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Laila Niklasson^a & Anette Sandberg^a

^a Mälardalen University, Västerås, Sweden

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Children and the outdoor environment

Laila Niklasson and Anette Sandberg*

Mälardalen University, Västerås, Sweden

ABSTRACT: In this article we will discuss the outdoor environment for younger children with the help of two different concepts. The first concept, affordance, is well known in the discussion about outdoor environments. What the affordance in the outdoor environment is perceived as can differ between actors. How the affordance is used can be another source of interesting difference between actors. We would also like to bring in an additional concept: private and public space. Interviews during a walking-tour have been carried out with 103 children, aged 3–9 years. The results show the affordances that scored highest were climbable features, shelters and moldable materials. These categories were also the highest scored concerning use. The outdoor environment at the pre-school, pre-school class and school is mainly a public space, but there are examples of private space such as shelters.

RÉSUMÉ: Dans cet article, nous discuterons des environnements extérieurs pour les jeunes enfants à l'aide de deux concepts principaux. Le premier, celui d'affordance, est bien connu dans les discussions sur les environnements extérieurs. L'affordance au niveau des environnements extérieurs est perçue comme pouvant différer entre acteurs. La façon dont l'affordance est utilisée peut être une autre source de différences intéressantes entre acteurs. Nous aussi aimerions apporter un autre concept, celui d'espace privé et public. Des entretiens ont été réalisés au cours de promenades avec 103 enfants âgés de 3 à 9 ans. Les résultats montrent que les affordances ayant les plus hauts scores sont les équipements pour grimper, les échelles et les matériels modulables qui ont également obtenu les plus hauts scores sur le plan de leur utilisation. L'environnement extérieur, au niveau préscolaire et scolaire, est principalement un espace public mais il y a des exemples d'espaces privés tels que les échelles.

ZUSAMMENFASSUNG: Die Lebensumwelt im Freien für jüngere Kinder wird in diesem Beitrag anhand hauptsächlich zweier Konzepte diskutiert. Das erste Konzept, der Aufforderungscharakter, ist in der Diskussion in diesem Zusammenhang gut bekannt. Wie der Aufforderungscharakter wahrgenommen wird, kann sich zwischen den Akteuren unterscheiden. Wie der Aufforderungscharakter genutzt wird, kann eine andere Quelle interessanter Unterschiede zwischen den Akteuren sein. Wir würden gerne ein anderes Konzept einbringen, nämlich das Konzept des privaten und des öffentlichen Raumes. Interviews während eines Ganges im Freien sind mit 103 Kindern im Alter von drei bis neun Jahren geführt worden. Die Ergebnisse zeigten, dass der Aufforderungscharakter die höchsten Werte erreichte, wenn es um eine äußere Erscheinung ging, die sich erklettern liess, die sich als Obdach nutzen ließ und wenn es sich um Materialien handelte, die sich formen ließen. Diese Kategorien erzielten auch die höchsten Werte, wenn es den tatsächlichen Gebrauch betraf. Die

*Corresponding author. Email: anette.sandberg@mdh.se

äußere Umgebung von vorschulischen Einrichtungen, von der Vorklasse und der Schule ist hauptsächlich öffentlicher Raum, aber es gibt auch Beispiele privater Räume etwa in Form von Unterkünften.

RESUMEN: En este artículo discutiremos el ambiente exterior de los niños pequeños con la ayuda principalmente de dos conceptos. El primer concepto, 'affordance', es bien conocido en la discusión acerca del ambiente al aire libre. Como se percibe el 'affordance' del ambiente exterior puede variar entre los actores. Como el 'affordance' es usado puede también ser una fuente de diferencia entre los actores. Nosotros queremos agregar un concepto adicional, espacio público y privado. Durante una caminata se hicieron entrevistas con 103 niños de edades entre 3 y 9 años. Los resultados muestran que los accesos valorados más altamente son los lugares para trepar, para guarecerse y materiales moldeables. Esas categorías recibieron también los más altos puntajes de uso. El ambiente exterior pre-escolar y escolar es fundamentalmente un espacio público, aunque también hay ejemplos de espacios privados, como las guardas.

Keywords: outdoor environment; younger ages; affordance; private and public space

Introduction

In this article we discuss outdoor environment for younger children with the help of two different concepts. The first concept, affordance, is well known in the discussion about outdoor environment. The second concept – private and public space – is less often mentioned. We argue that these concepts can develop our understanding of early childhood and support early childhood education.

