The role of green spaces and their management in a child-friendly urban village

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Abstract

Environmental child-friendliness is affected by how built environments and green spaces are planned and designed, but also by their ongoing management, including both development and maintenance. This study examined children's perspectives on their local environments with focus on green spaces and their management in an urban village. Five groups totalling 16 children aged 10-11 were interviewed through child-led walks. Both the qualities of the village as a whole and of specific places within it added to the child-friendliness of the local environment. The children showed planned and managed spaces including playgrounds and parks, and unmanaged places such as abandoned gardens. They found many qualities in multifunctional planned places with a varied, rich content. In unmanaged areas the lack of management was seen as positive for exploration, play possibilities and for the place to be children's own. The findings suggest that children's perspectives can play an important role not only in planning and design, but also in the ongoing process of landscape management, including the provision of more variation in local green spaces.

Keywords: children's perspectives; child-friendly environments; green space management; landscape management; landscape planning; urban green space

Introduction

The child-friendliness of built environments has been described as having multiple values. Children's access to local child-friendly environments, including green spaces, contributes to sustainable development in several ways (Björklid & Nordström, 2012), including diminished car transportation (Freeman & Quigg, 2009) and support for children's healthy development (Bell et al., 2008), physically active free play (Veitch et al., 2008) and concern for the environment (Palmberg & Kuru, 2000). The freedom to access and explore varied local environments is also important from children's own perspectives (Elsley, 2004), as children relate to the environment differently than adults; their relationship is more sense-oriented (Björklid & Nordström, 2012) and can include direct construction and manipulation (Moore, 1989; Jansson, 2015). .

There have been attempts to summarise and concretise factors or determinants of the child-friendliness of built environments. Kyttä (2004) has described and empirically tested the interrelation between children's independent mobility with perceived environmental qualities for use and activities – so called affordances; the latter described by Heft (1988, p. 32) as: "the functionally significant properties of the environment […] perceived qualities that emerge from person-environment relations". Riggio (2002) and Horelli (2007) both point at the importance of versatile open spaces and their development, as well as children's perspectives and participation, as key aspects of child-friendliness, aspects with close connection to the management of green spaces. Further studies are needed to approach clearer definitions of child-friendly environments and their different aspects, although this might also be partly context-bound (Broberg et al., 2013). In this paper, we focus on children's own perspectives on green spaces and their management and the role they play in the child-friendliness of environments.

Children find affordances for play and form their own places – *children's places* – both in environments which are formal, planned *places for children*, and in informal, unplanned places such

as abandoned lots or green fringes (Bell et al., 2003; Rasmussen, 2004). Children's places are often created in environments with unique qualities that they can use repeatedly to meet each other and physically interact with or manipulate elements (Rasmussen, 2004). The difference in qualities between places which are *managed* and *unmanaged* might be of specific relevance (Berg & Medrich, 1980), since in places which are "free of adult regulation [children] feel at liberty to play quite creatively" (Bourke, 2014, p. 41). Children might appreciate access to both planned places for play and other particularly green spaces (Noschis, 1992; Elsley, 2004; Jansson, 2008).

Environmental child-friendliness might be threatened by shrinking open spaces, increasing traffic levels and limited independent mobility, due in part to social aspects such as adults' safety fears (Björklid & Nordström, 2007; Prezza, 2007; Björklid & Gummesson, 2013). Particularly in Western countries, childhood is currently transitioning towards diminished time for free outdoor play and a rise in indoor, adult-controlled and organised activities (Skår & Krogh, 2009). This might be counteracted by the development of local environments that facilitate outdoor play. Adults, including green space managers, can play a role in counteracting children's alienation from green spaces and the many associated benefits (Bell et al., 2003; McAllister et al., 2012), if children's perspectives are recognised (Elsley, 2004; Björklid & Nordström, 2012).

Urban green spaces are commonly formed through planning and design and thereafter maintained and further developed through landscape management, forming the content and quality of green spaces (Jansson & Lindgren, 2012). Planning, design and management of landscapes all affect environmental child-friendliness (Horelli, 2007), but management remains particularly unexplored in this aspect, despite a main goal of management being to meet users' needs and perspectives (Jansson & Lindgren, 2012). In municipalities, three green space management levels can often be distinguished: policy/strategic (politicians), tactical (civil servants) and operational (park workers, often entrepreneurs) (Randrup & Persson, 2009; Jansson & Lindgren, 2012). Management

processes have the potential to approach users on a local, informal, hands-on and ‘everyday’ level which can be valuable for including children’s views (Clark & Percy-Smith, 2006).

