

Barrier-breaking Body Movements in the After-School Programme: Children's Imitation
through Play.

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Barrier-breaking Body Movements in the After-School Programme: Children's Imitation through Play

Abstract

This article investigates how children learn body movements in informal social situations, and is based upon close observation and qualitative research interviews undertaken among eight- and nine-year-old children in an after-school programme (ASP) in Oslo. The learning process is described and discussed in relation to the concepts of imitation, joint attention and turn-taking. The study shows that learning body movements is usual during child-managed activities in the ASP, and occurs frequently as imitation. The imitation process is characterized by joint attention and turn-taking. In best-friend groups, joint attention, characterized by shared involvement along with intuitive turn-taking, is predominant. In activity groups that come together occasionally, considerable initiative is required on the part of the imitator in order to become an active part of a mutual process. It is recommended to encourage child-managed activities in ASP, and emphasize the ASP's complimentary role in contrast to the school.

Keywords: *Body movement, peer learning, informal social interaction, child-managed activity*

Introduction

When the 'after-school programme' (ASP)¹ was introduced as a national programme in Norway, importance was attached to the children's leisure-time activities. Any extension of the school's function and tradition was to be avoided; there was no desire to combine school and leisure-time activities into an entirety based on the school programme (Haug, 1994; KUF, 1993). Guidelines indicated that the children themselves should select and manage the ASP activities. In the Education Act it is specified that the programme shall provide the opportunity for play, cultural and leisure-time activities, and provide the children with care and supervision (KD, 2009). There are no formal educational objectives associated with ASP. Consequently there is a strict division between school and leisure-time.

Surveys in Oslo have shown that physical activity in the children's play during ASP time is extensive and characterized by child-managed bodily movements and social interaction (Løndal & Bergsjø, 2005). An interesting question is whether valuable learning occurs during the play, in spite of the absence of formal aims. The Norwegian ASP is currently under

debate. The discussion focuses on whether ASP time should be used systematically to increase learning in school subjects, for example through supervised homework and adult-managed activities. Such a discussion should include appraisals about what the children can lose if the time used to child-managed play is reduced. This article argues for the inclusions of for such appraisals.

Within educational research there has been increasing interest in how interaction between children affects learning. Damon (1984) maintains that children can have a strong influence on each others' intellectual development, and refers to the agreement between a number of theoretical traditions on the positive effects of self esteem, school performance and social behaviour. Within the sphere of education this form of learning is frequently referred to as 'peer learning'. Peer learning may be ascribed to one of two categories: 'peer tutoring' and 'peer collaboration'. Peer tutoring occurs when one of the participants is an expert and functions as an instructor to the others. In peer collaboration, the participants work together to solve a problem, but without any one individual possessing the status of expert. Ward and Lee (2005) have presented a review of empirical literature relating to education in general, and physical education in particular. The review refers to the fact that a large number of research projects have documented the positive effects of peer learning within a broad spectrum of subjects and situations. Among other things, they conclude that peer tutoring is an effective method of advancing the learning of motor skills in physical education.

Peer learning is actively used in school education, and is most often associated with situations that initially are under control of a responsible teacher. As such, this must be considered as a formal learning situation. Ward and Lee (2005) emphasize this point stating: 'Merely placing students in groups is insufficient to ensure that learning will occur' (p. 206). This statement assumes, however, that learning must be directed towards a specific aim, and will exclude typical ASP activities. In the ASP it is the individually-selected and child-managed activities

that are predominant (Kvelling & Wendelborg, 2002; Løndal & Bergsjø, 2005). ASP time is regarded as the child's leisure time, and activities normally take place within informal situations without direct supervision by adults. Learning which occurs in such situations will be incidental, and in contrast to that form of learning encountered within the formal school programme. One objective of this article is to contribute to an understanding of how learning of body movements can occur when children interact in situations that are not based on a formal learning programme. This assumes that learning must be regarded as something more than a product of teaching or a path towards formal aims. The discussion is based on a fieldwork conducted in Oslo in 2007. The research question is: What is the process by which children learn movements in informal social situations within the ASP?

Theoretical framework

When referring to learning in this article, it is associated with the concept of 'barrier-breaking movement' (Morris, 2004). The child's body movement can be habitual, or part of a barrier-breaking process where the movement pattern is undergoing change. To what extent the movement is habitual or barrier-breaking is indicated along a continuum ranging from basic movements, through adaptive movements, skills and styles, to idiosyncratic adjustment (Morris, 2004). This is a learning process involving a dynamic interaction between the body and the place where the movement occurs. The child's body movement will, as such, be either habitual or located somewhere along the continuum described.