Affordance is an expression for significant and important actions in the environment seen by the individual (Gibson 1979). According to Norman (1988), affordance refers to the perceived and actual properties of an object, those properties that decide how it can possibly be used. Norman and Gibson give different meanings about the concept of affordance. McGrenere and Ho (2000) have compared Gibson's and Norman's perceptions of affordance. Gibson's affordance includes:

Offering or action possibilities in the environment in relation to the action capabilities of an actor; independent of the actor's experience, knowledge, culture, or ability to perceive. Existence is binary – an affordance exists or it does not exist. (McGrenere and Ho 2000, 3)

On the other hand Norman's affordance involves:

Perceived properties that may or not may actually exist. Suggestions or clues as to how to use the properties. Can be dependent on the experience, knowledge, or culture of the actor. Can make an action difficult or easy. (McGrenere and Ho 2000, 3)

Fjortoft and Sageie (2000) and Fjortoft (2001) pointed out a strong relation between the diversity of landscape and the affordance of play. Carr (2000, 2001) used the concept of affordance for a study about early childhood technological activities and constructed categories of affordance such as 'transparency (encouraging certain goals), challenge (encouraging diverse responses to difficulty and uncertainty) and accessibility (encouraging a range of patterns of responsibility)' (Carr 2001, 40). Kytä (2002) described that affordance contains various levels, namely: potential, perceived, utilised, and shaped affordance.

In this paper we also bring in an additional concept. We will analyse affordance, but also discuss affordance from a private and public perspective. What is not so often mentioned is that affordance also can be analysed and discussed from a private and public aspect. The private and public can be discussed both from a territorial space and a social interaction perspective (Copeland 2008; Habermas 1996/1998; Halldén 2006; Niklasson 2007; Wikström 2007). With a distinction between the public and private, the often perceived public outdoor environment can include an affordance to be private with some friends, or to sit and reflect alone.

With this theoretical framework we wanted to study how younger children perceived their outdoor environment. If the staff in early childhood education area pay attention to the results from research they need to be aware of what kind of affordance they give, and how it is perceived by younger children. Our research questions are: What do children perceive as affordance and use in the outdoor environment? How is the affordance related to the concepts of private and public? What implications do the results have for staff in early childhood education and care policy and practice?

Background

Children of today face a rapidly changing society with new challenges and possibilities. Childhood is organised, and the medial, material and communicative development has changed childhood. Furthermore, twentieth century welfare has increased, plus the transition between farming, industry and information society. This increased prosperity has been visible in children's access to larger spaces indoors (Sandberg 2003a). Therefore, it is essential to increase awareness of the importance of the outdoor environment for children's development. Chawla (1998) argues that it is important to be aware of the significance that childhood experiences outdoors have on individual development and behavior concerning the environment. Values based upon experiences from childhood may influence how architects and others design children's environments in pre-school and school.

Experiences from the outdoor environment and nature are findings that influence the lives of human beings (see Palmer and Suggate 1996; Palmer et al. 1998a, b, 1999). Cooper Marcus (1978), Chawla (1986), Dovey (1990) and Sandberg (2003b) have noted that importance placed on the outdoors and freedom coincide. Nature is an environment where both children and adults can find peace and relaxation from the stresses of everyday life, and increase their playfulness and feelings of freedom. The adults serve as models and influence children during their development and this also applies to nature experiences. If adults have a favourable view of nature this is transferred to their children. Björklid (2005) maintains that children become more involved and show endurance when they receive access to natural environments.

The outdoor environment is the pre-school's symbol to the world. Mårtensson (2004) points out that the outdoor environments of pre-school are some of society's most public environments and that outdoor play can be considered as 'micro-processes of city life'. She further points out that both the social and the physical environment meet in a pre-school's outdoor environment. In Mårtensson's (2004) study, where she compared the outdoor environments of two pre-schools – one located in the countryside and one located in the city – the result from the research showed that motion and sensuousness were prominent aspects of play and interaction outdoors. The study also showed that play experiences rich in content are better made in a limited play environment, where children have the opportunity to create their own spaces.

Sook-Young, Herwig, and Shelley (2001) show in their study of pre-school children from three different pre-school environments, where children were being observed by video recordings, both outdoors and indoors, that outdoors, the children were more engaged in more complicated games with friends, compared to when they played indoors. Concerning education, there can be differences in the learning environment indoors and outdoors. The outdoor environment and nature can allow more active and physical play.