Few previous studies have applied a child perspective on urban green spaces with focus on their management. It has been found that management of school grounds is important for children’s play and learning (Malone & Tranter, 2003) and that managers need more insight into the perspectives of children and young people in their use of green spaces (Bell et al., 2003). Roe (2006) found that children felt that the management of their local environments was not adapted to their preferences. More knowledge on landscape management practice for environmental child-friendliness is needed, also in a larger local context than specific places for children.

This study takes its starting point in the need for more knowledge on the complexity of child-friendliness of built environments. It aims to reveal more about the role of green spaces and their management, from children’s perspectives, for management to adapt to children as users of the local environment. Which socio-environmental qualities are affecting the child-friendliness of local environments? What is the role of green space management? And of the properties of green spaces? How do children see themselves as users of their local environment and its green spaces?

Method

The study has a qualitative approach, with an urban village as a single case. Case study methodology is based on the interest of exploring one or several cases in a context using a selection of methods (Stake, 1995) and is therefore suitable for studies in relation to concrete environments (Johansson, 2005). An important methodological driver for this study is the approach to explore children’s own perspectives on their local environments (Kylin & Lieberg, 2001; Elsley, 2004; Rasmussen, 2004; Cele, 2005; Roe, 2006; Bourke, 2014).

The case study area

A village in southern Sweden was selected as a so called intrinsic case, with properties of particular interest to explore further (Stake, 1995). The village has a number of qualities which have been found to be representative of child-friendly environments (Riggio, 2002; Horelli, 2007), including a green outdoor environment which is rich in affordances and safe. A previous study (Johansson et al., 2011) found that children aged 10 in the village have high levels of independent mobility and physical activity on an everyday basis and that they frequently play and socialise with friends. Furthermore, a high sense of community was discovered amongst adults living in the village (Johansson et al., 2011). A further study (Wales et al., manuscript) also revealed a high sense of community amongst local children aged 10-11.

The village has approximately 4 300 inhabitants and is the second largest built area in a municipality with 23 000 inhabitants in total. It is situated in a rather urbanised region in close proximity to larger towns to which it is connected through regional trains with a local station. The socioeconomic and education levels are relatively high and unemployment low. The village is comprised of mainly detached houses with gardens, but on the western side of the railway line there are mainly rental apartments. The village is expanding, and planned to expand further, through building projects on surrounding arable land and on both former industrial sites and green spaces within the built areas. There is very limited car traffic in central parts and good possibilities for walking and biking. Green space is plentiful and consists mainly of lawns, but also shrubs, trees and woodlands, flower plantings, two large storm water ponds and roughly ten playgrounds, mainly managed by the municipality. There are local schools, of which the centrally placed municipal schools are attended by most of the children living in the village.

The physical planning of the village is both organised and conducted by the municipality. Green space management is organised by the municipality (policy and tactic level) while performed

(operational level) by a company specialising in green space management. The same company has had responsibility for the village for several years and is local or perceived as local, e.g. in the sense that equipment is stored in the village.

Child-led walks

When studying children's perspectives on outdoor environments, the methodological approach is of main importance, in order to both diminish the risk of influencing the results too much and for having a child-friendly research process. Group methods are often preferred by children, although some see the risk that certain children may dominate in the group (Hill, 2006). Outdoor walking interviews with small groups of children, so called child-led walks, have been found to be of particular value in studies of children's perspectives on environments (Kylin & Lieberg, 2001; Cele, 2005; Loebach & Gilliland, 2010). Children in year 4, aged 10-11, were involved through the local municipal school. This is an age commonly included in similar studies (Kylin & Lieberg, 2001; Cele, 2005; Bourke, 2014), when children often are able to communicate their perspectives, have some independent mobility and are interested in their local environments.

The study included sixteen local children from four classes, 11 girls and 5 boys, which is around 15 % of the local children in that age group. All children who were given written consent from their parents participated. With help from their teachers, the children were formed into five groups, of which one included four children and the rest included three, each group with children from the same class who knew each other well. Three groups included both boys and girls and two included girls only.

