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Place, space and materiality for pedagogy in a kindergarten

*Solveig Nordtømme**

Abstract

This study explores how kindergarten spaces and materiality can be vital for children's exploration of participation and how the physical environment enables children to interact and position themselves in play and meaning making. Methodologically this study is based on ethnographic fieldwork with two groups of 2- to 5-year-old children in two Norwegian kindergartens. Place, space and materiality are analysed through a theoretical framework based on socio-cultural perspectives of learning and meaning making, aspects of power relations in play supported by Corsaro's concept of children's power-sharing relations and Bourdieu's reflections on social fields as fields of force. The main findings of this study describe how kindergarten children create meaning and play within and outside of pedagogically staged spaces, and how materiality creates power relations and interplay with the actors involved.

Keywords: space, materiality, meaning-making, learning, power, kindergarten

Introduction

Places, spaces and materiality are significant for the everyday life of children in kindergarten. The physical context creates possibilities for participation and meaning making that can be vital for children's experience of life. On the other hand, place, space and materiality are embedded with values and expectations that also open up possibilities for exclusions. Recently, place, space and materiality have been increasingly acknowledged and considered (Buvik et al. 2004; Krogstad 2012; Moser, 2007; Thorbergesen, 2007) because of the extensive expansion of kindergartens in Norway over the last 15 years. On both national and international levels increasing attention is being given to theoretical approaches that emphasise the meaning of interactions between subject and materiality (Clark, 2010; Gulløv & Højlund, 2005; Kampmann, 2006; Lenz Taguchi, 2010; Otto, 2005; Palludan, 2009). The inspiration to study space and materiality goes back to my years as a kindergarten teacher managing a development project in kindergarten (Almedal, 2001), and the perspectives provided by Kampmann according to children, space and spatiality (Kampmann, 2006).

This article is based on my studies on space, materiality and play in kindergarten and ethnographic fieldwork in two Norwegian kindergartens. This study includes

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a mapping of the physical environment and artefacts in kindergarten. Further, the characteristics of spaces for joyful play and playful work are discussed. There have been analyses of pedagogically staged places, analyses of spaces created by children 'inbetween', and hidden spaces where children seek privacy (Nordtømme, 2010, 2012). In this article I will use a small selection of my empirical data and discuss the narratives that emerge in relation to these themes.

Kindergarten and kindergarten pedagogy

Kindergarten is used as a term for Norwegian pre-schools and points to a historical and ideological link to the German pedagogue Friedrich Fröbel (1782–1852). The Fröbel kindergarten was a place where children were allowed to play and develop as a correction of the disciplinary childcare common at that time (Strand, 2009). Fröbel saw play as the highest expression of human development and underlined that play was the free expression of a child's soul. He considered space and materiality to be vital for pedagogy and designed toys he called play gifts. The focus on play rather than on academic learning reduced Fröbel's standing among his contemporaries, and he did not succeed in engaging male teachers to follow his pedagogy. Instead, Fröbel turned to female intellectuals who enthusiastically took up the mission and made kindergarten a global movement (Allen, 2006; Strand, 2009).

More than 175 years later, Fröbel's legacy can be seen in the Norwegian kindergarten practices based on the Kindergarten Act (Ministry of Education and Research, 2010) and the Framework Plan, which state that "Play has intrinsic value and is an important part of child culture. Play is a universal human phenomenon, which children are skilled at and enjoy" (Ministry of Education and Research, 2011). In Norway, as in most other Western countries, the focus on children's learning has increased over the last decade. The Anglo-Saxon influence, with its focus on the individual child's range of knowledge, skills and dispositions (Alvestad, 2009), presents an increasing challenge to traditional holistic pedagogy where play, interaction and children's curiosity and investigation are the cornerstones of the pedagogical approach.

Kindergarten as a term for preschool reflects a line in my own professional biography, as a female, from my first job as a student trainee in a kindergarten in the late 1970s to a kindergarten teacher in the early 1980s, and through my work as a kindergarten teacher over many years to my present role as a lecturer for kindergarten teacher education.