Girls and boys have qualitatively different experiences playing in the outdoor environment (Ärlemalm-Hagsér 2006). In Sandberg and Vuorinen (2006) the girls in the study saw play environments as being dependant on climate. The majority of the girls prefer outdoor play when it's warm, or when there is snow.

Method

An observation and interview guide was developed, primarily inspired by the taxonomy of affordance in the outdoor environment presented by Kyttä (2003). We listed a number of perceived and utilised affordance. The affordance was divided into possibilities in the environment such as *flat, relatively smooth surfaces*: cycling, running, skipping, skating, skiing, playing hopscotch, skateboarding, coasting down; *detached objects*: throwing and digging, building of structures, playing with animals, using plants in play; *attached objects*: for jumping over and jumping-down-from. *Non-rigid attached objects*: for swinging and hanging; *climbable features*: for climbing. Also *moldable material*: dirt, sand, snow; and *water*: for example swimming and fishing were considered. The private and public dimension was regarded in both whether there were *sheltered* places and if there were activities that were carried out in groups or alone. In *affordance for sociality* included to play rule and role plays, playing home and war, and also being noisy, calm and silent.

Two categories were excluded, i.e., the possibility to share or follow adult's business and also affordances looking out from, because it was not valid in this environment. Instead we included two new categories i.e. *to be silent* and *to be calm*. Concerning moldable materials, we specified affordances playing with sand and affordances playing with dirt.

Participants

Children from 71 pre-schools, 24 pre-school classes and eight schools participated in the study. These pre-schools, pre-school classes and schools are cooperating with Mälardalen University, Sweden in the teacher education programme.

There were 103 participants in this study, 52 girls and 51 boys. Out of these, 68 were 5-years-old or younger, and 35 were between 6- and 9-years-old. The youngest participant was 3-years-old and the oldest was 9-years-old; thus, there was an age gap of six years separating the youngest participant from the oldest. The participating pre-schools were located both in city and rural areas of Sweden.

Table 1 shows the number of subjects and the children's age and gender.

Procedure

The data collection was carried out during two weeks when teacher students at Mälardalen University, Sweden had practicum weeks. The teacher students collected

Table 1. Subjects of the study.

	Girls	Boys	Age mean	Total
3–5 years	36	32	4,3	68
6 years	10	15	6	25
7–9 years	6	4	7,7	10
Total	52	51	6	103

data during a walking tour with the children. During the walking tour with one boy and one girl, they asked about their perceptions of the outdoor environment. The student teachers could choose, to a certain extent, when and how to make a walking tour and interview the children according to the observation guide. The guide suggested what the outdoor environment afforded the child possibilities for, for example, cycling, different kinds of playing, if objects were placed in the outdoor environment in addition to play, places to hide, material to form. The children and the students wrote in their individual guide if they agreed, ☺, or did not agree, ☹, for each question. Further on, if the boy and girl used this affordance during their outdoor time at pre-school, pre-school class or school. If the children couldn't write, they got help from the student.

Ethical considerations

The ethical rules in Swedish social science research (requirements of confidentiality, consent, information and autonomy, and an emphasis on voluntary participation in the study; Humanistic Social Science Research Council 2002) were considered. To get permission from the parents, the student teachers were asked to give a letter to the parents. We, the researchers, wrote that letter. The letter informed the parents about the research project and the role of the student teachers and the children. The parents then chose whether they accepted that the student teachers walked together with their child and talked about how they used the outdoor environment. The parents had to sign the agreement. In most of the cases the parents accepted; only few student teachers had to ask more than two parents to get acceptance for the walking tour with the child. With the consent from the parents and the use of ethical guidelines the rules for ethics are secure.

Results

A scale was constructed based on all questions (33 in total) relating to the affordance taxonomy categories included in this study, to describe the degree of availability of them in different ages and gender. A total score was created for each category by summing how the children perceived affordance in each category (Table 2) and also if the affordance were utilised (Table 3). The scores are expressed in percentage.

Perceived affordance

Table 2 shows the pre-school and school affordance of 3- to 9-year-old children in Sweden categorised according to the affordance taxonomy.

Flat, relatively smooth surfaces, affordance for sociality, attached objects and water were particularly perceived affordances for girls between 7- to 9-years-old. Graspable/detached objects and non-rigid attached objects were the mainly perceived affordances

Table 2. The percentages of the scores of perceived affordance categorised according to the affordance taxonomy.

