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## **Affordances for risky play in preschool – the importance of features in the play environment**

**Ellen Beate Hansen Sandseter\***

**Abstract** The purpose of this article is to qualitatively explore the affordances for risky play in two different preschool outdoor environments, an ordinary preschool playground and a nature playground, based on Gibson's (1979) theory of affordances and Heft's and Kytteä's (Heft, 1988; Kytteä, 2002, 2004) extended work on this theory. Observations of risky play in two Norwegian preschools, one ordinary preschool (where play took place on an ordinary playground) and one nature and outdoor preschool (where play took place in a nature area) were conducted. In addition, the children were interviewed about their actualized affordances of risky play, their mobility license, and the constraints on risky play. The results show that both play environments afford an extensive amount of risky play among the children, and that the degree of mobility license tolerated by the staff is an important factor for the children to actualize these affordances. Differences in the qualities and features in the two play environments were found to have an impact on the degree of riskiness in the play situations. As such, the nature playground afforded a higher degree of risk in children's risky play.

**Keywords** Risky play, affordances, preschool, play environments, children

### **Introduction**

Risky play can generally be defined as thrilling and exciting forms of play that involve a risk of physical injury (Sandseter, 2007). Children's risky play has both positive and negative aspects. On the one hand, the imminent risk of being injured is present when children seek physical risks in play, an issue that has led to a growing focus on play safety and the

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development of legislation on playground design (for a review, see Ball, 2002). The balance between risks and benefits in children's risky play has been a debated issue in the last two decades, and a growing concern about the shrinking opportunities children have for challenging outdoor play has emerged (see e.g. Clements, 2004; Gill, 2007; Hughes, 1990; Jambor, 1998; Lester, 2007). However, the research on risky play and what influences children's engagement in this type of play has been scarce.

### Affordances in the Play Environment

Even though children naturally seek to engage in risky play, features of the play environment influence children's play by affording certain types of play activities. Gibson's (1979) theory of affordances states that the physical environment that we live in affords different actions and behaviors. The affordances of the environment include what it "invites" us to do, and the concept of affordances includes both the environment and the person, meaning that the affordances are unique for each individual and correspond with the individual's body size, strength, skills, courage, fear, etc. Harry Heft (1988) elaborated Gibson's theory and argued that children's outdoor environment affords different types of play and that children perceive the functions of the environment as invitations for certain activities. In his work on affordances in children's play environment, Heft (1988) elaborated a taxonomy of environmental features affording activity, such "climb-on-able feature", "jump-up-on/down/off-able feature", "swing-on-able feature", and "run-on-able feature". Kyttä (2004, p. 181) further developed this theory by distinguishing between *potential affordances*, which are specified relative to an individual and, in principle, able to be perceived, and *actualized affordances*, which are that subset of the former that the individual perceives, utilizes, or shapes. Gibson (1979) argued that other individuals also offer affordances by inspiring or constraining actions. Kyttä similarly argues that children's ability to move around

freely, the *independent mobility license* is important for enabling children's free action and their urge to escape the control of adults, and, thus, closely linked to the ability to actualize affordances. Kytta's work on categorizing the affordances in play environments led to a description of the ideal environment, where children can actualize a large amount of affordances. Kytta named this environment "Bullerby", including an extensive mobility license combined with a large amount of potential affordances.

In another study, Lee (1999) aimed to understand the interaction of the physical environment and children's play by interviewing guardians or caretakers on the issue of children's play experiences in regard to different types of play activity. Lee distinguished between three different types of playgrounds: 1) traditional-equipment play area, 2) contemporary-design playground, and 3) natural-design playground. The traditional playground included traditional equipment such as swings, slides, seesaws, merry-go-rounds, sand pools, and monkey bars. The contemporary playground had novel forms with different heights and textures, all in esthetically pleasing arrangements designed by architects or landscape architects. The natural playground contained wild, natural areas where materials such as wood and ropes were used. Lee found that children reacted to naturalized playgrounds enthusiastically and actively, and that naturalized playgrounds afforded most challenging play. On the other hand, traditional playgrounds afforded the least challenging play and most non-play (wandering or standing). Similarly, Fjørtoft (2000) found that functional play such as gross-motor activities and basic skills (running, jumping, throwing, climbing, crawling, rolling, swinging, and sliding) was predominant when children played in nature as opposed to playing on a traditional preschool play area, and that landscape structures such as steep slopes, rough cliffs, and trees afforded play such as climbing and sliding. According to Fjørtoft, preschool children consider traditional playgrounds as more boring than natural playscapes, and children develop better motor abilities when playing in nature as opposed to