Meaning making in place and space and through materiality

The concept of my study reflects my epistemological and ontological point of departure that knowledge is created among subjects seeking meaning, participation and learning. I regard materiality as essential for children's experiences and meaning making and their position, interaction and play in their peer groups.

Both Merleau-Ponty (1962) and Dewey (1997) describe meaning making as essentially human. Dewey saw the human mind as a meaningmaking body, continuously driven to make sense of its world (Dewey, 1997). Meaning and meaning making are embodied in children's actions and through dialogue and interactions with others.

Space and materiality influence interactions with children. Children respond differently if a room is pedagogically staged for physical activity, with mats, wall bars and gymnastics rings, than if a room is filled with props and costumes for drama play. Both space and materiality invite and inspire.

Kindergarten takes place somewhere, and I recognise place as a concept that corresponds to space and materiality as a concrete location and an important context for what happens, as well as a concept that expresses belonging (Martinsen, 2005). Kindergarten as a place is a significant outdoor meeting place in a neighbourhood. In my point of view, kindergarten as a place of pedagogy, as expressed by Løvlie (2007), is both concrete as a location and a place for relations, meaning making and belonging. Throughout this paper, place is considered to be an underlying meaning for the concepts of space and materiality.

Space is both visual, like the physical environment created by architecture, and invisible, like a social space (Bourdieu, 1998) that contains a sense of shared meaning and feelings of belonging and is where the field of force emerges. Space represents the idea of contemporary time and a flash of history in the way that architecture, space structures and materiality reflect ideas about children, kindergarten and early childhood care and education (Gulløv & Højlund, 2005). Spaces are not neutral. The physical and social space presents a range of expectations for both children and adults (Clark, 2010:179). Dialogue, experience, cooperation and shared meaning create a sense of space which Lave and Wenger (1991) describe as a community of learners and attach to the concept of "legitimate peripheral participation" and the situated perspective of learning (Bourdieu, 1998; Lave & Wenger, 1991, 2003). Materiality includes play materials, tools and toys, which are also called artefacts. However, materiality brings in the notion of social interaction between artefacts and humans. Materiality concerns how artefacts and things are a part of human actions and provide opportunities, power and limits (Otto, 2005). Space, materiality and physical activity are closely connected. Children's activities provide experiences of space and materiality through their bodies, senses, relations, actions and position. Children are *doing* space in the sense that children create activities and actions and interplay with the artefacts. The space will change and transform according to children's embodied activity. One way of doing space is playing.

The aims of my study are to contribute to the research-based knowledge of kindergarten space and materiality, children's play and meaning making, and to explore what occurs when children are playing and *doing space* in a material context. My study contains a number of research questions (Nordtømme, 2010, 2012), but for this article the following questions guided my exploration of the themes:

How do kindergarten space and materiality influence children's self-initiated play? How do children position themselves as meaning makers and in power sharing positions?

When I was doing my fieldwork these research questions were in my mind and provided guidance for my selections of situations in the complex context. I was looking for situations where meaning emerges in play and common activities, and how meaning, participation and positions changes over time according to space and materiality. At the same time, these questions were significant when I was starting the analytical process. Equally significantly, the theoretical framework formed a basis for the construction of the thematic narratives.

Theoretical framework

To explore how children are doing space within play activities, I look at these issues through situated, socio-cultural perspectives of learning. Socio-cultural perspectives offer multiple aspects to understand learning and meaning making and emphasise the historical, cultural and relational conditions for learning (Säljö, 2001). The perspectives I draw on do not try to explain what learning is but how contexts including place, space and materiality interact in children's learning, meaning making and identity processes. Learning is explained as an integration of mind and body, situated in social practice and created through participation (Gjems, 2009; Lave & Wenger, 1991; Säljö, 2001). In these learning processes, children create and recreate identity, membership and interpersonal relationships. This situated perspective emphasises the interdependency of the subject and the world, the interplay of the activity, meaning and learning, and the dialectic relationship between the social world and the subject. Learning and meaning making are embedded in social and material practices.

