

Music is Movement

A Study into Aspects of Movement Representation of Musical Activities among Preschool Children in a Dutch Music Education Setting.

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ABSTRACT

Musical activities are at the centre of Music on the Lap, a Dutch approach to early childhood music education. The present study takes an in-depth look at the role of movement in these musical activities and thereby focuses on the representation of musical elements through movement. This study has among its aims the raising of more awareness for the conscious use of movement in early childhood music education.

Departing from an embodied approach within an interpretative design, the premise of the current study is that movement should be considered an important form of kinaesthetic representation through which preschool children can come to understand and learn different aspects of music. The musical movement responses of children aged 18 to 36 months in a regular Music on the Lap setting were investigated. The musical movement behaviour of the children, during specific musical activities, was captured on DVD and the individual responses of 27 children were analysed. Interviews with the participating teacher provided important additional information. Through microanalysis of the children's movements, the study arrived at a theoretical interpretation: movement responses to music can be considered enactive symbols, creating direct and indirect representations of musical characteristics. To further musical learning the movements should be firmly based in a temporal framework of aural and verbal connotations in order to stimulate purposeful movement responses. This temporal framework should be structured by the teacher through a process of appropriate movement models and verbal guidance to arrive at meaningful movement actions, which can consequently generate implicit and explicit musical kinaesthetic and musical representational knowledge. In this process the children are actively participating to construct with body and mind their own musical knowledge.

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ACCOMPANYING MATERIAL**DVD WITH FRAGMENTS OF THE COLLECTED DATA.****Examples on DVD First Study**

Chapter 5

Eén Twee /One Two**Tam Tam****Examples on DVD Second Study**

Chapter 8

Klap klap zo doen de handjes / Clap clap this is what the hands do

CC1 ZG1

CC2 DG1

CC3 ZG1

CC4 ZG1

Kijk eens een vliegtuig / Look an airplane

LA1 ZG1

LA2 DG1

LA3 DG1

Plitse pletse Plater / Slitter splatter splotter

PPP1 DG1

PPP2 ZG1

PPP3 DG1

Eén Twee / One Two

OT1 DG2

OT2 ZG2

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1 INTRODUCTION

“Educational research, one might say, is not so much research about education as it is research for education” (Biesta & Burbules, 2003)

1.1 EARLY CHILDHOOD MUSIC EDUCATION

The purpose of early childhood music education is to foster musical learning in young children in preparation for later life by providing them with foundational experiences of the fundamental elements of music. Preschool children – in the Netherlands this term refers to children aged 0 to 4 years – can explore and develop their musical competences in different settings. Many Dutch children are presented with music-corners at day care centres and playgrounds where they can explore their musical play freely. Sometimes the day care centre and the playground environment provide guided musical activities by an adult. Another possibility is to go to a music course for preschool children accompanied by a parent or carer. These courses are offered in the Netherlands in music schools, community centres and in private settings. In these courses the children are offered a wide range of musical activities that they can explore and join in with.

1.2 MOVEMENT

One bright morning we were singing songs with Taran, a wide-eyed boy 9 months of age. One particular song elicited a repeated movement response from Taran. This was a short Dutch traditional children’s song with different movements. Always when the song was finished - it was repeated many times - he made one movement: holding one hand to his forehead. He could have chosen any other movement from the song but he chose this one and always demonstrated it after the song. Being an early childhood music educator, this evoked my interest to find out what was happening. What is the role of movement in the songs we present to children and especially during early childhood music courses?

According to Booth “truly, music and movement are fundamental to all beings (Booth, 1992, p. 6)”. Most people would agree with this statement, nevertheless this fundamentality does leave room for multiple interpretations. Movement was and is

very often used as an inherently 'logical' part in early childhood music activities. Often it is taken for granted (Taylor, 1989) and because movement seems such a logical part, its specific merits are frequently overlooked. An in-depth understanding of the movement responses of preschool children is still in need of specific knowledge concerning the potentials of movement for supporting the musical learning process. The mere act of offering a musical activity – a song with a motor activity or action song – to young children implies that there is some sort of underlying aim concerning the musical learning process when presented in a music education setting. In order to be able to offer the ultimate workspace a teacher should have knowledge of the musical responses the children might give – taking into consideration the general and musical developmental level of the children – to support the musical learning process. Andress describes a possible view on early childhood music education:

“There is a body of knowledge about music to be acquired by children. Within each experience, the child will deal with basic music understanding. Though the child may not be fully cognizant of the given musical concept being presented, the teacher must be. It is through this awareness that the teacher can plan a sequential, meaningful, and enjoyable course of learning. Each experience should contribute to the child's growing awareness and ability to make decisions about music” (Andress, 1980, p. 88).

This I think should be accomplished by: “be willing to make sense of the world for children on the basis of their greater knowledge and experience” (Garhart Mooney, 2000, p. 7). Offering a nice song with movement and objects (musical instruments suitable for young children or toys) is no guarantee in itself that the children will be engaged in music educational experiences. All these three elements – the song, movement and objects – pertaining to a musical activity within a music education setting should be thoroughly thought through concerning the way they are presented to the children. Musical learning aims should be clearly defined in advance in order to tailor these elements adequately to the musical possibilities of the children. Consequently the children will be engaged in musical experiences from which they can benefit.

Kemp, when examining the personality traits of musicians, found that people who had engaged in music for a long time, develop a form of intelligence which he described as

feelingful and holistic and which enables the individual to live a rich, colourful and symbolic inner mental life (Kemp, 1990). According to Kemp, this suggests an integration of classic dichotomies like feeling and thinking. Music education should educate the whole person: body, mind and spirit. His conclusions are confirmed by Damasio (1995), who stated that feelings, emotions, are an important part of thinking. Thinking and reasoning, apparently cannot occur without emotions. This makes a case for music education: expression of the self in music then will possibly develop the cognitive abilities. A “knowing through whole-body experience” (Kemp, 1990).

Early childhood music education is widespread among different countries – a course or in a childcare context – and movement has traditionally been and continues to be an important part in the musical learning process (Booth Church, 1992; Flohr, 2005; Greata, 2006; Tafuri, 2008; Young, 2009). Given its central role in early childhood music pedagogy, there is a relative shortage of substantial research in to the movement responses of young children, particularly in the very young age group of the children in this study. Moreover, there is a shortage of research that explores the movement responses of children in-depth and in detail in order to understand the process and its intrinsic connection to learning basic musical elements. This study is therefore much needed and promises to make a valuable contribution to Music on the Lap (see 1.4) in the Netherlands and to early childhood music education in general.

1.3 AIM OF THE STUDY

The underlying notion of the present investigation is that the inherently present musical capabilities of young children should be preserved and developed in early childhood music education settings. These are the settings where children can benefit from appropriate adult guidance in their musical learning process. Free musical play settings are conducive for experimentation and discovery but they lack the important adult guidance to embed the musical experiences in a music cultural framework and to offer the children new ways and ideas to extend their musical knowledge. The study envisions theory development, hopefully contributing to an underpinning of the use of movement in music educational practice. Different authors steadily uncover the notion of intentional music making by children aged 0 – 4 years (Chen-Hafteck, 2004; Cohen, 1994; Gluschkof, 2002; Young, 1999). Young children do clearly have more musical

capabilities then presumed in the past (Flohr, 2005). Therefore this study is concerned with the significance of movement for the musical learning process of young children.

In order to enjoy music and participate in music in later adult life, according to Pound and Harrison (2003), young children need to be prepared. This implies the need for certain skills within the musical domain, an explicit or implicit understanding of musical elements. Young children participating in a music course should be guided to be able to understand music to a certain level. Taylor describes

“the ultimate goal of general music education to be the development of a memory for music (both short and long term) through the promoting of mental imagery.” (Taylor, 1989).

If memory for music is promoted through the use of mental imagery, or mental representation, a major concern then should be the practical part of developing the use of representation. Therefore I consider musical representation to be an important tool in musical learning. As movement provides the children with a medium more accessible to young children than passive listening (Young, 1996), movement to music will be considered in this study an important tool in musical representation.

Music is a temporal art form. It spans a moment in time and then it is gone. Bits and pieces will somehow stay in memory and probably at one point a whole song will be memorised in some form. Within this moment in time the children will encounter the four characteristics or parameters of music: tone height, tone intensity, tone duration and tone colour (timbre). The endless combinations create music, which the adolescent Seashore described as: “[...] the charm of the soul, the instrument that lifts mind to higher regions, the gateway into the realms of imagination” (Seashore, 1938, p. xi). To be able to enjoy music in the same way Seashore so poetically described, early childhood music education has a task. In order to learn musically, to step into the musical learning process offered in a music educational context, an intention is needed which can implicitly be brought about through motivation in an environment which makes sense to young children. I am convinced that young children possess the capabilities to do this. Music education for children under four has a task to explore and elaborate these possibilities by means of adult guidance through appropriate pedagogical underpinnings.

I will argue that through movement children are able to internalise and externalise their musical representations. Movement will help the children to develop their musical representations, consequently preparing the ground for further musical learning: be it singing, instrumental play or the pure joy of listening. The premise, which will be explained in chapter 3 by drawing on relevant theory, hereby is that movement is an important kinaesthetic representational way for young children, through which they can come to understand and learn different aspects of music. We cannot see representation, consequently posing challenges for investigation. Therefore this study will focus on the actual movements, overt behaviour, young children make accompanying a musical stimulus: songs specially written for children aged 18 months to 36 months, in a real world setting. The Dutch approach Music on the Lap constituted the real world music educational setting of this study.

1.4 EDUCATIONAL SETTING

The present study took place within the field of continuing development of preschool music education in the Netherlands. Muziek op Schoot – Music on the Lap – is the Dutch name for early childhood music education courses from the age of 4 months to 4 years. These courses have evolved from expert pedagogical practice over many years, but have not, so far, been subject to any kind of formal research to explore the processes of musical learning.

A regular Music on the lap (MoL) course is build on ‘activities’: the singing of songs that are always accompanied by a motor activity and often an object: either a musical instrument suitable for young children or a toy (Alberts & Rikhof, 1998). Multiple repetitions of the songs during a lesson and a course provide the children with the opportunity to step into an activity at the moment when they have captured the movements. These early childhood music lessons are given on a weekly basis on the same location. A setting in which the children will be presented with multiple sensory information. These lessons can be regarded as personal musical incidents or events in the lives of young children. The children will have to find their way in understanding the MoL environment and at the same time act upon the MoL environment. MoL’s events are new at a certain moment but by repeating the events over a period of time, familiarity and therefore participation occurs because the children then are able to

retrieve the events from memory in interaction with the reinforcement – the presentation of the activity by the teacher – of incoming musical information.

1.5 RESEARCH APPROACH

The aim of the study was to investigate preschool children specifically in an educational setting. There they are presented with new musical information and can respond to this information. In order to observe a process of transformation instead of a static situation the investigation asked for a real world situation, in which the children's movement behaviour over the time of a course could be studied. A laboratory setting would have taken away the normal educational situation in which these children musically function. The use of qualitative research methods had the advantage that the "natural occurrence of phenomena" was not distorted (Cohen, Manion & Morrison, 2000). The MoL setting provided naturalistic research possibilities: the children's movement behaviours were not interfered with for the purposes of the research. A MoL class to a certain extent can be regarded as a contrived situation. However it is much less controlled than a laboratory situation: the normal functioning of this context is not disturbed. Moreover, MoL provided an ideal setting because of its child-centred structure and well worked out practical approach.

1.5.1 Design and method

In accordance with the nature of qualitative research, predictability was not the aim of this investigation but the understanding of an aspect of musical behaviour: movement. **Insight into** the movement behaviour of the children in the music educational process was achieved through a design of multiple case studies. The design of the study at first envisioned a preliminary study to establish movement activities and categories for the main study. However the large number of relevant findings from this first study was not anticipated and therefore this study was regarded as a study that could stand on its own. Nevertheless, the information derived was used to construct the second study to look more closely at certain aspects with a larger number of participants. The process of recruiting participants was carried out as naturally as possible, meaning that if the investigation would not have taken place the parents and their children would have taken the course anyway. In total 7 courses of 8 lessons have been put on tape for analysis. Data were collected through the use of direct observation (Rolf, 2001).

The analysis of the data can be described as a three level process (Vries, 2003): a literal description of the movement responses of each child per selected activity, the comparison of certain movement behaviours and the construction of coordinating themes.

1.6 RESEARCHER PERSPECTIVE

My personal perspective stems from experiences in early childhood music education as a teacher and workshop leader. As a certificated Dutch Music on the Lap teacher I have worked amongst others in music schools and day care centres and I have given workshops for carers, young pedagogues students/interns and parents about music and young children. To broaden my perspective I have worked as a carer in different day care centres and as a playground teacher. This background provided me with the possibility to take a child-centred perspective in conducting the study. I consider children to be intentional human beings who are with body and mind actively taking part in the construction of their own knowledge and skills.

1.7 THE WIDER IMPLICATIONS CONTEXT

Where research and education in art in early childhood are more and more moving towards an embodied approach (Wright, 2003a; Young, 2003a), Tobin observed an opposite approach in early childhood from his experience with education in the US. He concluded that “the body is disappearing in early childhood education” (Tobin, 2004, p. 111) and this time it is not developmental psychology that is blamed for it. According to Tobin the intensified use of scientific orientated research findings to inform practice in early childhood education – especially where children and parents in disadvantaged situations are concerned – supports academic development instead of social and bodily development. Also the present clinical medical view on the body and the “moral panic” according to Tobin evoke an increasingly disembodied perspective. While Maria Montessori wanted to provide children with real and accessible tools because “she believed that children learn best through sensory experiences” (Garhart Mooney, 2000), children’s environments have become more and more unrealistically safe and detached from vivid sensory experiences. Tobin suggests that his view of the disembodied nature of early childhood may be generalised to other countries. In the Netherlands I have observed a similar movement towards disembodiment. In short:

into the head and out of the body. I propose that one of the reasons we need more research conducted in early childhood music education is to literally keep the body in.

1.8 OUTLINE OF THE THESIS

In chapter two I will give a short overview of the Dutch music education setting. Music on the Lap is an elaborate Dutch approach for early childhood music education, developed over a period of 20 years. This was the actual real world setting in which the study took place. Chapter three provides an overview of relevant literature in relation to the research subject. Work from researchers in the field of early childhood music will be discussed as well as work from practitioners in early childhood music education. I will argue that the bodily movements of the children are an indication of the way young children can learn music, understand music, and represent music: a symbolic action where the movements embody the internal sensation of external sound production. Chapter four consequently explains the used methodology in general in this study and in the first study in particular. As the movement responses of the children were the actual target of the observations, the research questions were formulated in a way that would capture the overt behaviour of the children. Positioning the study in the field of naturalistic inquiry within an interpretive paradigm, the method of choice was a multiple case study. Because of its design it appeared to be appropriate for the study. Chapter 5 describes the results of the observations of the first study. In order to understand if the children have the capabilities to respond to the offered musical activity, it was important to know what to look for in the children's musical movement responses and what possible influences there might be on these responses. Movement types, movement categories and conditions to evoke purposeful movement responses could be derived from the data. These findings also shaped the observations of the second study: a process and structure emerged from the data to facilitate the second study in which the observations could be more intensified.

Chapter 6 discusses the methodology approach for the second study. To obtain additional information besides direct observation – the videos – a field notebook was kept during the data collection and interviews were held with the participating teacher. The results of the first study made it necessary to take a closer look at the use

of objects in the second study and consequently I will provide a small literature overview on the subject of objects. Furthermore I will describe the activity sets – songs situated in movement categories – for the second study. The analysis of the second study will be described in chapter 7. A separate chapter was needed to elaborate on a more refined analytical approach compared to the first study. It appeared that the boundaries of the unit of analysis (Yin, 2003) could be drawn much closer in an activity and that the respective perspectives of the teachers and the researcher on the subject to investigate needed more insight. In chapter 8 I will describe the results of the observations of the second study. By collecting and describing in detail instances of overt musical movement behaviour, through a micro analytical process of interpretation and sense-making I aimed to arrive at theoretical viewpoints, simultaneously being an elaboration of the findings in the first study in combination with new observations. The found 5 coordinating themes are: Movement, Objects, Representation, Teacher Influence and Information Construction. The syntheses of the relevant findings of both studies and their implications will be discussed in chapter 9.

2 EDUCATIONAL SETTING

This chapter aims to give a short overview of Music on the Lap (MoL), an approach to early childhood music education in the Netherlands. MoL constitutes the music educational setting and music educational environment in this study. The information in this chapter has been assessed and approved by Van Gestel who is a teacher of the teacher-training course and also the internal observer in this study. In this context the following can be considered the first written – though concise – explanation of the MoL approach. The study at hand is not an attempt to formalise MoL, but to explore certain aspects of its approach in order to contribute to its theoretical groundings with a possible resonance to a wider audience.

2.1 MUSIC ON THE LAP

Music on the Lap (MoL) is the name for preschool music lessons for children in the age of 4 months to 4 years, an age range as is generally defined for the preschool age range in the Netherlands. The aim is to let children acquire and develop the basic skills of music by means of a programme (Gestel, Albers, Maurik, Bomen, Rikhof & Veerman, 2010) strongly underpinned by evaluation of practice with theory emanating from practice. Certified MoL teachers provide music lessons for children accompanied by a parent, carer, or grandparent. These lessons are given on a weekly basis on the same location. Courses are held not only at music schools but also in community centres. Lessons are also given in larger groups at playgrounds and day care centres in the presence of professional carers. MoL works with different age groups in its courses. Although depending on the group composition which boundaries can be determined by the individual teacher, regularly the baby group has an age range of 4 months to 12 months; the “dreumes groep” (this is a specific Dutch word for this age group) 13 to 24 months and the toddler group 25 to 48 months. The songs used in these groups are specifically written and selected for them in order to make a close connection to the musical and general developmental levels of the group.

A regular MoL course consists of 6 to 12 lessons. The lessons are built on musical activities. An activity is a song accompanied by a motor action and using often either a musical instrument suitable for young children, or a toy (Albers & Rikhof, 1998). A

regular MoL lesson generally takes 30 or 45 minutes. In this time 8 to 12 songs will be presented. Each song/activity will take an average of about 4 minutes. The remaining time is generally used for distributing objects and putting objects back into boxes, responses from the children about what they experienced and the response of the parents and teacher on this, or the longer continuation of an activity due to the children's responses to it. A MoL course generally has 6 to 10 participating children accompanied by one of their parents or a carer. Because of the importance of repetition, each lesson only offers two new activities. All lessons are prepared by means of a lesson plan in which the activities are described as well as the necessary (musical) objects and musical and general developmental aims to focus on. Directions as they are articulated by the teacher-training course are not binding, but serve as good guidelines for the didactical choices MoL teachers can make. Within this construction, teachers decide for different aims for each activity: different motor actions; focusing on different aspects of the developmental areas and for different choices of toys and musical equipment. In the study these guidelines have been followed as a basic construction of the investigative framework.

The MoL way of working has emerged from more than 21 years of practical experience with early childhood music education lessons. In 1981 the Dutch Annie Langelaar – who stood at the cradle of general music education for children in the Netherlands – created the Foundation for Toddlers and Music (Stichting Peuters en Muziek). The aims were to investigate how musical influence in the first years of life could be of importance for future general development, to bring back singing to children's homes and to advance research in the field of early childhood music education. It was found during professional practice in general education and general music education that children were less and less able to sing well (Albers, Gestel, Hopster & Maurik, 1990). Therefore the need was felt to stimulate and preserve the musical abilities of young children in a professional music education setting: the MoL courses. In 1988 the first child/parent courses were offered to the public (Gestel & Albers, 1992).

The founding in 1984 of the Early Childhood Music Education commission of the ISME (International Society for Music Education) by a group of women – amongst which Annie Langelaar – working in music education and originating from different countries,

contributed to the shaping of the MoL approach. Their common goal was to advance and develop early childhood music education in different places over the world. Through the exchange of information, thereby incorporating the different backgrounds and ways of working in music education of the members, practical issues and challenges were addressed in their respective music educational practices. The resulting eclectic approach of MoL makes it very interesting and creates the opportunity for development of its way of working and personal contributions from its teachers. Because of its open pedagogy and broad way of thinking, certain aspects might well be transferable to other ways of working in early childhood music education. In this perspective MoL can also be described as a community of practitioners, national and international, who together advance the MoL way of working. For example: through annual meetings MoL-teachers come together and exchange new songs and new activities and share their personal experiences. In 1989 the first teacher-training course was organised which has now developed in to an officially approved post-bachelor course. Organised until 2008 by the foundation Toddlers and Music, it was transferred to the Foundation Music on the lap. The latter was created to stimulate music education for preschool children, to preserve the acquired knowledge and to expand and propagate knowledge about early childhood music education. The music educational aspect is its most prominent feature thereby putting the teacher-training course at the heart of the foundation. Prospective teachers are trained for a full year in which they have to create a portfolio with assignments and give lessons at the course. The subjects are amongst others: theory of musical development in the age group of 0 to 4; theory of general development in the age group of 0 to 4; personal musical skills; musical skills with young children; song repertoire; evaluation and observations skills; course and lesson construction. The students are assessed by means of formulated final competences and learning goals by the Foundation Music on the Lap.

2.2 A PHILOSOPHY IN FLUX

Tarfuri, an early childhood music researcher, in reference to the music education methods of Dalcroze, Orff and Kodály, used the term method “in the sense of a systematic and organic set of procedures and repertoires oriented to the acquisition of specific musical skills” (Tarfuri, 2001, p. 84). MoL specifically does not have systematic

procedures. Because MoL considers itself to be an approach instead of a method, she expects its teachers to construct their own courses and lessons and add new theory and new musical activities as they see fit. A result is that no MoL lesson is the same and there is specifically room for personal contributions from the teachers themselves. Campbell and Scott-Kassner (2010) expressed this way of working in the following manner:

“With an understanding of the functions and meanings of music, along with sensitivity to children’s musical capacities and modes of musical experiences, teachers develop their own personal method for stimulating the musical development of their students” (Campbell & Scott-Kassner, 2010, p. 13).

They also say that:

“There are many effective instructional techniques, [but] probably no certain method exists for teaching music to children, anymore than there is just one way to climb a mountain or fall in love. The most effective method through which children become musically educated is to be found within the teacher’s own training and interests” (Campbell & Scott-Kassner, 2010, p. 13).

In the MoL teacher-training course the prospective teachers are equipped with knowledge and skills, the ingredients or guidelines, to construct a well-defined process to guide the musical learning process in a lesson and a course.

Taking the foregoing into consideration a comparison with other methods or approaches is therefore difficult; especially because MoL has not put its philosophical and theoretical groundings on paper. Also, in the Netherlands a national curriculum for music education does not exist. Moreover, MoL is an approach specifically created for children in the age group of 4 months to 4 years. In this respect she has always taken a bottom-up approach and is not a derivative of music education practices with older children.

MoL begins with the notion that music for young children is an integrative mind-body experience and that young children possess the capabilities for making music, listening to music and singing. Annie Langelaar wrote the following:

“Every child is born with a large number of very different talents, amongst which music. These talents need to be given the change to develop otherwise they will shrivel” (Langelaar, 1977, p. 14).

The quest is therefore to develop these inherent capabilities according to the children's own level of possibilities and to offer activities and songs that can be used in the home situation to continue the musical learning process. The music educational process is not considered to be an intervention to enhance musical learning but is an offering of possibilities to participate in freely: in MoL children are not forced to participate.

By creating a broad environmental framework, in which the musical elements can land, the children can acquire musical experiences. Hence, MoL is process driven instead of product driven. Through constant evaluation during and after a lesson, MoL teachers adapt their way of working in a course to the musical responses and musical needs of the children. The underlying idea is that out of motivation comes participation and participation creates musical experiences. Therefore the musical activities offered to the children need to be tailored to their possibilities and capabilities. Knowledge about the general development of young children and connecting with their personal capabilities is important. Participation should come from motivation: the offering of music wrapped in an attractive activity and constructed in accordance with the developmental level of the children. This way the children are invited to join in. Multiple repetitions of the songs during a lesson and over a course provide the children the opportunity to step in to an activity when they want to. Consequently MoL does not only take musical development into consideration but also the sensory, emotional, motor, social, language and cognitive development. To offer different movement possibilities a lesson alternates between activities that are performed on the floor and activities that are performed in the space of the classroom. A regular lesson should contain different kinds of activities in order to focus on the different parts of the developmental areas and contextual aims. For example activities are being offered which can be directly transported to the home situation like a tooth brushing song.

The structure of the musical learning process is based on a group process more or less derived from the family structure. Parents (or carers) are an important part of the MoL-lesson. The musical interaction between parent and child is stimulated as well as taking part in group processes. The Teacher should function as a mediator of musical

information and guide the mostly implicit learning processes. Therefore observation and evaluation, understanding what is happening, are among the most important skills a MoL-teacher should have.

A future aim of MoL could be to connect with for example the theories of Russian psychologist Vygotsky (1978) – for example the use of tools and symbols and the concept of mediation – and Wenger who thinks “human knowing is fundamentally a social act (Wenger, 2010). Wenger uses the concept of communities of practice: “Communities of practice are formed by people who engage in a process of collective learning in a shared domain of human endeavors” (Wenger, 2010). MoL might adopt elements or underpin its approach by these theories and extend its philosophy.

2.3 SONGS IN MOL

Songs in MoL are the centre of the activities and are carefully chosen for their musical learning merits as well as action and variation possibilities. Most songs used in MoL lessons are written especially and selected for MoL by its teachers, which is a reflection of the workings of the community of practitioners as mentioned above.

In many cases a song will be repeated with a variation of the lyrics. Variations in the movements and objects or use of objects are also possible. MoL has explicit musical criteria for the choice of songs, which are described in the course material of the teacher-training course (Gestel et al., 2010). MoL makes a distinction between songs sung by the children and songs sung for the children. The latter are more demanding songs which are sung by the adults present in the lesson but they do contain movement for the children to engage in the activity. The following criteria pertain to songs that can be sung by the children themselves.