traditional playgrounds. In accordance with this notion, Kaarby (2004) found, in a study of children's play in an outdoor preschool (playing in nature areas), that physical activity play such as climbing up very steep hillsides and sliding down again, climbing up and jumping down from big rocks or small cliffs, climbing in trees, throwing javelins or cones, shooting with bows and arrows, rolling on the ground, balancing on stones, fallen trees, etc., and fencing with sticks were prominent most of the time. All of these studies support Gibson's (1979) assumption that a natural environment affords more intense and varied physical activity than a standardized playground.

Features and qualities of the play environment are expected to influence the nature and extent of children's risky play. The purpose of this article is to qualitatively explore affordances for risky play in two different play environments: an ordinary preschool playground and a nature playground. Each of the play environments' potential affordances for risky play will be evaluated. Children's mobility license and actualized affordances will then be studied through video observations of outdoor play in the preschool setting and interviews with the children. The data is examined to determine how different environmental features afford risky play and how these affordances are actualized in children's play.

## **Method**

The study was carried out at two Norwegian preschools. A total of 29 four- and five-year-old children (21 girls and 8 boys) were observed and videotaped while playing. Twenty-three of the children were also interviewed on outdoor play, in general, and risky play, in particular. The preschool administrator, the staff, the children, and the children's parents were informed of the research project prior to the data collection, and consent for participation was given.

## The Preschools

The choice of participants in this study was purposive (Berg, 2007; Merriam, 2002; Patton, 1990). The aim was to include the typical play environment of two different types of Norwegian preschools, an ordinary and a nature and outdoor preschool; therefore, these school types served as the purposive criteria. The features of the play environments were collected as data in forms of field notes, pictures, and video recordings.

*The Ordinary Preschool:* This preschool had with a fixed playground with swings, a climbing tower, a “play hut”, switchbacks, and several climbing trees. The playground in this preschool was surrounded by a fence. The ordinary preschool was chosen because it was a typical municipal preschool with no specialties concerning pedagogical or practical features. Further description of this playground will be presented when describing its potential affordances.

*The Nature and Outdoor Preschool:* This preschool was situated in a forest and did not have a fixed playground or surrounding fences. This preschool was chosen as a participant in this study because of its characteristics of a typical nature and outdoor preschool in terms of time children spent outdoors and the access to nature environments. Further description of this playground will be presented when describing its potential affordances.

## The Observations and Interviews

A total of seven days was spent on each of the preschools' playgrounds, participating in all of the outdoor activities. Video recordings and field notes of risky play situations were collected based on previously developed categories of risky play; a) Play with great HEIGHTS – danger of injury from falling, b) Play with high SPEED c) Play with dangerous

TOOLS, d) Play near dangerous ELEMENTS, e) ROUGH-AND-TUMBLE Play (RTP), f) Play where the children can DISAPPEAR/GET LOST (for more details: Sandseter, 2007).

Both the children's play and the staff's supervision were observed. The field notes and the video recordings were transcribed into an electronic word file. The videotapes do not provide a complete picture of all potentially risky play situations that took place, but, rather, what the researcher managed to focus on based on the previous risky play categories. When risky play was performed simultaneously at different sites on the playground, the researcher chose to videotape novel situations or the most risky situations.