Dewey has described the concept of situation as "a universe of experience" (in Løvlie, 2007:33). Løvlie points to *materiality*, *attunement* and *situation* to explore the "pedagogy of place" (Løvlie, 2007). Everyday life in kindergarten can indeed be a universe of experiences for children that are both engaging and challenging. Children play an active role in constructing a social context and practice; *attunement*, as a type of atmosphere (Løvlie, 2007), is part of this construction. Whether the atmosphere expresses good feelings and engagement or whether it is an uncomfortable atmosphere depends on the relationships created in the interplay of subjects, space and materiality. Studies of kindergarten environments (Gulløv & Højlund, 2005) support these perspectives by focusing on space as embedded by politics, ideology and history and by illustrating how structures, including furnishings, the placement of equipment or closed doors, create power relations.

Every relation and situation, as play and meaning making, carries power relations and power structures. These positions involve participation, communication and negotiation to take control and initiative. Corsaro (2005, 2009) describes this as a central theme in peer cultures, the culture created by children in kindergarten, as follows:

“Children make persistent efforts *to gain control* of their lives and to *share* that control with each other” (Corsaro, 2009:302). Children’s intention to participate and to gain control inhabits power relations. Corsaro points out that “peer culture is a matter of neither simple imitation, nor of direct appropriation of the adult world”(Corsaro, 2009, p. 301). Children’s power-sharing positions are seen in relation to adults, and to challenge adult’s authority. How children seek control and achieve positions create a sense of power, which is woven into everyday situations.

Bourdieu’s theories and concepts such as capital, habitus and field are used to point out power relations on macro levels in society. He emphasises the role of practice and embodiment and argues that the social nature of a human being creates the need to understand the social space (Bourdieu, 1998). The social space has material and symbolic power, is constantly changing over time and enables the actors to move into different positions.

The concept of field draws attention to a type of social pattern in the social space and describes it as a set of meaningful relationships, a structure that gives meaning to the participants’ perceptions of the social world (Thoresen, 2007). The field is generated and upheld through the common interests of social agents and institutions. In the field, there is inequality and, at the same time, there is mutual dependence. These contradictory elements make the field a social field of force. The field of force both influences the participants and positions them in a game about what to decide, who to define, what is at stake and who is to define the roles (Strand, 2009).

Even though Bourdieu’s concepts are used to analyse macro levels, and the use of these terms on micro levels may create the risk of simplification, the theme field of force and the concepts of social agents, inequality and mutual independence add to Corsaro’s focus on children’s power sharing as they seek autonomy from rules and adults as authorities. Bourdieu’s concept may contribute to a more investigative gaze being directed at different power processes within play, and possibly revealing children’s access to positions within play situations.

Methodology

My ethnographic fieldwork in two Norwegian kindergartens was chosen because their staff were interested in how to organise the physical environment. One of the kindergarten buildings had recently been enlarged to double the amount of children; the other one was located in an old school building. Both kindergartens were public and situated in the central, eastern part of Norway, both lying just outside a minor city. The kindergartens had a capacity of 120 children aged 1 to 5, and I was doing my fieldwork in groups of 2- to 5-year-old children. In each kindergarten children from 2 to 5 years were split into smaller groups of 18 boys and girls. The area those kindergartens were situated in were middle class areas, mainly involving children with Norwegian as their first language, and less than 10% with children with Norwegian as their second language.

As I was focusing on children's indoor, self-initiated play, I was doing my fieldwork in the early morning and sometimes in the late afternoon when they had finished their outdoor play. I sought to explore the connections between place, space, and children's meaning making in social practice and play, to construct ethnographic knowledge more than universal and general knowledge (Gupta, 1997).

The choice of an ethnographic approach is based on my professional background, my theoretical approach and the epistemological understanding that knowledge is situated and created in the encounters between people. Exploring how children experience place, space and materiality and how they interact and play requires a presence. My presence will never make me completely understand children's experiences, but it will give me experiences in activities that engage children, their positioning and their social practice in a kindergarten community and according to space and materiality.