Two researchers conducted all the interviews together during one week in May, when the weather was nice, mostly sunny and with temperatures of 20-25 degrees Celsius. Each interview lasted about two hours of which the first approximately 15 minutes indoors and the rest of the time

outdoors. During the indoor part, the children were introduced to the researchers and the task by looking at a large map where they could mark their homes, friends' homes and places they liked, disliked or the existence of barriers. They were also instructed to decide which local places to show during the walk. While walking, questions were posed to them about the environment and their use of it, concerning: places suitable or unsuitable for them, the arrangement of the outdoor environment and the management work there, what they can or would like to do there and needs for improvements. The interviews were documented by two digital recorders and both researchers and children also took some photographs during the walks. Directly after, the researchers wrote down everything they could recall from the interviews, including observations that could not be recorded, such as how the children had acted in the environment during the walks.

Analysis

The two parallel recordings were fully transcribed and put together into one text document. The qualitative data analysis included coding built on reading and rereading the transcriptions (Bryman, 2012), focusing on everything with a connection to the children's local environment, its green spaces and their management. The photographs and notes from the child-led walks were used as support in the analysis. The analysis was performed by a research assistant in close collaboration with a researcher. Coding of all five interviews resulted in a large number of categories that were grouped into two main categories: *the village* and *places*. Further interpretation of the results from the coding was then made to draw conclusions and answer research questions.

Results

The results reveal that the children have shown how aspects of the village – including village size and character, management work, structures and elements supporting independent mobility and affordances and changes in the environment – all affect child-friendliness. Specific places,

including playgrounds, green spaces and parkland and abandoned places, were key contributors to the village's qualities (see Figure 1).

