Several adults are sitting in the sunny parts of the streets for enjoying the sunshine from 12am to 2 pm. Our registrations show that the public spaces are well used that day, and the results comply with the results from the interviews. All interviewed families say that they are using the urban spaces inside the neighbourhood, the playgrounds and the park.

In Laksevåg, most children are found in the area’s park. More adults are using the public spaces than children. Most children are accompanied by adults. Few people are standing or sitting in Laksevåg’s public spaces. The time children use in the park is short due to the poor quality of the playgrounds there. Most adults registered were just passing though directed towards the city centre. The registrations of Laksevåg comply with the results from the interviews. The families living in Laksevåg complains about the poor possibilities for social contact, and that they cannot let their younger children walk alone due to the cars dominating the streets and roads.
Figure 8: Static snapshots of Møhlenpris during one saturday
Figure 9: Static snapshots of Laksevåg during one Saturday
5. CONCLUSIONS

What did the registrations, the results from the interviews and the spatial analyses from Møhlenpris and Laksevåg contribute to understand how children use urban space? So far, the results seem to support the view from Jane Jacobs: Neighbourhoods with balanced streets profiles with high natural surveillance from adjacent buildings are attractive for families with children.

Møhlenpris has a clearly defined orthogonal street pattern with short urban blocks. The buildings are shaped by the street pattern. The area has a clear demarcation between private and public space, and the street profiles enhance a balanced use between vehicles and pedestrians. The cars are forced naturally to have low speed. Every street segment is constituted by entrances and windows contributing to the natural surveillance mechanism. The routes between dwellings and social facilities such as playgrounds, parks and cafés are perceived to be safe. The area is attractive to stay in and is used by locals as well as visitors. The results comply with the results from the interviews and the static snapshots.

Conversely, Laksevåg has an organic street pattern with large blocks. Most of the buildings are freestanding, where many of them have front gardens and entrances turned away from streets. In many cases, there are several semi-private spaces between then building entrance and the street. The street functions are car dominated, in which make the routes between homes and the park with playgrounds unsafe for small children. Likewise, these street profiles are also found in the dwelling streets (or rather roads). The streets in Laksevåg facilitates the cars more than the pedestrians. These aspects contribute to make the perception of this neighbourhood unsafe for social life and for children. The area lacks cafés and playgrounds with good play possibilities for children. The results comply with the results from the interviews and the static snapshots. Few adults as well as children stay in the public spaces in Laksevåg. The interviewed families living in Laksevåg complain about the heavy trafficked roads, and a lack of possibilities to social contact.

How to enhance good living qualities in urban centres, particular for families with children? Everything is related with everything. Regards the physical aspects of the built environment, the following can be said based on these two case studies: The key is to have inter-accessibility for everyone on various scale levels. On a macro scale level, the neighbourhood needs to be adjacent to the city centre. That is the reason parents choose to live close to the city centre. Parents spend less time for transport for their daily activities, they are lesser depend on the private car, and there are many activities nearby the neighbourhood. A spatially integrated main route going through the area contributes to a natural mixture between locals and visitors, as well as a mixture of functions in a neighbourhood. However, when these main routes have a street profile facilitating high traffic speed and small pavements, it is considered as unsafe for children.

For the perceived safety for children, the vicinity of the homes need to have balanced street profiles with low speed of vehicle transport. An integrated main route running through the area needs thus to have a balanced street profile enhancing a vital local centre in the area. This contribute to local centres with a variation of activities, which is important for the social life in a neighbourhood. The street profiles need to be clearly defined with broad pavements with possibilities to play for children. Some street needs also to be converted into playgrounds as well as for possibilities to recreate for adults. In general, the routes between home and activities need to be safe and vital for children as well for adults. On an urban micro scale level, windows and building entrances need to be directly connected to streets on ground floor level for the natural surveillance mechanism.

It can be concluded from this inquiry that playgrounds are attractive if they offer playing challenges for children. However, the way from home to the various activities (schools, leisure activities, playgrounds etc.) needs safe street for children in term of balanced street profiles with low speed on vehicles and possibilities to play on sidewalks. It is the routes between home to the activities that matters for children - not only the places where the activities for children take place. Seemingly, the micro scale spatial qualities of the streets matter in the way for increasing a child’s action radius and to let them learn about the world around them in an urban as well as sub-urban context.

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