Twelve children in the ordinary preschool and 11 children in the nature and outdoor preschool (four- and five-year-olds) participated in a one-to-one qualitative interview with the researcher in the 'staff room' in each of the preschools. Each interview was approximately 20-30 minutes and was recorded on audiotape (Mp3). The interviews were semi-structured, using an interview guide list of questions and issues. The interview guide was based on Sandseter's (2007) six categories of risky play, and aimed to explore the types of risky play that the children engaged in within the different play environments and whether the staff constrained or intervened in their actions. Having spent four to five months observing the preschools, the researcher was known to the children and, thus, the children were comfortable with being interviewed by this person. Upon completion of the interviews, the audiotapes were professionally transcribed verbatim into an electronic word file.

### The Analysis

A content analysis (Berg, 2007; Patton, 2002) was performed on the data. The analysis was theory-driven (Coffey & Atkinson, 1996). Firstly, each of the play environments' potential affordances for risky play, as categorized by Sandseter (2007), were analyzed in

relation to the most relevant affordance categories developed by Heft (1988) and Kyttä (2004) to evaluate their potential affordances for risky play (risky play category in brackets):

**Climbable features** – affords climbing (great heights)

**Jump-down-off-able features** – affords jumping down (great heights)

**Balance-on-able features** – affords balancing (great heights)

**Flat, relatively smooth surfaces** – affords cycling, running, skating, skiing, and rough-and-tumble play (high speed and RTP)

**Slopes and slides** – affords sliding, sledging, and running/cycling/skiing (high speed)

**Swing-on-able features** – affords swinging (high speed and great heights)

**Graspable/detached objects** – affords throwing, striking, and fencing (RTP)

**Dangerous tools** – affords whittling, sawing, axing, and tying (dangerous tools)

In addition, two other categories of features of the environment were also evaluated:

**dangerous elements** close to where the children play, such as a lake/pond/sea, cliffs, and fire pits (dangerous elements) and **enclosure/restrictions** for mobility license (disappear/get lost).

Secondly, to reveal the actualized affordances (Kyttä, 2004), the transcriptions of the video observations, field notes, and interviews were examined to determine the types of risky play children engaged in within the different environments.

Thirdly, the observations and the interviews were also analyzed to determine the degree to which children actually had or experienced mobility license (Kyttä, 2004) in their preschool, particularly while engaging in risky play. The transcriptions of the video observations were examined to determine the extent to which, and in which situations, the staff had the children under surveillance while they engaged in risky play or was taking initiative to or constrained risky play.

Finally, the results from these three analyzing procedures were handled on an interpretive level related to former research, evaluating the features of the environments' impact on children's possibility to engage in risky play.

## Results

### The Ordinary Preschool - Potential Affordances

**Climbable features** – climbing tower (1.5 – 2 meters high), play hut (climbing on the roof, 1.5 meters high), 2-3 climbable trees (3-5 meters high).

**Jump-down-off-able features** – climbing tower (1.5 – 2 meters high), play hut (from the roof, 1.5 meters high), 2-3 trees (jumping down from branches), large wooden storage box (1 meter high).

**Balance-on-able features** – the rim of a wooden boat used as a sand pool, branches in the climbing trees.

**Flat, relatively smooth surfaces** – the outdoor area around the preschool house has a flat surface with grass, gravel, two sand pools, and some asphalted paths – approximately 2,500 m<sup>2</sup>. In the winter, the preschool staff prepares a small skating rink within the preschool playground.

**Slopes and slides** – the outdoor area is mostly flat, but there are two elevated levels (approximately 2 meters above the rest of the surface) of small grassy hills, one switchback is situated at one of the elevated hills, and one curved switchback runs down from the climbing tower.

**Swing-on-able features** – two ordinary playground swings made of tractor tires.

**Graspable/detached objects** – some plastic buckets and spades and some wind-fallen wooden sticks.

**Dangerous tools** – knives for whittling, only taken out under adult supervision.

**Dangerous elements** – none.

**Enclosure/restrictions** – the playground area is surrounded by a fence and a locked gate.

### The Nature and Outdoor Preschool - Actualized Affordances

The video observations and interviews were analyzed according to the six categories of risky play (Sandseter, 2007) to determine the types of afforded risky play on the preschool playground that the children actualized in their play (see table 1).