- a song should be short, only one verse
- pitch range D1 –B1 with a few extending steps up and downwards
- syllabic not melismatic
- logical musical phrasing
- repetition of sentences or part of sentences
- the subject of a song should connect with the daily life experiences of young children

Results from Mang's research (2005) with 2- and 3-year-olds supports why MoL only uses one verse in songs for children aged 4 months to 4 years old. Important is that Mang is referring to songs with more than one verse and songs which have verses and choruses which have been used in her investigation.

"The words of learned songs appeared to be a challenge for children aged 3 - 4. They sometimes expressed frustration about forgotten words, which made it difficult for them to complete a song. Even when a child could successfully recall a melody but not the words, she would frequently give up singing the song" (Mang, 2005).

The task of this chapter was to describe the educational setting where the investigation took place. The following chapter will provide an overview of the literature in relation to the study.

3 LITERATURE REVIEW

3.1.INTRODUCTION

It has been demonstrated by research (Gorali-Turel, 1999; Moog, 1976; Chen-Hafteck, 2004) and educational practice (Greenberg, 1979; Young & Glover, 1998) that movement is a natural response of young children to music and that movement responses to music occur before singing responses (Hicks, 1993; Moog, 1976). Because the movement responses of young children have been considered in the past to be a form of unintentional action (Prevel, 1973), music education practice suffers from adequate adult guidance. A core argument of this thesis is that movement responses need to be valued as an important element in the musical learning process; an active mental engagement of the children on which to build music pedagogical practices supportive of the musical learning process. This chapter will show that acknowledging the movement responses of young children as an important way of expressing their inner musical experiences (Greenberg, 1979; Cohen, 1994) and as a way to engage in the musical learning process, are notions that have emerged in the research literature. Without this response, visible overt movement, early childhood music educators – if they only rely on vocal responses in a music education setting – would not know whether young children actually are engaging with the music and how they are engaging. This view is also expressed in (not music related) general movement development by Macintyre and McVitty, (2004). I have also found support for this from Greenberg, an early childhood music educator and researcher who stated that

“the young child is actively engaged in responding to music, and it is through his own body that he shows how he feels and what he understands about music” (Greenberg, 1979, p. 128).

Without movement young children in an early childhood music education setting would be deprived of an important means of musical learning. Therefore it is my opinion that they might not be able to show their full musical potential. Hence the title of this study: Music is Movement.

I will argue that in order for young children to learn musically, to step into the musical learning process offered in a music educational context, movement is an important requirement. I would therefore make the proposition that to externalise their musical

representations young children need to make movements. Simultaneously these movement responses will stimulate musical representation. Furthermore I will argue that the bringing about of the movement responses of the children and their music representational qualities are subject to certain conditions that will be further explored in this study.

In this chapter I will support these arguments through findings drawn from a range of relevant literature and I will shape the framework of the study in cooperation with these findings. One challenge is the specific area of research: movement responses of children aged 18 to 36 months in a music education setting. Because to date there is only a very small body of research, results of research with older children shall also be discussed. Arguments shall be drawn from research in related fields to provide a well-rounded argument. Different truths can exist in many different forms and knowledge can be reached in many ways. Therefore results from specialised research carried out under rigorous methodological procedures as well as reports from practitioners will be reviewed. The integration of these bodies of information is considered valuable. All too often the reports of practitioners are thought less reliable because the findings do not derive from recognised methodological procedures. But experienced practitioners provide information born of pedagogical expertise and long-term experience of how young children respond and behave musically. The contribution of practitioners is also considered important here because this study hopes to make a contribution to the field of early childhood music education. In other words, the study has a commitment to the integration of research and practice.

3.2. TOWARDS EMBODIED MUSICAL REPRESENTATION

The term used here, embodiment, is not without debate in the current cognition literature, as is explained at great length by Gallagher (2005) and suffers from “explicit discussion of its meaning” (Anderson, 2003). Within the many possible connotations of embodiment, the enactive approach emerged as a possible fitting frame of reference for the present research project. The enactive approach, a term introduced by Varela, Thompson and Rosch (1991), sees cognition as

“grounded on the sense-making activity of autonomous agents – beings that actively generate and sustain themselves, and thereby enact or bring forth

their own domains of meaning and value” (Thompson & Stapleton, 2009).

The term embodiment in this view is “reflection in which body and mind have been brought together” (Varela, Thompson & Rosch, 1991) and cognition is a form of embodied action (Thompson, 2005). I will explore the possibility of connecting with elements of this approach in order to arrive at a possible description of the concept of embodiment within the subject of movement responses in early childhood music education in this study.

3.2.1 Introduction to the connection of music and movement

Most parents are delighted when their child starts to move when music is being played or sung. Often it is taken as an indication that their child must be musical. The challenge is to find an appropriate way to support the children in their musical learning. The movement responses from which parents conclude that their child must be musical have to be found of importance in the musical learning environment. It is my experience that parents, and most carers, have no problem linking music to movement and the other way around. The issue is that making purposeful movements to music by children below four implies an active mental engagement and the inseparability of the body and the mind. It requires also acknowledgment of the body as an important medium to understand, remember and express music. Looking at the inheritance of researchers in the past, Young, an early childhood music researcher with an extensive body of research, concludes:

“The prevailing view is that early childhood music-making represents a period of intense motor activity with little mindful engagement. It is revealed in the terms used by researchers to describe this phase. [...] they uncover the notion symptomatic of the mind body split that bodily activity is mindless, 'mechanical', thus meaningless and worthless” (Young, 1999).

The consequences of this view for a large part explain the minor attention to the analysis of movement in early childhood music education to generate well-underpinned movement models for practice (Young, 2003a). Movement was often considered a natural process in early childhood music education (Taylor, 1989; Booth, 1992) and most research has been about spontaneous movement responses (Miller-

Bryant, 1983; Sims, 1985; Goral-Turel, 1999; Beyer, 2004; Chen-Hafteck, 2004; Eerola, Luck & Toiviainen, 2006).

The ontology of the body-mind split – the Cartesian duality (Grotty, 1998) or Cartesian dualism (Walker, 2000) – and the predominantly Piagetian approach much researchers in the past and the near present have taken, caused researchers and educators to denote bodily movement of young children as meaningless and mechanical. Regarding the “disembodiment of experience in relation to knowledge in western culture” (Juntunen & Westerlund, 2001), music psychology and music cognition – vast research areas – have taken a disembodied approach (Clarke & Davidson, 1998). Thereby, according to Walker (2000), staying behind other fields. Starting from the 1990s, the situation is gradually improving to “a rather more realistically corporeal approach” (Clarke & Davidson, 1998, p. 74). Gradually indeed, because in 2000 Walker reports that there is still a “striking absence of the body” (Walker, 2000, p. 27) in music cognition.

Piaget’s theory of childhood cognitive development has been the major influence on education theory and practice since the 1960s (Garhart Mooney, 2000) and his contribution to theories of child development was extensive and important (Siegler & Alibali, 2005). Time revealed that he underestimated young children’s capabilities as a result of his methodological approach (Donaldson, 1978) and his emphasis on the deficiencies in logical reasoning of young children “representing static states not transformations” (Siegler & Alibali, 2005). The work of Piaget is very extensive and encompasses many aspects of child development. Similar to the works of Vygotsky, Piaget’s works have been extensively described and the resulting theories put to practice by researchers and practitioners in the field. In this respect the dissemination and interpretation of Piaget’s ideas is a joined action of the community of developmental psychologists. An overview here would not do justice to the extensiveness of his work. Margaret Donaldson a professor of developmental psychology was for some time connected to Piaget’s research institute in Geneva. In her book ‘Children’s Minds’ (1978) Donaldson acknowledges the importance of Piaget. Nevertheless, according to Donaldson “no theory in science is final” (1978). Her report of different research projects with children in the area of developmental psychology revealed a number of important methodological issues. The way a problem is

introduced in tasks has a significant effect on the outcome. Especially the use of language and interpretation of language as well as the significance of contextual clues. The development of new methods to investigate what young children are capable of have progressed over the years resulting in the discovery of more capabilities as presumed of young children (Gopnik, Meltzoff & Kuhl, 1999; Siegler & Alibali, 2005). Hence, the way research with young children is conducted and the ontological premises – the world as an embodied or disembodied experience – have shaped the vision on movement and music making of young children in the past. The challenge is to take a musical learning point of view – so a domain specific view – and to devise or construct appropriate or adequate methods of investigation that suit the early childhood music education context. Very important is that in this matter children aged 18 to 36 months do not yet have the language capabilities of older children and as a consequence “the only possibility is to try to make inferences from the way he [the child] behaves” (Donaldson, 1978). Interestingly this behaviour suggests movement, thereby making movement an important part not only of musical learning but also of the methodology itself.

Early childhood music education can profit from the new findings and consequently fulfil the vision Dalcroze had at the beginning of the last century: “I look forward to a system of musical education in which the body itself shall play the role of intermediary between sound and thought, becoming in time the direct medium of our feelings - aural sensations being reinforced by all those called into being by the multiple agents of vibration and resonance lying dormant in our bodies.” (Jaques-Dalcroze, 1921/2000, p. 4). Jaques-Dalcroze (1865-1950) was a Swiss composer and music educator who is well known for his eurhythmics – movement exercises with the whole body – to develop rhythmic consciousness in the child and to awaken the whole organism. In his view musical experience comes before musical theory. “The gift of musical rhythm is not a mere mental affair; it is physical in essence” (Jaques-Dalcroze, 1921/2000, p. 31). According to Dalcroze: “Rhythm is the basis of all art” (Jaques-Dalcroze, 1921/2000, p. 40) and “by accustoming the body to regular symmetrical movements under the control of eye and muscular senses, a feeling for musical rhythm may be produced” (Jaques-Dalcroze, 1921/2000, p. 32). Most likely regular at the time his work appears to start with children aged around 4 to 6 years (Jaques-Dalcroze, 1921/2000). Much

later practitioners in the field like Strevens (2005) and Burrell (2007) have used his philosophy and exercises to construct a way of working with younger children. Nevertheless his views are of relevance to present study (see 3.5).

3.2.2 A natural response

Generally when young children hear music they are not being asked to move, but do so spontaneously (Mueller, 2003). According to different authors movement is in fact the most natural response of young children to music. Greenberg (1979) and Young and Glover (1998) came to this view after extensive observation while working with preschoolers. Associate professor of music education Mueller (2003) stressed the “innate ability and the need to move to music” of young children. Gorali-Turel (1999) conducted a qualitative observational study among 93 children aged two to three-and-a-half years, based on observable spontaneous rhythmic movement to taped music. The objective was to uncover musical movement as an expression of the children’s musical cognitive processes. Movement in this study was unquestionably the – if not only – way to allow the children to respond to music. Moreover, movement responses to music occur even before singing responses (Hicks, 1993; Moog, 1976), making them the first visible response to and of music by young children.

Probably one of the earliest accounts of the integration of movement in the musical process with young children is by the music educator Donald Pond writing about the Pillsbury Nursery studies which were carried out between 1937 and 1942.

“I also observed the children’s primary impulse to set sounds in motion – not to invent rhythm patterns, which developed shortly thereafter, but to compel a sequence of sound impulses into wave-like movement by means of accentuation” (Pond, 1980, p. 40).

This primary impulse might be a natural state of affairs. From a neurological point of view, according to Oliver Sacks, “rhythm – in this special sense of combining movement and sound – appears spontaneously in human children, but not in any other primate” (Sacks, 2007, p. 263). Moog (1976) conducted a large and influential study into the musical experiences of children aged zero to six in which he presented the children with a large series of tests consisting of songs, and found that young

children already in their first year make spontaneous movements to music with a considerable increase of movements and moving in the second year.

To uncover the natural movements young children make spontaneously – unguided movements that emerge from the child itself without any model – movement responses to music of preschool children have been researched in the following three different settings: a home situation, a music educational setting and a nursery with musical instruments. Chen-Hafteck based her case study on the improvised movement responses of her own child to recorded music from age 0 to 3 in the home situation. The aim was to “investigate movement responses to music as an indicator of musicality” (Chen-Hafteck, 2004, p. 1) by providing “ample opportunities and encouragements to listen to music of different styles” (p. 6). Chen-Hafteck reported that her child was “actively interpreting the music and expressing her musical ideas” through a large repertoire of movements.

Where Chen-Hafteck had her daughter experience many different styles and pieces of music over a period of three years, Hicks presented the children in her investigation with one familiar and four unfamiliar songs over a period of a 10 week music course. Hicks (1993) based her findings on the observation of eight children aged 6 to 14 months in an educational setting. Videotape recordings were made and all responses were analysed by means of categorisation. Hicks’s intention was to look at preparatory audition*. Hicks concluded that even very young children make purposeful movement responses without encouragement to music (Hicks, 1993).

Young (2003) investigated the “spontaneous instrumental music-making of three- and four-year-olds in typical pre-school educational settings in London”. A total of 95 children over three nurseries were observed. Young children appeared to make purposeful movements also when playing on instruments: “movements and movement ideas were strung together in ever-lengthening portions”. Young has also investigated the way young children create musical patterns, and concluded that children make movements which have their “own internal logic” (Young, 1999 & 2003).

*Audiation a term coined by Gordon (2003) refers to the “assimilation and comprehension of delayed musical events in our minds”.

If natural movement responses are purposeful, it is possible to denote them as intentional, which implies an active involvement of the mind. Nevertheless the purposefulness of the movements is in the eye of the beholder: different teachers and researchers will see different things. Therefore it will be necessary to find elements in the music education environment that provide a basis upon which to denote movements as purposeful.

The natural movement repertoire has been investigated by Sims (1985), Metz (1986), Chen-Hafteck (2004) and Eerola, Luck and Toiviainen (2006). Interestingly all investigations, though by the use of different methods and resulting in slightly different descriptions, revealed more or less the same natural movement repertoire. In her study Sims (1985) asked a group of 3-, 4- and 5-year-olds year olds to improvise to a sequence of 3 short music pieces with three highly different tempi, for a total duration of 2 minutes and 21 seconds, with movement. Sims' study resulted in the following movement categories: locomotor, axial* and small motor movements. Axial movements can be compared to swinging movements, and locomotor movements to the galloping movements Metz (1989) saw in her study with 2-, 3 – and 4-year-old groups in a preschool setting. Chen-Hafteck (2004) saw her daughter jumping, swinging, walking, galloping, turning and falling, which is consistent with locomotor and axial movements. Eerola, Luck and Toiviainen (2006) made a distinction between hoppers, circlers and swayers in their research set in an experimental setting with children aged 2 – 4 years olds. A study that had as one of its aims to observe the spontaneous movements children would make to one known special children's song. Moog saw that children aged two

“went on making only three of the movements which were typical of children aged six months; these were rocking from side to side in a sitting position, bouncing up and down by moving the spine, and ‘conducting’ (Moog, 1976, p. 72).

Sims suggested that this “limited range of movements might be enhanced by modelling or training” (Sims, 1985) which is one of the purposes of early childhood music education promoted in this study.

*Axial movement are understood here as, “Non-locomotor movement, anchored to one spot, occurring above a stationary base involving the spine, around the axis of the body.
<http://www.choreovideo.com/page0/page12/page19/index.html>)

3.2.3 Movement categories

Considering that the literature mainly described the natural movement repertoire of the young child, the three movement categories described by Greenberg (1979) should be discussed here. These movement categories appeared within the setting of early childhood music education – movement guided by adults to express and understand the music – and provide an extended categorisation beyond natural movements. From a combined perspective as an early childhood music educator and researcher, Greenberg's book was based on extensive research in the field of early childhood music education. The book is directed at the music education of children aged 0 to 5. To make the book accessible for parents and teachers Greenberg only described the outcome of his research thereby omitting methodological and procedural approaches. His main concern was to provide a solid approach for practise. In this framework Greenberg defined three types of rhythmical movement activities: "formal or structured rhythmical movement, informal rhythmical movement and creative rhythmical movement" (p. 141). In formal or structured rhythmical movement the teacher gives the movement example physically and through verbal guidance or through the lyrics of the song. Although vaguely mentioned I suspect that Greenberg expects the child to imitate the example of the teacher as well as it can. Nevertheless he concluded his description with: "this type of movement will enhance the child's ability to move in a less structured, more creative way" (p. 143). Hereby suggesting that the structuring should come from the teacher. This becomes clearer in the description of informal rhythmical movement: "[this] allows the child to be creative within limits suggested by the music or the words. The directions for the movement are left somewhat open" (p. 143). The child in this case is free to interpret the movement within the activity. Examples are amongst others finger play-, action songs-, pretend to be songs- and singing games activities. The third category is basically moving to music without any directions or verbal guidance or with a verbal clue to an idea or a story that can be expressed through movement. Greenberg mentions that adult direction is necessary. In both formal and informal rhythmical movement activities Greenberg gives examples like "Can you walk like a big fat elephant?" and "Let's jump like a grasshopper or rabbit." In informal rhythmical movement activities the child should be encouraged to be more creative than in formal activities. However, as already mentioned above, also in formal activities the children's abilities to move

less structured and more creative will be enhanced according to Greenberg. Interestingly the informal activities are much more structured in a musical sense because here he gives a range of different activities and songs that can be presented to the children, which is not the case in formal activities. Furthermore Greenberg gives many examples of activities *in* rhythmic movement that clouds the formal and informal movement type distinction. It seems that Greenberg was mainly directing the focus on elements of meaning supporting fantasy. An attempt has been made to categorise movement behaviour within an educational context, however with rather confusing terminology and examples. This underlines the need for more investigation into the structuring and underpinning of movement categories in an educational environment to support the musical learning of young children.

3.2.4 Extending the movement music connection

Having established that young children are in possession of a purposeful natural movement repertoire, the next step is to look at the connection of music and movement in terms of what the movements can denote. How do music and movement relate to each other? According to Greenberg “merely moving the body is not enough to show the various qualities of the music” (1979, p. 129). In exploring this question I took an eclectic approach and I will therefore look at researchers and practitioners in the field of early childhood music education and research, as well as related fields.

Connecting music and movement apparently depends on the research approach taken as well as the underlying ideas about the capabilities of young children. In 1986 Piaget’s ideas resulted in a very influential piece of research by Swanwick and Tillman. Their investigation was based on musical compositions of children aged 3 to 9 years. Conclusions were nevertheless extended until the age of zero and the age of fifteen. Concerning the downward stretching: this is still a commonly seen phenomenon in early childhood practice and research. Findings or pedagogical approaches are interpreted for younger children on the basis of the work with older children: “a bottom down approach” (Young, 2009).

Swanwick and Tillman presented their research in the form of a spiral – literally a drawing – in which the processes of musical development through four fundamental transformations could be seen. Building on Piaget’s notions of assimilation and

accommodation as well as mastery and imitation, their investigation resulted in defining the first musical developmental stage, the age 0 to 4 as “Mastery – sensory response to sound materials – evolving into manipulative control” (Swanwick & Tillman, 1986, p. 317). An important concept in their reasoning is imitation. They described imitation as a Piagetian concept (p. 308):

“Imitation is also easy to identify in early childhood: it happens when a child submits to the world and attempts to resemble some aspect of it. [...] When we imitate something or someone, we give up some part of ourselves and take on characteristics of whatever is imitated. For Piaget, imitation represents a tendency towards ‘accommodation’. We accommodate to, change ourselves, pretend to be like; rather than impose our idiosyncratic view upon the world” (Swanwick & Tillman, 1986, p. 308).

Important in this context is that for Swanwick and Tillman the imitation period in musical development does not come sooner than the age of 4 and lasts until the age of 9. Also “submitting to the world” sounds as giving up oneself and letting new information replace old (stored) information. Then there would be solely an outward learning process where past and personal representations would not have much meaning. Swanwick and Tillman also based their work on Moog’s (1976) findings and interpretations. They translated Moog’s identification of his findings of matching movements to rhythm between the ages of 18 months and 2 years as: “surely the first presage of response to expressive character in music” (Swanwick & Tillman, 1986, p. 310). However, expressive character according to Swanwick and Tillman only presents itself within the imitation phase starting at the age of 4: “musical expression is a form of imitation” (Swanwick & Tillman, 1986, p. 336). Moreover, expressive character is linked to the great works of musical endeavour like a Bach fugue, situating the bias of their research towards adult interpretations of music. Metz, already in 1989, reports about the predominant adult criteria in early childhood music research. Furthermore they tell us that in the Mastery phase: “Compositions [...] are frequently determined by the actual physical structure of the instruments themselves” (Swanwick & Tillman, 1986 p. 332). Again, an external element where intention, an internal motivation, plays no role. Nevertheless, the physical structure of instruments can very well shape an important referential framework of musical intentions as Young has described (Young, 2003a).

The purpose of the qualitative study by Metz (1989) was

“to explore preschool children’s movement responses to music in a natural learning setting and, according to naturalistic procedures, to attempt to generate substantive theories regarding the nature of this complex social situation” (Metz, 1986 & 1989. The 1989 article is a shorter description of her thesis.)

The target groups in her study were 2-, 3-, and 4-year-olds in three groups in a preschool setting. Excerpts of music were played in the specially set up music area to which the children could respond. Although her research was set in a general educational context: “a natural learning situation” – a preschool setting, some conclusions are of interest to early childhood music education and do reflect on the present study’s procedures and outcomes. Set in a real world situation, by providing for a special “researcher-designed” environment, the natural state of the preschool setting was altered. Nevertheless the children had ample opportunity to respond freely and spontaneously. The responses of the children in her study might be described as musical explorations on different levels. A study set within grounded theory methodology, Metz’s conclusions should be seen in the context of the social situation of preschool education. Children were asked to describe their musical movement responses. Metz concluded that: “modelling alone did not seem to increase music-related responses unless it was combined with describing and suggesting” (Metz, 1989). This notion of modelling was extended by Metz through “tactile modelling”.

“In interactions with 2-year-olds, the researcher occasionally was able to use *tactile modelling* [italics Metz]: for example, there were several opportunities to take the hands of a child and swing them back and forth to the music” (Metz, 1989, p. 52).

In relation to the advancement of early childhood music education Metz also concluded that instructional strategies could reinforce “awareness of music related movement responses in preschool children”.

There where Young and Glover see the music and movement connection as being inherent, linking movement to musical concepts created challenges in the works of Shio Baba, Greata, and Mang on a cognitive level, as discussions of their work in the

following sections will show. Connecting music and movement also depends on the acknowledgment of movement responses as a way to engage with the music. Movements have to be recognised as representations of musical characteristics: “aural counterparts” (Young, 1996).

In her thesis Shiobaba concluded that

“the danger is that the children will learn to recognize the movements they have been taught when they hear a piece of music, but not to listen sensitively and interpret what they hear in movements” (Shiobaba, 1993).

Greata, an early childhood music educator and researcher considers moving to music and listening to music while moving as two distinctive activities (Greata, 2006, p. 102). Both authors use the example of not linking walking to a musical beat, but to the movements themselves. These movements then are interpreted, or the movements interpret the music, but the children are not actually listening to the music. This made Shiobaba conclude that:

“The children who see to benefit most from movement to music activity in school are younger primary school children and 7- to 8-year-olds were chosen as the most suitable subjects for this experiment”.

The question is if it is possible to move to music without actually listening to at least one aspect of the music – for example the beat – and if it is a problem that the movements interpret the music. Listening to music, understanding the music might be enhanced by making movements that support the meaning of the music. What Shiobaba names a danger is conceived in the present study as an important element, a necessity for younger children to interpret and understand the music they perceive.

An interesting viewpoint in this matter is advanced by Mang (2005). Her research concerned the aim of detecting the underlining referent of children’s semi-spontaneous song singing at home, to investigate the origins of self initiated songs by children aged 2 - 3. “Some children in the study recalled a song through body movements or imaginative play rather than singing it aloud” (Mang, 2005). Her comment on the acting out of all the body movements of a song in the correct order without singing by a participant was: “Claire was mentally rehearsing the song from beginning to the end” (Mang, 2005). Mang also saw that Claire’s movements were

“acted out in accordance with the appropriate melodic rhythm of the words”. Denoting that some sort of representation was going on in relation to the rhythm of the song and its words. “She [Claire] expressed the song without actually singing it aloud”. So far I consider this is a good example of movement representation of a song, especially because Mang also concluded that although children might forget words of a song, they do remember the overall musical structure of the song. However, Mang also concluded that: “this is a complex example of dissociation”. Dissociation in the psychological sense means generally

“to characterize the process (or its result) whereby a coordinated set of activities, thoughts, attitudes or emotions becomes separated from the rest of the person’s personality and functions independently” (Reber, 1995).

This would mean that Claire’s movements had no relation at all to the song she was mentally rehearsing. I consider this a contradiction. Mentally rehearsing a song implies the existence of musical elements in some form in memory, be it rhythm, words, melody or the overall feeling. Because Mang also saw that Claire performed the movements “in accordance with the appropriate melodic rhythm of the words”, I think that Claire was overtly associating the movements with at least one important musical element: rhythm. Therefore, instead of dissociation, Mang has given a perfect example of the representation of musical elements of a song through movement.

The publication by Young and Glover (1998) was intended to build music pedagogy for early years practitioners who work with children aged 3 to 8. Young and Glover described the relation between music and movement as being inseparable.

“We physically sense the movement in music and ‘hear’ the music silently by movement. The qualities of timing, rhythmic patterning, phrasing and intensity are shared by both [music and movement]. So it makes sense to work with children in music and movement together both in musical terms and in terms of children's learning” (Young & Glover, 1998, p. 36).

This is reinforced by Walker:

“Musical production is not solely an internal construction of tonal-rhythmic patterns, it is the external process of thought and movement in time and space through which one simultaneously creates and perceives both sonic and movement patterns.” (Walker, 2000, p. 27).

Movement to music, according to Young & Glover, can be used as a medium to understand music:

“Movement not only has the learning advantages of centring musical experience in the child’s own physical self, it is also a ‘time art’, depending upon linear sequencing of events. As a time-space metaphor of the music it helps to fix what happens over time in the mind” (Young & Glover, 1998, p. 37).

The construction of the movement responses then takes place in a time frame – music is a time-art – and are subject to simultaneous internal and external processes in which meaning can play a role.