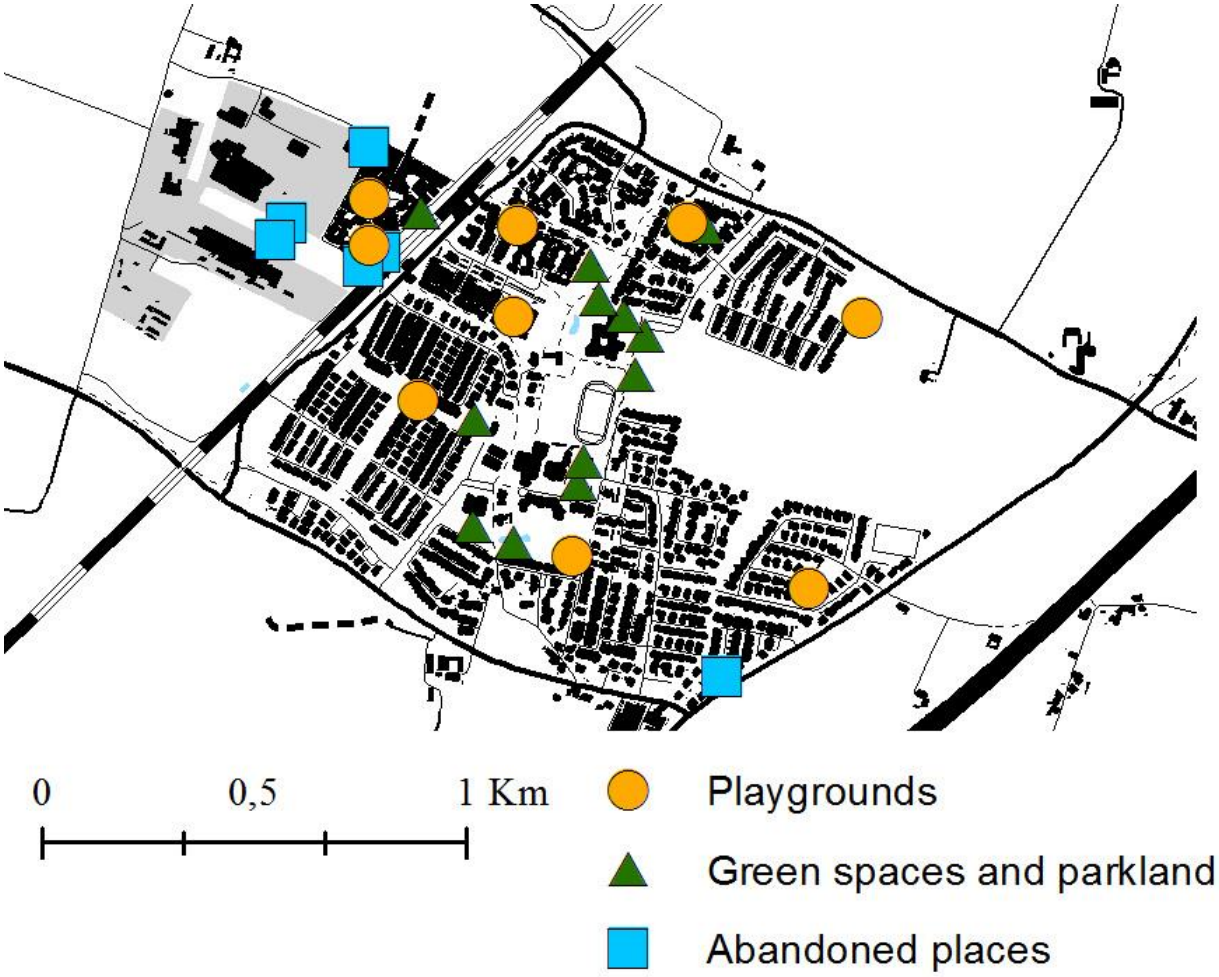

Figure 1: The village and the places visited during the child-led walks

The village

Size and character

The village was described as a good place to live, possibly the best, by all the children; particularly by two children who had experiences from living elsewhere. Positive factors included the small size of the village which meant they were close to everything (friends, school, sports facilities, some stores), many playgrounds and green spaces, being able to easily find your way, not having to travel by car and having access to public transportation. For example, one girl described the best aspects of living there as "there are many playgrounds, many green areas. You can be outdoors a lot."

Proximity to large roads and the lack of public bathing facilities were among the few negative factors brought up.

Management work

Many of the children knew who was responsible for taking care of the outdoor environment. “They clean the playgrounds very often. We do have [company name]. They are building a lot here, planting areas” and also recognised them: “Rather often you can see a truck pass by. They have their own large storage here.” Some of them found it positive to see park workers, knowing that they are taking care of their local outdoor environment: “one wants to know that they are controlling… if there is dog poop that they take it, take care of the nature” or, as expressed by a few children, to get the chance to talk to them, exchanging information: “it is clean water [in a fountain]. We have asked [company name] and they say that the water is clean.” Several children had some insight into the organisation of green space management, knowing that it was the municipal organisation that made the decisions and hired the company to perform the maintenance and development. The overall image of the green space management was that it was performed well, mainly with focus on the maintenance, including cleaning and caring, with “many bins for dog excrement,” but also complaining: “They pick up litter, but don’t care about the cigarette butts.” Cleaning and removal of litter from adults was considered important. Some of the children even engaged in picking litter.

Structures and elements supporting independent mobility and affordances

The children described having much independent mobility within and to some extent also outside the village, walking, biking or even jogging. There appeared to be little or no limitations from the parents as the children described themselves as free to go where they wanted:

Boy 1: I think that I have had freedom since I was seven.

Boy 2: I have found my way in [village name] all my life.

Boy 1: I know the entire [village name].

Interviewer: What does freedom mean?

Boy 2: That you can go wherever you want.

Interviewer: Within [village name]?

Boy 1: Yes, and sometimes I bike to [town name] with my friends.

They described a variety of uses of their outdoor environment including playing in the streets (chasing games, ball games, skipping, painting the asphalt with blackboard chalk), exploring all types of spaces, also informal, mostly in unstructured ways but some via geocaching.

Small scale built and green elements provided many affordances as the children moved through the village. They often preferred walking on grass or crossing green spaces. “I bike here, straight over here. It feels a bit as if it is me who made so that nothing is growing there.” Elements such as walls and fences were used for balancing. Grass straws, leaves, flowers and stones were frequently touched, picked and played with, in particular where the maintenance level was low and there was for example high-grown grass. Some litter was picked up as treasures. Special qualities were sometimes noted in the materials. “On our hedges the leaves are larger, I usually pick those” said one girl.

A few children were less familiar with the local environment than the others and explained that this was due to them having many scheduled activities and little time for playing in the neighbourhood. Other factors described as limiting the children’s mobility were roads with much car traffic and when there were barriers on or machines using walking and cycling paths (including pickup cars for green space maintenance), the train station and railway, and monotone residential areas seen as bad for orientation.

Changes in the environment

The children related much to changes and development of the village, in large and small scales. They noticed ongoing or recent changes, interestedly examining where there had been diggings, objects added or green elements damaged by machines, and talked much about plans for change.