**Table 1** *Actualized affordances of risky play on the ordinary preschool's playground – results from video observations and interviews (RTP = Rough-and-tumble play)*

| Observations             | Situations = 51   | Interviews                | Interviewees =12 |
|--------------------------|-------------------|---------------------------|------------------|
| <u>Great heights</u>     | <u>Total = 22</u> | <u>Great heights</u>      |                  |
| Climb trees              | 16                | Climb trees               | 12               |
| Climb on play hut        | 3                 | Jump down from swing/tree | 7                |
| Climb in climbing tower  | 1                 | Climb on roof of play hut | 5                |
| Balancing on tree branch | 2                 | Climb in climbing tower   | 4                |
| <u>Speed</u>             | <u>Total = 22</u> | <u>Speed</u>              |                  |
| Swing                    | 10                | Swing                     | 11               |
| Bicycle                  | 3                 | Bicycle                   | 9                |
| Ski                      | 1                 | Ski                       | 6                |
| Sledge (on snow)         | 5                 | Sledge (on snow)          | 10               |
| Run fast                 | 1                 | Run fast                  | 2                |
| Skate                    | 2                 | Slide down switchback     | 10               |
|                          |                   | Skate                     | 3                |
| <u>RTP</u>               | <u>Total = 5</u>  | <u>RTP</u>                |                  |
| Play fencing with sticks | 3                 | Chase and catch           | 6                |
| Play wrestling/fighting  | 2                 | Snowball war              | 5                |
|                          |                   | Wrestle / fight / fence   | 6                |
| <u>Dangerous tools</u>   | <u>Total = 2</u>  | <u>Dangerous tools</u>    |                  |
| Whittle with knife       | 2                 | Whittle with knife        | 5                |
|                          |                   | Hammer & nails            | 2                |

Of the 51 situations of risky play observed on the playground in the ordinary preschool, 22 of the situations were situations of play in great heights and 22 of the situations were situations of play with high speed, while there were 5 situations of rough-and-tumble play and 2 observations of children playing with dangerous tools. No observations of play near dangerous elements or play in which children could disappear/get lost were observed, as seems natural because of the fact that this was a fenced in and constructed (according to the safety legislations) public playground.

The results from the interviews show that, similar to the video observations, play in great heights and with high speed are the most common actualized forms of risky play in the ordinary preschool. Similar to the video observations, no situations of play near dangerous elements or play in which children can disappear/get lost were mentioned in the interviews.

## The Nature and Outdoor Preschool - Mobility License

Within the playground area of the ordinary preschool, 51 situations of risky play were videotaped during the observation period. These 51 situations were analyzed to determine the extent to which, and in which situations, the staff had the children under surveillance (see table 2).

**Table 2**      *Staff involvement in risky play situations within the ordinary preschool's playground - results from video observations*

| Staff involvement                     | Number of situations |
|---------------------------------------|----------------------|
| No staff present or watching          | 37                   |
| Staff watching from distance          | 9                    |
| Staff watching closely                | 2                    |
| Staff taking initiative to risky play | 2                    |
| Staff constraining risky play         | 1                    |

*\* Additional results from field notes*

Table 2 demonstrates that the mobility license within the playground of the ordinary preschool was extensive. Only one incident of *the staff constraining* risky play was observed in the video material, and this was a situation in which three boys were fencing with sticks and threatening each other so intensely that one of the boys became frightened and began to cry. In this situation, the staff member present instructed the boys to stop the play. In addition, the field notes revealed a situation in which one of the staff members interfered in three girls climbing a tree by instructing them to descend in the tree because she thought they were too high up from the ground.