A movement referential framework then needs to be constructed to capture the musical intentions of the children and to extend the natural movement repertoire to accommodate the musical learning process. In order to do this the concept of musical representation will be explored. To benefit from movement representation in music education settings there should be some sort of predisposition to be able to understand and absorb the information that is offered and for the movements to be embedded in.

3.2.5 Early musical predispositions

This section will look into the musical predispositions children need, to be able to function in the musical learning process in the music education environment. Because music is an art form in which time (timing) is crucial, young children also need a form of temporal representation in order to be able to embed their movement responses in the musical timeframe.

3.2.5.1 Environment

In order to understand the music of one’s culture, implicit knowledge is needed (Hannon & Trehub, 2005), which is brought about by enculturation: “the culturally specific interaction with a musical environment” (Sloboda, 1985). Hannon and Trehub’s study concerned the influence of enculturation on the perception of complex rhythms. Their conclusion:

“Our findings imply that adult biases in temporal pattern processing [rhythm] results from category-learning processes that are part of musical enculturation, not from intrinsic perceptual biases for simple temporal structures”.

The music psychologist Sloboda makes a distinction between enculturation and training. Training is a specific experience, which is not shared by all members of a culture and involves self-conscious effort where enculturation is also typified by a lack of self-conscious effort (Sloboda, 1985). The cultural surroundings in which children grow up, has an important influence on their musical development and consequently should shape the music educational context which can build on these experiences. Musical learning then in this conception is context bound, which underlines the need for context based research and education.

3.2.5.2 Motor capabilities

A certain level of physical development is necessary to be able to perform musical movements as they are offered in the educational environment for children aged 18 to 36 months to show their musical ideas and knowledge in movement.

“The ability to act on the world affects all other aspects of development, and each new accomplishment brings with it an increasing degree of independence” (Slater & Lewis, 2002, p. 61).

Where the developmental psychologists Slater and Lewis leave the nurture-nature debate unanswered and let their readers decide for themselves, the neurologist Eliot (1999) advocates the combination of maturation and experience/training. She stated that:

“while it [training] may not effect the timing of motor milestones, the act of moving itself, especially when encouraged by an enthusiastic adult, does contribute to a child’s ultimate success at physical activities” (Eliot, 1999, p. 277). “Once the basic neural pathways are in place, their final function depends on practice, on being selected and stabilized by actual motor activity. Only with repeated exercise can these complex motor circuits select the precisely timed patterns of activity that permit smooth, efficient movement” (Eliot, 1999, p. 288).

Movement to music in this view cannot accelerate motor progress – which is also not the aim of musical learning – but it can improve the quality of the movements when offered in a context guided by adults. Repeated practice is what the music education environment should offer and many early childhood music practitioners do underline and promote this (Andress, 1980; Albers & Rikhof, 1998; Young, 2003a; Greata, 2006).

3.2.5.3 Temporal

In a laboratory-based study concerning rhythmical processing Hannon and Trehub conducted three experiments with 50 college students, 17 adult immigrants and 64 infants (M=6.9 months). Their aim was to test intrinsic perceptual biases for simple duration ratios, which they thought would constrain the organisation of rhythmic patterns in music. Hannon and Trehub found that:

“infants can detect subtle changes in duration and tempo and can discriminate musical excerpts on the basis of rhythmic changes”, and “7-month-old infants can categorize unique rhythms on the basis of implied metrical structure” (Hannon & Trehub, 2005).

Pouthas (1996) explored a range of experimental studies with infants that related to the early development of temporal competence, departing from inherently biological and motor rhythms. According to Pouthas “musical competence is related to the development of temporal competence: perception of duration and rhythms, as well as temporal regulation of actions” (Pouthas, 1996). Results according to Pouthas indicated that very young children are able to regulate their internal rhythms to outside stimuli and they can structure auditory events. Also they can associate movement to an auditory sequence with the same rhythm.

In conclusion: young children are in possession of appropriate musical capabilities needed to embed their movement responses in a musical timeframe. The research environment chosen in the present study corresponds to an appropriate music educational environment where repeated musical practice is offered.

In response to the reviewed literature certain elements can be drawn out that appear to be of importance, and influence the representational process of movement

responses among young children. From the general literature for movement and learning, Laszlo and Bairstow (1985) report that all overt behaviour is expressed through movement. Consequently Macintyre and McVitty pose the question: “How are we to know if children have learned if they don’t move”(Macintyre & McVitty, 2004, p. ix)? Movement then in this view can also be regarded as a requirement for the observation of musical learning. The question is then: how do we encourage children to move purposefully, considering that in the educational environment the children will go beyond their natural movement repertoire?

3.3 REPRESENTATION

In order to arrive at an understanding of how young children internalise and externalise their musical representations in the music educational environment this section will look into representation in relation to musical representation and in particular in relation to movement. The aim is to come to a workable, though provisional, construction of musical movement representation within the context of this study.

3.3.1 Towards a provisional understanding

From a review of the literature, representation appears to be a multi-interpretable concept. The differences in approach towards the concept “conveys a range of ways in which knowledge can be held” (Martinez, 1999) and are depending on the epistemological stance and field of research of the investigator (Sigel, 1999).

My point of departure in this matter is that musical knowledge is acquired in interaction with the musical environment. The children will actively construct the elements offered in the music educational process into a personal representation of the musical information. Through musical experiences (the activities in the MoL environment) and musical interaction (children and the teacher in the MoL environment), the children will be able to explore what Walker names a “physical embodied frame of reference for knowledge and meaning” (Walker, 2000, p. 27).

I already pointed out above (see 2.3.1) that musical learning is context bound. It is shaped by young children’s cultural surroundings. Therefore young children most likely

need to acquire what DeLoache and Smith name “a set of culturally important symbols” (DeLoache & Smith, 1999, p. 61). This notion is relevant on a smaller scale: the musical symbols used in the context of Dutch early childhood music education. From a music education perspective, according to Flohr (2005), there is a task here for teachers as well as the underpinning of meaningful experiences embedded in a cultural context.

“Knowledge of the social and cultural context in which children live helps ensure that musical experiences are meaningful, relevant, and respectful for the children and their families” (Flohr, 2005, p. 3).

Through representation the children can “explore, solve problems and think about and create new meanings” (Duffy, 1998). According to the neurologist Damasio: “When we see hear feel or taste, body and mind interact with the environment” (1995). It is then possible to consider the action of representation as a way to obtain musical knowledge.

In response to Flohr, Duffy and Damasio, I consider movement responses a physically and mentally active response, in which the mind and the body work as an integrated system to generate meaningful representations within a specific cultural setting, in order to obtain musical knowledge. This I think can be connected to the embodied vision as expressed by Varela, Thompson and Rosch (1991) (see 3.2), and might be tentatively summarised as reflective embodied musical action.

Musical movement responses can also be considered a skill. There is a process of learning over time the movements that are offered in the music educational environment. These movements will go beyond the natural movement repertoire of young children as was found by Sims (1985), Metz (1986), Chen-Hafteck (2004) and Eerola, Luck and Toivianen (2006) (see 3.2.2).

According to Byrnes, a researcher in mental development, knowing a skill is the same as having created a representation of that skill:

“The primary evidence that the person has specific knowledge is that the individual can evoke the relevant representation when cued in some way” (Byrnes, 1999, p. 275).

In the present context, I interpret evoking in a literal sense: by overt movement. Another part of Byrnes statement, “when cued in some way”, reveals the need of an educational process in which the conditions are created for the children to be able to respond to music by movement.

3.3.2 Musical Representation

The multiple definitions of musical representation, coming from the field of music psychology, illustrating the diversity and complexity of the subject, are often placed under the header of musical imagery and are variations on the theme: “images of musical sound in our mind” (Godøy & Jørgensen, 2001). For example Leman (2001) defines musical imagery as “the capacity for mental representation of musical sound in the absence of a direct audible and corresponding sound source”, and as most definitions do it incorporates the invisible nature of musical representation. It is not possible to look into the children’s heads to see what is going on in there and if and how they represent the offered musical activities. I therefore take Byrnes statement, as a departing point that a musical representation can be evoked through a cue. The visible outcome – movement – can be seen as evidence of a form of musical representation present in mind and body. In this quest I will draw from perspectives in music education and music psychology. Hereby implying that representation not only has image characteristics – I translate this freely as some sort of picture in the mind – but also kinaesthetic (bodily sensations) characteristics. I base this on the premise that the making of music is not possible without some sort of bodily action. Although the internal hearing of music in the mind has no overt aspects, making music, creating external audible sound is by definition an action that is visible. Turning Byrnes’ statement around, it is possible to consider the actual making of movements, movement responses, as a cue for the creation of a bodily, kinaesthetic representation.

According to Repp (1993), already in 1938 Alexander Truslit tells us that: “motion can generate tones, so tones can elicit a sensation of motion in the listener” (Repp, 1993). Here I connect with Kemp (1990) who stated that musical development could be promoted through whole body experience, and this should start already in early childhood in order to develop an internalised vision of music. This internalised vision

then has image and kinaesthetic characteristics, which Truslit names an “inner motion of music” (Repp, 1993). This inner motion, which is described by Sloboda as “dynamic feelings” (Sloboda, 1998) can be regarded as a representation, where body movement functions as “a physical metaphor in the process of musical understanding from the concrete to the abstract, or conceptual”, according to Juntunen and Hyvonen (2004). Clarke, in a small overview of the relation between motion and music proposes from a more musicological perspective that: “the sense of motion when listening to music is an inevitable consequence of the event-detecting nature of the auditory system” (Clarke, 2001). He argues that: “the relationship between music and motion should be regarded as a truly perceptual relationship”. Inner motion in this view is the result of a physical aspect – sound which activates the balance organ in the ears and consequently gives a feeling of motion – and the movement specifying properties of sounds itself – literal movement of sound in space in relation to the perceiver or the other way around. For movement to function as a physical metaphor of music, it is possible to distinguish sounds in general from musical sounds. It might be then, that movement can function as a physical metaphor when it has meaning. I will discuss the function of movement responses as musical symbols later.

The following research is not situated within the domain of early childhood music and therefore a certain translation is needed. Most likely for young children to hear something in the music depends on what the music education environment in its cultural context, brings them to hear in the music: the creation of meaning in order to perceive motion in music and music in motion. This is consistent with what Juntunen and Hyvonen (2004) denote as from the concrete to the abstract. Clarke’s notion, that music and motion have a perceptual relationship, finds support by other scholars who raised the possibility of regarding musical representation as a simultaneous process of two modes. This is similar to the simultaneous internal construction of tonal-rhythmic patterns and external construction of movement in time and space of Walker (2000) mentioned earlier.

Reybrouck (2001) speaks of “co-perception” in this matter. This represents a contemporary notion of the interaction between perception, representation and action and is based on the fact that “all perception has image characteristics [...] images and percepts share the same format” (Reybrouck, 2001), which according to

Kalakoski (2001) share some common underlying mechanisms. Noé (2004) from a philosophical standpoint of view argues that a divorce between perception and action is very unlikely. He argues that perception is intrinsically active. Important here is that in this view an active component is added from the part of the perceiver. This component is regarded here as the musical information in memory. According to Martinez (1999) representations in general include old elements (memory) and new elements that present themselves at the same time in a certain situation.

Janata raised the issue of incoming musical data as a second way in which musical representation can take place: "formation of musical images depends on an interaction of memory-dependent processes (expectancies) with representations of incoming auditory input" (Janata, 2001). Musical representation then can be considered a coupling of action and perception, "a combined approach of both sensory processing and imaginative reconstruction of the mind" (Reybrouck, 2001). This can be considered a two way process: the interaction of actual incoming information and information stored in memory.

At this point I propose that in this co-perceptive process the act of meaning-giving is essential to construct a musical representation. Because musical representation in the context of this study is an active process involving perception and action – literal movement action combined with an internal representation on a mental and bodily level – through the act of meaning-giving it becomes a personal constructional process. According to Taylor (1989), who carried out a substantial study of movement and musical memory in a music education context with children aged 11 and 12 years, memory for music is the ultimate goal of music education, in which representation is essential. If this is so, then it raises the question as to how musical information should be offered in the music education environment for it to be most effectively memorised. There are some clues as to how this might be achieved in a reading of earlier studies. Metz found that "children's movements became more dynamic when the researcher described how their bodies were moving" (Metz, 1989, p. 56). The teacher here verbally performed the act of meaning-giving. This might be linked to the suggestion of Martinez (1999) that long-term memory is organised by meaning. Metz's verbal descriptions assisted the children in generating meaningful movement. Metz's

study was carried out with children aged 2-, 3- and 4-year-olds, older than the cohort of children for this study who would be less verbally competent. Therefore Metz's strategy, while informative to this study, cannot be directly adopted.

Following from the presented arguments, it is possible to describe the representational mode as "enactive representation" (Bruner, 1981).

"Knowing something through doing it, representing events by the actions they require. What is crucial is that the representation is expressed in the medium of action with many features constrained by the nature of the action, for example, its sequential and irreversible nature" (Bruner, 1981, p. 152).

Music is by nature sequential and irreversible, unfolding in a fixed time frame. Reybrouck (2001) uses the term enactive listening, "in the sense that 'enactive listening' takes the human body and its actions as a reference". According to Reybrouck (2001) "it involves a kind of motor imagery", because music can be conceived as movement through time. Metz also adopted the term enactive representation by Bruner (1981) and in her study she saw that: "as an enactive representation, body technique was important in achieving music-related movement responses" (Metz, 1989, p. 56). According to Flohr: "Children respond better to doing than to abstract language or pictorial representation" (Flohr, 2005, p. 98). To learn music and to externalise their musical representations young children need to make movements. So from this follows that making movement responses to a musical stimulus – the stimulus being the musical activity, song and movement, in an educational setting – incorporates the stimulation of musical representation. When actual musical stimuli are incorporated in the representational process, it is possible to consider movement an actual visible part of this process, which at the same time might be an indication of a musical learning process.

Considering that in their musical representations in the MoL environment the children will need to interact with this environment, musical representation involves more than hearing it only in the head. Movement refers in the present context to an abstract and time-bound entity: music. To make the abstract concrete a meaningful symbolic relationship is needed. Meaning can perhaps also be the onset of a symbolic relationship, where it is possible to see the movement as the symbol and its referent

as the musical information. This discussion leads to a further question: how should we understand the symbolic value of movements?

3.3.3 Movements as symbols

“When we represent we make an object or symbol stand for something else, for example, we may use our imagination to pretend that the toy doll is a real baby or draw a picture that symbolizes our experience of going to the zoo. Spoken language is also a form of symbolic representation, words standing for something in the real world” (Duffy, 1998).

The cognitive psychologist DeLoache (2000) uses the concept of symbol in her study of young children’s dual representation, in relation to artefacts: “entities that have been created or drafted to serve a representational function” (DeLoache, 2000, p. 329). Dual representation in the sense expressed by DeLoache is the double act of representing mentally the symbol as well as its relation to its referent. The online Oxford dictionary (<http://www.askoxford.com/>) describes an artefact as “a functional or decorative man-made object”. Movements cannot be considered man-made objects in the literal sense. However, they can be considered man-made bodily objects that are defined by their function in action.

Besides the fact that movements are no artefacts in the literal sense of the concept, the intended referent of the symbols – movements – is abstract in itself: music. Music is a time related art, which is intangible and has no direct physical reference. However we may perhaps say that music does have physical referents in the sense as expressed by Clarke (2001), Woody (2002) and Truslit (Repp, 1993) where movements are regarded to be symbolic actions: the movements embody the internal sensation of external sound production. For example singing, playing or listening to a scale (being played) means understanding the properties of the scale and what it is ‘doing’. It goes up or down or both, it has virtual direction and this direction can be felt (Clarke, 2001). This has also been observed in teaching music students:

“Motional aspects of music, seen in imagery using terms such as ‘flowing’ or ‘bouncy’, are considered crucial in the connection between performed music and felt emotion” (Woody, 2002).

In this sense the degree of physical similarity is a kinaesthetic one.

The experience of moving through space and time creates bodily feelings, which can be associated with sound representations in terms of pitch, duration, intensity and timbre (Kemp, 1990). Implicit notions of close, far, up and down, high and low (Grunwald, 1989), can organise the “incoming pitch-time phenomena” (Bamberger, 1991), promoting the recall of musical aspects through gesture “particularly in imaginative activities” (Kemp, 1990). DeLoache’s “degree of physical similarity” might be considered an arbitrary one. According to Young:

“So, for example, children reach high or low in order to assist their understanding of pitch variations, they take long and short step patterns to represent notational durations. Music is invisible and cross-modal imagery is often used metaphorically as an aid to grasping; in this respect movement has a function. But we need to be clear that the structuring of movement via conceptual ideas creates an arbitrary connection between movement and music, not based on existing intrinsic properties constant across both domains” (Young, 1996, p. 3).

Movement then can only receive its purposeful link with its intended musical referent within a specific context with inherent cultural musical symbols. The physical similarity is then most likely constructed through the act of meaning-giving and subject to certain conditions. Meaning-giving then can be considered an intermediary to connect the symbol and its referent, in order to let the movements function as symbolic enactive representations in the musical learning process.

As it is possible now to consider movement responses enactive symbols of music, the question is how the movements become purposeful actions in the musical learning environment. In response to DeLoache: which kind of information do the children need then to understand the musical symbols offered to them and how does the educational environment provide the children with ample experience with musical symbols?

3.3.4 Temporal representation

Enactive representation, movements as musical action symbols, underlines the temporal aspects inherent to music. The passing of a certain amount of time is the time frame in which music unfolds: musical time. Musical time occurs within certain

fixed boundaries. In between these boundaries the movement responses of the children take place. Through movement young children can experience the musical time frame as an actuality (Young, 1992), through the “dynamic change in spatial position occurring over time” (Moore & Yamamoto, 1988). Moore and Yamamoto (1988) created a learning programme about the observation of human life through the medium and analysis of movement. In their view “movements can be seen as linear sequences with beginnings and endings, or as rhythms that repeat periodically”. In order to construct or co-create (when in a group) the timeframe, regular actions – rhythms that repeat periodically – are needed, because the timeframe is created through a temporal regular sequence of actions. “Rhythm in music is the core element that binds simultaneity and sequentially of sound patterns into structural organizational forms” (Thaut, 2005). These regular actions are in the present case the movement responses. Therefore I will discuss research about temporal aspects of synchronising movement to a beat because representation of musical movement also implies the regulation of action in time. In this matter I propose that “keeping a steady beat” (Flohr, 2005) or “synchronizing a motor action to an external rhythm” (Pouthas, 1996) is an important aspect of musical movement representation because it provides the underlying pulse that constructs the musical timeframe in which the children place their movements responses.

Because of the relatively few studies that have been undertaken with the age group 18 to 36 months (Flohr, 2005), research with older children than the group in the present study will also be discussed here. Although rhythmical possibilities are seen as inherent to young children, synchronising a movement response is more often than not seen as a skill beyond the capabilities of children under the age of 3. In his recent overview of music educational practices, Flohr (2005) concludes:

“In light of the research, a developmentally inappropriate practice would be to expect three- and four-year-olds to march or march while clapping because most of them will not be able to do so” (Flohr, 2005, p. 103).

Flohr does acknowledge the fact that young children do like these kinds of activities but he advises not to expect a synchronisation with a beat before the age of 6 or 7 (Flohr, 2005). “It is easier for young children to keep a steady beat using certain movements (e.g., chanting or tapping) than other movements (e.g. marching)” (Flohr,

2005, p. 103). According to Pouthas (1996) even very young children can learn to regulate rhythmic responses to sound stimuli. Most likely certain conditions have to be in place in order to guide this process.

In a much quoted study concerning the multiple individual testing of children over several years in the age group of 0 to 6 years, Moog (1976) found that

“until the age of about eighteen months, unless a child has exceptionally musical talent, one cannot take it for granted that the movements which he makes will correspond with the rhythm of the music played to him, even for a short stretch of time. [...] Sometime between the ages of eighteen months and two years about 10 percent of children begin, for short stretches of time, to match their movements to the rhythm of the music” (Moog, 1976, p. 74).

The reason for this according to Moog lies in “the child’s inability to isolate the time element in the sounds he hears”. Moog makes a difference between the passage of time and “the movements of dancing”. These according to him are “totally dissimilar elements”. The question is: how can it be possible to isolate sounds from the time element as sounds – musical sounds – only exist within the passage of a certain amount of time. To detach musical sounds from its temporal basis would merely result in a description of the basic characteristics of musical sound. Also Moog describes the movements as movements of dancing, indicating that Moog’s research most likely evolved around what I have described above as the natural movement repertoire. I do not consider movement the same as dancing. Dancing is stylised movement and therefore functions differently from musical movement that supports the musical learning process. Nevertheless Moog saw that from the age of 18 months children are able to a certain extent to synchronise their movements to the rhythm of the music.

Miller-Bryant (1983), Sims (1985) and Metz (1986) concluded from their investigations that the tempo of the music played a prominent role. Metz (1986) found that it was more difficult to synchronise with the beat at a slow tempo than at a fast tempo. Miller-Bryant saw that

“fast tempi are more conducive to rhythmic responses than slower tempi” and the children were “more physically and musically active to music with fast tempi” (Miller-Bryant, 1983, p. 82).

The purpose of Miller-Bryant's research was "to describe musical behaviours which young children demonstrate naturally". Children aged 3 through 5 years were selected as subjects. She also saw that "subjects, marched, hopped, jumped, skipped, and ran when the particular action was dictated by words of a song" (p. 98). This is an indication of onset of a movement action by meaning. In this case the meaning is provided by the words of a song and from it followed a movement action. Another interesting point is the following:

"When marching, subjects skipped or changed feet to "get in time" to the music; 5-year-olds performed this task more easily than did 3- or 4-year-olds" (p. 99).

Hence, the children had clearly a feeling of the beat and were actively synchronising their movement responses to this beat. Set in a research oriented childcare centre, the 22 children – aged 3-, 4- and 5-year olds – in Sims' (1985) research were exposed to a joined sequence of 3 short music pieces for a total duration of 2 minutes and 21 seconds. Within the music three highly different tempi were presented. All children were tested individually. Sims concluded that "activities requiring young children to match a beat with body movement may be inappropriate", because the children could not match or had difficulty matching their movements to a prescribed beat. However Sims also tells us that:

"As response patterns the three pieces indicated that the children's use of rhythmic movements seemed to depend upon the music's tempo or the prominence of the beat, music for use in young children's movements should be purposefully and carefully selected" (Sims, 1985, p. 48).

Metz in contrast (1989) saw no age difference in swinging in time to the beat between the age groups of 2-, 3-, and 4-year-olds. She did find a difference in swinging to a meter of three – the children often made complete circles – or a compound meter (meters of 2 and 4) to which the children swung back and forth. If the movements of the children depend on the tempo of the music and there is a preference for fast tempi, what then is an appropriate tempo for the children to match their movements to?

In a more contemporary study, Eerola, Tiivainen and Luck (2006) situated their research as an ecologically valid deviation of the much used tapping tasks – a method used in music cognition research – in order to detect the spontaneous motor tempo in general rhythmical motor coordination research (Eerola, Toivainen & Luck, 2006; Provasi & Bobin-Béque, 2003). Their objective was to “investigate the development of timing abilities in early childhood” with an emphasis on spontaneous motor tempo and synchronisation in children aged 2.5 to 4 years. The children were recruited from 5 different early childhood music education groups. They concentrated on a Finnish children’s song, which was presented to all 46 children individually in 5 different tempi over a time span of two minutes. This song was chosen because the children were familiar with it, and the tempo of the song was close to the general preferred tempo – spontaneous motor tempo – as was found by Provasi and Bobin-Béque, (2003) for this age group. They found that “most children did not adjust the tempo of their movement according to the tempo of the music” (Eerola et al., 2006). They could however confirm that with age the natural preferred tempo of young children becomes a bit slower. Their choice of the song “was directed by the tempo” as advised earlier by Sims (1985).

The studies discussed did not take place in a music educational environment and were mainly concerned with spontaneous movement of young children. It might than be possible that the musical learning process, conducted in an early childhood music education environment will be able to reveal the conditions necessary to guide the children in the synchronisation process.

3.3.5 Kinaesthetic representation

In the literature the terms proprioception and kinaesthesia are often used interchangeable. To avoid confusion, throughout this study the term kinaesthesia will be used as an umbrella term in the sense described by Montero (2006):

“the sense by which we acquire information about the positions and movements of our bodies via the vestibular system and receptors in joints, tendons, ligaments, muscles and skin”.

Kinaesthesia has been investigated for over a century (Galvao & Kemp, 1999). The implications for music education however, have had very little attention except in the work of Dalcroze. Mountain (2001) and Godøy (2001a) have explored kinaesthetic representation in the context of musical representation. Movement in music has been researched as the production of music performance (Baily, 1985; Gabrielson, 2003). According to Kemp and Galvao (1999), the work of music pedagogue Dalcroze, 'eurhythmics', is the "strongest emphasis of the kinaesthetic integration of body and movement [so far] in the process of music learning". Dalcroze saw the mind and body as an intertwined expression of human creativity and life, "musical sensations of a rhythmic nature call for the muscular and nervous response of the whole organism" (Jaques-Dalcroze, 1921/2000, p. x).

"If, up to the present, muscular movements of hand and fingers alone have sufficed to create in the spirit a distinct consciousness of rhythm, what far more intense impressions might we not convey were we to make use of the whole organism in producing the effects necessary for the evocation of the motor-tactile consciousness?" (Jaques-Dalcroze, 1921/2000, p. 4).

Dalcroze's movement system, eurhythmics, has as a characteristic the evoking of sensations that create mental images (Juntunen & Westerlund, 2001, p. 210).

"Rhythmic training can make a person musical, since impressions of musical rhythms inevitably evoke some sort of motor image in the mind, and instinctive motor reactions in the body, of the hearer. Musical sensations eventually coalesce with auditory sensations which, thus reinforced, add to the faculties of appreciation and analysis" (Jaques-Dalcroze, 1921/2000, p. 190).