My earlier occupation as a kindergarten teacher allows me to enter every day kindergarten life easily and relate to the children, the kindergarten teachers and the parents. Nevertheless, every kindergarten is unique as a pedagogical, social and cultural field, in which I was an outsider. I had to relate to each kindergarten with their children, employees and parents with engagement, sensitivity and respect.

I performed as an active participant observer by joining groups of children and having small spontaneous conversations with children and employees. In play situations, I participated when children invited me, or I observed close to the play. The improvisational element in children's play reinforces the importance of participant observation as a method. My playing participation shifted by being given a role in a play, helping with dressing, organising a queue in front of a trampoline, and observing a play situation from the corner. As Emerson, Fretz and Shaw point out, *the ethnographer's presence in a setting inevitably has implications and some consequences for what is taking place, since the fieldworker must necessarily interact with and hence have some impact on those studied* (Emerson, Fretz, & Shaw, 1995, p. 3). Regardless of which positions I took as a partner, an observer or active participant (Hasse, 2003) the children were influenced by my participation.

The parents of the children explicitly approved my research in their children's kindergarten, but equally important was the children's here-and-now approval of my participation. When children were hesitant about my participation, or disliked my video recording or photographing, I respected that and let them continue in their activity without my attention. Both invitations from children and refusals were recorded in my field notes.

My ethnographic writing sometimes occurred during observations, and often a short time after my participation. My memory was supported by photos and video recordings so I could extend my notes with more details. The field notes are my descriptions of experiences and observations, and will never be a 'correct' description of reality. The field notes are a piece of my lived experience as an observer and as a researcher, and turn into written text according to my history, my sensitivity to pro-

cesses in daily kindergarten life and to my academic point of departure (Emerson et al., 1995). The field notes, photos and video recordings are my selections and my way of framing what I recognise as meaningful in the complex kindergarten day, and this certainly leaves out other possibly significant events.

My field notes are thoroughly transcribed into continuous text. The multiple methods gave me a wide range of research data to identify thematic narratives (Emerson et al., 1995) by studying excerpts, looking for connections and disconnections. I have moved back and forth between special events in the field notes and concepts and topics in my theoretical approach. The ethnographers Gulløv and Høilund (2003) say that the challenge in such a research approach is to balance being close to the field with a necessary distance. Altering between theoretical concepts and ethnographic text, while looking for possible themes, distinctions and interconnections (Emerson et al., 1995) is my way of dealing with closeness and distance.

In the analytical processes dealing with the ethnographic texts and theoretical concepts, I will highlight two themes which are central in the data material. The themes are *doing space, materiality and participation*, and *power relations in play*. The first theme is presented by one excerpt, the other one by two, with all of them being written as narratives. After each narrative I will discuss the excerpts in the light of the theoretical approach. This method of analysis is based on the theoretical concepts I have presented, and the method is like a wave that consists of the presented theoretical concepts and issues that emerged through my work with the narratives.

Presentation of the narratives

In the following section, doing place, space and materiality by playing is exemplified by one narrative and power relations and play by two. The explorative approach includes the presumption that children's engagement involves meaning and meaning making. The main purpose of the analysis is to examine the factors that contribute to engaging children in doing space.

Narrative 1: Doing space, materiality and participation

The situation for this narrative takes place in the main room for one of the groups of 18 children. At this time, the children are allowed to use the kindergarten space as they want, they can shift between different groups and no arranged pedagogical activity is taking place.

The room is well-lit, with two windows on one of the long sides. The walls are decorated with documentation from the children's work with a project called "Engineers in the future", which includes photos and the children's own drawings. The walls also display photos of the group members, photos of their favourite activities at home and a big birthday calendar. The room is furnished with two tables and chairs on one side of the room and a round carpet on the other side, which invites children to play on the floor. Between the two windows are shelves with drawers containing paper,

crayons and building materials such as railroads. On the other long side of the room are shelves with a drawer for each child to keep their ongoing paintings and other products. The narrative below is constructed from field notes dated 11 April 2010.