In the interviews, the children in the ordinary preschool generally expressed that they were allowed to do almost anything they wanted in their preschool. However, some constraints made by the staff were mentioned when the researcher requested them to tell more about what was and was not allowed. Restrictions on climbing, bicycling (nearby younger

children), play fighting was mentioned. In addition, the children expressed that whittling with knives was only allowed for the five-year-olds and under strict surveillance by the staff.

#### The Nature and Outdoor Preschool - Potential Affordances

**Climbable features** – several climbable trees (from small trees to trees up to 7-8 meters high), several small rocky walls (2-3 meters high), cliffs and climbable big rocks, one steep and very high (more than 50 meters high) hillside including projecting cliffs and stone edges.

**Jump-down-off-able features** – several climbing trees (jumping down from lower branches), several cliffs, and big rocks (2-3 meters high).

**Balance-on-able features** – several big rocks, cliff edges, and wind-fallen logs and branches.

**Flat, relatively smooth surfaces** – the outdoor area near the preschool house is hilly with a mix of slopes, hills, cliffs, and relatively flat natural forest areas with grass, bushes, trees, etc. There is a gravel yard immediately outside the preschool house.

**Slopes and slides** – several natural hills, cliffs, and slopes in the terrain.

**Swing-on-able features** – one giant's-stride made of a rope tied in a tree branch (3-4 meters pendulum).

**Graspable/detached objects** – some plastic buckets and shovels and a large number of wind-fallen wooden sticks.

**Dangerous tools** – knives for whittling and saws only taken out under adult supervision and/or when on hikes.

**Dangerous elements** – several cliffs, a pond/small lake approximately 50 meters from the preschool house, and a fire pit on the gravel yard (not always with a burning fire).

**Enclosure/restrictions** – no fences surrounding the playground. The extension of the surrounding forest area is endless.

## The Nature and Outdoor Preschool - Actualized Affordances

The video observations and interviews in the nature and outdoor preschool were analyzed to determine the types of risky play afforded by the outdoor playground that the children actually engaged in (see table 3).

**Table 3** *Actualized affordances of risky play on the nature- and outdoor preschool's playground – results from video observations and interviews (RTP = Rough-and-tumble play)*

| Observations                 | Situations = 55   | Interviews                  | Interviewees =11 |
|------------------------------|-------------------|-----------------------------|------------------|
| <u>Great heights</u>         | <u>Total = 15</u> | <u>Great heights</u>        |                  |
| Climb in steep hills/cliffs  | 6                 | Climb trees                 | 11               |
| Climb in cliffs (+ RTP)      | 5                 | Climb on cliffs/rocks       | 6                |
| Climb trees                  | 2                 | Jump from heights           | 2                |
| Climb on rocky walls         | 2                 | Balancing (rope in tree)    | 1                |
| <u>Speed</u>                 | <u>Total = 33</u> | <u>Speed</u>                |                  |
| Swing (rope in tree)         | 8                 | Sledge/slide on snow/cliffs | 13               |
| Sledge/slide on snow/rock    | 17                | Swing (Giant's stride)      | 9                |
| Ski (downhill)               | 8                 | Ski                         | 5                |
|                              |                   | Bicycle                     | 3                |
|                              |                   | Run fast                    | 1                |
| <u>RTP</u>                   | <u>Total = 3</u>  | <u>RTP</u>                  |                  |
| Play fencing with sticks     | 3                 | Fighter roles (superheroes) | 6                |
|                              |                   | Snowball war                | 6                |
|                              |                   | Wrestle / fight / fence     | 4                |
|                              |                   | Chase and catch             | 5                |
| <u>Dangerous elements</u>    | <u>Total = 3</u>  | <u>Dangerous tools</u>      |                  |
| Play near a pond/lake        | 2                 | Whittle with knife          | 7                |
| Play on top of a steep cliff | 1                 |                             |                  |
| <u>Disappear/get lost</u>    | <u>Total = 1</u>  |                             |                  |
| Play alone in the woods      | 1                 |                             |                  |

Of the 55 risky play situations observed, play with high speed (33) and play in great heights (15) were the most common types of risky play. Three situations of rough-and-tumble play were observed in addition to the rough-and-tumble play situations described as a part of climbing on the steep hillside. Three situations of play near dangerous elements were observed. One situation of play in which the children can disappear/get lost was observed. This was a situation in which a group of girls went in the woods to play alone while outside of the staff's field of view. There were no situations of play with dangerous tools in the videos.