Barrier-breaking body movements, as described in this article, do not occur within a formal learning context or in the direction of formulated aims. Informal and unstructured situations predominate during ASP time. Nobody has a declared expert or beginner status in these situations, something which is regarded as a characteristic feature of so-called 'apprenticeship learning' (Nielsen & Kvale, 1997). Seen from this standpoint, relevant barrier-breaking situations in the ASP are preferably limited to the concept of 'informal and incidental

learning'. 'Informal and incidental learning' is defined as being contrary to formal learning, and the term is used in research related to experience-based learning (Marsick & Watkins, 1990). Such research focuses on experiences in everyday situations, and argues that learning can occur in a variety of contexts, including informal, social settings without expert-novice-relations. The child's body movements in ASP normally occur as informal and incidental experiences in everyday situations. In this connection Wenger's (1998) description of social learning in 'communities of practice' is relevant. He refers to the fact that humans form their identity through social participation, one that is built on a common repertoire of resources. Learning in communities of practice is called 'situated learning' (Lave & Wenger, 1991), and is not restricted to situations where a novice learns from the experiences of an expert. In communities of practice resources for learning will be encountered at all levels of experience, from novice to expert.

With its informal character, characterized by child-managed activities and social interaction, the ASP environment appears as a meaningful context where the participants have the opportunity to be accepted and recognized by other children for their performance. This concurs well with the definition of 'communities of practice'. In barrier-breaking body movements during the ASP time, tips are picked up from other children's movements. In this connection, Jespersen's (1997) account in the article *Modeling in sporting apprenticeship* is particularly relevant. He associates the imitation of others' movements in sport to the idea of a habitual phenomenological field: 'Thanks to the role of the body itself we find ourselves situated in a phenomenal field constantly trying to change our existence by creating new fields' (p. 185). Jespersen supports Merleau-Ponty's phenomenology (Merleau-Ponty, 2002 [1962]), and maintains that physical actions in situations where sports activity is imitated can be explained as direct bodily processes where other's movements are immediately comprehended. This does not imply direct imitation, but rather a creative and innovative

process (Jespersen, 1997), and appears to be a useful approach in the analysis of children's experimental and barrier-breaking body movements. Children learn movements in interactive situations even without competent teaching and without formulated objectives whereby particular movements ought to be learned.

Sheets-Johnstone (2000) describes learning of movement as occurring in informal situations as spontaneous and natural dispositions, characterized by joint attention, imitation and turn-taking. The concept 'joint attention' implies something more than regarding seeing the same as another person; it assumes that 'two individuals know that they are attending to something in common' (Tomasello, 1995, p. 106). This implies a common focus and a *shared involvement* characteristic of situations where several participate in the same activity. In addition, the participants have a basic understanding that their attention is coordinated with that of the others (Racine, 2005). Joint attention is presented as the basis of the mutual interaction between the participants and is, as such, an assumption for social practice (Sheets-Johnstone, 2000).

Imitation refers to the individual's ability to imitate movements and thus corresponds with Jespersen's account (1997). Imitation is already observed in infants (Meltzoff & Moore, 1983), and is also relevant in children of higher ages when learning movements and techniques. Smith (2007) associates this phenomenon to the concept of *mimesis*: 'a formative impulse of human rationality that finds similarities and forges identifications with others' (p. 55). He sites Benjamin (1978) when *mimesis* is included among natural phenomena: '[The human] gift of seeing resemblances is nothing other than a rudiment of the powerful compulsion in former times to become and behave like something else' (Smith, 2007, p. 68). The recent discovery of the mirror neuron mechanism supports this view. It appears that certain cells in the brain that control the body react to other persons' movements as though they themselves have carried out this action (Rizzolatti & Craighero, 2004). According to

those who discovered this mechanism, it plays an essential role both for understanding the movements of others and in imitating them. It can explain why others' intentions are so rapidly recognized and that movements are imitated intuitively. This permits a mutual communication process where the perception of one's own body can be transmitted to the other, and that the image of the other can be immediately understood by one's own body schema (Merleau-Ponty, 1964). The concept of 'body schema' here refers to the implicit knowledge which is linked to the body and which is used intuitively with body movement (Gallagher, 1986). Seen within the context of ASP, children's social interaction and bodily presence provide possibilities for communication of perception, and also to mimic other's movement in a spontaneous and intuitive manner.

Turn-taking is a phenomenon which is often associated with the development of the child's language (Bloom, 1993), providing the basis for the spontaneous exchange in a conversation where two or more individuals are participating (Sacks, Schegloff & Jefferson, 1974).

Without turn-taking, the fundamental, mutual understanding which enables the conversation to flow will not be present. Sheets-Johnstone (2000) considers that turn-taking has a much deeper and broader relevance than language. As an example, she points to the alternating non-verbal communication that occurs between individuals, and maintains that such situations are frequently affective occurrences. Further, she describes the phenomenon as basis for apprenticeship learning.

In this article the process by which children learn movements in informal social situations is discussed in relation to the concepts *imitation, joint attention, and turn-taking*. The discussion concerns whether these phenomena are relevant for situated learning in the community of practice that the ASP context implies.