There are fourteen children and two adults in the room when I enter. One of the teachers is sitting beside the table; the other is on the floor building train tracks with six children. They put more and more tracks together, and the track acquires a large range. Some of the children are busy with an advanced bridge construction with support from the teacher. Two children are sitting on the shelf, carefully studying what is going on.

The three youngest children have placed a chair beside the other shelf. From the chair, they climb up on the shelf, sit for a few seconds and look out over the room. Then one child rose and moved to the end of the shelf, climbed down on the chair and jumped down on the floor, the other two followed. This route and this movement were repeated several times.

Three girls are sitting next to the children playing with the train tracks. The girls are playing with some small figurines. They talk together in character and play with the figures.

Two of the youngest children who have climbed the shelf have moved out on the floor. They have brought a small blanket and sing "The bear is sleeping", walking around and singing loudly. The third one took a break, sat on the teacher's knee for a few minutes and then joined the small group again.

The atmosphere in the room is concentrated and at the same time relaxed, although there are many sounds in the room! The children are centred on the floor, where three parallel plays are in progress. The play with the train tracks takes more and more space, and the two children playing "The bear is sleeping" move in small circles over the floor. The three girls playing with the figurines are pushed a little bit, and turn their backs to the ongoing train-tracks play. Then, one girl rises from the floor to walk over to a drawer, taking out some string. She brings the string back to the two other girls and puts the string on the floor in a circle. The three girls go into the string circle and continue to play with the small figurines.

The three separate simultaneously plays continue for about 10 minutes. The group of train-track builders changes when the bridge construction comes to a standstill. One of the boys from the observer position jumps down and picks up a significant block to strengthen the construction. The two former bridge constructors and the other boy from the shelf take observer positions from the floor, on the periphery of the play. Inside the string circle, the three girls play with the figurines, which are small dolls. The string circle was an effective border to the ongoing simultaneous plays. Even the three youngest who were playing "The bear is sleeping" didn't cross the line.

Materiality, participation and positions

The complex play situation allows multiple perspectives on what is going on. First, I will look upon it in the perspective of materiality. The train track material interplays with the children in different ways. The boys and the teacher are reassembling the trains, fitting tracks together and constructing a bridge. The train tracks created an

agency that interplays with the children and the adult as they are challenged in assembling different tracks and investigating how the tracks can fit together in different train networks.

The shelf was obviously a significant part of the materiality by offering children an out-look point. In relation to the train track play, the position of the two boys on the shelf allowed them to ‘read the map’ both in terms of when to join and how to participate.

The three youngest children used the shelf in a similar way. They were climbing and unified in a bodily activity. When reaching the top of the shelf, they carefully walked behind one another and made room for one another. The shelf was their lookout point on the other children’s play.

Access to a variety of play materials makes children move into positions, either to join a more central position or to protect ongoing play and positions. One of the boys watching the train track constructions knew exactly which block to offer for the construction, and with this knowledge he immediately became part of the play. The other boy grabbed an artefact and with it he moved into position, gaining access to the play material and putting him in a better position to start playing.

When the three youngest changed their activity from climbing on the shelf, using it as an outlook point, to play “The bear is sleeping” on the floor, they moved from a peripheral position to a closer position by using a blanket to hide underneath.

Regarding the girls with the figurines, their play fantasies with the figurines held their playgroup together, and they continued to play despite the increasing disturbances from the other two groups. They apparently did notice the narrowing of their space but did not correct the other children. They placed a long, thin string on the floor, which made a weak border with the other groups. With this border the play was protected and apparently created an unspoken agreement among the children to not cross that line.

The materiality provides opportunities that lead the attention to the significant variation of the play material. Traditional play materials such as train tracks and figurines are very well accomplished by flexible materials like blanket and string. In this play situation the flexible materials are used to move into positions and to protect the play.

According to Lave and Wengers’ (1991) theory of situated learning and their concept of “legitimate peripheral participant”, the position and movement described above can be understood as the children’s way of participating. In a community of learners (Lave & Wenger, 2003), newcomers are included in common activities by participating on the periphery. In this case, both the boys looking at the train track play and the three youngest children created a small group in a shared activity, while they observed the older children’s play at the same time. And they used their experiences as peripheral participants to gain more central positions.