Slater and Lewis (2002) consider kinaesthetic feedback a sense – like vision or hearing – and they tell us that this sense is already starting to develop in the womb and continues to develop after birth. Also this sense interacts "with other senses, particularly the sense of vision and motor development" (Slater & Lewis, 2002, p. 97). Both Bamberger (1991) and Cohen (1994) explored the idea of movement being a way to show musical representation. The problem of conveying in teaching only one aspect of the musical experience, analysis at the expense of synthesis, made Cohen look for a way to have the children "enter into her head" by way of mirroring her movements to the music. This was based on the idea that Cohen experienced the movement-gestures

she had developed, to a music piece for the children, as kinaesthetically representing the cognitive schemes in her mind. According to Cohen “mirrors [movements] appear to be a direct expression of music heard”. Cohen argues that kinaesthetic gestures are the fundamental generator of young children’s music making on instruments.

“They are forms of organisation rooted in body movement shaped by the potentials and constraints afforded by the instruments played. The gestures are free-standing, sequenced within the ongoing flow of the child’s music-making and relating only to the immediately preceding ‘gesture’” (Young, 2003a).

Cohen’s investigation is concerned with a group of fourth graders (children aged 9 to 10) spread over two years, more complicated and elaborated movements are therefore possible than with younger children. Nevertheless, the movements offered in a MoL lesson are intended to represent the basics of movement in early childhood music learning and can therefore very well be considered kinaesthetic analogues.

Bamberger (1991) suspects

“that the process through which we actively organize incoming pitch-time phenomena are closely linked with the very basic, sentient organizing of our bodies as we move through space and time – gestural direction (up-down; right-left), stance, sequences of periodic movements (breathing, sucking, walking), equilibrium, as well as vectors of tension and relaxation”.

Bamberger (1991) looked at drawings of children aged four and five, which they had created when asked to draw a rhythm they had clapped. The drawings revealed different aspects of “immediate experience”.

“The children in scribbling could be putting on paper, imitating, the feel of their own continuous body motions in clapping the rhythm, in contrast to [...] the external, public, acoustic results of these motions” (Bamberger, 1991).

Bamberger’s findings show an important feature of musical representation: the children manifested how they *felt* the rhythm. They expressed musical movement by movement itself: drawing. Children aged 18 to 36 months have the same means at their disposal: their body, and they can transport the rhythm of their body to a musical medium like sticks or drums.

According to Levinowitz

“we experience rhythm as the flow of our movement through space. From the developmental perspective, children must experience rhythm in their bodies before they can successfully audiate rhythm in their minds” (Levinowitz, 1998).

In this view young children then should be stimulated to experience movement in the educational environment as a first requirement. This is supported by an experiment of Phillips-Silver and Trainor indicating that being moved to a certain beat helped 7-month-olds to distinguish one beat from another,

“after being bounced to one of two interpretations of an ambiguous (without accented beats) auditory rhythm pattern, infants preferred to listen to an auditory version with accents that matched the beats on which they were bounced, compared to a version whose accents did not match the beats on which they were bounced” (Phillips-Silver & Trainor, 2004).

According to Phillips-Silver and Trainor (2005) this stressed the critical role of self-movement in rhythm perception. An extension of the aforementioned experience of rhythm in the body might be supported in the musical learning process through what was being named kinaesthetic empathy by Moore and Yamamoto (1988) in their extensive study of movement observation and movement analysis: “Kinaesthetic empathy involves physical identification with the movements one observes being executed” (Moore & Yamamoto, 1988, p. 53). Montero (2006) described this as “seeing others move, we kinaesthetically represent their movement on our bodies”. Representing the perceived overt actions from someone on a bodily level has recently found support on a neurological basis. This process appears to be the result of the existence of a “human mirror neuron system” (Molnar-Szakacz & Overy, 2006) in which the same neurons are fired in a person’s brain when either performing an action or seeing that action being performed by someone else (Zeedyk, 2006). In combination with Reybrocks co-perception – the interaction between perception, representation and action – and Noé’s claim that perception is intrinsically active, offered movement than might be represented on a bodily level by the children through a combination of seeing and feeling movement. Moreover this would connect with the notion of embodiment in which cognition is a form of embodied action (Thompson, 2005), which I explained at the beginning of this chapter, taking that representation is a cognitive

action were body and mind work together. However, Phillips-Silver and Trainor (2005) also found in the same experiment that seeing an adult move to these two rhythms did not result in a preference for either rhythm by the 7-month-olds (Phillips-Silver & Trainor, 2005). The question is if the possibility of kinaesthetic empathy is age related or perhaps that other unknown elements are involved to promote kinaesthetic empathy. This issue then might be further explored in reference to the “tactile modelling” of Metz (1989) (see 3.2.4) within a music educational context. If seeing someone move might evoke an internal reference, literally feeling someone move might promote a more direct reference to the feeling of for example rhythm. The question is what the implications would be for the musical learning environment to support and promote this.

3.3.6 Episodic representation / the musical environment

Preschool Music Education is an educational setting in which the children will be presented with multiple sensory information (Young, 2003a). The lessons can be regarded as personal musical incidents or events in the lives of young children. The children will have to find their way in understanding the MoL environment and at the same time act upon the MoL environment. MoL’s events are new at a certain moment but by repeating the events over a period of time, familiarity (habituation) and therefore participation occurs because the children should be able to retrieve the events from memory in interaction with the reinforcement – the (re)offering of the activity by the teacher – of incoming musical information.

Acting in the Music on the Lap environment means making decisions about which musical action to undertake at a certain moment, depending upon knowledge of past events combined with future outcomes of a certain action (Martinez, 1999). Being able to represent has the advantage of being able to make predictions for the future, based on memory and expectations (Gopnik et al., 1999), and to devise strategies for acting in the environment (Martinez, 1999).

“Representations are problem- and context-sensitive, constructed in the present to meet present demands, including chosen goals and possible actions to take in pursuit of those goals” (Martinez, 1999, p. 26).

The children therefore need a functional representational system to absorb and act upon the total of stimuli presented (Martinez, 1999) and therefore will find themselves within the realm of episodic representation. This is a representational system incorporating the element of time – an inherent factor of music and music lessons – all media of sensory input and the processing of a particular personal incident within a specific context (Martinez, 1999; Baddeley, 1999).

3.4 DISCUSSION

Departing from a conception of the mind and body as an inseparable integrated entity, it is argued here that the bodily movements of the children are an indication of the way young children can learn music, understand music, and represent music. Young children aged 18 months to 36 months can express themselves musically with and through their bodily movements. Movement to music can be regarded as a kinaesthetic representational way to internalise the music: a symbolic action where the movements embody the internal sensation of external sound production. Movement activities become “aural counterparts” (Young, 1996), in which all aspects of sound: tone quality, duration, intensity, sounds and silences and timbre, can be experienced through the tension of muscles and energy input of the gestures (Kemp, 1990; Young, 1996). The term embodied will be used here as a way to experience music through bodily movement, and through these movements abstract musical information can be given meaning in order to construct a personal representation that supports the memorisation of musical knowledge. Representation is conceived here as a personal constructive process in which intention is brought about through personal motivation. At the same time the movement responses to music will be considered evidence of a personal musical knowledge construct. Bodily movement will play the major role in this study and the movement actions are regarded as being guided by intention. Within the music education environment processes and conditions will be looked at that support motivation and intention to take part in musical movement. Intention will be taken here as a form of consciousness, the will and ability to make personal decisions based not only on biological constraints, but also on self-determination. Self-determination will be regarded here as a derivative of the paradigmatic stance of constructionism taking in this study where “meanings are

constructed by human beings as they engage with the world they are interpreting” (Crotty, 2003).

Movement responses have been found by different authors to be a natural response of young children to music. Young children are in possession of a natural movement repertoire. How can we extend this repertoire in order to provide the children with movement opportunities for the musical learning process? In order for the children to understand and memorise the musical information presented to them, the abstract and time-bound nature of music has to be made understandable. According to Greenberg

“when the child moves to music, we should guide him to move his body parts in several ways and in different combinations and to use space around him to express what he feels and understands” (Greenberg, 1979, p. 129).

What are the conditions to put children into purposeful movement, considering that in the educational environment the children will go beyond their natural movement repertoire?

Two aspects are important in this quest: the notion of the competent child (Young, 2003b) and child driven criteria. Research based on tasks derived from adult based research will diminish the capabilities outcome of the children. Therefore the present study will be situated in a specific cultural context - the Dutch context of Preschool Music Education - and it will explore the conglomerate of conditions needed to present the children with an environment in which they can participate in musical movement and consequently benefit from this.

The task of this chapter has been to identify and discuss relevant information from practice and research concerning movement responses of preschool children and its representational characteristics. The following chapter will explain the research approach taken to provide a deeper understanding of the topic.

4 METHODOLOGY FIRST STUDY

4.1. INTRODUCTION

This section will describe the research approach taken in general and underpinnings of choices concerning the pilot and the first study. A more extensive approach of this method for the second study will be described in a separate chapter.

The purpose of this study was to investigate aspects of movement responses to music of children aged 18 months to 36 months that occur during a regular Dutch early childhood music education course. The movement responses might function as a way to represent the musical information offered in the music education environment. In order to understand to what extent young children had the capabilities to respond to the offered musical activity, it was important to know what to look for in the children's musical movement responses and what possible influences there might be on these responses. Important was that looking into movement representation as a static situation, might not have created a full understanding of the use of movements as a way to understand, recollect and show musical understanding. I would like to compare this to walking. In order to understand walking the movement itself must be studied, not the static situation of standing still. Therefore the use of movements by its nature implies a progressive situation that can be compared to a form of advancement. Movements take place in space and time and a movement itself is advancement in space and time (Moore & Yamamoto, 1988). This is in accordance with music, which is an art form unfolding in space and time: a piece of music develops over a certain amount of time.

4.2 RESEARCH APPROACH

Music education research has expanded considerably since the early 1990's and researchers now employ a wide variety of methods, taking advantage of recent technological developments like for example digital video (Phelps, Sadoff, Warburton & Ferrara, 2005; Thompson & Campbell, 2009) and brain-scanning techniques (Flohr, Miller & deBeus, 2000; Perani, Saccuman, Scifo, Spada, Andreolli, Rovelli, Baldoli & Koelsch, 2010). The new technologies, allowing coordination of audio and visual information, facilitate a much easier manipulation of data and the use of microanalysis

(Piras & Addessi, 2007; Longhi, 2009). As a result an expansion of methods for studying music in infancy has occurred. Head-turning techniques are now frequently used to determine for example an infant's memory or preference for a specific musical stimulus, thereby using a screen showing a movie or monitors transmitting music or both (Volkova, Trehub & Schellenberg, 2006; Ilari & Sundara, 2009). Musical preference in infants is also investigated by using pacifiers that are attached to a computer. Through sucking the infants can control the musical stimuli they hear over headphones (Flohr, Hammond Atkins, Bower & Aldridge, 2000). Furthermore, computer programs support the analysis of vocal expressions in infancy (Stadler Elmer, 2006) and the analysis of musical mother–infant interactions (Trevvarthen & Malloch, 2000). The use of video recording as an aid for observation can also be found in different naturalistic settings. Every day musical experiences and musical adult-infant interactions have been investigated at young children's home's or other non-educational settings (Street, 2005; Young, Gillen & Cameron, 2005; Piras & Addessi, 2007; Addessi, 2008) and children's free musical play could now be more intensely studied in day care centres (Young, 2004).

These developments are not only a result of advanced technology but also of a revised conception of early childhood (Gruhn, 2002; Young, 2005). Young children are no longer regarded as being 'passive subjects' of research, but as active competent partners who can provide information from their perspective, inspiring an interest in the 'everyday' musical experiences of children at home.

Studies of pedagogical practice among three year olds and older continues to be a strong area of activity in early childhood music education, as it has traditionally been, with methods focusing on the exploration of new pedagogical approaches. By means of quasi-experimental studies where teaching approaches were compared with a control group (Sims, 1991; Gruhn, 2002) and similar exploratory methods that focused on collecting observational data of children participating in musical activities (Viladot, Malagarriga & Gómez Alemany, 2005). These approaches attempt to identify the outcomes of work according to certain criteria of success, but usually do not seek to systematically study the musical responses of the children taking part, as a process.

While very young children may have difficulties expressing their ideas in verbal language, new techniques attempt to give them opportunities to use symbols and for example take photos (Clark & Moss, 2001). These strategies – led by research from the sociology of childhood - have been less influential on music education research, but there is some evidence with children of 5 – 7 years (Young & Pérez, 2010).

Pedagogical studies of children younger than 3 have been much less common, in part because children of this age are less commonly attending institutionalized early childhood education. Moreover, there are particular methodological challenges in studying this age phase – they are non-verbal, not yet able to participate on their own in sessions, so that one is in effect always studying a partnership. Information has to be deduced from their physical responses within a naturalistic setting.

The framework for the present investigation was for the larger part derived from the MoL setting: the context, planning and didactical underpinning of the lessons. Although a music course, the educational setting, is to a certain extent a controlled situation, I compared it to a real world situation in terms of being representative of the social lives of young children like going to a playground. According to Gluschkof: “The study of children’s *musicking* (the term used here by Gluschkof is from Small, 1998) from the perspective of their own level, should be done in its natural setting, and not by means of commissioned tasks in which children are asked to engage in those activities that the adults want to study rather than being allowed to act according to their natural inclination. Young (1999) argues

“the child’s way of being musical is intimately connected to context and is not something which can be discretely isolated for study and captured in a series of sounds” (Gluschkof, 2002).

Although it might be tempting to look upon MoL’s activities as a set of commissioned tasks used in this study to investigate children's musical movement representations, I considered them to be “offered” activities according to the MoL approach. MoL provides process driven and not product driven music education. Children are free to participate in their own way. MoL also uses child criteria for pre-school musical performance: its aim is to tailor the activities as much as possible to the needs and capabilities of the children. This is why MoL expects teachers to have knowledge of the general development of pre-school children.

Among the many possible stances to take towards the approach of the study, the choice was made for naturalistic inquiry within an interpretive paradigm. Based on the “key philosophical assumption” of qualitative research as Merriam (1998, p. 6) described it, the position in this study can be formulated as follows: young children in interaction with their music education environment construct their music education reality. The aim was to understand how young children make sense of their musical experiences in the music education environment through movement.

Consequently the investigation of the musical movement behaviour of young children asked for a real world situation. A laboratory setting would have taken away the normal educational situation in which these children musically function. The use of qualitative research methods had the advantage that the natural occurrence of phenomena was not distorted (Cohen, Manion & Morrison, 2000).

My goal was to investigate pre-school children specifically in a music educational setting. There they are presented with new musical information and can respond to this information. Being a Music on the Lap teacher and therefore having extended knowledge of the MoL setting, I choose this setting for its naturalistic research possibilities.

4.3 RESEARCH QUESTIONS

The research questions were formulated to start, structure and guide the study. It was therefore not intended that these questions would be answered in a literal fashion. As this study was trying to understand the phenomena of musical movement responses, the research process was open to new encounters and new findings in the literature. The scope of the project did not pretend to arrive at a full understanding of the phenomena, but to identify and understand certain aspects. Therefore the research questions were open to modification and adaptation during the research process.

The basic question was: how can representation through movement of a musical activity in a music educational context be understood?

To arrive at an understanding it was necessary to look at the movements themselves: the actual movement responses the children gave.

- Are there qualitative changes in the movement responses of the children over a MoL course in a music activity?
- Can performance improve over the course of a MoL course?
- Do children increase the synchronization of their movements to music, over a MoL course?
- What capabilities do the children have to perform the offered movements in a MoL course?

Qualitative changes in this context were the actual performances of the movements by the children: their resemblance to the offered movements by the teacher incorporating idiosyncratic ways of movement.

The matching of the movements is considered here to be a timed response: to be on time. Thaut (2005) regards rhythm to be the “core element in communicating symbolic as well as associative meaning in music”. Beat and rhythm, synchronising one’s responses to the music is then vital in order to make and understand music. A qualitative approach is being taken here and the responses are not measured or counted. This would have created a product evaluation and would possibly not have allowed valuing the representational process itself. The approach taken gave an understanding of the process that children can engage in, to arrive at timed responses.

A second question was formulated:

- do the children perform the movements outside the Music on the Lap environment?

This might have been an indication that the movements would be attached to a musical activity not only within the educational context but also outside of it. Through its music education programme MoL also endeavours to facilitate the children with activities that can be continued at home to promote continuing musical learning. The combination of song and movement is hoped to persist outside the MoL context. Based on my own experience as a MoL teacher and the many reports of MoL teachers and comments of parents on children who do not give responses during the music course but do show a lot of movement and singing outside the education environment, this question was created to see if the children would perform the movements outside the educational context.

4.4 METHODOLOGICAL APPROACH

Although the framework for the methodological approach and design of the study can be described as an “emergent design” (Thomas, 2009), it was also necessary to decide on an approach based on the purposes and aims of the study. The nature of the early childhood music education setting, as was explained in chapter 2 and 3, led the way into an interpretative approach where direct observation would be the main instrument to collect data. The appropriate design for the study was decided to be a case study because it encompassed “an example of a phenomena [...] to assist our general understanding of [a] phenomena” (Naughton, Rolfe, & Siraj-Blatchford, 2001, p. 126). This choice was underpinned by Yin who considers case study appropriate when the research question is a ‘How’ question, when there is little control over the events – “when the relevant behaviours cannot be manipulated” – (Yin, 2002, p. 7) and when we are dealing with a contemporary real-life context (Yin, 2003. p1). Further excavation into the strategies of case study research revealed a multitude of terms/concepts and approaches (Bassey, 1999; Baxter & Jack, 2008). A result of personal views, varying theoretical orientations and most likely the fact that case study research was for a long time regarded as the stepdaughter of scientific method (Flyvbjerg, 2006). The key criticism of case study method was that the outcome of a case study could not be generalised (Thomas, 2009). So different scholars have tried to make case study research scientifically valid by structuring them in a way to get results that could be generalised (Mason, 2002; Silverman, 2000; Yin 2003, Gerring, 2002). Coming from an American political background Gerring says the following: “A case study, I argue, is best understood as an in-depth study of an individual unit where that unit is approached as an example of some larger phenomenon” (Gerring, 2002). Stake (1995) and Thomas (2009) maintain a pure interpretative vision that case study, as a part of interpretative inquiry, should take no part in generalising: “you are not studying this case in order to understand others. You are studying it in order to understand it in itself” (Thomas, 2009, p. 115). Bassey (1999) made it clear that it is impossible to arrive at a “coherent framework” in which the many positions are summarised. A most likely continuing situation as Flyvbjerg (2006) for example argues to generalise data in some form using a process named falsification – a method used in the positivist paradigm also described as the 0-hypothesis – thereby completely

ignoring all the authors mentioned in this chapter section except strangely enough for Stake.

All this made it necessary to scrutinise the present study on its purposes and the characteristics of the specific topic in order to devise a suitable design. Returning to the quote at the very beginning of this study: “Educational research, one might say, is not so much research about education as it is research for education” (Biesta & Burbules, 2003), and in order to hopefully make a contribution to early childhood music education, the purpose of the present study is to understand and arrive at some form of theory generating, understood in the term used by Mason. According to her interpretative case study research should somehow establish “a wider resonance” (Mason, 2002). The actual act of generating theory might incorporate an aspect of generalisation on a theoretical level, where the resulting theory can be applied and adapted to other similar contexts where the actual appropriateness has to be decided by other researchers or practitioners in these contexts. According to Yin “case studies, like experiments, can be generalised to theoretical propositions and not to populations or universes”. He proposed that through “analytic generalization” (Yin, 2003) the theory itself would be expanded and generalised. For this a previously developed theory is necessary in order to compare the results with. This was not the mode of action in the present study, because it was conceived as a “theory seeking” (Bassegy, 1999) study. (Theory seeking can be compared to “exploratory research” of Yin, 2003). The theory, which came out of this study is of a provisional nature and will be described in a way that early childhood educators and researchers might find it useful and of interest. An attempt for a “wider resonance” was made through what might be called ‘audience driven description’, which is a modification of Bassegy’s “fuzzy generalisations”. Where Bassegy proposes, “Do y instead of x and your pupils *may* learn more” (Bassegy, 1999, p. 51), the mode in this case study was: there is the *possibility* of doing y instead of x, and hopefully it will be of benefit to your pupils.

This approach can be of benefit in the face of research rigour as expressed by Burnard (2006). In an editorial Burnard made it very clear that research in music education needs more awareness

“of the importance for researchers to be explicit about the assumptions and theories that underpin their work, and of being articulate about the research process in achieving research rigour” (Burnard, 2006).

Similar sounds came from Bowman (2005), who urges the music education profession to engage in theoretical enquiry and to start valuing the “potential significance of philosophical or theoretical inquiry to its [music education] instructional, curricular, and research efforts” (Bowman, 2005). As a supplement to Burnard, according to Bowman

“philosophy’s most fundamental values to the profession, lies in the kind of uses: in its potential to develop habits of mind and dispositions to act; things like attitudes, values, character, the capacity for ethical discernment. The habit of changing habits” (Bowman, 2005).

Research according to Bowman without this kind of reflection “atrophies into mere method: the description of what is, divorced from considerations of what should be or might be” (Bowman, 2005), resulting in un-theorized practice.

Notwithstanding the large range of methods in music education research, specific literature about research methodology in an early childhood music education context concerning movement is almost non-existent. From a conventional positivist point of view, the reason for this is, according to Sims, that “obtaining measurable musical responses” in this specific age group is a challenge (Sims, 1987, p. 61). Sims proposed

“a research model combining videotape recording of children’s overt musical responses with systematic observation procedures. A paradigm through which it is possible to record, assess, and analyse a variety of preschool children’s musical behaviours which are not amenable to measurement through some of the more traditional testing formats” (Sims, 1987, p. 61).

Furthermore Sims proposed

“systematic observation of children’s physical responses to musical stimuli, through activities in which the children respond to the *music itself* rather than to questions *about* music” (italics Sims).

From one of her studies Sims concluded that:

“children’s spontaneous responses within the structured framework of the activity seem to be good indicators of the children’s discriminatory listening abilities” (Sims, 1987, p. 62).

This notion of a structured framework of an activity might be compared to a MoL activity in which it is also the aim to respond to music itself. Therefore I adopted this way of looking at children’s movement but in a different manner. Sims proposed also the use of videotape recording, which is supported by researchers in general movement development like Macintyre and McVitty (2004).

Because of the “transitory nature” (Macintyre & McVitty, 2004) of movement, observation of movement is difficult.

“It is over in a flash and needs practised eyes to ‘see’ what is afoot. Observations can be replayed with different viewers and they can be compared” (Macintyre & McVitty, 2004, p. 51).

Macintyre and McVitty suggest that it would be good to “list the things that are to be spotted” to structure the observation, but also to keep room for new points. The use of video-observation is non-intrusive according to Robert-Holmes (2005) and Sims (1987). However, to be able to capture all the movement responses of the children on tape, a camera most likely has to be moving around and I expected it to be intrusive. The question was: to what extent? Therefore I conducted a pilot study to see if a “moving” camera would distract the children and if this would inhibit them from responding. Nevertheless,

“the major advantage of videotaping is that particular sequences can be replayed again and again so that fine behavioural details and subtleties can be noted and interpreted” (Robert-Holmes, 2005).

On the matter of commissioned tasks as discussed in this chapter under 4.2 Research approach, the concept as it has been used in this study should be explained. Sims (1987) promotes “tasks carefully designed to elicit overt, non-verbal responses directly related to the music itself”. Important here is to understand that in the vision of Sims, musical “tasks” have to be designed in a way that allows for systematic data collection and replicability: the possibility to quantify data. The tasks as they are presented in the MoL environment have a music educational purpose: supporting specific

developmental areas (among which of course music) through carefully planned activities. Both conceptions of the concept of a task then are to a certain extent controlled. The level of control depends on the envisioned outcome and purpose of the task. Both conceptions of a task also are directed at eliciting overt, non-verbal behaviour responses directly related to the music itself. The difference is that a MoL task in the present study does not have as a purpose to either replicability or quantification, but to structure the observations.

4.4.1 The Case study

In order to construct a clear method for collecting and analysing the data of the studies, a need was felt for a base framework: direct observation within the structure of a case study design. The nature of the research questions asked for naturalistic observation. This resulted in the observation of regular early childhood music education situations where the movement responses of the children were captured on video in order to analyse them.

4.4.2 Direct observation

In this study, I used the observational technique of direct observation. According to Rolfe (2001) the term direct observation

“implies the recording of data of interest directly from the researcher’s own observations of the research participants, rather than indirectly through objective tests” (Rolfe, 2001, p. 226).

This also implied in the present situation that the children were observed in a continuous mode, recording their continuous movement behaviour within a designated activity instead of time sampling. Because the unit of analysis (Yin, 2003) and an activity (song and movement and often either musical equipment or a toy) were considered to be the same (actual boundaries of the unit of analysis will be described in the analysis chapter) this could be regarded as a form of event-sampling in which the specified observation period fell together with the events to record (Rolfe, 2001). This is an implication of the nature of music, which spans a moment in time, the time-stream of a song. Within this time-stream the activity and the movements started, unfolded and stopped together with the end of the time-stream.

Running records (Rolfe, 2001) were made to create a detailed account of all the movement behaviour that would occur, separate for all observed children of 5 courses.

Because there are no intermediary instruments, the observations do rely solely on the researcher's and internal observer's skills. A kind of objectivity is very hard to realise because "we see the world around us through a lens" (Rolfe, 2001, p. 231). Someone else may see the same thing totally differently. "Through observer training and careful definition of target behaviours" (Rolfe, 2002, p. 231) subjectivity can be reduced. According to Mason, conceptual and ontological clarity are conditions for reliability in qualitative research (Mason, 2002, p. 188). The training aspect was covered by consulting the internal observer regarding the data of the first and selected data of the second study – the other teacher of the MoL courses in the study next to the researcher who also served as a teacher. Early childhood music education is a highly specialist field and to be able to make relevant observations it was vital that an added observer would have profound knowledge of the music education environment and its pedagogical underpinnings, and had ample experience with the observation of young children in a music education setting. Because both teachers were experienced MoL teachers and were both involved in the furthering of the MoL approach, conceptual and ontological clarity was ensured.