Age interval	Boys			Girls			All
	3–5	6	7–9	3–5	6	7–9	
Flat, relatively smooth surfaces	65%	68%	68%	67%	67%	74%	67%
Affordance for sociality	62%	68%	75%	66%	74%	77%	67%
Relatively smooth slopes	53%	47%	38%	46%	40%	50%	48%
Graspable/detached objects	68%	72%	75%	64%	74%	63%	68%
Attached objects	81%	77%	75%	69%	80%	100%	77%
Non-rigid attached objects	67%	80%	88%	57%	75%	83%	68%
Climbable features	88%	93%	75%	86%	100%	100%	89%
Shelters	86%	90%	100%	76%	85%	100%	84%
Moldable materials	86%	77%	100%	83%	83%	96%	84%
Water	29%	38%	25%	29%	33%	39%	31%

for boys between 7- to 9-years-old. Both boys and girls aged 7- to 9-years-old perceived affordance mostly in shelters. For the most part boys aged 3- to 5-years perceived affordance in relatively smooth slopes. Interestingly, climbable features were perceived as an affordance for girls between 6- to 9-years. Moldable material was above all a utilised affordance for boys between 7- and 9-years-old.

Gender differences for perceived affordance

The girls aged 7- to 9-years out-performed other participants in perceived affordance in almost all categories. The perceived affordance was greater in all 10 categories except graspable/detached objects, 63%. In non-rigid attached objects (83%), there instead boys in ages 7–9 year (88%) ranked higher and moldable materials (96%), there boys ages 7–9 year ranked higher (100%) in comparison with the girls.

The girl's age group of 3- to 5-years in this study attached scores to objects (69%) non-rigid attached objects (57%) and shelters (76%), lowest in comparison with the other participants. But the girls aged 3–5-years ranked climbable features 86% highest of all categories in their age interval (3–5 years).

Boys in the age group 7- to 9-years scored moldable materials 100% and shelters 100% highest in comparison to the other participants. They ranked climbable features 75%, lowest compared to the other participants. Girls aged 6-years scored climbable features 100%, highest compare to the other participants.

In the 6-years age-range 77% of the boys in the investigation mentioned moldable materials as lowest ranked. They also ranked climbable features (93%) highest of all categories in their age range.

Boys aged 3- to 5-years ranked the lowest in comparison with the other participants for the flat, relatively smooth surfaces (65%) and affordance for sociality (62%). In relatively smooth slopes they ranked highest (53%), but they ranked climbable features 88%, highest of all categories in their age range.

Utilised affordance

Table 3 presents whether the children utilised the affordance in pre-school or school.

Table 3. The percentages of the scores of utilised affordance categorised according to the affordance taxonomy.

Age interval	Boys			Girls			All
	3–5	6	7–9	3–5	6	7–9	
Flat, relatively smooth surfaces	57%	70%	61%	54%	53%	67%	58%
Affordance for sociality	49%	63%	45%	51%	54%	57%	52%
Relatively smooth slopes	41%	40%	38%	40%	40%	50%	41%
Graspable/detached objects	54%	57%	50%	49%	56%	57%	53%
Attached objects	56%	57%	50%	46%	55%	83%	54%
Non-rigid attached objects	50%	77%	63%	46%	65%	83%	56%
Climbable features	75%	87%	50%	69%	80%	83%	75%
Shelters	63%	83%	75%	63%	80%	83%	69%
Moldable materials	70%	63%	69%	64%	65%	79%	67%
Water	25%	38%	17%	23%	23%	33%	26%

Flat, relatively smooth surfaces were especially utilised affordances for boys aged 6-years. Affordance for sociality, relatively smooth slopes, attached objects, non-rigid attached objects and moldable material was a utilised affordance for girls in the 7- to 9-year age range. Graspable/detached objects and shelter was a notably utilised affordance for both aged 6-years and girls aged 7- to 9-years. In particular for boys aged 6-years, climbable features and water was a utilised affordance.

Gender differences for utilised affordance

The table shows gender differences in that girls aged 7- to 9-years utilised affordance highest in seven of the ten categories. Especially, attached objects, non-rigid attached objects, climbable features and shelters ranked highest (83%), and are important parts in utilised affordance for girls aged 7- to 9-years.

Girls aged 6-years scored lowest in comparison with the other participants in two categories: flat, relatively smooth surfaces (53%) and water (23%). However, climbable features and shelters (80%) are important parts in utilised affordance for girls aged 6, but also in perceived affordance (see Table 2).