Method

Materials for this study were gathered in the children's life-world. I was engaged in following an ASP group during the autumn of 2007, and used the opportunity to gather qualitative materials. Merleau-Ponty (2002) argues that the bodily action, gestures and speech are complementary forms of expression and communication. In this study, materials that captured these interlinked components were gathered, and two complementary methods were used – close observation (van Manen, 1990) and qualitative research interview (Kvale, 1996).

Participants

The aim of the project was to contribute to an understanding of the children's body movements in play, and not to undertake a comparison of institutions. For this reason, the investigation was restricted to a single ASP. Further, the study was concentrated on the upper two age groups who were permitted to attend the ASP. Thus the study comprised eight- and nine-year-old children in the 3rd and 4th grades in school. Forty children were included at the selected location, and attended the ASP between two and three hours each day. Permission was sought from the parents and the children concerning participation in the study. Parents of four children made reservations about participation. Consequently, information was gathered from 36 children of whom 19 were born in 1998, and 17 in 1999. 22 girls and 14 boys participated.

The context

The ASP studied is located in the suburbs of Oslo. The associated ASP building comprises a recreation room with a dining area, a playroom, a reading room, and a cloakroom. In front of the entrance to the ASP building is a flat asphalt area. Otherwise, a grassy slope surrounds the building. Approximately half the area comprises grass: the rest is trees and rugged terrain. Immediately to the side of the main building is a playhouse surrounded by trees suitable for climbing. The children refer to this as The Climbing Area. The area does not have traditional

play apparatus. A peripheral part of the school's play area is located in the immediate vicinity of the ASP site, and is available to children participating in the ASP. Here are areas for ball games, various types of swings and 'The Wheel'².

Gathering materials

Using close observation for gathering materials, one attempts to enter the life-world through direct participation (van Manen, 1990). The observations relevant for this article focused on specific places within the ASP area. These were chosen because they appeared particularly interesting in respect of the children's body movements. Video and sound recordings were used to register situations and events. Focus was concentrated on one place each day, and the observations were filmed or noted down when one or more of the 36 children were present at that place. Up to one hour was recorded each day. Parallel to the recording, field notes were written.

After the observations were concluded, five girls and four boys were selected for one individual qualitative research interview. The interviews were intended to provide depth to situations and events that had emerged in the observations. The children selected for interview had been involved in particularly interesting situations related to these themes. In line with Kvale's recommendations (1996), the interviews were given the character of a one-to-one conversation where the child could relate his or her own experiences to relevant themes.

The interviews were carried out with one child at the time in a room with which they were well acquainted. The interview commenced with situations in which the child had participated and been video recorded. These were edited so as to form a four-minute film for each individual. This was shown during the course of the interview and provided a basis for the conversation. The interviews were video and sound recorded.

Transcription and analysis

In order to ensure that the video and sound recordings were suitable for qualitative analysis, these were transcribed. The transcriptions of the interviews were written down in note form in such manner that the significance of the conversation emerged. The video recordings from the observation period were also transcribed and prepared for analysis. Giorgi's method (1985) was used in the analysis, and the interview transcriptions, the transcribed situations from the video recordings, and the field notes were included in the process. Through a stepwise analysis comprising four chronological sets of written notes, I moved from 1) a basic description, via 2) localization of the meaning units, and 3) incorporation into a theoretical perspective with relevant professional terminology, to 4) a synthesis of the meaning units to a consistent text where the phenomena studied emerge.

Results and discussion

The results are described and discussed in relation to specific situations in the ASP time. These are presented as numbered situation examples in the text. The observation materials reflect many situations where children imitate others' movements. The situations are selected on the basis of their significance in relation to the entirety in the group studied. Importance is attached to presenting situations showing how barrier-breaking body movements emerge as part of children's social interaction. The description and discussion are structured according to the concepts *imitation, joint attention and turn-taking* (Sheets-Johnstone, 2000).

Barrier-breaking body movements - characterized by imitation

The observation materials reveal a large number of situations with barrier-breaking body movements; situations where the children's movements are associated with developing skills and adaptation to the activity place, their body and the equipment. This occurs in many different situations and the learning processes in such activity are for the most part characterized by *imitation*. Individual children *can* be alone when developing barrier-breaking

movements, but this appears to be unusual during ASP time. Social interaction between the children is characteristic of the activities in the ASP context. Children interact socially in small or large groups, dependent upon the activity at that time, and with whom they wish to associate. They participate either in a small group of best friends, or in groups which emerge as a consequence of the chosen activity. In this article, we refer to these as ‘best-friend groups’ and ‘activity groups’. In the following, selected situation examples from the transcripts are introduced.