Place and space

Space is both concrete by its installations and artefacts and social by the feeling of belonging, of force and shared meaning. The furnishings offer different levels for the children to enter. In this situation, I see the different levels as being significant for allowing the children to participate in different ways. Palludan's anthropological study (2009) in a school context in Barcelona shows how materiality interplays and choreographs everyday school life. Palludan's study shows that older children become objectives for younger children when they observe how older children behave, how they care for each other and how they fight. When the physical space offers different levels to play and interact, it also gives children opportunities to overlook, to study their peers' play and to participate in different positions or tempos.

In the narrative, the children announced their existence and belonging to the group by doing space in different ways. When they move positions they were given tacit consent by not being shoved away. When the girls with the small figurines found that their space for their play was shrinking, they put up a border against the other groups. The youngest children apparently recognised this border and respected it.

The play situation as a whole expresses engagement and intensity while also creating a sense of a field of force. The shifting positions for the children create a force balance which allows the play to carry on. The concept of attunement (Løvlie, 2007) gives an expression of the atmosphere which is relational and located between the participants. In my field notes, I described the situation as concentrated but relaxed.

Bourdieu (1998) describes the field of force as a matter of inequality and mutual dependence. The inequality in the play situation can be seen as the different access to play and play materials, and the mutual dependence relies on the sense of belonging to a group and being accepted as a participant in the community of practice (Lave & Wenger, 1991). The attunement (Løvlie, 2007) is the experience of the concentration among the children, and simultaneously a feeling of fragility, that something could very easily disturb this situation, which corresponds to Bourdieu's descriptions of field (1998) that something is at stake.

The two teachers' participation, I will argue, was a significant part of the whole situation. The teachers were materialised as body subjects into the space and represent values and power to support the children in their meaning making and play. They balanced and completed the force of field. The 'pedagogy of place' is confirmed by the interaction between the children and the teacher who was playing and the teacher sitting by the table, open for children to come to.

The following narratives are chosen to highlight the theme *power relations in play*. The two narratives show how power relations can be explored in micro situations.

Narrative 2: Who is playing?

The first situation takes place in a small playroom. In this room there is an area for toy cars and construction materials, and on the floor there is a carpet with a drawing of streets and traffic lights. Beside this carpet is a construction made of wooden blocks. The narrative below is based on photos and field notes from 18 April 2010.

I am sitting on the floor in a small playroom when Tore enters and heads for the car carpet and the constructing materials. He invites me to play with him and get small cars from the shelf and wooden blocks from a box. He gives me a car, and we both start driving the cars around on the carpet. He stops his car by the block construction and puts another block on the construction. He drives his car carefully on this construction. He asks me "Who built this construction?" I tell him that I don't know, but I think it is OK that he plays with it. He makes a new arrangement and new gateways in between and on the top. He drives his cars carefully, and he watches my car's movement as well. Tore seems worried and he asks me "Could it be Marius who built this before?" I tell him that I don't know, because it was built before I entered the room. He lies down on his stomach and continues to drive the cars carefully around the constructions. The door opens and a boy and a girl enter the room. Tore rises up and leaves the play and the room immediately.

Materiality, participation and power relations

The wooden blocks and the cars seemed to inspire Tore to play. He very quickly invited me to come and play with him, and he supported me with a car. He studied the construction and seemed to planning an expansion. The materiality engaged him and urged him on to play. However, something held him back from fully accomplishing his play. He continuously asked me who had made the constructions, and thereby signalled that he was risking causing trouble with the original builder if he were to come back. Perhaps I was invited as a co-player who could protect Tore from being attacked.

In this narrative, I interpret the situation as showing that something invisible is going on. Maybe Marius, who Tore assumed had made the constructions, was playing there after all. And maybe Marius was acting as an invisible agent keeping other playmates away from his playing materials. Too much tension, or too little, can create an attunement of disengagement.