The girls in the age group 3- to 5-years gave the lowest score for utilised affordance of the same categories as in the perceived affordance (see Table 2), i.e., attached objects (46%), non-rigid attached objects (46%) and shelters (63%). Also boys aged 3- to 5-years score shelters lowest (63%). But the girls also score graspable (49%) and water (23%) lowest in comparison with the other participants. Addition, climbable features (69%) was highest scored and an important part for utilised affordance for the girls aged 3- to 5-years.

In comparison with the other participants, boys aged 7- to 9-years utilised affordance lowest in three of the 10 categories. Two of these categories were also ranked lowest by them in perceived affordance (see Table 2): relatively smooth slopes (38%) and climbable features (50%). The third category was affordance for sociality (45%). Among the boys aged 6-years-old, moldable materials (63%) was lowest ranked in comparison with the other participants, which was the same result as in perceived affordance (see Table 2).

Age group perspective for perceived and utilised affordance

The results from the 103 children revealed that from an age group perspective the participants in the oldest age group, i.e., 7- to 9-years, perceived and most utilised affordance is reflected principally in *shelters*. The age 6-year claims perceived and most utilised affordance also in *climbable features*. Those in the age intervals of 3–5 years and 6 years consider *climbable features* as perceived and most utilised affordance. In all age ranges *water* is characterised as the lowest perceived and utilised affordance.

In conclusion, on average, the categories of climbable features, shelters and moldable materials received the highest score, i.e., they are strong perceived affordance categories. The strongest category, climbable features that afford, scored over 89% (perceived) and 75% (utilised) of the maximal score. The lowest average score was in the category of water, i.e., it is weak category, since the average was 31% (perceived) and 26% (utilised) of the maximal score.

Discussion

In this study we have shown what children perceived as affordances and how they utilised affordance in the pre-school, pre-school class and school environments. Affordance in this case was mainly afforded in a public space; the children are visible and social.

Concerning the method that we have used, we would like to comment the guideline during the walking tour. When we were reading the results we noticed that the variables for public and private space were few, compared with the other variables. Our hypothesis was that the affordance of sociality and shelter would be enough. The affordance categories are able to use for an initial discussion, but to be able to carry out a more elaborated discussion further research is needed.

What do children perceive as affordance and use, in the outdoor environment?

The participants perceived and utilised affordance mostly from climbable features, moldable materials and shelters. These results differ from Kyttä's (2002), where non-rigid attached objects, flat, relatively smooth surfaces and attached objects have the highest average score. In our study, in all ages water is characterised as the lowest perceived and utilised affordance and this corresponds with Kyttä's (2002) results. This result is contrary to earlier results from Sandberg (2003b) where water was often mentioned as used in the outdoor environment when adults talked about memories from play during their childhood.

There were also some differences between gender and ages concerning perceived and utilised affordance in our study. Boys of 6-years score water highest and girls aged 7- to 9-years score affordance for sociality, attached objects, climbable features and moldable materials highest in comparison with the other participants.

Girls aged 7- to 9-years ranked perceived affordance highest in seven categories but these categories were not the same as those they ranked as utilised affordance in pre-school, pre-school class and school. They didn't use flat, relatively smooth surfaces, climbable features and water, for example swimming and fishing, to the same extent as they perceived them as an affordance.

The answers from the children present an outdoor environment that is shaped and afforded by somebody. As we interpret the results the planners, and perhaps the

teachers, have thought and worked in accordance with Norman's (1988) definition of affordance, more so than Gibson's (1979). They have tried to think about experience, knowledge and culture. The outdoor environment is also created in accordance with not only a child's experience, knowledge and culture. The outdoor environment seems to be a reflection also of what the children should experience, know and which culture they should comprise. For example these children should be interested in outdoor activities and nature.

The matching and development of the child's experience and knowledge is also discussed by Chawla (1998). Her example that outdoor activities are essential for a child's individual development and behavior concerning the environment can be developed into a discussion about how nature is an important concept in a child's culture. In a Swedish context the children encouraged to stay outdoors and taught that human beings and nature are interrelated and dependent upon each other. This can also be a part of a more extended curriculum on sustainable development.

How is the affordance related to the concepts of private and public?

If public space is defined as a place where people gather, there is free access and the people are visible, then there is also a more private space where few gather, the access is more limited and people are less visible. According to Mårtensson (2004), she regards the outdoor environment at pre-school as one of the most public spaces in society.