1. *Roger comes running alone towards The Climbing Area. He swings up using the broken branch on tree number 2 and experiments with the tree alternatively climbing and balancing, first on the lower branches, thereafter a bit higher. After a few minutes he jumps carefully from tree number 2 and onto the roof of the playhouse, thereafter directly to the ground, and then leaves the area. During this period of activity, he has not been in contact with anybody else.*
2. *Andreas, Jonathan and Edward are playing with scooters on the rough terrain which leads to the asphalt area. This is something where they are experts – scooting fast down to the asphalt area, straight across, then between the sandpit and the playhouse, continuing behind the main building. Amanda watches the boys’ activity and also wants to have a go. She is more cautious than the boys on the first trip, but dares to go across the asphalt area at a moderate speed. The second trip is faster and she follows the boys round the house. Soon she is driving together with the boys – and just as fast.*

In the first example Roger is alone while he attempts to develop skills which he has seen other exhibit in The Climbing Area. In the second situation Amanda joins in and imitates the boys’ movements on the scooters while the models are present.

The Climbing Area is a popular activity place. Every day, there is much going on here, mainly in pairs or small groups. The activities are often advanced, but surprisingly similar from each time. The same routes are followed, but with varying degrees of difficulty and varying styles. The first situation is an example from the second week in the ASP. Roger is new in the ASP group, and it is clear that The Climbing Area arouses his curiosity. During the first week, I observed that he hung around The Climbing Area much of the time and carefully followed the other children’s habitual climbing activities. He keeps close to the other children

but is not an integrated member of any group. In the episode described, Roger goes to the area with clear intentions. He experiments with balancing and simple climbing. He does this on his own. It is nevertheless interesting to observe how his activities follow the pattern of the other children he had previously observed. The manner in which he swings into tree no. 2 is his personal approach to the manner in which the more experienced children normally enter The Climbing Area. The same applies to the jump onto the roof of the playhouse. Even though ‘the new boy’ is carrying out his own barrier-breaking tests, he is strongly influenced by the others’ habitual movement patterns. He has clearly observed some of the key points in their exercises and is in the process of imitating them.

The second situation describes one associated with the asphalt area where a large group of children are engaged with various activities. Three boys enjoy themselves scooting over the rugged terrain. These boys are not a best-friend group; they have come together as they have chosen the same activity. The way in which this is carried out suggests that they have done this many times before. The skills are habitual. Amanda has become aware of this activity and observes the boys several times before doing it herself. Right from the first time, she carries out the activity – scooting – the same way as the boys, although not as fast. The second time, she scoots more quickly. Soon, she does the same as the boys, showing equal proficiency. It is amazing how quickly this imitation occurs. This is a typical example of how a child with less skill imitates more experienced children while the models are present, conducting their own habitual activity.

Both situations concur with the view of imitation of movements that Jespersen (1997) presents. He explains how the movement is transferred from one to another without being a direct copy. Regarding sports movement, this imitation can occur at very different stages. It is normal that ‘testing’ occurs at the same time and place between the model and the imitator, although this does not necessarily have to be the case. Numerous examples have been seen in

the body movements taking place at the ASP location. There are, for example, repeated occurrences in the football area where children who have watched football on TV attempt to imitate their heroes' shots, feints and celebration rituals. The situation with Roger in The Climbing Area is comparable in so far as he imitated the movements that he has observed on previous occasions. What was special about Robert's situation was that this occurred when he was alone. In the ASP it is more normal that such barrier-breaking activities occur in interaction with other children. Consequently, the situation that describes Amanda's imitation of the boys on the scooters is more representative of the ASP time than Roger's 'private' imitation in The Climbing Area.

Joint attention to the movement which is imitated

Roger's and Amanda's imitation actions in the two described situations occur without that they initially undertake these in participation with the children they are imitating. Roger is alone in his activity while Amanda joins the activity group from the sideline.

Roger's activity can be interpreted as an early adaptation of the more advanced course in The Climbing Area. As he is new to this activity environment, he has a need to become accustomed to the basic skills before attempting movements undertaken by the more experienced children, and before he can participate as an equal. Nevertheless, this activity does not occur within a vacuum. Even though he is undertaking this activity alone, his movement is influenced by the fact that he has observed what the other children do in this area. The influence in this particular situation is not, however, characterized by mutual attention. He has carried out a discrete observation of other children and attempts to imitate these on his own.

Concerning Amanda, it is only when she has undertaken the first attempts to imitate that she is included in the group on a mutual basis. In the first part of the situation Amanda's attention