The children's positions in the play area made structures while they were present, and this position could also be obtained when they were absent. To challenge these positions, Tore would need some type of capital, according to Bourdieu's concept. Using Bourdieu's description of social and cultural capital (1998) as elements in the force of field, we can imagine that children's capital in the kindergarten field often relies on muscular strength, age and size. In this playing situation, Tore could obviously not rely on his capital to maintain his playing position. He did not trust my participation to protect him or give him enough 'capital' to obtain the position and fully engage in the play.

Narrative 3: Identity and power relations in hidden spaces

This room was called “the pillow room” and appeared to be deprived. The room had no curtains, no decorations on the walls and no furniture. The only play materials were the big curtains. The walls were in bad disrepair. When this situation occurred, there are three children playing: a girl and two boys. The narrative is constructed from field notes, photos and a transcription of video recordings from 25 March 2010.

I knock on the door and I am welcomed inside. The children had put all the cushions on the floor and were pretending they were on the ocean. They tell each other stories about a mermaid and share a fantasy in which they swim around with this mermaid. I sit down on one of the pads, and the children continue their pretend play and swim around me. After a while, Anne stops to ask me, “What do you actually do in this kindergarten?” I tell her that I want to see what they are doing in this room and how they use it. Anne then looks around the room and points at a plank mounted in the window to protect children from reaching the windowpane. “The plank is there so that we do not climb on the windowsill,” she says. She pauses, looking gravely at me and says, “You know, Anders manages to climb out the window anyway. He just put his foot on the water pipe there”. She points to the tube at the radiator and rises. She shows how he put his foot on the radiator pipe and knee against the wall and takes a good hold of the water pipes so he can push himself up on the windowsill. Her voice is proud and full of admiration when she shows and tells me. The two other children in the room are watching. Erik says, “I will not do it, but I do know how Anders does it”, and then also he goes over to the window and shows me where Anders put his foot and takes a grip with his hands so that he can climb up on the windowsill. He says “This is a magical room where we can be very strong! There is magic powder in the wall!” All three children show me by licking a finger and putting it into the hole in the wall to get white plaster to stick to the finger. This is the magic powder that makes them strong!

Space and meaning making

The first part of the narrative is about meaningful fantasy interplay among peers. I could imagine that I was out on an ocean because of the children’s play and because the small room gave a sense of being in a pool. I felt that I was treated as an installation, which made the children’s swimming a little more challenging and turned the swimming into a sort of moving pattern. Whether my presence interrupted the fantasy interplay or whether the fantasy play came to an end is difficult to decide by myself. However, when Anne turned to me and asked “*What do you actually do in this kindergarten?*” the two boys stopped playing and started listening immediately. The engagement was shared, which made the situation and the attunement like a “universe of experience”, to use Dewey’s expression (Løvlie, 2007:33). The space materialised an ocean universe in an interplay with these children. The children created their own culture.

Power sharing relations and belonging

The engagement continued when the children changed the subject and content. Again, I will see this in terms of the field of force where the tension in the situation brings the actors into a power-sharing position (Corsaro, 2005; Wenger, 1998). When children are doing space, they explore the possibilities of the space and the materiality. This room was basically in disrepair, with no decorations or documentation on the walls; the window had no curtains, and the surface of the walls was in poor shape, but the content the children put into it was overwhelmingly rich.

At the same time, we learn about power and positions of power among the children. To be strong, to be a good climber, and to dare to break the rules set by adults provides a strong position within the group of children. Meaning making and learning create identity processes among the participants (Lave & Wenger, 2003). By telling about another peer doing some extraordinary activities, challenging the roles, and finding a sense of magic inside this space, the children turned the room into a place of belonging where their own culture was primary and in which they resisted the official kindergarten culture.

Kindergarten seems to be “criss-crossed with invisible string which links the children to different objects, places within the space” (Clark, 2010). Children seem to express their belonging to a place by personal markers in the space. The hole in the wall, which could represent a lack of maintenance to adults, holds a magic meaning for these children.