The children were generally positive towards the management work, but very critical towards the governance and planning by the municipality. The development of the village, with plans for densification, was a recurring theme affecting their views of their local environment a lot. For example, one boy stated that "they don't think! The municipal organisation that we have is thinking more like adults. For the municipality to be good they must also go back and think 'if we were children, how would we like to have things?" The current plans made the children worry for loss of green spaces and increased traffic which might limit their independent mobility and social life. "If you like live in traffic then your parents might not let you out as much as they do now. Because I can be outdoors all the time and walk on all the streets and such, but if it becomes too much traffic then I will not be allowed to and so I can't meet my friends and that" said one boy.

Changed and rebuilt playgrounds were a source of frustration as the children were generally not included in or informed about those decisions, even though some children also understood that there might be reasons for such changes. A couple of changed or new playgrounds were popular, but one was described as "better before" and in a new housing area, the building of a playground was seen as taking too long. One boy described a process with an unclear participatory approach around another playground as very disappointing: "It was visited by many parents to a lot of children all the time, every day, and then they decided to tear it down. Now they have built one single squirrel there [wooden sculpture] and now no one goes there."

Places

Playgrounds

Playgrounds were frequently shown by the children during the walks. They offered affordances for equipment play, but also for example a chasing and hiding game called “dunkgömme,” ball games, pretend play, den building and tree climbing, often in green elements in or next to playgrounds. Furthermore, playgrounds were important as meeting and hangout places, particularly if strategically located.

Interviewer: What are you doing when you are here then?
Child 1: Spinning or swinging or doing “dunkgömme.”
Child 2: Or by the hammock and do some strange game that you invent.

Playgrounds were described as good if they contained different pieces of play equipment, were unique and if they contained age relevant equipment that provided them with a challenge, such as difficult climbing frames. They were also seen as good if they were multi-functional and provided opportunities for both play and social meetings for groups of children. One particularly popular playground, ”the China Swing,” named after a large swing there, was much used as children could sit together in it, challenge themselves by swinging high while socialising (Figure 2).

Figure 2: A playground with many qualities – the China swing

Green elements such as trees and shrubs and hilly terrain added affordances to playgrounds. For "dunkgömme" the green design of the playground was of main importance. A girl described a playground being good for the game as "there are shrubs there and then there are shrubs there, and there are very many different 'dunkställen' [objects used for the game dunkgömme, e.g. lamp posts]." In one playground the main attraction was a climbing tree with a platform that someone had built. In another, a boy clearly described the qualities as embedded in its green surroundings rather than in the play equipment: "that slide, you don't use it so much, but behind it a bit further there is one of the best climbing trees in the world" and the qualities of being in the tree as the possibilities for many social activities such as "talking with friends, you can see if someone is approaching, you can tell secrets here… everything."

From a social perspective, a few playgrounds were described as favourites among the ten-year-olds. Their settings appeared to support social dimensions of play. For example one boy said that "it is really fun. You have a lot of people and it is [...] a cosy place. Here you can chase each other and have fun together." Both children that were younger and older than them were described as problems if they visited their favourite playgrounds much. Older children might occupy the China swing and scare other children away. Settings suitable for small children and their parents were not seen as sufficiently challenging for themselves. Opinions varied whether the best solution was to make playground units more age-specific or to provide something for every age within each unit. One girl wanted "a small climbing frame and a large one… because that one is a bit boring sometimes, so if you had one for small and one for a bit older."

The children were generally pleased with the management and particularly the maintenance of their local playgrounds. Most of them were quite well-maintained, but the children did not react negatively to signs of neglect, although they liked seeing workers care for the playgrounds, gravel being added and new-sown grass. Some playgrounds the children knew were also taken care of by people living close to them, for example the China swing. Litter, except when from adults or youth such as cigarette butts and graffiti, was not a problem, as it also added affordances:

Boy: In this sand box there can be anything, for example candy wrappers. I once found a lollypop.
Interviewer: Does the litter bother you?
Boy: No. Once I found a coin.

Green spaces and parkland

Many different uses of green spaces were brought up during the walks: running around, playing ball games, playing with water, looking at fish and other animals by ponds, going on sledges down hills when snowy, sitting socialising, having picnic, sunbathing, reading and even doing homework. The

children used all their senses in green spaces, gave attention to smells, touched leaves, flowers and high-grown grass, walked on grass because it was "more comfortable," listened to birds and rustlings, tasted herbs from allotment gardens, talked about wanting to taste cherries and looked at small animals and shadow play under trees.