towards the boys' activity is unilateral – the boys are engaged in their own and others' activities, but it does not appear that they notice Amanda on the sideline. Model and imitator are both focussing their attention on the same activity, but this is not a situation where 'two individuals know that they are attending to something in common' (Tomasello, 1995). It is only when Amanda has made her first attempt at speeding that she becomes part of the group. It is then that attention becomes mutual: involvement is *shared*. The model and the imitator are both engaged in each other's activities. We see that the entrance to the imitation process has become a personal responsibility for the imitator. Those who are engaged in an activity first and foremost share their attention with others involved in the same activity. The beginner must take the first step into that activity in order to gain mutual attention. Amanda's imitation of the boys' movements nevertheless seems surprisingly effective, and can be explained whereby the image of the other can be understood immediately by one's own body schema (Merleau-Ponty, 1964; Rizzolatti & Craighero, 2004). When the first imitation has been carried out, the process gains tempo. It can appear as though this *shared involvement* of model and imitator, which occurs when the imitator is included in the group, has a favourable effect. The observation does not reveal any form of instruction on the part of the experienced boys, but Amanda nevertheless becomes a natural part of their mutual activity. She becomes part of a natural process with turn-taking (Sacks et. al, 1974; Sheets-Johnstone, 2000) where this alternates between the active participants and the observers, and so forth. It appears that the shared attention, and the subsequent turn-taking which arises after Amanda has been accepted into the group, is positive for rapid imitation.

A new example shows an imitation process already defined by a best-friend group.

3. *Toni, Karen and Ellen follow the permanent 'obstacle course' in The Climbing Area. They swing up to tree number 2 from the broken branch, jump on to the roof, and then into tree number 3, continuing from the slim branch down to the ground. It is a challenging exercise which not all dare to do, nor can carry out as yet. Toni and Karen complete the exercise with speed and skill. Ellen does not dare to jump from tree number 2 to the roof. She asks how to do it and Karen shows her. All are*

focussed on Ellen, but she does not dare to jump. Roger has been watching from the ground level and points out that it is easy to jump from tree number 2 to the roof. When his turn comes, he swings up using the broken branch and jumps securely onto the roof. Karen follows from her position on the roof and, apparently somewhat impressed, asks 'Have you done this before?'

In this example, the children's joint attention and shared involvement clearly emerges from the start of the activity, thus distinguishing it from example no. 2 where Amanda herself had gained access to mutual participation. In the best-friend group it appears that the joint attention is a matter of course right from the start. Even though the exercise relates to the individual's own skills, all four children are deeply focussed on their own and others' performances. They observe, and follow the movements commenting before, during and after the exercises have been performed. According to Sheets-Johnstone (2000), this joint attention is characteristic of situations where several are participating in the same activity. This enables mutual influence to take place and such that the advanced course through The Climbing Area becomes the joint property of the ASP participants. This explains why this course has become established as a standardised activity carried out by many children, with increasing refinement and personally adapted style. It is interesting to observe Roger's behaviour in this example. In the first situation, which was filmed nine days prior to the third situation, he was observed alone in the area. Now he is ready to enter into a mutual communication process, and the activity is carried out in a situation of joint attention and shared involvement. Roger is now part of an activity where several focus their attention on something in which they are jointly involved (Tomasello, 1995). The whole course is not yet habitual, but he has commenced with this. The three girls follow his action, and Karen gives a clear expression of acknowledgement.

The third situation can be said to be typical for barrier-breaking body movements in the ASP; this occurs in interaction between children with a close association with a best-friend group. The ASP environment appears to be a community where the activities encourage social

learning processes (Wenger, 1998). These are not learning processes that are directed towards formal educational aims. Nevertheless, the learned movements appear to be important to the individual child. Such learning is situated; it emerges as a consequence of informal situations in the ASP-practice. It is situated learning (Lave & Wenger, 1991) that fosters movements that the children experience as important in their everyday activity. Interaction in this community of practice shows, however, that interaction may occur in different ways according to type of activity taking place, the structure of the group, and individual expectations. Joint attention among children participating in a social group appears to increase the processes of learning movements during bodily play.

Turn-taking in social imitation processes

As mentioned, there is much bodily activity in the ASP, either in best-friend groups or in large groups based on activity choice. The best-friend groups comprise just a few children with close and mutual relations. One characteristic of the best-friend groups is the shared involvement in joint activities (Dunn, 2004). The activity is determined jointly by the participants, and may cover a wide range of interests. Occasionally, the children become involved in activities in which none of them has any particular prior experience: at other times there may be one or more 'experts' in the group. The first of these results in a joint experiment of new body movements while the other is characterized by imitation of movements that are familiar to some in the group. This has a strong effect on the imitation process. The following example, which took place on the asphalt area in the front of the ASP building, illustrates an experimental activity where all participants are at the level of beginner.

4. *Gloria comes out to the asphalt area with a hoop-la. She attempts to 'rock' and spin the hoop. After a short while her friends Pernille and Siv join her. They attempt to spin the hoop around their waist, their chest and their ankles. They throw the hoop and roll it along the ground. None of the girls appear as experts. They stand facing each other in a ring showing what they can do and challenging each other in various ways. During the minutes they keep up this activity, their level of skill is considerably increased.*