4.5. DATA COLLECTION

This section will describe how the data in the pilot and first study were collected.

4.5.1 Small pilot study

An informal pilot study was conducted to see if the children would not be distracted by the video camera, to explore how to work with a camera within a music education setting and to catch a broad first glimpse of what would be the preferred way to structure the first and second study. The pilot study had a total of 7 participants: 4 adults and three children. The pilot showed that the children were aware of the camera but appeared not to be distracted by it in their musical responses although the camera was moving around a lot. To capture the movement responses of the children it was found that a small group of children is preferable to a large group; the children do move around a lot in the space allotted and to capture all children at once and

record even the finest movements would be difficult in a large group. (The second study will show that in a naturalistic study real world conditions can affect group size beyond control.)

The pilot study generated a large amount of information. This made it necessary to construct a framework in which an excessive amount of data could be avoided in the first study. The matter was that initially all information appeared to be relevant. However to make an in-depth analysis of a manageable amount of information the observations had to be focussed. Therefore in an early stage I decided to focus on the activities, (the singing of the songs and therefore the actual musical movement time) and I would not look at information outside the boundaries of the activities. Also the possible influence of the parents and carers was not incorporated in the analysis of the data. In light of the latter, I found it useful to give a few instructions to the parents for them not to inhibit their children in responding through movement. In my experience as a MoL teacher parents sometimes tend to be very guiding and strict about the participation of their children, most notably when a camera is present. This might be because they want their children to perform well and is therefore an understandable reaction. However, the aim was to let the children freely move about the education environment in order to see what they themselves would do with the movements. It was seen in the pilot study that parents could have a major influence on their children's musical behaviour. As the influence of the parents on the movement behaviour of the children was not a research item – in a later stage this could become very well a research objective of its own – I tried to minimise this influence to let the children have as much freedom as possible by interfering in the naturalistic environment through parent-instruction sheets.

4.5.2 First study

This study was conducted to construct a defined set of musical stimuli – two sets of activities with specific movements for the two different age groups, 18 to 25 and 26 to 36 months – for the second study in order to structure the observations within the boundaries of a regular early childhood music education lesson. Along the way it became necessary to find out if the different movement responses to music would directly represent musical characteristics, or if they would represent characteristics of music indirectly. Although both terms, musical characteristics and musical qualities,

appeared to be used interchangeably in the literature I propose a distinction between them. Musical characteristics are the basic building blocks of music: tone height, tone length, tone strength and tone colour. Musical qualities I define here as the total of properties music has and can convey.

4.5.3 Location

The first study was conducted at the Pedagogium in Amsterdam, a 'Parent Child Centre' from the council of Amsterdam. In this location MoL lessons are given regularly and are part of the general educational programme of the 'Parent Child Centre'. This ensured full cooperation from the people of the Pedagogium in the research process.

4.5.4 Recruiting Participants

The participants were recruited through a regular MoL poster, which announced a 'research MoL course' among the regular courses. Parents who were taking part in a MoL course were approached and asked to participate. After showing interest in the research MoL course the parents were informed over the phone or in person what the aim of the course was and they were sent a special brochure with an application form. The parents were asked to sign a consent form that they agreed with the use of the video-recordings for the study and presentations about the investigation (see appendix A for the consent form). Although I did a lot of recruiting and approached parents from my previous courses, only two girls were registered for the course. Because of the real world nature of the course gender was not an issue. Later on it appeared that the small number of participants was a small blessing because it was possible to capture all the movement responses of the children.

4.5.5 The participants

Madeleine attended the course with her father and sometimes mother. She was 28 months old when the course started. Madeleine had already followed one regular MoL course with her mother and was therefore familiar with the process.

Olivia was accompanied by her nanny. She was 26 months old when the course started. Olivia had no prior experience with a MoL course.

Both Madeleine's parents were trained classical singers of a high level. Her mother performed regularly as an opera singer and in chamber concerts. Olivia's nanny was at

the time of the first study following a teacher training course for teaching music in playgrounds: a different version of the MoL teacher training course, specially for caretakers in playgrounds and day care centres. She had a background in childcare. Olivia and Madeleine were very good friends. They saw each other 2 or 3 times each week when Olivia's caretaker was caring for them both.

4.5.6 Materials

A Sony consumer digital camera was used, so the video data could be imported into a computer and put on DVD. Copies of the DVDs were given to the internal observer. The camera was handheld because a static situation was not preferable: the children were expected to move around a lot and therefore most likely needed to be followed at times. A woman who had a lot of experience with MoL courses, and therefore knowledge of the procedures and what to capture, operated the digital camera. Cohen, Manion and Morrison (2000) report that a video camera might be highly selective. The fact that only two children participated in the first study ruled this out: they could be taped all the time.

4.5.7 Stability of observations

Observing musical movement behaviour of young children serving the musical learning process was new in MoL. What to look for and why was unexplored territory. Because the present study hopes to facilitate new insights in how to go about these kinds of observations it was imperative that a second observer should be very knowledgeable about the MoL practice and should have an insight in the general early childhood music education and research literature in order to be able to look beyond the established music education programme. Detailed knowledge of lesson contexts and a high level of experience with young children's movement vocabulary were necessary. Therefore, next to my own analysis, I asked a highly experienced MoL teacher with 19 years of experience to assess the video-recordings independently in order to have a second expert view: Margré van Gestel. Because she was also the first teacher in the second study and consequently had a large involvement in the investigation she was named the internal observer. She is the main teacher of two teacher-training courses: the Music on the Lap teacher training course and the special MoL course for teachers in playgrounds and day care centres. Her expertise is not only nationally but also

internationally recognised. She has given many presentations and workshops around the world about preschool music education.

Portions of the data and their interpretation have been presented to audiences of international music education researchers at a number of important conferences thus receiving additional review and feedback. While this was not a completely systematic process as inbuilt in to the study itself, it served as a further source of checking and a means to reduce internal bias.

4.5.8 Teacher/researcher role

In a qualitative research study the researcher is the primary instrument of data collection, which is a specific feature of qualitative research (Merriam, 1998; Radnor, 2002; Robson, 2002). According to Radnor:

“The researcher is bringing to the research and is influenced by informal, personal and tacit theory about education. It becomes a positive aspect in research where the researcher is the research instrument ultimately in control of the research design she constructs” (Radnor, 2002, p. 30).

Therefore as a researcher and teacher I brought a certain amount of subjectivity to the study. However, this subjectivity was highly informed by many years of experience as a MoL teacher. This experience proved to be important in the design and conducting of the investigation: understanding what early childhood music education is about facilitated the manner in which the methodology could be approached. Merriam also stated that: “The mere presence of the observer in the setting can affect the climate of the setting” (Merriam, 1998, p. 104). In the present case two issues can be derived from this statement. First of all in this specific music education setting it was the task of the teacher to affect the climate of the setting in a positive, motivational and pedagogical way. The teacher was instrumental in engaging the children in the musical learning process. Therefore keeping an objective distance would not have been conducive for the musical learning process and as a consequence for the data collection itself, because the children would not have been given a full music pedagogical opportunity to participate in the musical learning environment.

Secondly, strictly speaking during the data collection being the teacher, I was not an observer. This task was taken over by the two cameras present in each lesson. Therefore it is difficult to denote the situation as for example participant observation or observer participation: the two roles were separate functions during the data collection.

Presently, we live in a digital society and digital media are widely available. Parents and grandparents very often film and take photos during a MoL lesson. (In my personal practice, before the start of a course permission is always asked from all the parents to either film or take photos.) As a consequence children, parents and myself were used to the presence of a camera. Nevertheless, being also the teacher in this particular research project I do not exclude that my awareness of the situation might have been altered and the cameras could have been of influence on my functioning as a teacher and thereby indirectly influencing the data collection process. A comparison between a MoL-lesson without cameras and with cameras in a research situation would be a subject for a separate study. Being an experienced MoL-teacher and used to cameras in the MoL setting it is possible on these grounds that my teacher role was sufficiently appropriate for the situation.

The participants and the teacher/researcher shared what can be named a common culture: they were all part of the same educational setting (Radnor, 2002). There was a consensus of why all were there at that specific moment in time: a music lesson. The parents and carers were fully aware of the research being undertaken and they could see the cameras during the MoL-lesson. Nothing was hidden. Also all participants had the possibility to withdraw from the project whenever they wanted and could object to the use of the filmed material for analysis or use in presentations. MoL itself in its approach to early childhood music education has high ethical-pedagogical standards in working with the children in an affective and respectful way. This way of working I have tried to reflect as the teacher and researcher in this study. Together with the internal observer we prepared each lesson thoroughly to ensure that the whole educational process would be well structured and beneficial for the children.

After each lesson I provided the opportunity to have an informal group conversation and one to one conversations. This way, if necessary, the parents had a chance to reflect on the research process and my functioning as a teacher/researcher.

4.6. THE COURSE

The Music on the Lap courses consisted of 8 lessons of three quarters of an hour spread over 8 weeks. A lesson plan was used for each separate lesson and parent direction-sheets were used. Activity criteria had to be established. The decision for 8 lessons was based on:

- the regular number of lessons in a MoL course which is 8, 10 or 12 lessons
- the parents and children had to be offered a full course therefore normal conditions within the MoL approach had to be met
- the children could become accustomed to the course: very often the first lesson the children do not know what is expected and therefore they often don't do anything but watch the adults and teacher: also learning has to be learned
- the children should be given enough time to respond as they normal do during a regular MoL course, this is based on the notion that repetition is vital for learning in early childhood music education
- a fair number of lessons was necessary because the children needed to be given time to build their musical knowledge and to arrive at effective musical movement responses.

4.6.1 The lesson plan

The 8 lessons were prepared by a regular MoL lesson plan that MoL teachers in general use. The plan described the whole lesson, including objects needed, activity aims, the duration of the activities and the transition from one activity to another. To a certain extent, this can be regarded as a form of stability of measurements: the lessons can be reproduced almost the same way. The human factor – the children – is always different and can and should not be controlled. The lessons in the second study used the same preparation.

4.6.2 Parent direction-sheet

The presence of the parents is an inherent part of regular MoL lessons. The general experience in Music on the Lap courses is that parents sometimes tend to stimulate their children to perform well, even occasionally in an over enthusiastic way, by at certain moments literally taking the activity away from their children. The children then are not motivated to respond in their own way and will less expose their personal

musical reaction. Also some parents do not respond or participate at all, which in certain cases causes the children to not participate or to wander around, completely ignoring the musical activities.

The direction-sheet was a mixture of kind and polite advising of the parents/carers to refrain from certain actions or to perform certain actions. In the pilot this worked quite well as the children were given enough room to explore the musical activities. Nevertheless in the pilot the initial result was that the parents lacked in enthusiasm, a necessary energy and modelling behaviour to be an example for their children. The parents were too concerned if they were following the directions correctly, which was wonderful but counter-productive. To promote active parent involvement the direction-sheet was modified, compared to the pilot. At the beginning of the course the parents received one sheet of directions for the whole course. They could take the directions home. Copies were present at each lesson to look at (see appendix B for the parent direction-sheet).

4.6.3 Activity criteria

The preparations of the lessons involved choosing about 25 songs for the activities from a total of more than 300 songs that are regularly used in MoL. This is a regular activity for MoL teachers when they are preparing their courses.

Every lesson two songs were always the same: the opening song and the closing song. From the second lesson until the fourth lesson, each lesson presented two new songs. Lessons five and six both had one new song and lessons seven and eight together repeated most of the songs. Two songs were chosen as a reserve because sometimes there is some time left during a lesson.

Songs were chosen on the basis of three sets of criteria:

- didactical events in the MoL environment (as described in the section about MoL).
- the MoL practice has sets of activities specially created for the different age groups within MoL.

The chosen songs came from the age groups: 18 to 25 months and 25 to 36 months. Because this study looked at musical representation through movement of the age group 18 to 36 months, a range of one and a half year, the observed middle group – the two children in the first study – was presented with a cross section of the activities suited for children aged 18 to 36 months.

Four general movement categories had been created before the first study, as a result of the pilot study, based on how movement is used in MoL activities:

- being moved (by parent or carer)
- movement by self (without any help)
- movement with support (moving together and for balance purposes)
- putting something in motion (a musical instrument or a toy)

These categories guided the choice for activities in the first study, to see to it that all 4 categories were sufficiently represented in the lessons.

4.6.4 Parent diary

In the small pilot study and the first study diaries were given to the parents to find out if the children performed the movements outside the MoL environment. I hoped to consider the parents as co-observers of the musical responses of their children. Parents and carers might be considered at least to some extent to be experts in the observations of their children. Furthermore, the act of keeping a diary might encourage them to focus their observations to relate them to what they have experienced in the music education environment. The diaries were kept very well during the pilot and the first study. Some modifications had to be made to the pilot diaries to be used in the first study in order to focus the information because sometimes large and very interesting but highly irrelevant descriptions were written down. To streamline the nature of the information reported it seemed more helpful to provide the parents with prepared semi-constructed diary-sheets. The compromise was that the diary information would be more structured towards reporting about the study's subjects through semi-constructed questions in the form-sheets to be filled in on a weekly basis. Hereby however preventing the parents reporting possible additional interesting information. During the first study I gave the parents a diary to register the observed musical behaviour at home or for example at the supermarket, in order to capture musical movement performance outside the regular weekly setting. It often happens that children do not respond during the lessons but sing and move regularly at home, as have many parents reported to Music on the Lap teachers in the past. Creating the diary I considered a pilot initiative in the framework of the study because of the lack of proper references for this specific type of parent diaries, except for Tafuri.

Tarfuri used specially prepared diaries for the mothers participating in her research project in Canto (Tarfuri, 2003). This was a longitudinal research project to study musical development (Tarfuri, 2008).

“Its main goal was to verify the singing abilities (to sing in tune, to invent songs etc.) developed by children exposed to an appropriate musical environment during the 6th month to prenatal life until the 6th year” (Tarfuri, 2003).

Tarfuri’s diary contained a series of questions “such as the amount of singing and listening activity per day” (Tarfuri, 2003). Also the questions would change depending on the continuing research process over the years. Tarfuri’s research had as its main topic the development of singing. Creating questions concerning movement responses asked for a different approach. The quest therefore became to construct a set of questions that would engage the parents in the observation of their children but would be easy to answer.

The diary for the first and second study came in the shape of bounded pages with prepared questions the parents could answer. These questions hoped to facilitate their motivation to write their observations down and to structure their observations. Each parent received 15 pages to make notes of 15 observed activities. This number is based on the average of reported musical events by the parents in the pilot. In order to see if movement prevailed over singing/vocalizing, questions about singing behaviour of the children were included (see appendix C for the diary sheet).

The task of this chapter was to describe the general research approach taken in this investigation and in particular the methodology of the first study. The next chapter will describe the results of the data analysis of the first study.

5 DATA ANALYSIS AND REPORT OF OBSERVATIONS OF THE FIRST STUDY

5.1 INTRODUCTION

The analysis of the first study generated a theoretical framework suitable for the description of the movement responses of the children: movement types and functions as well as conditions for the bringing about of movement responses to music. In order to stimulate musical learning, the evoking of purposeful movement through which the children can grasp the musical information appeared to be subject to several interconnected elements. The music education environment offered a context, which motivated the children to step into an activity. Also, being familiar with the music education environment constructed a learning process of how to act in the music education environment. Knowing what to do is implicitly expected, but not demanded. Certain conditions appeared necessary for representation to occur. Therefore in order to evoke movement and consequently movement representation, activities should be tailored to the children's capabilities and interests and music learning aims need to be formulated. Movement representation appeared to be a multidimensional construct in which activity conditions play an important role.

(The titles of the songs are written in italics. For an overview of the discussed songs/activities see appendix D.)

5.2 AIMS

The aim of the first study was to create a functional typology of musical movements to be derived from analysis of an early childhood music education course. This topology would then serve as a starting point for observation and analysis of the second study in which aspects of musical movement responses would be further studied within a larger group of children.

An important question was how to categorise the movements. This was also important for the second study: movement responses could only be established if the movements themselves could be placed in a referential framework of connotations/aural counterparts (Young, 1996). To define the different movement responses to music, I thought it necessary to investigate if the movements would represent musical characteristics directly, or if they would represent musical characteristics indirectly.

A second aim was to see if the parent diaries would provide additional information regarding the children's movement responses outside the educational environment. This aim included the sub-aims of finding out whether they would have a suitable and knowledge-generating construction for the second study. The analysis of the first study also generated information that was not anticipated in advance. Conditions emerged, which appeared to be necessary to promote purposeful movement responses within the musical learning process. Because the MoL environment was conceived as a whole, an interactive and inter-reactive environment, the activity conditions will be described before the movement categories and movement types.

5.3 PROCESS OF ANALYSIS

The process of analysis consisted of an observational road on which I would go back and forth between the literature and the initial movement categories from the pilot study, and the emerging ideas and themes from the taped lessons of the first study. This was done through a process of immersion in the data combined with the observations of the internal observer of the tapes.

Of all the activities of the total course the movements responses of the children were described, compared and organised into themes. This process might be compared to the "constant comparative mode" of grounded theory, to develop categories and properties on a first level analysis basis (Merriam, 1998). A complete written out report was created of the movement responses of the children for each activity from the videotapes. These had been converted to DVD movies in order to watch the children on a big TV or computer screen. The musical movement responses of the children were looked at in two ways: per activity over the course of the 8 lessons of the music course and the multiple repetitions of an activity in one lesson. Movement responses might occur within the multiple repetitions of a song within an activity but also during the multiple repetitions of the activity over the course.

The analysis of each activity was based on the following criteria:

- structuring the large amount of movement data – a total of 6 hours of taped data – into manageable units, which at the same time matched the didactical structure of the MoL lessons. The initial movement categories, which were derived from the pilot study, had indicated that it was possible to allocate one initial movement category to an activity.

- allocating specific movements to a music learning aim of an activity,

The unit of analysis (Yin, 2003) was defined by the musical time boundaries of the activity. Effectively this was the start of the singing of the song and the end of the singing of the song. This can be considered a form of event sampling in which the specified observation period coincided with the events to record (Rolfe, 2001).

5.4 MOVEMENT RESPONSES

Movement in MoL lessons does not stand apart from other elements in the activities, but is part of an interconnection. It was seen that in the MoL environment the tempo of the activities, the understanding of the lyrics as well as the concepts presented in the lyrics and the objects used, appeared to be of influence to evoke purposeful movement responses from the children, which might then function as kinaesthetic counterparts (Young, 1996) of musical elements.

Prior to the first study, an initial inventory of movements had been made based from the results of the pilot study. It was seen that MoL uses 4 movement categories, which were named at this point the initial movement categories. These categories have been confirmed by the internal observer.

- moving with support (moving together, e.g. holding hands during marching)
- movement by self (without any help)
- being moved (by parent or carer, e.g. cuddly songs)
- putting something in motion (a toy, music equipment)

These categories might be considered didactical aids in the preparation of a music lesson: a general schema to apply movement and to prepare the different activities. Within these categories it was possible to distinguish between dependent movements and independent movements.

- Dependent musical movement behaviour: movement responses based on the movements that are offered by the teacher. The use of different bodily movements with or without the use of musical equipment or a toy

- Independent musical movement behaviour: movements made by the children without an example of the teacher. The use of different bodily movements with or without the use of musical equipment or a toy. Independent movements are personalised responses from the children within an activity (unit of analysis).

5.5 DEPENDENT MUSICAL MOVEMENT BEHAVIOUR

The offering of a wide range of movements accompanying the activities can be regarded as dependent musical movement behaviour: the children were offered movements they could perform. These movements supported the songs simultaneously in different ways as:

- an underlining of the lyrics
- a support of the beat
- an extension for the use of objects

Movements, which were not directly clear to the children and therefore not performed right away, were watched intensely. Very subtle movements could be detected as if they were trying to feel in their bodies how to perform the movements. Movements, which were clear to them but which slightly extended their motor capabilities, were often performed, although not accurately, with great involvement. Important is that accuracy in the movements is not vital: within the MoL environment children can respond in a personal way.

Often the children started with delayed responses in for example timing-moments. This is a response shortly after the moment intended to synchronise a movement with the music. (MoL uses the experience of a specific timing-moment as one of its musical learning aims.) Very rapidly they often had the specific movement moment reasonably timed towards the end of an activity after at least 4 repetitions. This improved over the course when the activities were repeated. Movement responses occurred among others because of the multiple repetitions in a lesson of an activity and over the course.

When children cannot perform the offered movements to a reasonable degree of accuracy, I think it is possible to cautiously assume that representation, the symbolic

underpinning of the action, might not come across. The performance of the movements themselves may take up too much attention. For example in lesson 6, Olivia could sing and silently sing (lip movements without sound) the song when the tapping movements were synchronous. When the song was sung again with alternating tapping movements she appeared to be very concentrated but was not singing or silent singing along anymore (DVD example One Two). The alternating movements – the tempo was the same – required more attention, attention that could not be used to sing. Mang concluded in her research that singing might stop because of a child's "elevated involvement (absorption) in sensory experience" (Mang, 2005). This absorption might be undivided attention to one stream of specific responses. The reason for this might be that Olivia not yet had the motor capabilities for a reasonable performance of these kinds of movements or that she needed more repetitions to master them.

I often observed that the children did try to synchronise their tempo with the tempo of the offered activity. Sometimes the children matched the beat for a short period of time. At other occasions some 'bodily fumbling' was seen when the children were trying to keep in pace with the offered tempo. These were small random movements as if the children were trying to find a certain feeling in their bodies. In one case, during the dancing part in the song *Those who do not want to walk*, the children were looking at the adults who were dancing (in a simple way) and made very small body movements, as if they were trying to imitate the adults but had to search for the feeling. Further demonstration would probably have given the children the time to actually 'get' the right movements and consequently benefit from the activity. However, dancing is not the same as moving. I consider dancing to be a form of stylised movement. The dancing movements in this song did not have any reference to a musical entity or an object. Therefore it might be that the children did not know what the movements were for: they probably had no meaning for them in the music educational context. The internal observer concluded that the children would eventually try a lot of offered movements whether they are meaningful or not. Although not indispensable, in order to give movement responses that support the symbolic function of movement, I propose that meaning is an important added value for the movements to be purposeful in order to stimulate the musical learning process.

I use the concept of meaning in this context as a connection between the movements and the musical concepts to be transferred in the musical learning process. This connection might promote the understanding of this relationship. Meaning then in this case can be considered musical meaning. However, in many instances the musical meaning most likely will be indirect, resulting in a translation process that can be explicit or implicit. For example when a plastic duck is being tapped on the 'water' (a blue sheet on the floor) the lyrics refer to this tapping by words that portray the splashing of the water. At the same time the tapping of the duck is hoped to be on the beat of the song, thereby experiencing through movement the feeling of the musical concept of beat. The concept of meaning in the present context will be further explored in 5.6.1 and chapter 6.

5.6 ACTIVITY CONDITIONS

If overt behaviour, movement, is an indication of a representation (Byrnes, 1991) the question was: how do we put children into purposeful movement? In order for the children to start moving, to participate in an activity through purposeful movement responses, it appeared that certain conditions would enhance this process.

5.6.1 Lyrics / song meaning

Some activities seemed beyond the comprehension of the children: for example the activities *The little Caterpillar* and *Open and Close*. Those activities asked for an insight in what the lyrics portrayed and understanding of the concepts of high and low, as well as the use of multiple movements. The children hardly moved at all during the repeated offering of *Open and Close*. They watched intensely but did not try to perform the movements. The song was possibly too difficult to imagine: the portrayal through movements of boxes in different sizes. It might be possible to consider this a matter of a double translation – lyrics to movement, movement to musical aspects – the first step is important to complete the chain. Therefore understanding of lyrics might be a basic condition to choose songs for the activities. However, in her diary Madeleine's mother noted that the activity *Open and Close* had been her favourite for a few weeks at home! Perhaps what Madeleine showed was that time is a crucial factor: the activity in some way developed at home, which became clear from the diaries. A speculation might be that actual, real live boxes at home might have

established the first link in the translation chain. It is however not possible to derive from this that the activity is explicitly understood. More action should have been seen in the lessons and it was not possible to see what exactly happened at home.

When looking at Pia's diary entry (carer of Olivia): *The Little Caterpillar* was presented to the children together at home on a CD. They started to make a few of the movements and after a few repetitions of the rhythmical verse Madeleine spoke the text. The CD was the cue, a motivation to speak the lyrics and make the movements. However also in this case it is not possible to tell precisely what did happen. Nevertheless a tentative conclusion might be that activities are continued at home, even the most challenging ones with the support of the adult present. Repetition is vital.

During the song *Mommy bear and baby bear* Madeleine asked in lesson 4 for a Pia-bear. Because versions with a mommy bear and daddy bear had already been sung, her question illustrated the coming across of the meaning of this song. She could relate the adult bear to the carer of Olivia.

Gestural movements as were presented in the activity *Open and Close* can introduce the concepts of high and low in an indirect way by portraying the lyrics. Implicit notions of close, far, up and down, high and low (Bamberger, 1991) receive meaning for the children because of the lyrics. Songs that at first seem too difficult might therefore become easier over time when the activity is highly motivating. Meaningful lyrics can provide the way to understand these implicit notions. Lyrics also do have an important role in enabling children to remember songs.

5.6.2 Motor development

The level of motor development at a certain developmental phase should be taken into consideration before choosing the activity's actions. In lesson 4: *Those who do not want to walk*, when for example the offered movement was sneaking, timing elements disappeared. The movements were not completely grasped by the children and only Madeleine sneaked a bit, by simply trying to do what the adults did. Sneaking is

walking softly, sliding a bit, so the movement is nice and exciting to do, especially in a group, and necessary for a different dynamical quality: a reference to the musical concept of piano (soft). But no conclusions can be derived from the sneaking movement in the present framework.