Some elements in the green spaces were of particular interest. Hills were used in many ways, such as for running up and down or exploring, particularly hills with vegetation on them. Shrubs, whether on hills or not, were play objects, used for building dens, as expressed by one girl: "In front of my [house] there is grass and then there are a lot of shrubs and in there is a den." Much of the local green spaces were grass surfaces. They were seen as positive, but even more useful when combined with other elements, such as hills, football goals, shadowing trees, flowers, allotment gardens, and water in fountains, ditches and ponds. By a pond, one group stayed for a long time and engaged in looking at animals and picking flowers which they threw into the water (see Figure 3).

Figure 3: Combinations of elements in green spaces – throwing flowers into the pond

Some negative aspects linked to green spaces were also brought up, including fear connected to darkness, rustlings or covering shrubs. Such fears affected the use of green space for a few of the children, with one girl explaining "I usually never walk here because here is so much more shrubs than there." High grown grass in managed green spaces was seen as problematic since the children feared ticks and they became unsure of whether they were allowed to walk there or not. It also made ball games difficult. Nettles, steep slopes by ponds and grass allergy were also problematic for their green space use.

The children overall liked the level of management and maintenance of the green spaces. "They do cut the grass, not very often, but it never becomes too long" thought one boy. Cutting of shrubs was positive in some places for children who feared walking there alone. "It is good that this is cut down" said a girl when passing a hedge to a private garden. "Maybe there are people who see if something happens." But neatly kept green spaces were not always wished for. One boy thought that plantings might limit children's use, saying that "they plant a lot of flowers so that you are not allowed to walk there and that."

Abandoned places

The children also chose to show places which can be categorised as unplanned or – rather – as unmanaged: an abandoned piece of railway overgrown with trees, an abandoned house with its garden, another garden with fruit trees which appeared little cared for and a long-time abandoned garden which they called "the ghost forest." These places appeared to have a specific attraction for the children and their activities. Although some described them as being visited less often than more easily accessible places, children held them as an important complement to other, more planned or managed places for play.

Unmanaged places were used for exploration (Figure 4), seeing nature and animals, climbing trees and altering the environment by for example building dens. A girl said that she goes to the ghost forest to "just explore and check... it is a bit fun here." The children found the overgrown places beautiful and cosy and were inspired by the history and stories they connected to abandoned railways, houses and gardens. The ghost forest in particular was connected to much storytelling, as there were stones from a former stonemasonry which resembled grave stones. Also the abandoned house with its garden was both scary and interesting to explore. The unmanaged places were also described as important for social reasons, allowing solitude or to talk to a friend without being disturbed, as few people came there. Possibilities to find new settings and uses, inventing new games, appeared more unlimited in these areas than in planned areas for play, as shown in this conversation from the overgrown railway:

Girl: I think that this type of place is more fun… because here I think that you can do so much more still… it is just to come up with things to do. It is usually so that always when I am with friends and that we usually make up games instead of taking what you already know of.
Interviewer: But why is it easier to do that here than in an ordinary playground?
Girl: I think there are mainly built things and it is usually mostly swings and such things and when you have been to a playground […] very many times so it is a bit boring. But when you come to a forest you have for example been to one place and then you go further out and then end up in another place all of a sudden.

Figure 4: Exploring abandoned, overgrown places in the "ghost forest"

The lack of care in the unmanaged places was in most cases seen as very positive, despite high grass and nettles. "It is scary sometimes. I have been here in autumn… it was rather uncared for" said a girl about the ghost forest. She continued: "it is a bit difficult to walk, but at the same time hadn't it, if it would have been all perfect then it would not have been a ghost forest… so it is still quite good." The lack of management gave qualities that the children liked; kept others use of those places down; and also appeared to signal access for the children: "It is fun when something is abandoned so that you can walk in there because then it becomes much more fun" said one girl about the abandoned house. Another thought that no maintenance was needed to the abandoned railway now, but perhaps in the future for the risk of it growing too much, "so that we can keep on being here." However, fruit trees and berry shrubs were popular elements which they thought should be more cared for. A cherry tree in an uncared for garden where they were unsure of

ownership and thought the grass was too high, made them propose to “make so that it is legal to pick and that they who live there take care of that place.”