This is a group activity that occurs at the initiative of Gloria, and has not been agreed upon by any of the girls. Rather, it was an impulse by Gloria when she went to the equipment shed and discovered that all the scooters were being used. When she commenced with the hoop-la, this was a tempting affordance (Gibson, 1986), also for the two other girls. The hoop-la became a substitute for the scooter resulting in an activity where they experiment with the different ways in which the hoop-la can be used. There is no imitation involved of any previously developed skills. None of the girls has any particular experience with the hoop-la such that this is a barrier-breaking activity for all three. This results in a profusion of physical solutions. The girls focus their attention on a joint activity and the shared involvement is manifest. They compete in finding different ways in which to use the hoop-la and try out each other's solutions. All this occurs as a natural exchange between the three girls where they partly find their own solutions and partly imitate those of the others. They involve themselves intuitively when it seems appropriate; there are no pauses in the activity and no verbal exchange takes place regarding whose turn it is to display their skills or imitation. This appears to take place intuitively from non-verbal signals. This continues for about ten minutes. It is a form of communication that can be explained as a circular, intuitive exchange between each other's meaningful behaviour (Merleau-Ponty, 1964; Rasmussen, 1996). The similarity to a conversation with improvised exchange is remarkable. The girls' natural exchanges in presenting their activities and imitation can be explained by the concept of *turn-taking* (Sacks et al., 1974; Sheets-Johnstone, 2000), and is a phenomenon which is observed on repeated occasions in the ASP children's body movements. This is most clearly manifest in the best-friend groups when there is just a few children who are undertaking the same experimental activity. This exchange of body language appears to be most compatible and intuitive when the participants have reasonably similar levels of skill. This does not, however, need to be an activity in which they are new-beginners. It is also observed that the most skilful climbers challenge the others with advanced climbing in The Climbing Area.

Where one or several in a group are notably more skilful than the others in executing an activity, the bodily conversation becomes distorted and the natural mode of communication becomes less predominant. This is observed both through skills that the children have developed themselves, and in exercises developed by adults. In the video materials there is an episode where the nine-year-olds, Karen, Ellen and Toni imitate the basic gymnastic skills 'cartwheel' and 'bridge', something which Toni had learnt previously. The situation arose impulsively when the four girls, who were initially playing in the sandpit, began to speak about the gymnastics in which they were to participate that evening. This inspired them to try out the actual exercises. Suddenly, they ran over to the grass area and commenced. Toni had already attended the gym class for several years, and was considered as something of an expert. The others were at a considerably lower level. Toni immediately took charge; she showed the exercises, introduced assistance exercises, and assisted the other girls in the exercises. The similarity with an adult gym teacher was remarkable. The other girls immediately accepted Toni's expert role. They study her execution of the exercises, listen to her explanations, attempt to imitate the exercises and listen to her comments. The situation is characterized by joint attention and mutual involvement. Turn-taking appears, however, to be less intuitive than in the fourth example where none of the participants are experts. In this situation turn-taking more closely resembles that which occurs in a formal learning situation: it follows established rules based on who is the instructor and who is the imitator (Sheets-Johnstone, 2000). The situation thus resembles that which occurs in tutoring in formal learning situations. The youngest of the girls has an accepted instructor role that she appears to enjoy. It can appear as though she is imitating her own adult trainer when she adopts this role herself. The situation illustrates how children can gain experience when incorporating different roles into the informal social setting. These may be positive experiences, both for those giving instruction, and those who are imitating. Research has shown that peer tutoring can develop the ability to associate the development of skills to personal imitative (Sprinthall,

1994). ‘The child expert’ achieves advantages through increased understanding of the activity in which instruction is being given, boosting confidence and which can be carried over in a desire to learn other subjects (Ehly & Larsen, 1980).

The situation described above bears the characteristics of taking place in accordance with a model of adult-controlled children’s sport. Observations show, however, a corresponding pattern when movement developed by the child itself are imitated. The fifth situation, which took place at The Wheel, illustrates this.

5. *Rebecca is to launch herself from the top platform, and wants to be observed. She calls to Ida and Dorothy: ‘Watch me! Aren’t I crazy?’ Ida is interested and watches. Rebecca does an advanced manoeuvre, making a good deal of noise while executing it. Afterwards, she is happy and in high spirits. Ida now wants to try and goes straight up to the top platform. ‘Are you going to start from there?’ Rebecca asks. ‘I’ll try – it’s my first time,’ Ida replies. When Ida is ready, Rebecca shouts: ‘Sophie, look at Ida!’, and to Ida: ‘Go on, Ida!’. Ida breathes in a couple of times and launches the sling. The rope is slack, so it was a sudden start. Rebecca and Sophie are excited and run to Ida and clap her on the back. ‘Wow, that hurt a bit,’ says Ida. Sophie hears this and asks: ‘Wasn’t that cool?’ ‘Yes,’ says Ida, and smiles. All three then run back to the start platform. Now Rebecca will show Ida how it should be done. She climbs up to the top platform and tells Ida how to prepare to jump while she carries out this exercise herself. She emphasises that it is important to lean backwards and to the side at the start. She shows this taking one trip. It is then Ida’s turn again. ‘That’s quite dangerous what you are doing now.’ Rebecca says confidentially. Ida takes the sitting board, manoeuvres it into place with her left hand, and stands still at the top for a moment. Then Rebecca shouts: ‘Dorothy, watch Ida now’. The girls remind Ida that she must lean backwards. She does precisely what she is told and makes a good start. The girls are excited. When she comes back Sophie acknowledges the performance: ‘You are clever, Ida!’*