The results show that the children sort out a space, 'the shelter', which can be perceived as more private. The shelters are among the perceived affordances that were given the highest scores on a group level considering all answers. They also garnered some of the highest scores for being used. Even if we sort out gender and ages the pattern is the same. Even though the score is high for perception and use, there is one age group that gives the highest score. The shelter is perceived as affordance among 100% of the boys and girls aged 7- to 9-years. On the other hand, it is not the 7- to 9-year age-range which uses the shelters most; it is the 6-year-old boys and 7- to 9-year-old girls that use the shelters most. Boys aged 3- to 5-years and girls of 3- to 5-years were the age groups that used the shelters the least. That is, the older children use the private space more often than the younger ones. The younger ones are those most visible in the public space.

Even though the children perceived and used a private space, the overall impression is more of an outdoor environment that is a public space. If an external viewer would look at the outdoor environment of the pre-school, pre-school class or school, he or she will see children that are using different sorts of surfaces, perhaps cycling at the flat surface and climbing at the slopes; they are all visible. Where there are bushes for shelters or small houses for shelters the external viewer will not see what is happening, and neither will the staff. The outdoor environment is not created for invisibility. There is probably a reason for that. From a staff perspective one reason can be responsibility and control. When the children are inside they are in a smaller area and the security can be perceived as higher. When the children move outdoors the possibility to control can be reduced and one way of not losing control can be to support public, visible activities. From a society perspective there are also other reasons for a child's visibility. A pre-school with children that are playing can be perceived as a cultural asset in the living area. A visitor or the inhabitants can hear the children laugh and look at how they are trying to increase their skills while playing. The area can be

perceived as safe and nice; it is a place where you want to live and continue to live in. On a social level it can be positive to show that the small citizens are taken care of and that their development is supported; the visible activities in the outdoor environment for the pre-school, pre-school class and school show this.

If public space is regarded as the difference between playing alone or together it is interesting to notice that the affordance for sociality is lower than for shelter. The affordance for sociality is in the mid-range of the scores (67%) on a group level, considering all answers. The older they got, the higher scores sociality was given. They got even lower score for being used (52%). When we sort out gender and ages the pattern is varied. The 7- to 9-year age range for both girls and boys report the highest scores for using the social affordance. If we sort by age and gender for sociality boys aged 3- to 5-years reported the lowest use of social affordance, boys aged 6-years reported the highest score for use among boys (and for all children). Among the girls it was the 7- to 9-year age that reported the highest score for affordance for sociality.

If the older ages perceived and used the private shelter more than the younger, the same difference in age occurred concerning affordance of sociality. There the older ages perceive and use the affordance of sociality more than the younger. But overall the scores for sociality were not in top. The outdoor environment seems to offer activities, but they can be carried out parallel to another person's activity, not necessarily together in a joint venture.

What implications do the results have for the staff in early childhood education and care policy and practice?

As the child perceives the function of the pre-school yard and school yard and uses it for play and other activities, the pre-school yard, pre-school class yard and school yard have a capacity to influence children's actions, learning and play.

According to Gibson (1979) the definition for affordance is an expression for significant and important actions in the environment as seen by the individual. The challenges for staff in pre-school, pre-school class and school and planners are to give possibilities to create an outdoor environment as both a private and public space with interesting affordances. Affordance in a public space seems to be good enough, but private space for individual activities is offered less. Mainly, the shelter was offered as private space.

Affordance in the sense of Kytä's guidelines show a variety of activities. Even though; one result caught our attention. The result showed according to water a low score and they perceived and not used. On the other hand other affordances for moldable material, such as sand and dirt, was higher. Based on the results we want to argue that there is a possibility to develop the outdoor environment to let the younger children experience dirt, water, fire and wind in a more elaborate way. Such a development, then, is in line with Palmer and Suggate (1996), Palmer et al. (1998a, b) and Palmer et al. (1999), claiming that children need experience from nature for life-experiences.

Furthermore, on a municipality level there is the possibility of using the results, if a local pre-school and school plan includes a yearly study of the outdoor environment. The concepts of perceived, used affordance, private and public space can be used to structure this yearly report.

In conclusion, we argue that the concepts of affordance and private and public space can develop our understanding of early childhood and support early childhood education.

The results from our study and the walking tour can be used of pre-school staff. The tours with children offer the opportunity of understanding children's thoughts and experiences concerning affordance. The staff can use the results to support an individual child's development. Furthermore, the results can give new insights about developing the preschool outdoor environment from a spatial perspective. The discussion can end in a written policy for both education and care.

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