Discussion

A child-friendly village

The results from this study are in line with earlier findings (Johansson et al., 2011) and expectations that the studied urban village can be considered child-friendly. Several social and environmental factors found in this study, such as independent mobility and richness in affordances – variation – in the physical environment (Kyttä, 2004), appear to contribute to this. The environmental qualities appeared highly interconnected with the social, affecting the children’s independent mobility on the village level, similar to findings by Cele (2005). The studied urban village can give insight into general qualities while the context can also be expected to influence what child-friendly environments can be (Broberg et al., 2013).

The overall planning of the built area showed to have importance, with schools, sports facilities and green spaces centrally located in a walkable area. Proximity to school has also been found to be important for independent mobility in other cases (Fyhri & Hjorthol, 2009) and can, together with the limited traffic and access to large open and green spaces (Björklid & Nordström, 2007; Veitch et al., 2008) have an influence on adults allowing children to walk independently to school and home. It is also possible that the village’s limited size and building density, as proposed by the children in the study, has a value for the social qualities which support children’s independent mobility (Noschis, 1992; Kyttä, 2004).

With the exception of a few children, who had a lot of scheduled activities after school, they had relatively similar knowledge of their local environment, and high levels of independent mobility. They were masters of the areas closest to their own homes, but familiar with much of the village.

Their relationship to the local environment and the local adult world appeared overall positive, with a high sense of community (Wales et al., manuscript) and high allowance for children building dens, climbing trees etc. This can be compared with children in more dense urban settings in Sweden and Ireland who frequently had conflicts with adults and the adult world in their local environment (Cele, 2005; Bourke, 2014). These social qualities, sense of community and good relations with adults, can be expected to play an important role for child-friendliness, as proposed by Prezza (2007), for example.

The level of management and maintenance

The level of management in green spaces appeared to affect children's possibilities for play, with a combination of both managed and unmanaged places viewed as favourable (Berg & Medrich, 1980). The children expected different levels of care depending on the type of environment they visited. In planned and managed places such as playgrounds and parkland, management and maintenance were mainly seen as positive while in unmanaged places, lack of management highly added to the qualities of those places.

In unmanaged places, children experienced more freedom to invent their own games and also to affect the environment by for example picking straws, stones and flowers, climbing trees or building dens. The variety and richness of elements in such areas led to play being more varied and creative. In more well-kept green spaces, the children appeared to consider expectations on what is allowed there. The level of management and maintenance might signal the level of allowance and freedom - and the type of affordances. This is in line with the findings of Bourke (2014), suggesting that children's play is more free and creative where adult regulation is low and of Berg & Medrich (1980) who point at the privacy afforded children in abandoned areas in contrast to the rest of the adult controlled environment.

Unmanaged characters, including both natural and built and often abandoned structures, were very useful and positive qualities in such places. Besides making fruit and berries clearly accessible for everyone to pick, the children did not want these places to be managed because it would make them less allowing and useful for them and more used by others. This overall positive attitude to unmanaged and natural green spaces among children in this study is in contrast to the more mixed attitudes found in a Canadian city with little access to such areas (McAllister et al., 2012). Providing access to not only managed but also unmanaged green spaces, might therefore be positive for children developing a good relation to nature.

In managed spaces, the presence of park workers might be an important part of the management to children. The contact with managers, such as seeing park workers from the maintenance company or even having a dialogue with them, made the children feel that their village was cared for. They took an interest in any changes or novelties in the environment, including the park workers and their operational work, as previously found in studies of playgrounds (Jansson, 2015), and also saw it as separate from the political and tactical levels of the management by the municipal organisation which was much less popular.

Demands for maintenance in planned places were otherwise quite moderate. These included removal of litter, mainly if connected to grown-ups, and sufficient grass cutting to allow football play and limit the risk for ticks. The visited green spaces were overall rather well-maintained, although the children rarely spoke of less well-kept places and elements negatively. On the contrary, free-growing vegetation and a varied green content were mainly seen as positive and used for play, although some shrubs evoked unsafe perceptions. However, management approaches can be a way of further increasing the usefulness of planned green spaces for children. This can include developing varying and multifunctional green spaces, increasing the possibilities for finding “own”

places and allowing children to participate in the development of, and manipulate, the green spaces, as described hereafter.