This is a skill that the children in the ASP have developed themselves. Sophie has helped Rebecca before to imitate the skill, and the situation in example 5 describes how Rebecca assists Ida in her imitations. This is a typical example of a child functioning as tutor when another child wishes to imitate a skill that requires ‘daring’. The sequence contains several interesting elements with the child as tutor. At the first attempt the most important appeared to be getting Ida off the platform such that she could overcome her nerves. Rebecca’s attention was directed towards motivating her to ‘swing out’. After the first trip had been made, this

was greeted with loud ovation. It is first and foremost the bodily emotional feeling the two more experienced girls emphasise in their acclaim. ‘Wasn’t that cool?’ Ida emphasises in her tone of voice that that *was* ‘cool’. Buytendijk (1988) has pointed to a clear bodily-emotional association in the experience of movement, and this is manifest in the current situation. The bodily-emotional enjoyment can be observed in all three girls after Ida’s first swing from the top platform. It is an example of the joint attention and shared involvement which is so characteristic of body movements in best-friend groups. Ida experiences the enjoyment of having carried out this ‘daring’ exercise, and her two friends identify themselves with a similar emotion. In this situation, Rebecca does not give any immediate response concerning what was done correctly – or incorrectly. Nevertheless, she has a clear impression of what the correct procedure was. This emerges clearly in her expression when, during an interview, she is shown the entire episode on a video.

Rebecca: Ida attempted to swing from right up there. It was her first time.

Interviewer: Is that so? That was tough.

Rebecca: Yes. It was me who told her what to do. There she managed to do it properly.

Interviewer: Did she do it properly? Tell me what that means. Is it difficult to swing out from there?

Rebecca: Yes. When you go up there, it is quite difficult. It’s difficult because one thinks it is scary. It is a long way from up there.

Interviewer: I understand. But how do you do that?

Rebecca: First you have to climb up. Someone then gives The Wheel [pulley] to us. Then you must sit on that round board, and then push off.

Interviewer: You said that Ida did it properly the second time. What was it she did that was right?

Rebecca: Yes. The first time, she jumped down. Actually she should not have jumped down. One should lean backwards and a bit to the side. That’s what she did the last time.

On the next trip she is more focussed on skills in her instructions. The ‘daring’ has been carried out and the focus is now on the skills. There are several elements in Rebecca’s instructions that are often pointed out as ideals within sports didactics. Proficiency is

comprehensively presented as an exchange between demonstration and explanation, and where a direct and immediate response is given to the exercise. Turn-taking appears to follow the unwritten rules that apply in a formal learning situation. This is especially interesting as there is no mention of a standardised skill but one that the children themselves have developed. What is it then which determines what is right or wrong? Why shouldn't one just jump from the platform just as Ida did on her first attempt rather than leaning backwards and to the side? Ida commented that it hurt a bit when she just swung out with a sudden start. As such, it is the safety aspect that Rebecca is referring to when she says 'to do it properly'. In addition, it appears to have something to do with control. When the experienced girls demonstrate complete control, this implies a gradual transition from a stationary position to one of full speed. We observe that balance and flow are those features that arouse the most positive response of the children who are watching. This is an important aspect of children's imitation; it is not a matter of uncritical copying. The movement has an aesthetic dimension that is taken into consideration when the proficiency is evaluated. The children have the possibility to choose the action that is to be imitated; this enables an aesthetic evaluation of the imitation. This is in accordance with previous findings within sporting apprenticeship, where creative imitation is demonstrated (Jespersen, 1997). Thus, imitation is not pure copying. The different possibilities in an innovative practice have to be included in the evaluation (Sheets-Johnstone, 2000).

As mentioned, there are certain aspects of Rebecca's behaviour that are in accordance with recognized didactic principles. In addition, there are a number of surprising elements: 1) importance attached to the risk of a daring action, and 2) the energy which was attached to drawing the attention of others to the first attempt. It appears to be important that others are watching when the barrier-breaking exercise is performed. Further, Rebecca attached importance to the risk associated with this exercise. The introductory comment before Ida's

trip, 'What you are doing now is dangerous', emphasises this. Neither is this the only example. Observations from the ASP time reveal many similar occasions when daring and technically advanced exercises are performed on The Wheel, in The Climbing Area and the asphalt area. Both of these points can probably be explained by the significance that the physical actions have for being accepted and recognition by the peer group. Children use this when placing themselves in relationship to other children who are present. It also has a role when the children construe their identity through participation in social practice (Wenger, 1998). When Rebecca tells Ida sensitively about the risk aspect of the exercise, this is certainly because she is intuitively aware that carrying out the exercise will mean status among the children. Ida does not appear to react negatively to this. The attention of the other individuals is part of 'the significance of movement' (van den Berg, 1952), and is basic in children's physical actions. It is therefore quite normal for children to draw the attention of others when they are going to execute a 'daring action'. Considerable importance is attached to this in the barrier-breaking situation that Ida has performed. For Rebecca, who has functioned as tutor in this situation, calling the attention of others is a natural part of the instruction.