The level of motor development dictates to a large extent the movements that can be offered. As mentioned above in lesson 6, Olivia did not yet have control over alternating tapping movements at that specific moment. The educational benefit might be that repeated offering during a lesson and over the course would give her the opportunity to experience this movement pattern and internalise it. The point is that she did not have enough attention to sing and to synchronise her movements with the offered beat at the same time. The activity can then be regarded in her case as purely an offering of an experience: timing elements should not be an issue. According to Eliot: “while it [training] may not effect the timing of motor milestones, the act of moving itself, especially when encouraged by an enthusiastic adult, does contribute to a child’s ultimate success at physical activities” (Eliot, 1999, p. 277).

5.6.3 Tempo.

The tempi of the songs appeared to be of great influence on the general synchronisation capabilities of the children. When a song was presented in a tempo that was comfortable for the children, they were capable of clapping and marching reasonably in time over the course of an activity and the course itself. This occurred even when an activity was presented for the first time.

The movement possibilities of the children dictated what should be a suitable tempo for the songs: their personal tempi. The personal tempo or the spontaneous motor tempo (Eerola, Toiviainen & Luck, 2006; Provasi & Bobin-Béque, 2003) refers to the natural tempo of a person (Flohr, 2005). This personal tempo, the tempo that young children display through their behaviour, is according to Vaughan, the starting point for an activity and will “increase their ability to respond dramatically” (Vaughan, 1981). Nevertheless, it was also seen that tempi, which did not match personal tempi were after some time reasonably performed: sometimes even very well timed. This occurred mostly in the second part of the course (last 4 lessons), suggesting that learning of

different movement tempi is possible over time and with repetition at this age. However, these tempi did not dramatically differ from the average personal tempi as described by Eerola et al. (2006), Provasi and Bobin-Béque (2003) and Flohr (2005).

An example is the song *Tam Tam* in lesson 8. When drums and stick were distributed Olivia started tapping in a straight tempo of almost exactly 137 bpm. She kept this tempo for a while. The rest of the group joined without singing, just tapping their drums with the sticks. Then the activity was continued as prepared by the teacher. A CD was put on and when the teacher started tapping it was clear that the tempo was much slower than Olivia's first initiated tempo. Madeleine was struggling with her whole body, making bouncing movements in an effort to get this new tempo. Olivia was also trying to get this tempo but stayed ahead of it (by which I mean she was faster). Both children were changing the way they were holding their sticks and they tried out different ways of tapping during the song, mostly ahead of tempo. Madeleine also tried out a different sitting spot. The children were unable to adjust to this change of tempo which was clearly too slow. It was seen during the course that the children were always trying to synchronise their movements to the beat. The aforementioned adjustment had been too sudden and the difference in tempi was too big (DVD example Tam Tam).

Tempi appeared to relate highly to specific movements, especially the way in which the children moved their bodies. For example in the rhythmic activity *Clap clap this is what the hands do*, the amount of muscular energy input had an effect on the tempo of this activity. The children attempted to clap on the beat and succeeded over the course of three lessons/offerings. At one time strong clapping resulted in Madeleine being ahead of the beat and weak clapping resulted in Olivia having time to adjust her tempo to the beat. In lesson 5, the second repetition of the song, Olivia started much faster than the offered beat, but then saw that the distance between her hands was smaller than the distance between teacher's hands. Olivia adapted to the clapping model of the teacher and suddenly was much more in tempo. As the activity progressed more clapping in tempo was seen. Different movements ask for different energy inputs: for example the space between the hands, hands and knees, hands and floor, asked for an adjustment of the energy input into the movements. Therefore

clapping the hands together on the beat may require a different tempo than clapping the hands on the knees because of the adjustment in space distance. The general tempo of this activity was 118 bpm. It looked like the children would have preferred a faster tempo to really be able to clap on the beat. Often Olivia was seen trying to match her clap with the offered tempo: looking intensely at the teachers clapping and on a few occasions even skipping a beat to have the next one on time. Another example was seen during the song *Plitse Pletse Plater*. The children made circled movements on the water, pretending their (plastic) ducks were swimming on the blue cotton sheet on the floor. The teacher's example was a long curved line. However, the arms of the children were much shorter, so logically they stayed within their reach and moved faster than the teacher. Tempi in this case depended on limb size.

5.6.4 Objects

An observation was that the objects used might have had an effect on the movement performances of the children. For example in *The chair is my drum*, where full sized half wooden chairs were used. The children had to adjust their bodies to clap on the chairs while keeping the beat. At one point they attempted to clap in tempo (a bit faster than 120 bpm) but clearly were most of the time in and out of tempo. At one point in lesson 6 Madeleine stopped to pick up the correct beat at one moment. But when turning to the back of the chairs the children were again ahead of the beat. It appeared to be difficult to adjust their bodies to the half turn they had to make. When clapping with one hand on the seat and the other hand on the back of the chair, tempo synchronisation improved: this appeared to be physically easier.

In *Plitse pletse plater* the way of holding the ducks might have influenced the movements. The ducks came in two sizes but not too large for the children's hands. They were made of plastic and were a bit slippery. A lot of experimenting was seen in how to hold the ducks, sometimes taking away their attention from the activity.

In *One Two* the turning of the sticks* at moments took time for the children, but later on this was not a problem anymore. In this case they learned over time how to handle these specific objects in the way presented by the teacher. The body position towards an object as well as the kind of objects used in an activity might have an effect on the movement responses of the children. Because different ways of holding, handling and

energy input is required, this might affect the timing and the overall performance of the movements.

*In this activity the sticks can be used in different ways. They can tap crossing the sticks but also turning the sticks horizontal and tapping both ends against each other.

5.7 KINAESTHETIC MUSIC REPRESENTATION

The premise of the current study is that movement should be considered an important form of kinaesthetic representation through which children may come to understand and learn different aspects of music. Kinaesthetic representation was conceived here as the feeling – “via the vestibular system and receptors in joints, tendons, ligaments, muscles and skin” (Montero, 2006) – and consequently understanding and internalisation of musical information. Through a process of meaning-giving a personal representation could be constructed that supported the memorisation of musical knowledge. This process worked in two directions: the movement responses were also considered an indication of a personal musical representation of the children themselves. According to Kofsky-Scholnick (1999. P. 113) “Terms like representation are multidimensional”. Kinaesthetic representation, being a subcategory of representation in general, appeared to be an element surrounded by other elements that were of influence in different ways. I will explore here a division into different categories within the context of this study and I tentatively propose the following categories: construction modes; timing; time-stream; sequential representation; kinaesthetic reference and independent movements.

5.7.1 Construction modes

When the children engaged in an activity, they often had to pay attention to both singing and moving. These I propose to be two modes of musical information construction. A mode in this case is defined as a way, a manner to experience music. Most activities in the MoL environment combine these different response modes. This is a result of the underlying music learning aims of MoL, amongst which the promotion of the development of singing. Often the children started with a single mode response – only movement and sometimes only singing. During the duration of the activity and over the course they gradually went from a single mode to a dual mode response in some activities.

For example the activity *Mice*. The fact that the children did sing the song quite well even the first lesson might be an indication for an initial single mode preference: during this activity the singing occurred when there was no movement. This activity alternates movement with singing – holding the mouse hidden between two hands and then removing the upper hand when the lyrics at the end say: show yourself.

In *My mouse has disappeared*, Olivia sang the song during the section where there was no movement in the activity: when the toy-mouse was hidden. The toy-mouse was hidden before the song was sung and the mouse was taken out of its hiding place during the last sentence of the song – the timing-moment. Olivia sang it the third time when this activity was offered in lesson 6. Olivia sang the song and performed the movements after 4 lessons very well. A dual mode is possible when a child is allowed to learn in her own way and can absorb the information gradually. Movement does not take attention away from singing when introduced in a structural manner. Furthermore, the lyrics portray the action: singing what you do, thereby attaching meaning to the movements.

Some activities had secondary modes within a mode. For example *Mommy Bear and Baby bear*. In this activity the children and adults walked around in a circle singing the song. The primary aim of the activity was a timing-moment when a leg is supposed to be lifted - the paw of the bear – slightly half way over the song. Next to this timing-moment there was the walking on the beat of the song. Often it was seen that first the children concentrated on the leg lifting and later on in the course they also started to walk on the beat. Perhaps the multiple repetitions of the activity in a lesson and over the course provided the children with a learning process in which after having understood and mastered one element in the activity more representational room was created for paying attention to the second element: the walking on the beat. This last point was also subject to the tempo offering of the teacher. Secondary modes presented themselves when in an activity one mode of response had two different forms. In this case the movements were related to timing in two different ways: the lifting of the leg and the walking on the beat.

Operating in different modes simultaneously required the children to pay attention to different stimuli at once: a visual stimulus: the movement example of the teacher, an aural stimulus: listening to the singing of the song and a tactile stimulus: feeling the

performing of their own movements. This confronted the children with the need to pay attention to different perceptual elements at once. To build the activity over time the children most likely had to engage in a process of selective attention in order to create half-automatisms, which require little attention involvement (Ashcraft, 1998). As already discussed above in lesson 6 Olivia silently sang (pronouncing the words without sound) the song when making parallel tapping movements on a drum. However, then alternated movements were offered and she did not sing along any more. The more complex movements were most likely demanding too much attention to continue performing in dual mode. Olivia at this point probably demonstrated that when movements become more complicated and take away the larger part of attention, the attention will go to the movements: a single mode response. In order to evoke kinaesthetic representation, a didactical aim might be to promote a learning process from single to dual modes in an activity. I will later elaborate on the supporting role that kinaesthetic reference might play a here.

Those who do not want to walk: in lessons 5 and lesson 7 Madeleine by now had the timing-moment perfect. She stopped when the song had finished. She added her own independent movement just after the stop moment as if to confirm the halt with her body. (This notion will be described under 5.7.6 Independent movements and will be further explored in the second study: a confirmation movement.) It was as if she needed to give an extra physical response to mark the feeling of the stop moment. Olivia by now had also timed timing-moments, even to the point where she also timed the before last note: so both last words 'stand still' of this song had a timed step. The children did walk in their own tempo, which was faster, than the offered beat. This however had no influence on the timing of the stop moment. I consider beat synchronisation and the timing-moment to be two elements, which can exist next to each other and can be regarded as the primary aim and secondary aim of a mode in an activity. Consequently kinaesthetic representation might be subject to a process of single mode elements to be grasped in sequence. The onset of the process of information construction probably depends for a large part on the teacher's choice of musical learning aims for an activity and their interpretation: specification of the mode as well as primary and secondary musical learning aims in order to direct the attention

of the children to specific musical elements. Kinaesthetic representation in the present context was seen to be dependent on the way the musical information was offered.

5.7.2 Timing

Timing was regarded in the present context as a part of kinaesthetic representation: making, feeling a movement at a specific moment. This is inherent to musical movement responses because music can be defined by its rhythmical, structural pattern characteristics (Thaut, 2005). The concept of musical movement or movement responses to music logically should have these same characteristics. Concerning the representational aspect of timing, I found the concept of anticipation to be crucial. Synchronising with the beat supposes that a child is capable of thinking ahead: anticipating what will come next. This is also the function of a music educational MoL concept: the reaction-moment, which I have renamed the timing-moment. Imitation is by definition too late, because the moment will have passed before the response occurs. Imitation is responding to a stimulus but not anticipating that stimulus. In order to respond on time the children need to anticipate the moment. In MoL the timing-moment is a moment in a song to which the children can make a specific movement or stop at a certain movement (e.g. the end of a song). Often after many repetitions the children 'got' this moment. Also timing-moments were occurring without any relation to the general tempo of the song when the timing-moment was offered as a secondary aim. (Being the teacher I did not incorporate this intentionally in my lessons plans at the time of videoing. Primary and secondary aims are a result of this study.) The children would keep on moving in their own tempo, be it marching or clapping but they did respond to the specific timing-moment. This moment is generally announced by the lyrics. Over the course I observed that timing-moments were the first musical movement elements performed by the children. The repetition of the activity most likely helped to build their anticipation of the moment. I suspect that anticipation can be learned over the time of a course. Because of the frequent repetitions of the activities, the children could learn the songs, the movements and the course of the time-stream. The concept of time-stream will be explained in a later paragraph.

Kinaesthetic representation incorporates the element of timing: feeling when the moment has to take place. Timing in the educational process is probably not a concept that should be reached at once. There is the possibility of slowly adapting to the beat. This can result in movements, which may be ahead of the beat or delayed, or movements that are direct and movement responses alternating in and out of tempo. For example the timing-moment – in this case the exact stop moment of the song *One Two* – was mastered by the children the fourth time in lesson 1. Although during the marching in *Mommy bear and Baby bear*, the children were seen to have their personal tempo, which was always ahead of the beat, this secondary aim did not interfere with the timing-moment. An interim tentative conclusion is that the activity *Mommy bear and Baby bear* was simply offered in a tempo that was too slow for the children, resulting in not reaching a possible secondary musical learning aim. Timing aspects of musical movement can also be considered a demarcation of musical time: the time-stream.

5.7.3 Time-stream

In this section I propose that kinaesthetic representation in music can only function when it is placed in the time-stream of an activity. As a result of the need to structure the analysis I observed that a song and its lyrics created the temporal framework in which the children could place their movement responses: the time-stream. So the time-stream is considered here to be the actual song/singing time, which starts at the beginning of a song and terminates at the end of a song. Within this framework the lyrics and the construction of the song – the musical form – could function as anchors (Mang, 2005) to place the movements. The time-stream provided the structural features for kinaesthetic representation to take place.

Shiobaba concluded that: “The danger is that the children will learn to recognize the movements they have been taught when they hear a piece of music, but not to listen sensitively and interpret what they hear in movements” (Shiobaba, 1993). I acknowledged this “danger” to be of major importance and a prerequisite for representation to take place. The children need to pay attention to the movements that accompany a given song in order not to just ‘move away’ without reference. To interpret “what they hear in movements”, Shiobaba suggests that something can be

heard in movements. In the present context this something is interpreted as the symbolic function of the movements, the conveying of musical information through a process of meaning-giving. This I think is the second step in the music education process. The first step, knowing the song and its movements or the other way around, creates the time-stream. The time-stream than is being giving by means of the offering of a song and at the same time can be constructed through the concepts presented in the lyrics and the movements.

An indication for following the time-stream is that at certain moments the children – especially Madeleine – in their tapping or clapping followed the lyrics and did not continue the general underlying beat. This resulted in stopping at phrase or musical sentence endings. Madeleine stopped the beat at longer notes/phrase endings, in *One Two* lesson 1 and in lesson 2 during *The little Duck*. The lyrics in a MoL song are by definition one word or one part of a word per note (see chapter 2, MoL song criteria.) There are never two or more notes per word or word fragment. Therefore the lyrics always follow the rhythm of a song and very often the beat of a song. The lyrics then can function as an anchor for the rhythm and/or the beat of a song, giving at the same time a clear indication and demarcation of the stream of notes that pas by.

In lesson 6, *Mouse and elephant* (a rhythmical verse activity: this rhythmical verse has three loud taps at the beginning portraying the walk of an elephant and then a rest in the 4/4 beat, then one more sentence is spoken without movement), Olivia started with continued clapping and then slowly, over the course of several repetitions of the activity, understood that there were only three claps. As a result at some points there were no claps on the beat. At the same time she already started speaking along in tempo. By continuously clapping during the whole song Olivia was perhaps establishing a continuing link between the clapping/moving and the non-clapping/moving part of the song. This way she could feel the whole verse in one continuing movement thereby establishing the time-stream of the song.

In lesson 1 I observed that in *Close your eyes*, Madeleine was impatiently waiting for the Peek-a-Boo-moment. In my experience this is an exciting moment for young children and waiting for it is an emotional challenge. Most of the time Madeleine could not. Eventually she skipped most of the other movements in the song and with her

arms spread out she waited for the correct moment (the timing-moment) and gave an extra push with her arms to mark the correct *boo*-moment (again what I will later describe in the second study to be a confirmation movement). So the time-stream of the song remained in full tact. In order to anticipate this special moment she marked the passing time with her arms spread out.

In lesson 8 during the activity *Plitse pletse plater*: it was clear that Madeleine knew the song and was able to synchronise with the beat. She tapped a bit with her duck and then became busy swapping her duck with Pia's (one of the adults) duck, which had a different colour. Although not tapping, she was almost in time for the timing-moment: 'canal bank', which was to put the duck next to the sheet on the floor. When she had her new duck, she fiddled with it to have the right grip, which took some extra time before putting it on the 'canal bank'. So apparently two action streams were possible: listening to the song and performing a motor action not related to the activity. All kinds of tapping tempi, duck swapping and movements with the hands and on the 'water' were seen. But whatever happened in between, the children knew exactly when the song was finished.

Also during *Plitse Pletse Plater* in lesson 4, the second time Madeleine tapped along in time, she followed the lyrics stop in the song, not the continuing beat. Then she stopped altogether and slowly raised her arm and took it to the side through the air in one bow, and was perfectly on time when the timing-moment (canal bank) had arrived.

In lesson 7 during *Close your eyes*, Olivia was ahead of the moment to place her hands before her face. Nevertheless she stayed in that position until the Peek-a-boo moment. So there must have been an idea of the stream and construct of the song. In this same activity it was also seen that Olivia gave evidence of progression in the learning of an activity. She sang without looking at the teacher from the moment her hands were in front of her face.

The activity *Mouse and elephant* in lesson 7: it was seen that after 4 times Olivia synchronised with the last beat and stopped on time with two beats, if she missed the first beat. So although the continuance of the beat was sometimes difficult (three taps in a row) the underlying structure of this part of the song appeared to be understood.

Also the fact that Olivia knew that there were three claps and did not give more claps to have all three claps performed means that in her representation she was capable of continuing the time-stream of the song and 'step in' when she could. I also observed this in lesson 8. She spoke along with the entire lyrics, almost perfectly timed. This is an example of the possibility of a dual mode without interference after a certain number of repetitions.

At one point the children missed the time-stream when playing on the back of the drums (they were originally big tin cans). This was so extremely loud, which was fun in itself, that they could not hear the song being sung anymore.

Because during and after this research project I worked as an early childhood music teacher, I had the chance to experiment with my findings in practice and I was keen on hopefully observing my findings in other teaching situations. In this context I saw the following. With a large group of 12 children in the age of 2 to 3 and their parents, we were singing *One Two* and playing all at the same time on different kind of drums. We were playing the loud, forte version of the song with 25 drums, which made a big noise. We had some very big drums. It was impossible to hear any singing. Nevertheless everybody, so also all the children, stopped exactly at the end of the song. This created a moment of intense silence in which the participants looked at each other in delight. So in this particular instance the time-stream of the song and its boundaries were fully understood, even without the audible support of singing and lyrics. Interestingly this already happened in the third lesson of this course.

5.7.4 Sequential representation

The question arose as to whether kinaesthetic representation was influenced by the order of the movements in an activity with more than one movement. Bauer and Mandler (1989) looked at effects of temporal structure in daily causal and non-causal events: the order of the parts offered – sequences. The results indicated that even very young children include information about temporal order in their representations of familiar events. Furthermore, their data indicated that young children encode temporal information in their initial representations of certain types of event sequences, namely those with causal relations among the elements. Many activities in MoL have more than one movement and these movements are offered in an often

predetermined order, portraying the lyrics of the song. It was seen that Olivia in lesson 6 during *The little caterpillar*, performed all the movements in the right order. This activity had a logical sequence of movements inherent to the sequence of transformation of a caterpillar into a butterfly. The little caterpillar had clear causal relations between the movements: the caterpillar, through eating and then its cocoon hanging in the sun becomes a butterfly. It is speculated that Olivia implicitly understood this logical inherent order of events, supported by the frequent rehearsal of this children's rhyme and the movement support of the lyrics.

There were no mistakes made in the order of the movements of *The little caterpillar*, which did happen with *Willemijntje* and *Hands in the side*. *Willemijntje* and *Hands in the side* do not have a logical movement order: an order, which could be based on a real life sequence. In *Willemijntje* there are no causal relationships between the movements: you can comb your hair and then brush your teeth or the other way around. A different order will not cause a different result. Over the three offerings in three lessons, it was seen that the order of the sequence was almost always mixed up. Nevertheless it was clear that the children at one point did know all three movements: combing hair, brushing teeth and washing hands. Perhaps because the teacher went along with the movement choices of the children – mainly Madeleine because she was often the first to respond – the children did not have the opportunity to really learn the order of the sequence as described in the song. In lesson 4, halfway, when the lyrics continued: “what is she doing there?”, Madeleine immediately started washing her hands, which is actually the third movement. The teacher went along and did the movement sequence this time in reverse. Madeleine however wanted to comb her hair now, but quickly started brushing her teeth when she saw the teacher brushing her teeth. Then when the last movement of the sequence came she already opened her arms: the ‘I am ready’ movement. This was not illogical because in her view all three movements in this section of the verse had been performed so the ‘ready’ movement now had to come (arms spread out). This last movement is logical and has a causal relationship: the cleaning up is done so now I am ready.

In *Hands on the side* the sequence of movements is fully guided by the lyrics. It literally tells you where to put your hands: at your sides, on your back and back again, hands

on your knees, then three claps, hands on your tummy and then a 'ready' movement, arms spread out. The order of the movements might be considered to be totally irrelevant. The aim is to be able to perform all the movements in a timed fashion. Kinaesthetic representation in movement sequences might depend on the logical and therefore understandable order of the movements supported by the lyrics. However, the total number of movements in one activity might also be of influence. This subject required more investigation.

5.7.5 Kinaesthetic reference

This concept resulted from a combination of the initial movement category: being moved and Metz's "tactile modelling" (Metz, 1989, p. 52). The aim is to give the children the opportunity to literally feel the beat of a song. Kinaesthetic reference might be an additional aid to feel the music, the beat, instead of only watching the movements and experimenting with them. During for example the traditional song *On a Big Mushroom*, a child is sitting on the pulled up knees of the adult and is being bounced up and down. Through the movements of the adult the child can experience the beat and the timing-moment. I suggest that it is possible to say that the primary aim of this activity is the child's experience of the beat through kinaesthetic reference. A secondary aim are the timing-moments: halfway the song, where the child "falls" between the legs of the adult and the end of the song where the child is lifted up, half upside down, holding the child by the back of the knees. Both timing-moments take place on specific words. Through repetition a child would know at a certain moment that the special moment would come. He or she would then have the possibility of preparing for this moment and might be able to place it in the time-stream of the song. Madeleine's father (sometimes replacing her mother) was not bouncing his legs on the beat of *On a big mushroom*, but on the rhythm of the lyrics, which is the same as the beat except for a few added rests. I saw this to be an indication of the feeling of musical phrase boundaries.

Kinaesthetic support was also observed from Pia and Olivia, when holding hands in lesson 5 during *Mommy bear and Baby bear*. The children initially tried to march and lift their leg on their own without support. Interestingly, later on when supported they were ahead of tempo with the lifting of their legs. The support made it easier to lift and probably therefore their response was too soon because when marching without

support they had to find the balance in their bodies first before the lift and had gotten used to this way of timing. In lesson 6 when Olivia was holding Pia's hand during *Mommy bear and Baby bear*, Pia was shaking her hand on the beat of the song. This might have helped Olivia with an external kinaesthetic input because she marched perfectly on the beat of the song. The MoL category 'movement with support' can provide children with external kinaesthetic help to support an internal feeling.

5.7.6 Independent movements.

Independent movements that occurred within an activity without an example of the teacher in the present context, I took as an indication of representation: the understanding, memorisation and then personal movement interpretation of an activity. According to Byrnes (1999), knowing a skill is the same as having created a representation of that skill. "The primary evidence that the person has specific knowledge is that the individual can evoke the relevant representation when cued in some way" (Byrnes, 1999). In this case "cued" can be all aspects of the offering of an activity. This was among others illustrated by Olivia in lessons 8, where it was seen that Olivia bounced her head along with the beat for a moment. When the song was sung the last time, Pia moved her feet in alternation to the beat. Madeleine saw this and started to slowly do this too. The movements stop when the song is finished. In this case Pia's feet were the cue for Madeleine to start responding with independent movement (not offered by the teacher!) and synchronise with the beat. Independent movements were also seen when the songs were not sung but played on a recorder. In lesson 4 I observed that Madeleine knew the song, *Mommy bear and Baby bear*, because she already started marching when the teacher introduced the song on the recorder. There were no lyrics to offer assistance. The melody alone made her march in such a way as if she was constantly lifting her left leg higher. She made a circle and stopped when she had returned to her starting point at the end of the song.

During the Goodbye song in lesson 7, the fourth repetition, Olivia, while seated on the floor bounced her legs on the last three notes of the beat very well timed. In lesson 8, when the teacher introduced this song on the recorder, Olivia again bounced along with her legs. She was sitting on the floor and had the last three bounces in alternate mode, perfectly timed. This I considered an example of her knowledge of the song even without lyrics support and she expressed this through movement.

Those who do not want to walk: the movements of Madeleine illustrated in lesson 3 the understanding of the construct of a song. After almost each turn of the song being sung, she made an independent movement: an extra step or very small jump to mark the end of the song. The steps/jumps were more than often well timed (continuing the beat), after the last note of the song. Further on in lesson 3 Madeleine even marked the endings of both phrases of the verse. The lyrics were extremely helpful in this: the lyrics end with 'stand still'. When the movement was crawling, Madeleine gave a finishing delayed clap on the floor. She was very resourceful in doing this because the extra step was now impossible. It looked like Madeleine wanted to really mark this moment by demonstrating with and to her body that to stand still is what it had to do. So she showed a delayed independent movement. The extra movement – which is the contrary of standing still – might be explained as a need to feel, the feeling of actually standing still, marking the onset of standing still. For example, in my experience often when people are advised to relax they get tense instead: because they need to feel something.

Blowing bubbles, when sung the second time in lesson 8 and all were sitting on the floor with their little pots, Olivia tapped along on the beat with her pot on the floor. She started out ahead but ended up perfectly in synchronisation and stopped on time. The 4th time in lesson 8, Olivia started to sing along, then tapped her pot and sang softly at the same time. She was synchronised again at the end: she stopped on time. In lesson 6, *Mouse and elephant.* At one point Olivia moved to sit on her knees and started to bounce along on her bottom. The bouncing was mainly during the speaking of 'this is what the elephant does', filling up the gaps without movement. She moved a bit wobbly because of her body position but continued until the end and reasonably in time. This might have been a personal way of externalising the beat of this song. In view of Byrnes' statement and the need for overt behaviour to know if children have learned something as expressed by Macintyre and McVitty (2004), I consider independent movements to be a personal kinaesthetic representation indicating a form of musical understanding.