Elements and places in varying and multifunctional green spaces

Varied elements in green spaces such as trees, grass, flowers, animals, hills, water and functions such as allotment gardens provided rich environments with many affordances for example for exploring, running, sliding and seeing people, experienced as very positive by the children. This seemed to facilitate for the children to find their own places.

Also, playgrounds were seen as better when in proximity to other functions, in combination with varied green spaces and with varied and multifunctional content, which is in line with previous studies (Jansson, 2008). Such playgrounds were commonly shown and described as much used and appreciated during the walks. This is in contrast to Cele (2005) and Kylin and Lieberg (2001) who found little interest in playgrounds during child-led walks, except for the social aspects of playground use, which were found also by Cele (2005). The children in this study looked for playground settings which allowed playing or socialising together with others in their own age while avoiding concurrence with other age groups. Planned playgrounds appeared valuable for child-friendliness of built environments, as did access to less programmed open spaces (Noschis, 1992; Cele, 2005; Jansson, 2008).

The children valued places which suit them and the specific needs of their age group, where they could be on their own or with friends. It is of importance that children are given the opportunities to find and create places where they feel at home (Rasmussen, 2004). In playgrounds it included a specific balance, which included avoiding competition from both small children and teenagers. Few playgrounds in the village were therefore preferred as hangout places by the ten-year-olds. Other green spaces, both managed and unmanaged, did not appear to be connected with the same

competition or demands on design or management. Unmanaged places were described as providing a specific freedom for their play. Children's places can be created both in planned places for children and elsewhere, but are supported by the freedom to affect places that children find in unmanaged places (Rasmussen, 2004). However, parkland and playgrounds that did provide the right qualities became very important places for them.

Children's participation and manipulation

The children's use of their local environments included many aspects of participation and active change of, and interaction with, physical elements there, through manipulation (Jansson, 2015). As they moved through their village, a physical interconnection with the environment, in particular with its green elements, was often present. Access to loose materials through varied vegetation and elements is a commonly described affordance and quality for play (Moore, 1989; Cele, 2005; Jansson, 2008). The children also described affecting the environment more intensively, such as through den construction and path-making. The manipulation of environments, both unmanaged and managed, needs to become recognised as part of children's play and met by understanding among managers who must deal with the different perspectives on places among adults and children (Bell et al., 2003; Jansson, 2015).

The children were keen on participating and influencing both the planning of the village and the development of local green spaces. Several were critical of the lack of participation and thought that the municipal organisation showed no interest in their perspectives. The children's knowledge about their local environment, which they describe themselves having, and as also found by Roe (2006), could be valuable for managers and planners. That major changes of the built environment are conducted without including the local children's perspectives is strongly affecting them and their views of the municipality and democracy. To find ways of including children in the development of their local environments is a major challenge within landscape practices.

Discussion of the methods

The main method used – child-led walks – was well-functioning in getting qualitative information about children's own perspectives on their neighbourhoods (Kylin & Lieberg, 2001; Cele, 2005). Although the case study was based on this single method, it has elements of multi-method approaches and triangulation (Stake, 1995) because of the complexity of the method, e.g. being both indoors and outdoors, based on interviews with elements of observation, photographing and description of the case village. The children's relation to the environment is very direct and not always easy to verbalise. The combination of being in the environment and talking about it made the issues possible to approach, although the children were sometimes answerless when asked about their ongoing interaction with the environment or about its management. What they say about the environment (e.g. want grass to be cut) was not always reflected in their actions (e.g. play with high grass). Management issues are not always seen as separated from other aspects. The pilot character of this study, with a small number of children, opens up for coming studies to further reveal and refine aspects for environmental child-friendliness. The uneven distribution of girls and boys in this study, with two groups consisting of girls only, might be seen as a methodological weakness. However, this probably gave more gender balanced results, since boys tended to dominate in the mixed groups.

Conclusions

The results of this study show how environmental child-friendliness is created through a combination of factors on different scales. Planning, for example of roads, housing and parks and a supportive adult word can allow independent access to important functions and green spaces and contribute to a positive social climate. Management can lead to variation and change in several aspects. This includes providing and developing accessible places with a variety of management levels, contents and functions, which support socialising, the finding of own places and

manipulation. Managers' active presence can be positive. There is a particular value in also having access to environments which are not well-kept, even unmanaged and natural. Managers of urban green spaces should increasingly take an interest in children as users, meet the interest that children have in management work and ensure to the provision and preservation of child-friendly environments despite densification and urbanisation processes.

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