Joint attention is a characteristic of barrier-breaking body movements among best-friends. Mutual appreciation, which is so typical of best-friends relationships (Dunn, 2004), appears to establish shared involvement that is favourable for the imitation processes. This applies both to activities where all are at approximately the same level, and those where one is an expert. The imitation processes on the other hand arise differently. If all are at the same level, the process of turn-taking appears to be intuitive and spontaneous, more so than when an expert is present.

Concluding remarks

This study shows that much barrier-breaking body movement occurs in the informal social situations in the ASP. Situations arise in two categories of group formation: best-friend groups and activity groups. In both categories body movements of both habitual and barrier-breaking character take place. The barrier-breaking body movements in the best-friend groups can be characterized according to two categories – joint try-out of new movements and imitation of other children's habitual movements. Both categories are characterized by shared involvement and have a clear body-emotional expression. Joint try-out of new movements occurs in a natural exchange of activity and observation within the group – through new suggestions and by imitating the others' suggestions for activity. The development in the movement patterns is unstructured and incidental, and imitation of others' movements occurs spontaneously and intuitively. The most salient pattern appears to be joint participation and turn-taking. When there is an expert in the best-friend group, the weight is on imitation of his or her habitual movement. In such situations we have seen that the expert has an accepted tutor function. The situations have a bodily-emotional character characterized by a strong mutual association between model and imitator.

Barrier-breaking body movements in activity groups with looser social relations occur more frequently as a personal imitation of other's habitual movement patterns. In such groups we have not observed examples whereby the model acts as tutor as with best-friend groups. The imitator and model focus joint attention on the actual bodily movement, but do not have the same degree of reciprocity observed in best-friend groups. A greater degree of personal responsibility is required of the individual for participation in an imitation process. After participation has been entered into, it appears that the joint attention is characterized by a greater degree of shared involvement, something that appears to have a favourable impact on the imitation process.

Ward and Lee (2005) have emphasised that peer learning within education where ‘merely placing students in groups is insufficient to ensure that learning will occur’ (p. 206). This conclusion is certainly a consequence of the form of peer learning which is frequently used in schools. It is not the intuitive imitation to which importance is attached, but rather peer-assisted learning directed towards specific objectives. The results of this study suggest that the citation from Ward and Lee (2005) should be modified, and that the school’s physical education can be compared to movement-learning through imitation of child-managed play. In spite of the absence of formal objectives and without a strict supervision of responsible pedagogues, children learn valuable movements in the ASP. Learning in such informal social situations, which is so typical of the ASP, largely occurs in processes where children *imitate* others’ movements. *Join attention* and *turn-taking* are characteristic features of such learning processes. Each of these three phenomena is expressed to different degrees, dependent upon the context in which the learning process occurs. In best-friend groups, joint attention, characterized by shared involvement along with intuitive turn-taking, is predominant. As such, it appears that the best-friend group is a very favourable situation whereby learning of body movements can occur. In the activity groups it is the imitation process itself that emerges as the central feature, and considerable initiative is required on the part of the imitator in order to become an active part of the mutual process. Following the first initiative we observe both shared involvement and turn-taking, frequently with a rapid adoption of the movement pattern as a result. The advantage with these groups is that they are open for participation and that there is often an expert who can be imitated.

The findings in this study should be taken into consideration when the future organisation of the Norwegian ASP is discussed. If ASP time is to be used systematically in order to increase learning in school subjects, for example through supervised homework and adult-managed activity, the time used for child-managed activities would be reduced. Such a situation would

decrease the children's opportunity for learning in informal, social situations. The findings of this study suggest that greater emphasis should be placed upon ASP activities as being complementary to those in the school. Future training of ASP professionals should encourage an understanding of learning processes in informal, social situations that particularly characterize the ASP.

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Notes

¹ The 'after-school programme' (ASP) [*skolefritidsordning*] is a voluntary programme of cultural and play activities administered by the school or the municipality outside normal school hours.

² 'The Wheel', as it is popularly called, is a sling suspended from a pulley (the wheel) on a wire line between two poles. The poles are about 25 meters apart; one is higher than the other. The child drags the pulley to the higher frame, climbs a ladder and sits in the sling. He or she is then virtually launched into space as the pulley runs down the line towards the lower pole. The lower support is so designed that when the pulley comes to abrupt halt, the child is then left swinging in the sling. Altogether, a considerable feat of daring for many children!

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