5.8 MOVEMENT CATEGORIES

The creation of the movement categories resulted from comparing movement categories from the literature with the movements as they were observed in the music course. Generally the age group of the study was younger than the age groups in the consulted literature. Also the way the movements were related to music or movement without music had different starting points. Describing movements as a representation of musical elements or as a motor action is very different. Young and Glover (1998) described movement as a metaphor for analysing musical elements. Not a direct one to one connotation of musical elements but an approximation of abstract constructs. Davies (1995) and Russel (1965) who like Macintyre and McVitty (2004) come from a background in general physical education for children, based their movement descriptions on Laban*. The different backgrounds resulted in different ways of looking at movement. For example fast and slow is of minor importance to Davies, while in musical movement it is essential: music defines itself through rhythm and tempo (Thaut, 2005). Nevertheless the terminology of the studied movement categories was an inspiration in the construction of the present movement categories and types.

5.8.1 Movement analysis criteria

The challenge was to see if movements could be regarded as representations of musical characteristics. Would the movements used in MoL be direct or indirect symbolic actions? First it was necessary to establish which musical characteristics could be used and in what form, and secondly which movements could be assigned as being representational of certain musical characteristics and in what way.

When thinking about characteristics of music, the basic parameters of music come to mind: tone height (pitch/frequency), tone duration (length), tone intensity (dynamics) and tone colour (timbre) (Seashore, 1938). These are the essential building blocks of music. However, these basis parameters of music could not be used as one to one music to movement connotations.

*Rudolf Laban born in 1879 in Bratislava has created a system for analysing and notating the way the human body moves. His work is used a.o. in dance, theatre and physical education. Newlove, J. and Dalby, J. (2004). Laban for all. London: Nick Hern Books.

First, this would have created an excessive number of movements, which would be too specific for the age group at hand and fairly unmanageable for early childhood music teachers. Secondly, it was not possible to assign all movements or a combination of movements to one or more music parameters. Subsequently these parameters were gradually reworked to manageable, workable movement categories.

Tone height or pitch, which can be translated to contour information: “the overall pattern of ups and downs” (Howell, Cross & West, 1985), could have resulted in the category movement direction. Direction is a feature that takes place physically in space and therefore the use of direction in space is a far more manageable starting point than contour information in music. Macintyre and McVitty (2004) created a “general up-to-date framework” of non-musical Laban based movement analysis. They translated the term space into “where to move” and described this as “directionality”. This might be linked to Bamberger’s (1991) process of “actively organising incoming pitch-time phenomena” which I have described in chapter 3.5. Moving in space with “fun activities will help the children to develop perceptual skills” (Macintyre & McVitty, 2004). These perceptual skills are amongst others up and down, in front of and behind. Through movements in space that have meaning, the children might be motivated to move and consequently they can experience in an implicit way, directionality in music. Meaning, as opposed to abstractions, is given by the activity itself: being a small mouse or a big elephant for example. The concept of meaning is crucial: lyrics have an important role in understanding the symbolic musical value of movements. According to Mang (2005): “The sounds of words often operate as an anchor to the musical elements, especially the melody and the formal structure of the song”. I would like to extend this anchoring by the meaning of the words, the concepts they represent. Meaningful lyrics therefore provide the way to the understanding of implicit notions because movements in themselves are abstract entities. All kinds of meaningful movements then can evoke kinaesthetic representation of movements that will later become concrete musical qualities. The term “gestural direction” by Bamberger was adopted to create this movement category, because a gesture expresses inherently a meaning (Concise Oxford Dictionary, 1996) and therefore this term, gesture, is used to denote a meaningful movement category.

Tone duration might be translated to actual movement duration, the time it takes to make a movement. However this would have created a vast amount of different movement lengths, which would be unmanageable and too abstract: the experience of time will need some reference in the actual real world. The duration of movements might be better experienced when the movements have meaning. The implicit experience of tone duration can be evoked by direct and indirect representation of musical characteristics. Therefore I propose the following concepts.

- Direct representation: an action that creates sound and can therefore be directly experienced. There is an audible causal relationship.
- Indirect representation: there is no audible sound and therefore no audible causal relationship.

The experience of duration can for example be the opening of an imaginary curtain, where the hands portray the curtain. This way duration is experienced not directly through music itself but it provides a kinaesthetic feeling of the continuation of a movement for a certain amount of time. This movement then could be offered in an activity where the movements would receive their meaning through the lyrics. According to Macintyre and McVitty “Every movement has an intrinsic rhythm” (2004, p. 42) and children learn to control the speed of their movements in order to come to a “rhythmical pace”. So all musical movements will have inherently a durational component, which is made concrete by the act of given meaning in the music activity.

Tone intensity is inherently connected to musical movements itself: it can be regarded as the amount of strength, volume or energy (Young & Glover, 1998) used to create sound. When looking at creating sounds the age group at hand is occupied with clapping, stamping, tapping and drumming sounds: sounds without tone frequency but with a rhythmical component, promoting direct representation. Tone intensity or musical energy therefore can be regarded as a rhythmical category in which the different possibilities of movement strength can be explored. Gestural movements can also be subject to dynamics but in a different way than rhythmic movements: there is no contact surface to make the sound. Davies (1995) describes dynamics in terms of weight, qualitative space, time and flow. For example we can see a difference in taking the hands away from the eyes when playing *Close your eyes* (Peek-a-boo), a sudden movement, against opening an imaginary curtain in *Willemijntje*. The hands (flat up-

right) start in front of the eyes and go horizontally to the left and right in a fast movement in *Close your eyes* and in a slow sustained movement in *Willemijntje*. The reference will be not directly to loud and soft in the music but the movements will establish a kinaesthetic memory trace of the muscular possibilities and a kinaesthetic reference to the lyrics. These implicit notions can be later linked to musical aspects.

Timbre (tone colour) is the personal character of a tone (Bottenheim, 1957), depending on physical aspects like overtones and bodies of resonance. Dynamics, the amount of energy put into a movement, can influence the timbre (Michels, 1990). Timbre is a musical characteristic inherent to the musical equipment – among which the voice – that is being used in MoL lessons. A certain level of timbre control assumes the control of dynamics, which in turn assumes the control of certain movements. Therefore offering of a whole range of movements to practise and experiment with is a prerequisite to possible timbre control and therefore timbre is not a movement category in itself in the present context.

5.8.2 Movement types

To capture the many movements possible in the music education environment, I decided on two broad types of movement, which at the same time can incorporate direct or indirect meaningful musical constructs.

5.8.2.1 Rhythmic movements

These movements are tempo/beat related. They follow the beat of the song and sometimes the rhythm of the song. Four important responses were observed, which the internal observer confirmed:

- a direct movement response: in tempo, a synchronised response
- a movement response ahead of the tempo: a response faster than the offered beat
- a delayed movement response: slower than the offered beat
- a movement response alternating in and out of tempo

The beat can be exteriorised through different bodily actions: e.g. marching, stamping, jumping, clapping (hands on surfaces, objects) and tapping (hands on surfaces,

objects). In these kinds of movements dynamics can play a role. Rhythmic movements always do have a contact surface on which the rhythm will sound: e.g. floor, objects (toys, drums, sticks, chairs) and limbs.

5.8.2.2 Gestural Movements

These are a whole range of different movements, which create an indirect representation of the music. The song lyrics are an important part of gestural movements in order to give the movements meaning. The whole body and/or parts of the body can perform gestural movements. A feature of these movements is that there is no contact surface. They relate to implicit notions of close, far, up, down, high and low (Grunwald, 1989). Russell describes these movements as “shaping movements in the air with the arms or legs, gathering, scattering and penetrating the space” (Russell, 1965). The internal observer considers these movements also occurring in space. From Davies I can add: the highlighting of body parts and restricting the use of body parts. Young and Glover (1998) describe qualities of sound, timbre, as qualities of movement. Concerning preschool children the internal observer expressed a different opinion: qualities of sound depend on highly controlled body movements and bodies are never the same and have their own way of moving, which must be respected. The view of the internal observer was that qualities of movement are related to a strong or weak movement response. This might have all kinds of origins: a child is tired, a child is trying to understand the movement and/or motor development has not reached a certain level for example.

5.8.3 Activity types and functions

As I already have mentioned, MoL uses 4 movement categories, the initial movement categories, to construct clear activity aims (see above). In order to define the movement activities in MoL more specifically, these categories were reworked to capture the movement types as outlined above. Children aged 18 to 36 months will benefit from clear single mode or simple dual mode activities in which they do not have to spread their attention to too many simultaneous responses.

5.8.3.1 Rhythmic activity:

The aim is to synchronise body movements with the tempo of the music: to follow the beat. The representational action of anticipating is involved. The body is partly or wholly involved with repetitive actions. Dynamical aspects can play a role. In order to promote synchronised movement responses to the beat, the choice of tempo is crucial.

5.8.3.2 Sequential activity:

The aim is the order of the movements. Music is an abstract temporal art form and can be considered a string of events over a certain period of time in a specific order. The causal relations between the movements, which may provide an anchor for the temporal structure, are maintained through the portraying of the lyrics through the movements. Within these sequences gestural and rhythmic movements can appear.

5.8.3.3 Timing activity:

The aim is to anticipate one movement for it to be on time. This movement may stand out against another 'secondary' movement or it can be the end of a repetitive movement: noticing endings (Young & Glover, 1998). For example *Mommy bear and baby bear*: the lifting of the leg is a timing-moment. Secondary is the marching of the children on the beat.

5.8.3.4 Gestural activity:

The whole or parts of the body are involved. The articulation of the body follows the lyrics of the songs. There is an indirect connection with musical elements. The movements can function as kinaesthetically feeling direction and space in music. They might provide the initial notions of melodic elements. These movements are also a reinforcement of the lyrics of the song.

These 4 activity types can contain one of the initial movement categories. For example a timing activity can be the activity *Mommy Bear and Baby Bear*: moving with support. The primary aim is to lift a leg at a certain moment. To support the children in their balance, carers and children can march around holding hands. Another example is a

combination with 'being moved': a Dutch traditional song *On a big Mushroom*. Here the children are bounced up and down on the carer's knees when sitting on the floor. The highlight of this activity is the lifting of the child almost upside down above the carer's head holding the child by the back of the knees: a timing-moment. Through rehearsal and kinaesthetic reference the children will remember and anticipate this moment. The MoL categories 'movement by self' and 'putting something in motion' cover most of the activity types. The possible construction in this way of musical movement activities suggested here is of course not definitive and very much open to new findings. Nevertheless, the present construction supported the framework for the second study.

5.9 ANALYSIS OF THE PARENT DIARIES

The diary questions (see appendix C) were kept as simple and straightforward as possible to accommodate the parent and carer in observing their child's musical behaviour. It was important they should be encouraged to keep the diary during their busy lives. Also the diary questions hoped to help to focus the observations.

It was found that song and movement do occur at any time and any place. Musical activities are initiated in the MoL environment and do find their way in different forms and shapes outside this environment. Personalised responses of the children with and without encouragement – cues – have been observed and described by the diary keepers.

The diary entries have been collected into the following categories:

Movement responses without a cue; movement responses semi-cued; movement responses cued.

A response to a cue can be personal or guided by the adult/carers. Different cues were seen: objects and verbal cues (e.g. a question).

5.9.1 Without a cue

During play

**Open and close.* Her mother wrote that Madeleine sang the words and made the movements. There are two entries for this song, so Madeleine sang the song at least

on two occasions. Another entry describes that Madeleine sang the words and made the movements of *open and close*. Her mother added: “During a couple of weeks this was one of her favourite songs. She sang it a few times a day”. The difference in response in the MoL environment – almost no response – and the home is interesting. Although this is an example of an activity that does continue outside the music educational environment, the difference in amount of responses is not yet understood and asks for further investigation.

Transfer of elements of a MoL activity

*Although this is not a song used in the course, Pia writes that Olivia gets her bear and starts singing “Sleep little child sleep”, a Dutch traditional, while rocking her bear in her arms. When the song is finished she puts her bear in her little toy buggy. This might be a response to the Cuddle Bear song use in the course, after which the bear is put back in his sleeping bag (his home, in fact a pillowcase). Her actions had the same construction only the song was different. This might be seen as the translation of the action/movement of one song to another song. The movements keep their original function. There is a double transfer here: transfer to an action with a bear (from being moved to movement by self) and a transfer of the movements to another song. In the MoL course the teacher would cuddle and rock a toy (e.g. a bear) and the children were rocked and cuddled by their parent/carer during the singing of the song. Olivia transferred the rocking of herself, the action performed by her carer, to her bear. The actions of her carer (see below) and the teacher in the course might have functioned as an example.

Daily setting

*While sitting in her buggy, outside and being pushed by Pia, Olivia spontaneously starts to sing “the ducks in the box”. This is the melody of the *cleanup song*, which had been sung that morning. Later on she sings the lyrics used that morning “the ducks in the nest”. Pia joins her in the singing. Because she is sitting in her buggy, there are no movements. The *cleanup song* can appear during a course in different variations depending on the objects to be put away and where they are being put. The construction and melody of the song remains the same only the specific nouns are

changed. Pillowcases, bags and boxes in different shapes and sizes are used to put the objects in.

*Madeleine's mother wrote that during play and dinner Madeleine almost daily spoke the words of the rhyme *The little Caterpillar* and made the movements.

5.9.2 Semi-cued

During Play

*That day Olivia and Madeleine were playing together with Pia. They had sung *My hands have disappeared* and Pia had added a variation of her own: "My head has disappeared" into her pullover. Half an hour later during play, while making a puzzle, Olivia puts a sort of pointy hat on her head, which makes almost all of her face disappear and she sings: "My head has disappeared". The cue was given, however Olivia transferred the variation of the lyrics of the song given by Pia, to a similar but different situation.

Different daily settings

*Madeleine's mother wrote in her diary: "During breakfast and on all kinds of moments she takes her notebook with songs and sings them all, with movements". The parents did receive all the notated vocal lines of the songs after the lesson. The format was such that the songs could be put into an ordinary small photo book, which is easy for the children to handle because of the plastic covers. This is a usual procedure in MoL courses. How Madeleine recognised the songs from the notes is not clear. However most of the songs had pictures, which portrayed a reference to the theme of the song. Also the layout of each song was different. Perhaps the combination of the layout and the pictures made Madeleine remember the activities, but this is speculation and should be looked into further.

5.9.3 Cued

During Play

*Olivia and Madeleine playing together. Pia asked if Olivia remembered the *Cuddle bear* song. Olivia sings the *Cuddly bear* song and rocks the bear in her arms. After a 5-minute walk with the bear in the buggy, Olivia takes him out again and now starts again singing the cuddle bear song without encouragement. She also likes to be in Pia's

arms and Pia sings the cuddle song for her. Then Olivia is the cuddle bear. Clearly Pia gave a cue here to see if she remembered the song from the course.

* Olivia and Madeleine playing together. When playing with a bear, Pia asked Olivia if she remembered the song *Mommy bear and baby bear*. Olivia and Madeleine sing together while Olivia is marching in circles and lifting her leg on the right moment. She marches without a bear. At one point Olivia sings alone. A verbal cue.

Different daily settings

* After breakfast, Madeleine took an umbrella and sang *Through the rain*. No movements were noted. An umbrella has not been used in the course. The song was offered with movements and accompanied by a CD. An object was a motivational agent to start singing the song. An implicit causal relationship: when it rains you need an umbrella. The lyrics of the song portray the walking through the rain and the raindrops that fall on your raincoat. In this case the object was the cue for the song.

* Both children are at a playground with Pia. The children see a child with a little pot to blow bubbles. They want this too. Pia sings the song *Blowing Bubbles* with them together and they answer yes all the time. Although this activity in the course does not contain any musical movements, except for the blowing: voice formation, the activity does contain a musical form aspect: singing – blowing – singing – blowing.

* During diaper changing. Madeleine starts to sing *On a big Mushroom*. Olivia joins her while lying on the bed to be changed. The song contains a phrase that says: “both his legs, hop! in the air”. This is a cue for Olivia to put her legs up in the air, which is very convenient for Pia to do her work. When Olivia is ready she sings the song again and rocks left and right during the lyrics: “ hopping back and forth”, (in Dutch this means going from left to right) and she lifts one leg on: “both his legs, hop!”. Possibly, perhaps Madeleine started this song because of the reference to legs, which go up in the air during diaper changing, an item that Olivia seemed to have used spontaneously. *On a big mushroom* is a ‘being moved’ song. Olivia transported this to a ‘movement by self’ situation.

* During dinner, both children together. When the rhyme of *The little caterpillar* passed on the CD, Olivia starts making the movements together with Madeleine.

Apparently they made the walking (with fingers), the cocoon (both hands make an O shape) and the butterfly movements (hands up and crossed by the wrists and waving). The first time they started with only these movements. When the song passed a second and a third time they also spoke the lyrics out loud. Olivia not completely. This indicated that the verse slowly came to being understood by the children. Repetition is vital and a continuance outside the music education environment helps to build the activity.

* Before sleeping. Caroline, Madeleine's mother, sings *Cuddly bear*. Madeleine does not sing the words, but she does rock her doll and her mother also has to rock a doll. This song is sung every night and is part of a whole repertoire of 4 to 5 songs Madeleine sings before she goes to sleep.

Additional information from Pia: "I wrote down the songs and movements on the days that I had Olivia and Madeleine together (Monday, Tuesday and Thursday). They sang most of the songs together, but often Olivia started a song with movement and Madeleine joined her. They sang often when I had put on a CD (Music on the Lap or French songs from Madeleine). They often danced to the music without singing. We also used musical instruments like a drum, maracas and flute and marched to the music around the room.

Caroline also wrote in her diary that Madeleine often wanted to listen to *Tzigane* of Ravel and the *Carmen* suite of Bizet. Also Madeleine likes to listen to CDs of her mother: singing accompanied by harp.

5.9.4 Discussion

The diaries revealed interesting information, especially about the two songs, which did not seem to work in the lessons but did at home. Although it is necessary to go deeper into this before drawing any conclusions, it does indicate that no response or a weak response in the lessons does not indicate that the children did not pay attention or did not understand an activity. The point is that the diaries gave a personal reflection of the parent and the carer. In addition there is another point that weighted heavily on the results of the diaries. A very unique situation emerged from the recruiting of

participants for this study. Both parents of Madeleine were classically trained singers on a high level and the carer of Olivia was in the process of becoming an early childhood music educator herself. She followed a music course specifically for carers in day care centres and playgrounds. As the children were often together with Olivia's carer, a situation was created in which the carer took the opportunity to guide their musical play and singing. In Madeleine's home listening to a large range of classical music was a regular activity. Her mother told me that Madeleine also likes songs by Stravinsky! This puts the diaries and the notion of parent and carers as co-observers in a different light. The participating parents and carer in the first study were both professionally involved in music and music education. Based on the experience as a MoL teacher myself, this is not a regular situation among parents and carers who accompany their child to a MoL lesson. This might have consequences for the diaries in the second study.

The task of this chapter was to report the observations of the first study. The next chapter will describe the methodology of the second study.

6 METHODOLOGY II

6.1 INTRODUCTION

The second study was conducted to observe movement responses of a larger group of children. The resulting categorisation of the first study became the basis of the two sets of activities that were used in the second study. The analysis of video data of the first study had created the musical movement categories based on my observations and those of the internal observer. It appeared that these categories were surrounded by criteria to bring forth purposeful movement responses. Both the categories and the criteria were the foundation on which the second study was based. They provided the structure to focus the observation. An extra research question was added based on the observations of the first study: the use of objects during musical movement responses. The second study consisted of 4 related case studies: a multiple case study. A case in the present situation was a Music on the Lap (MoL) course of 8 lessons of 45 minutes every week. The number of lessons, 8, in a course was necessary in order to observe the musical learning process unfold through movement responses. The first study had showed that a difference in learning style could cause some children to first look and listen, and later, perhaps even after a few lessons, respond. Also children may miss a lesson due to different reasons, for example illness. A highly experienced teacher in the Netherlands – the internal observer – was the teacher of two courses and myself gave the other two courses.

6.2 RESEARCH APPROACH

The research approach taken in the first study was continued in the second study. It was hoped that the second study would give more instances of phenomena, which had been observed in the first study and possibly more insight in movement responses of young children. Also this study asked for a real world situation to observe the movement responses of the children in a regular music education setting for this age group. This was taken one step further: the courses were regular music courses that would have taken place with or without the study. The courses were not presented as research courses, but as courses with an extra element.

The framework for the study was derived from the MoL setting – the context, planning and didactical underpinning of the lessons. The difference with the first study was that in each course a set of activities was inserted for specific observational aims. The activity sets were based on the outcome of the first study. Where the first study could deliver the categories; the second study could use these categories to focus the observation and at the same time could profit from the observations of the first study. Following the MoL structure in the lessons of the second study was necessary to create a naturalistic setting and to realise “applied practice-related research” (Hultberg, 2005). Because this study aimed to contribute to theory development of the musical learning process of pre-school children, the total study became an educational process itself of which the other teacher and myself could profit.

“Researchers in music education need practitioners. Without practitioners there would be no area to explore” (Hultberg, 2005). The role of the participating teacher next to the researcher herself was considered to be of major importance. Before starting the study, one of the conditions for collaboration expressed by the teacher was that no obstructions caused by the research process should arise when giving the MoL courses. Other important elements were that the researcher was familiar with the MoL practice and the environment was safe and respectful. Also the discussions and information beforehand – articles, results of the first study – through which the teacher obtained a thorough pre-understanding of the research topic and the conviction that knowledge gained could be valuable for practice, were very important. On top of this the teacher could reflect on and give suggestions about activities in the activity set for the data collection of the main study. Consequently a combination of free and fixed content of the lessons – prescribed and free musical activity sets – allowed the teacher to operate within a realistic setting. Constant reflection on and evaluation of the music lessons by the teacher is part of the MoL practice, producing a continuing process of adaptation to the musical learning situation. During communication with the participating teacher, which took place before and after the lessons she gave, a process of formative action research (Hultberg, 2005) emerged that allowed for possible modifications of the overall design of the study where appropriate. This process of formative action research will be described in chapter 7.3 .

6.3 RESEARCH QUESTIONS

The research questions of the first study were also applied in the second study. Furthermore, in the second study a question was added because of specific observations from the first study:

- the use of objects during musical movement responses.
 - o what are the possible influences on the movement responses of the children

Although not an explicitly formulated research question, a further objective of the second study was to see what the influence of the teacher was in relation to the movement responses of the children. According to Metz (1989) “teacher interaction with the children [...] revealed that increases in music-related responses were dependent on the guidance of the teacher”. The aim was to further explore what the influence of the teachers’ guidance would be.

6.3.1 Objects

In the MoL environment objects are used to offer the children musical experiences to extend the control of their bodies to and through the use of objects in order to explore their musical surroundings. Preferably objects – toys, musical equipment – that represent the tangible part of the world a child lives in. This exploration of the world of sounds and musical characteristics can provide the onset of the music symbolical function of objects. Resulting from the pilot study the initial movement category of ‘putting something in motion’ was created to establish the use of objects as part of the movement repertoire and responses of the children.

From the first study it appeared that the use of objects influenced the movement responses of the children. To investigate what the influences might be and to what extent they might have an effect on the representation of musical movement, became a matter for further exploration.

Different bodily positions towards an object and during the handling of an object, as well as semi-spontaneous language variations initiated by objects were observed during the first study. Depending on their function and use in the music education environment, objects might initiate and stimulate musical movement representation.

While objects can have an effect on the overall movement performance of the children, the possibility may exist that simultaneously they can stimulate the act of meaning-giving by extending the activity's aim as expressed by the lyrics.

At this point it is perhaps appropriate to elaborate on the concept of the act of meaning-giving as I take it within the context of the study. Again the connotation will be tentative considering that it is an emerging aspect concerning movement responses in the music educational environment. Because it was possible to denote movement responses as action symbols, enactive representation where movement is a physical metaphor, the act of meaning-giving will then have to be part of this action and is an active process. As I consider this to be a personal constructional process, a constructionist perspective where "meanings are constructed by human beings as they engage with the world they are interpreting" (Crotty, 2003), the symbolic value of the movement responses receive their meaning in the interaction between the child and the object: supporting implicit and explicit notions that can be related to musical characteristics. This corresponds with the conceptualisation of embodiment as an enactive approach by Varela, Thompson and Rosch (1991), who incorporated "sense-making" in their definition of the term. The question is then what possible criteria and conditions could be imposed on the use of objects in the musical learning environment to promote a musical symbolic relationship, hence musical learning.

The safe and pedagogical use of objects has been described in the material of the MoL teacher-training course (Gestel, et al., 2010). The specific functional use of objects concerning the musical learning process is implicitly present but not supported by any document. The following therefore has been partially derived from conversations with the principal teacher of the teacher-training course.

To arrive at musical experiences, objects can be regarded as tools (Levinowitz, 1998) or as an extension of the body (Miller-Bryant, 1983), because their function is to serve the musical learning process. According to Levinowitz: "Real musical instruments, like tools, can [...] become simply extensions or amplifications of the body's ability to be musically expressive" (Levinowitz, 1998). An important part of many activities in MoL is dedicated to the exploration of the objects used. In MoL this type of exploration is

called experimenting and is used to explore how objects respond and how a child can control the object. The premise taken here is that objects can be used in the music educational environment to convey explicit and implicit characteristics of music by putting objects into motion. For this to happen in a purposeful way it is necessary to look at the music symbolical functions of objects.