The interviews showed that play in great heights and with high speed were the most common types of risky play among the children in the nature and outdoor preschool. All of the 11 children interviewed told that they climb trees on the preschool playground, while 6 of them also told that they climb rocky walls and cliffs. No situations of play near dangerous elements or play in which children can disappear/get lost were mentioned by the children in the interviews.

#### The Nature and Outdoor Preschool - Mobility License

Within the playground area of the nature and outdoor preschool, 55 situations of risky play were videotaped during the observation period (see table 4).

**Table 4**      *Staff involvement in risky play situations within the nature- and outdoor preschool's playground - results from video observations*

| Staff involvement                     | Number of situations |
|---------------------------------------|----------------------|
| No staff present or watching          | 38                   |
| Staff watching from distance          | 11                   |
| Staff watching closely                | 1                    |
| Staff taking initiative to risky play | 5                    |
| Staff constraining risky play         | 0                    |

Table 4 demonstrates that the children in the nature and outdoor preschool had an extensive mobility license when playing on the preschool playground. No situations of the *staff constraining risky play* were observed. At only one situation the *staff was watching closely*. This was a situation in which one child was climbing on a rocky wall and balancing on top of the cliff edge.

In the interviews, the children in the nature and outdoor preschool generally expressed that they were allowed to do almost anything they wanted in their preschool. However, restrictions on walking far away from the preschool's vicinity , climbing on one specific steep and very high cliff/rocky, going to the small nearby lake alone, and climbing very high up in

trees were mentioned when talking more about this with the children. In addition, the children expressed that whittling with knives was only allowed while under staff supervision.

## **Discussion and Conclusions**

The results showed that the playground in the ordinary preschool resembles what Lee (1999) categorizes as a traditional playground. It includes traditional playground equipment such as a play hut, climbing equipment, swings, slides, and sand pools. In addition, there are some climbable trees and two small grassy hills. The nature and outdoor preschool's playground resembles what Lee (1999) categorizes as a nature playground with wild, natural areas including wood, rocks, and forest. Comparing the two play environments, they both seem to include an extensive amount of affordances for risky play. At both preschool playgrounds, there are opportunities for play in great heights such as climbing, jumping down, and balancing and as well as opportunities for play with high speed such as swinging, sliding/sledding, running, and bicycling. Both preschools offer opportunities for play with dangerous tools, although only under surveillance by the staff. One of the most pronounced differences between the two play environments was the difference in dangerous elements in children's access. No dangerous elements were present in the ordinary preschool's playground, while there were several cliffs, a pond/small lake, and a fire pit within and nearby the nature playground. The other pronounced difference was the difference in enclosure/restrictions. The ordinary playground was surrounded by a fence and a locked gate through which the children were unable to go, while there was no fence around the nature playground and it was surrounded by endless forest area. Another difference between the two playgrounds was the potential risks due to the environmental characteristics of the playground. As Sandseter (in press) points out, characteristics of the environmental features influence the degree of risk a child is afforded in risky play. On the nature playground, as

compared to the ordinary playground, there were more trees, the trees were higher, there were several cliffs, rocky walls, and big rocks, and there was a very long and steep hillside for climbing, jumping down, and balancing. The nature playground also included a variety of natural hills, slopes, and cliffs for sliding and sledding at varying degrees of steepness, while the ordinary playground included two quite short and ordinary switchbacks and two small and not very steep hills. The swing on the natural playground also had a much larger pendulum (gives higher speed and greater height when swinging) than the swings on the ordinary playground. As such, the natural playground afforded risky play with a higher degree of risk than did the ordinary playground.