The space where this narrative took place would generally be considered dilapidated and not representative of typical standards for a kindergarten. However, the children showed how space could be given meaning and significance separate from adult logic. The magic arose from the children’s imaginations and strings.

Concluding thoughts on doing place, space and materiality in kindergarten pedagogy

The starting point of this study was to explore how place, space and materiality interacted with children in play and how these interactions influence children’s everyday life in kindergarten. Doing space became a concept that highlighted the embodiment of doing and children’s agency towards space and materiality.

Although there is increasing interest in space and materiality as a physical environment in pedagogy, place, space and materiality exist independent of attention and may be at risk of being overlooked and taken for granted.

The pedagogy formed by Fridrich Fröbel in the 17th century underlined that play, space and materiality are central. The growing focus on learning and skills in kindergarten (Alvestad, 2009; OECD, 2006) may turn kindergarten pedagogy into more formal and school-look-alike pedagogy if we do not pay attention to the significant processes going on among children in play situations in kindergarten.

Children's experience of participation, and negotiation by being a member of a community of learners (Lave & Wenger, 1991), is vital to their construction of identity and knowledge.

By viewing the kindergarten as a place of pedagogy (Løvlie, 2007) where playing situations can be a "universe of experience", and by using the situated perspective (Lave & Wenger, 1991; Säljö, 2001), in addition to the concept of field of force (Bourdieu, 1998; Wilken, 2006) and a cultural approach to materiality (Otto, 2005), I have explored the interplay between materiality and the subjects needed to provide tension or an attunement (Løvlie, 2007) that inspires children to engage and participate.

Something has to be on stage (Bourdieu, 1998). In every play situation and meaning making activity, the concentration, tension and attunement seem to create possibilities for disruption and conflict. The kindergarten teachers play a significant role by challenging or moderating as a materialised body subject, either by being an active participant in play or by participating as an installation. They carry values and qualities that balance the power relations or inequality among the children in the situation and become a type of guarantor of mutual dependencies.

The ethnographic approach of my work is closed connected to my theoretical approach where the situated perspective on learning (Lave & Wenger, 1991; Säljö, 2001) and meaning making communicate with the way I conducted my ethnographic fieldwork. I was familiar with kindergartens as pedagogical institutions, but I was a newcomer in each kindergarten, and participated and learned by shifting positions and participation.

Place, space and materiality interact with children and adults, and reflect ideas, values and expectations. These expectations are often invisible, although they create practice and rules that influence daily life in kindergarten. Engaging kindergarten teachers are vital, teachers with shifting positions, sometimes as an active player, sometimes as a materialised subject body open for children, but withdrawn from the centre of the play.

By using narratives from my fieldwork, I have taken a close look at play situations in relation to space and materiality and analysed these situations to reveal new perspectives and findings according to the research questions. Self-initiated play in kindergarten demands different types of materiality. Every space in kindergarten should contain both flexible and firm materials. From the first narrative, I will argue that the flexible materials supported the children in creating a new possibility by either entering or protecting the play.

In the physical sense of space, the variety of levels in the playroom allowed the children to seek community from different positions. By having an overview, studying the play before entering, or taking a break and withdrawing to another level, the children were able to shift positions and still belong to the play group or maintain a sense of community. When kindergarten spaces have installations that provide children with opportunities to move on different levels, the children use the installation as a way

of doing space, but also to gain meaning and to position themselves in the activity. The personal marks that children put on a kindergarten (Clark, 2010) transform the kindergarten into a place of belonging and a place of meaning making. For children, the marks can be an expression of gaining control and achieving autonomy from adults (Corsaro, 2009). These personally marked places are often in-between or hidden from the teachers' access. The marks can be seen as interplay and create fantasies that enlarge the children's existential experiences, such as with the story of the magic powder and the illegal climbing up to the window.

I sought to explore connections between place, space, and children's meaning making in social practice. Sometimes, these connections may remain hidden to adults. Sometimes, the force in play situations among children remains disregarded because it seems to be invisible. Therefore, taking a close look through participation and observation can reveal certain hidden connections.

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