The potential affordances in a play environment will not be actualized if children do not have the opportunity to use the available features in the environment. The mobility license given by the staff is, therefore, important as a part of the concept of affordances for children in a preschool play environment (Kytä, 2004). As previously presented, one differing characteristic of the play environment was that the mobility license of the children in the ordinary preschool was restricted by a fence and a locked gate, while the children in the nature and outdoor preschool had virtually free access to an extensive forest area. Both the observations and the interviews revealed that both preschools practiced a large extent of mobility license in play situations within their different settings. There was no pronounced difference in the degree of staff involvement or restrictions and children in both preschools expressed in interviews that they were allowed to do almost anything they wanted in their preschool, even though children in both preschools admitted that there were some rules made by the staff to avoid accidents or injuries in play. However, none of the children seemed to experience this as a constraint to their free play.

The present data on actualized affordances revealed a quite similar picture of the two different preschool playgrounds. The observations showed that play in great heights and with

high speed were the most common actualized risky play in both preschools, even though the nature and outdoor preschool had more situations for sledding and sliding than the ordinary preschool. This was likely due to the great opportunities for sledding on the nature playground in the winter when the snow covered the long and steep hillsides. On the other hand, the ordinary playground had more situations for climbing activity than the nature playground, particularly tree climbing, even though there were fewer trees available on this playground. Both preschools also had some situations of rough-and-tumble play, in spite of the fact that children in the nature- and outdoor preschool told in the interviews that play fighting and fencing was not allowed. The difference between the two preschools in the observations of risky play was that situations of play near dangerous elements and play in which children can disappear/get lost were only observed in the nature and outdoor preschool. This difference is a result of the characteristics of the two playgrounds. The ordinary playground included no dangerous elements and was surrounded by a fence that did not give the children the opportunity to walk off alone, while the nature playground included several dangerous elements and had no fence to restrict the children's mobility license. On the other hand, play with dangerous tools was only observed in the ordinary preschool. The interviews with the children revealed a picture of the actualized affordances similar to that gained in the observations. Play in great heights and with high speed such as climbing, jumping down, sliding, swinging, skiing, running, and bicycling were the most common forms of actualized risky play. Rough-and-tumble play was also expressed as a quite common thrilling type of play among the children in both preschools. Even though play with dangerous tools was only observed in the ordinary preschool, the interviews revealed that among the children in the nature and outdoor preschool, this was also a popular activity. None of the interviewed children told that they play near dangerous elements. This finding may be explained by previous findings that showed that this category of risky play is only perceived as risky from

the preschool staff's point of view (Sandseter, 2007), while the children are not aware of the risk present.

In sum, both preschool playgrounds seem to afford a great deal of risky play, and the mobility license within the two playgrounds is quite extensive and results in a large number of situations of risky play in both preschools. As such, the two play environments both resemble the "Bullerby" environment (Kytä, 2004) when considering the large amount of potential affordances, the high degree of mobility license, and the number of actualized affordances. However, the ordinary preschool's play environment had features that constitute some constraint on children's ability to engage in risky play. For example, the ordinary preschool was surrounded by a fence, implying a more restricted mobility license than in the nature and outdoor preschool, where children had access to a great forest area. Another important qualitative consideration is the difference in the characteristics of the play environment in the two preschools. The nature and outdoor preschool's playground included features that, as previously mentioned, afforded risky play with a higher degree of risk present than the ordinary preschool's playground. This is in accordance with Gibson's (1979) assumptions that a natural environment affords more intense and varied physical activity than a standardized playground and Lee's (1999) results that indicated that naturalized playgrounds lead to more challenging play among children. The present study is a small contribution to the research on children's risky play and what influences children's opportunity to engage in such play. The results indicate that the nature playground does not afford a higher frequency of risk-taking play among children but, rather, a higher level of risk in children's play because the features of the play environment are more challenging and risky. Children seek risky forms of play in any play environment. However, one can assume that the nature playground enables the children to experience more intense, exhilarating, and thrilling play situations than the ordinary playground.

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