Movement can be regarded as a symbolic action through a meaningful visual clue: an object with inherent causal relationships that can be made visible. Metz (1989) reported about the use of objects in her study with groups of 2-, 3 – and 4-year-olds in a preschool setting where excerpts of music were played in the specially set up music area to which the children could respond, that the use of objects was an iconic representation of music-related movements where the

“emphasis was placed on the object’s visual representation of a movement idea, not on an arbitrary notational symbol of a music concept. Researcher-designed objects visually represented the movement and music idea (e.g. a hand-held horse suggested galloping). Objects relating to some specific quality of movement in the music elicited increased music-related movements from the children when they listened to music” (Metz, 1989, p. 57).

The children might have imagined the movement possibilities pertaining to a horse and transported this to their own motion. However, the representational action described here depends on the level of insight a child has reached in order to detect the relationship between the symbol – a toy horse – and what it stands for (Deloach, 2000, p. 329).

Symbolic interaction with objects was submitted to a laboratory-based experiment within the area of studies of child development by Tomasello, Striano and Rochat (1999). Their aim was to explore the use of single objects as symbolic representations of other single objects without the possibility of verbal guidance. Among the 40 participants 8 children of 19 months and 16 children with an average age of 26 months were submitted to two conditions: one with object to object representation and one with gesture to object representation. They concluded:

“the object play of children at this age is not truly symbolic, but might instead involve imitation of adult actions on objects (that the adult sees as symbolic)” (Tomasello, Striano & Rochat, 1999).

Symbolic play with objects is supported by adult language and imitation of adult action. The question is then if the younger children in Metz’s research were actually capable of iconic representation or were imitating an example. However, the larger issue here is the music educational quality of the use of objects in a musical learning perspective.

The music education environment in this matter has a task in providing the children with causal knowledge (Gopnik, 2009): how objects work in the musical world of the music education environment. Causal knowledge is understood here as knowledge about how the world works and according to Gopnik (2009) “children develop causal theories of the world from a very early age”.

DeLoache has investigated the development of early understanding and use of symbolic artefacts, literal objects and according to her

“representational insight must be achieved to use a symbol. One must detect and mentally represent, at some level, the relation between the symbol and what it stands for, its referent. The attainment of this insight depends on the interaction of several factors, including the degree of physical similarity between symbol and referent, the level of information provided about the symbol - referent relation, and the amount of prior experience the child has had with symbols” (DeLoache, 2000, p. 329).

The use of objects as support for acquiring musical knowledge through movement is subject then to certain conditions. Within the category of dependent movements (see chapter 5.5), the teacher probably can provide a supporting role in this matter.

6.4 METHODOLOGICAL APPROACH

The approach taken was the same as explained in chapter 4.4 (p. 64) using the observational technique of direct observation (see 4.4.2). The difference was that the second study was a multiple case study where the first study was a single case study. However, as both studies were created and conducted with the same method, aims

and views, the whole of this investigation can be regarded as a multiple case study conceived as described by Baxter and Jack (2008): “a collective case study that will allow the researcher to analyse within each setting and across settings to understand similarities and differences”. Another difference was that although using the same data collection techniques as in the first study, the data collection in the second study was much more structured and this structure was based on the results of the first study. Where the first study was more directed at creating research possibilities to enable discovery, the second study continued to build on these findings to arrive at more developed interpretations strengthened by a larger corpus of examples of movement responses.

6.5 DATA COLLECTION

This section will describe how the data in the second study were collected. The aim of the second study was to collect and analyse more instances of movement responses of children in the age group of 18 months until 36 months, by way of a field notebook, videoing, teacher interviews and parent diaries. The first study had provided the structure of the observation in terms of movement categories and movement types.

6.5.1 Ideal world versus real world

A group of children was needed who would receive music lessons on a regular basis to observe their movement responses. It appeared that the foreseen age groups for the studies were too much of an idealistic situation. An ideal group in MoL would consist of 8 children in an age span of half a year. In reality groups are formed on the basis of application and often financial reasons: a course must be profitable. In order to avoid a hidden laboratory situation I went along with the real world groups as they were naturally formed by the usual ways of recruiting children and parents for a MoL course.

A real world versus an ideal world also meant that sometimes guest children were present, often a sibling who was staying over. And most notably as a first we also had a dog present. A lovely animal that did not make a sound and in no way interfered with the lesson. Grandparents came in pairs or sometimes accompanied the mother and often a little baby sat in a baby chair at the edge of the room. These examples

underline that Music on the Lap can be considered a family happening pulling it into the realm of a community in which children, parents, grandparents and attendants have the opportunity to meet with musical experiences in a co-active fashion. Furthermore this notion of a musical active community is enriched by diverse cultural influences. In one of the Zevenhuizen courses there was a girl of Russian origin and in one of the Diemen courses a girl with a South American background. At the moment, The Netherlands is becoming an interesting mix of diverse cultures and most courses have children who do not have Dutch as their first language.

6.5.2 The sample

The rationale for the study was to understand the central role of movement responses of young children in early childhood music education. This concerned specific music education courses where a parent or a carer accompanies a child. These courses constituted therefore the population from which the sample had to be drawn. Considering that this study took place in a certain and defined context – Dutch Preschool Music Education – it would have been ‘unnatural’ to select participants and assign them to a course. The regular way is that parents subscribe to a course, which has been announced. Assigning children to a course would not be the regular way in which MoL works.

Generalisation to a specific audience is not inherent to the flexible design (Robson, 2002) of this study. However, in generating theory to support musical learning in preschool music education contexts a wider resonance (Mason, 2002) of the results of the case study is desirable (see also 4.4). The representativeness of the population took place on a different level. According to Mason (2002, p. 123)

“The aim is to produce a relevant range of contexts or phenomena, which will enable you to make strategic and possibly cross-contextual comparisons, and hence build a well-founded argument. In this version then, the sample is designed to encapsulate a relevant range in relation to the wider universe, but not to represent it directly. This might mean a range of experiences, characteristics, processes, types, categories, cases or examples, and so on.”

Mason refers to this as strategic sampling (Mason, 2002, p. 124).

The population of preschool children in the Netherlands – children aged 0 to 4 years – can be considered relatively homogenous (they go to play grounds, day care centres, have swimming lessons, have baby massage courses etc.). Especially because they have not yet entered primary education. The present sample is drawn from the population of children participating in a MoL course. Consequently other courses could have been chosen than the ones present in the study. There is one central point where teacher training can be received in the Netherlands. Because of the fact that all MoL teachers virtually have had the same training, every MoL course should be representative of the general early childhood music education environment, though personal teaching differences do occur. The wider population of children is then more or less established through its educational context. Silverman (2000) refers to this as purposive sampling.

“Purposive sampling demands that we think critically about the parameters of the population we are interested in and choose our sample case carefully on this basis” (Silverman, 2000, p. 104).

In order to investigate the process of movement responses, a music educational process, the place for this to occur within an educational setting was the MoL environment. The sample therefore in the second study can be regarded as a purposive strategic sample.

The aim was to reach a total number of 30 children in the age group of 18 to 36 months. Availability and location played a role. Normally at one location a maximum of 3 courses are given in the morning. Courses are rarely given in the afternoon. Courses are given twice or three times a year with an average of 10 lessons per course.

This means that for example a course for one group aged 25 to 36 months would pass twice or three times a year taught by the same teacher.

To reach a sample of 30 children would have as a possible result that with one teacher data collection would take a minimum of one year, because a regular course has a maximum of 10 participating children or less. This would have created a time boundary too large within the scope of this study. Therefore two other courses have been selected which were given parallel in time by a second teacher: the researcher herself, thereby restricting the data collection time to about three months. Having

ample experience in MoL and a teaching location at my disposal this was a workable choice. Nevertheless issues emerged regarding my double role as a researcher and a teacher, which will be described later (see 7.3.1). Eventually a total of 25 children participated during 4 courses.

6.5.2.1 The Sample in relation to the participating teachers

To collect data from a larger group of children I decided to videotape lessons of three teachers. To provide a genuine teaching example from practice three teachers in different stages of their professional experience were asked to participate: a beginning teacher, a teacher with 7 year of experience (the researcher) and what can be denoted as the most experienced teacher in the Netherlands with 17 years of experience.

Considering that a further objective of the second study was to see what the influence of the teacher in the musical learning process was in relation to the movement responses of the children, the research process itself already brought to light in an early stage that teaching capabilities played a vital role. Along the way it was seen that the guidance of the teacher in the pedagogical-didactical process, was of vital influence on the movement responses of the children. In MoL the circumstances under which children are offered musical activities need to be optimal in order for the children to arrive at musical experiences from which they can learn. The nature of the interaction between the children and the teacher should provide an essential part of the learning environment for the children. In short: the quality of the teacher is important in the musical learning process.

Both the researcher and the internal observer assessed the beginning teacher's lessons by viewing the DVDs. In this process the MoL criteria for evaluation of a lesson were used. These criteria reflect the functioning of a MoL teacher during a course and are described in the teacher-training course material (Gestel et al., 2010). There are 5 categories: Preparation (for example transitions, time management, alternation between action and rest); Musical (for example use of pitch, repetition, appropriate song material); Didactics (for example manner of offering, tempo of lesson, structure of lesson, reaching of lesson and activity aims); Attitude (for example consciousness of position of role model, responding to the situation) and Social (for example creating an

atmosphere, respecting the child, dealing with parents). Although many of these elements were present in the lessons, they were not sufficiently worked out and as a result the musical learning aims were not reached.

It was concluded that this teacher actually stood at the very beginning of her MoL teaching career and had not yet the means and capabilities to evoke a solid didactical learning process to promote the children's musical experiences. Based on Metz's (1989) observation that music related responses depended on teacher guidance, analysis of these lessons would therefore have resulted in reporting the inadequacy of the learning environment. Moreover, it would have been unethical to expose this teacher to strong analysis with a possible negative result. Especially because this teacher in fact had not yet been given the chance to develop and professionally mature in practice.

Personally I felt that although the beginning teacher was enthusiastic to participate in the research, I should have been much more conscious of the consequences of putting a camera in a music education setting where the teacher not yet had the professional experience of working for a reasonable period before being intensely observed and analysed.

This resulted in not including the data from the lessons of the beginning teacher. Therefore the original sample of 30 children was narrowed down to 25 children. To study children's musical learning an optimal situation has to be created. The valuable result, which could be drawn from this situation, is that teaching quality is of vital importance for the musical learning process of young children and it provides further support of the guidance of the teacher most likely being of influence on the movement responses of the children.

6.5.3 Locations

The second study was conducted at two locations: the music school of Diemen and Foundation De Zeven Muzen in Zevenhuizen. Both locations were the regular Music on the Lap teaching locations of the participating teacher and myself. Therefore music education environmental conditions were in place and because both locations were

know for many years as being MoL locations, there was a reasonable certainty that children and parents would be interested in a course.

6.5.4 The participants

At both locations two groups were formed along the regular ways of offering a MoL course to the public. The parents of the Diemen courses were informed by email and over the phone and no one had any objections to participate in the study. My concerns were that the number of children in one of the Diemen groups – 10 children aged 24 to 36 months – might be too large in order to capture every child on camera continuously, even using two cameras. However, this could be an experience in itself. The two courses in Zevenhuizen were normally advertised on the web page of the foundation De Zeven Muzen. Due to unforeseen circumstances it had not been possible to inform the parents in advance of the fact that the courses would be used for investigation. They were unexpectedly confronted with cameras the very first lesson. Nevertheless there was no opposition against their child being filmed for investigative purposes. On the contrary: they were enthusiastic about the study.

The analysis of the first study brought new information to light concerning the role of the parents in the music lessons. The challenge was to explore ways to control the parental participation without either inhibiting it or leaving the parents too much freedom to be over controlling or passive. The manoeuvrability of the research method's flexible design (Robson, 2002) allowed for the discovery of parents being an integral part in the musical learning process of the children during a MoL course. I observed that certain supporting movement behaviour of the parents appeared to be important in the musical learning process of the children. This specific behaviour was even captured in a movement category. Therefore in the second study I refrained from using the parent direction-sheet.

All participating parents and carers received and signed a consent form that adhered to the ethical guidance as issued by the Graduate School of Education, Exeter university (see appendix A). Because it was inevitable that the first names of the children would be used in the courses – this is inherent to MoL – and would therefore be audible on the videotapes, there was no point in concealing the children's first

names. Although not literally mentioned in the consent form, the parents and carers were asked to give consent that the data would be used in the study and in further either spoken or video presentations of the data, this implied the use of the children's first names. As an appreciation for their participation all children were given a DVD of one lesson of the course.

6.5.5 Materials

The movement responses of the children were captured for analysis by a digital consumer camera. In each course two cameras were present. One camera on a tripod for total capture and one camera for specific capture which could move around. The latter was either operated by myself or a student of the MoL teacher training course. The video data were imported into a computer and put on DVD. The DVD was divided into chapters to facilitate the analysis and fast finding of relevant material. Copies of the lessons then could be made and given to the internal observer on DVD. This also ensured a second location where the material was being kept for it to be safe.

6.5.6 Parent diaries

The point of the diaries was to see what would happen in the week immediately after a lesson in the home environment. The parents in the second study were given a weekly diary form to fill in. The next week they could return the form and receive a new one. Some modifications were made as a result of the analysis of the first study. The diaries were constructed in a semi-structured way (open and closed questions) to accommodate the parents and carers. More general questions were incorporated like: "Which musical activities performed by your child have you seen this week?" Also a specific question about tempo and movement was added: "When clapping, stamping or tapping together, do you feel that your child goes faster/slower/the same as you?"

First of all I was now confronted with a different situation compared to the diaries of the first study. Among the participating parents there were no professional musicians. There was one pedagogical worker who delivered extensive diaries: she added extra pages per week. She was the only one who worked professionally with young children and her diary showed that she had ample observation skills of young children. Although all parents did try to fill in the forms it proved to be quite a challenge. Often

they did not have the time or scribbled notes in their calendars to put in the form later, but not really remembering what the notes were about. Some parents did not fill in the forms at all because they did not know what to look for. This was reported to me during the conversations after the lessons. The question about tempo (see above) had an interesting result: most parents reported that their child was clapping/stamping/tapping slower than they were clapping/stamping/tapping themselves. This is interesting because during the lessons it was seen that mainly the children were clapping/stamping/tapping faster than the adults. During the lessons the adults had to adapt to the natural tempo of the children. The question was: what was the parent's example at home? What tempi did they offer? This unfortunately cannot be retrieved. Nevertheless, an interesting discrepancy that should be subject to future research.

Tafari reported that the diaries were "onerous to the parents" (Tafari, 2008). This might have very well been the case in the present study but the parents did not report this. The parents and carer in the first study were all professionally involved in music. This might have been a motivation to keep the diary. Moreover, they were probably better equipped to observe their children in a musical way than the parents and carers without a professional musical background in the second study.

A conclusion is that the construction of the diaries should have been different. The questions most likely were not clear enough to generate useful and coherent information. A separate study is needed to find out what works and what does not work. My conception of parents being co-observers might be interesting but it would have to be fully worked out in a different research project. Possibly more guidance in this co-observation process is necessary as well as clearer conceptualisation of the questions.

The diaries of the second study were therefore excluded from the analysis, but will most certainly be kept for a different study within the Music is Movement project. They will serve as a guideline for a future study about the construction of appropriate diaries.

6.5.7 Teacher interviews

I wanted to have a second opinion from the participating MoL teacher on her lessons. Therefore after 6 of the 8 lessons given by the principal teacher a short interview was held in which she could reflect on what just had happened in the lesson and her personal ideas about this. The interviews were held right after the second research group. This way all the observations of the teacher would still be fresh in memory. The interviews were of a semi-structured nature.

6.6 PROCEDURE

To focus the observations of the lessons clear choices had to be made considering that 4 courses of 8 lessons 45 minutes each, would generate a total of 24 hours of information. A choice in activities to be observed had to be made. Also the teachers needed to be equipped with guidelines concerning the numbers of uses of the activities in the courses and the use of tempo in the activities, which would be a reflection of the findings of the first study.

6.6.1 Activities

The first study had provided the activity categories for the observations of the second study. Each activity category should be present in the courses. The activities were chosen from the regular MoL courses. With most activities there is at least 10 years of experience, and teachers know the appropriate activities for each age group. Concerning the activity conditions, as described in the first study, only tempo was prescribed in an advisory manner for the teachers. The other conditions are described for each activity and are a prerequisite for an activity and therefore an inherent factor. Knowledge about activities differs from teacher to teacher because new activities are created every year and the number of activities (songs often with movement actions) circulating in the Netherlands is considerable. I did not pretend to have knowledge of all available activities. The participating teacher in the second study was considered to be an integral part of the study. In fact the study might be considered a form of a researcher approach: researching your own practice. Therefore the participating teacher was involved in the preparing of the activities. She was informed through telephone calls and emails. An email was sent to her one and a half week prior to the main data collection that contained a request for a suggestion for activities. The

request was based on the idea that, if possible, all of the four groups of activity types should be offered:

- two rhythmical activities, one with and one without objects;
- two gestural activities, one with and one without objects;
- two sequential activities one with and one without objects;
- two timing activities one with and one without objects.

Objects in these categories can be either musical equipment or toys.

My starting point was that one activity of each prescribed duo was to be offered in each lesson. So each activity would be presented 4 times over a course of 8 lessons. Resulting in 4 prescribed activities for each lesson. A minimum of four repetitions of the song in each activity was required. The teacher in charge was free to choose the surrounding activities for each group to create a whole lesson. This construction would offer all the activity types in each lesson. For each course only the prescribed activities were to be analysed to focus the analysis.

The initial movement categories were incorporated as general movement categories: a general didactical underpinning of the activity categories. Within these categories different activity types then could be offered. The category 'being moved' was not used because this would only support the children with kinaesthetic reference and would not show actual movements of the children themselves. 'Putting something in motion' was accounted for in the use of material for each group of activities. 'Movement by self' was inherently present when using objects and 'movement with support' was also present in a few activities.

In consultation with the participating teacher the following was established. We were unable to find a suitable song for a sequential activity with objects. In fact the question was raised: does it exist within the MoL context at all? First it was found that a sequential activity has movements in a defined order within one run of the whole song. (It might be that for the second run a different movement and also for the third run again a different movement is used but these then are movement variations not a sequence on its own.) Some activities may have two dynamical versions of one movement (loud and soft). This was also not considered to be sequential. A rule of

thumb might be that a sequential activity has more than 2 movements in one run of the song (activity). Another important consideration was that the objects and the lyrics of the song should denote in the activity what is to happen or what is happening. Are objects an appropriate mean for this? Then it was also considered that sequential movements should somehow have a temporal-rhythmical order in terms of when the movements should be placed in the song/time-stream. Sequential songs with objects – with more than two movements and complying by the criteria – have not been found. This category was therefore excluded from the set of activities.

An activity for the age group 18 to 25 months within the category gestural activity with objects was also not found. The participating teacher proposed to use an existing activity and to transform it from a 'being moved' to a 'putting something in motion' category. Instead of the children being moved like an airplane by their parent or carer they could now use a paper airplane to put in to motion themselves.

6.6.1.1 Temporal representation

The results of the first study revealed that a sense of tempo – a musical learning term - or synchronising a movement with a musical beat – a music cognition concept – had a considerable influence on the movement responses of the children. In behavioural developmental literature this is denoted as “spontaneous motor tempo” (SMT) (Provasi & Bobin, 2003), and refers to “a person’s preferred rate of tapping, and synchronization to an external time-keeper” according to Eerola et al. (2006). Already in 1981 Vaughan tells us to “start with a tempo dictated by the children’s own behaviour and their ability to respond will increase dramatically” (Vaughan, 1981).

Continuing the initial notion of regulation of movement action in time, which provides the underlying pulse that constructs the musical timeframe, research of Malbrán provided some underpinning for the use of concepts. Seeking empirical evidence in an explorative study about rhythmic performance at the age of three, Malbrán (2001) situated his study in the realm of cognitive music psychology, administering tapping tasks to 30 children aged 3. His use of a 10-bar piece corresponds with the average length of a MoL song. Using a digital drum and a 10-measure excerpt from a march from Prokofieff for children, the tempo of the march was 125 beats per minute. Malbrán concluded that children aged three are able to attain a certain number of

synchronised tappings to a beat but the overall performance is irregular and responses were more delayed than anticipated. Within this construction Malbrán used the concepts “delayed”, “anticipated” and “strict onset”, which correspond with the terms I proposed in the analysis of the first study: movements that are ahead of the beat, movements that are delayed, movements that are direct and movement responses alternating in and out of tempo.

Flohr (2005) described the results of a study by Loong concerning the average preferred tempi of 60 young children aged 5 years and below. Loong found that the tempi of responses depend on the instrument played, with tempi ranging from 111-168 beats per minute (bpm): 112 bpm for scrapping/rubbing; 132 bpm for walking/stepping; 141 bpm for striking; 164 bpm for shaking a maraca” (Loong, 2002, as cited in Flohr, 2005). Provasi and Bobin-Bèque (2003) reported “the internal tempo of children before the age of three is located somewhere near 400ms”. (Their unit of measurement is the Inter Response Interval and can be translated to 150 bpm: one beat is 0,4 seconds.) It should be mentioned that their experiment asked the children to tap on a screen in an experimental setting. They found that most of the children, aged between 29 and 36 months, used the whole hand, all fingers, to tap. Loong found a difference between the use of a certain instrument and without an instrument. When we would interpret striking as striking on or perhaps striking with something, this might explain the difference, because Flohr (2005) reports: “Response depends on instrument played” by Loong in the summary of selected findings.

Returning to the investigation of corporeal synchronization with music in an experimental setting by Eerola, Luck and Toiviainen (2006) with preschoolers: they found an average of 387 ms (155 bpm) of movement periodicity in 2 -3 year olds and 415ms (144 bpm) in 3 – 4 year olds. Also of interest is the finding by Provasi and Bobin-Beque (2003) that “Results showed that regular spontaneous manual tapping tempo could be observed in children as young as 2 years. Moreover, the children could slow down their tap rhythm when the auditory stimulation became slower”.

Flohr (2005) also mentions that the cultural environment of young children is of influence on being able to keep the beat. Research from Hannon and Trehub (2005), among Bulgarian and Macedonian parents and North American parents and children,

gave that the rhythms present in a certain cultural environment influence the capabilities of how children and especially adults understand complex rhythms. Their research was based on the premise that western rhythms are simpler than for example Balkan rhythms. According to Thaut: music takes on meaning “within the cultural background, the social context, and the intents and expectations of the situation in which the communication takes place” (Thaut, 2005). Temporal representation then is context bound and should be looked at within the boundaries of the music education environment.

Most likely beat correspondence – direct movements – in the music educational process is not an aim, which should have to be reached directly. There should be the possibility of slowly adapting to the beat over the process of a music course.

All 7 activities prepared for the observation had a recommended average tempo based on the above. The teachers were advised to “rehearse” this at home, because it was foreseen that it would not be workable to check the tempi during the lessons. However if the teachers might detect a different average preferred tempo for an activity then they were free to pursue this.

6.6.2 The Activity sets

Separate sets of activities were created for both age groups of the courses. The activities in both sets were chosen on the basis of the activities MoL offers depending on the general and musical developmental level of the children.

ACTIVITY SET 1: GROUP 18 TO 25 MONTHS

Rhythmical activity without objects

Clap clap this is what the hands do

Movement by self; tempo recommendation based on the average of Loong (in Flohr, 2005) 141 beats per minute for striking (bpm), Eerola et al. 155 bpm periodicity in 2 -3 year old: average recommended tempo 148 bpm.

Rhythmical activity with objects***Tap along***

Putting something in motion; objects: wooden sticks and small drums; tempo recommendation based on the average of Loong 141 bpm for striking, Eerola, Luck and Toiviainen 155 bpm of movement periodicity in 2 -3 year old. Average recommended tempo 148 bpm.

Timing activity with objects***Splitter spletter splotter***

Putting something in motion; objects: toy ducks, a blue large sheet and small tubs; tempo recommendation based on the average of Loong 141 bpm for striking, Eerola, Luck and Toiviainen 155 bpm of movement periodicity in 2 -3 year old: average recommended tempo 148 bpm.

Timing activity without objects***Step step step***

Movement with support; tempo recommendation based on the average of Loong 132 bpm for stepping. As this is a general tempo for children under the age of 5 it is expected that the tempo will actually be higher for this age group.

Gestural activity with objects***Look an Airplane***

Putting something in motion; objects: paper airplanes with a ribbon tail; tempo recommendation was established after communication with the participating teacher: 160 bpm.

Gestural activity without objects***Ora Viva***

Movement by self; tempo recommendation based on the average of Loong 141 bpm for striking, Eerola, Luck and Toiviainen 155 bpm of movement periodicity in 2 -3 year old: average recommended tempo 148 bpm.

Sequential activity without objects***Clap your hands now***

Movement by self; no tempo recommended.

ACTIVITY SET 2: GROUP 25 TO 36 MONTHSRhythmical activity with objects***One Two***

Putting something in motion; objects: wooden sticks; tempo recommendation based on the average of Loong 141 bpm for striking; average recommended tempo 141 bpm.

Rhythmical activity without objects***Clap along***

Movement by self; tempo direction based on the average of Loong 141 bpm for striking. Eerola, Luck and Toiviainen 155 bpm of movement periodicity in 2 -3 years old: average recommended tempo 148 bpm.

Timing activity without objects***Mommy Bear and Baby Bear***

Movement with support; tempo recommendation based on the average of Loong 132 bpm for stepping.

Timing activity with objects***Walk in a circle***

Movement by self; objects: divers, depending on the choice of the teacher; tempo recommendation based on the average of Loong 132 bpm for stepping.

Gestural activity without objects***The wheels of the bus***

Movement by self; no tempo recommendation

Gestural activity with objects***Wie waa waaien***

Movement by self; tempo recommendation was established after communication with the participating teacher 155 bpm.

Sequential activity without objects***Hands on your side***

Movement by self; tempo recommendation based on the average of Loong 141 bpm for striking.

This chapter has described the methodological approach taken in the second study. As a result a set of activities was constructed to structure the observations. The next chapter will describe the analysis approach of the second study.

7 ANALYSIS DATA COLLECTION SECOND STUDY

This chapter will discuss the method of analysis applied to the data of the second study. The initial analysis was carried out in the same way as the data analysis in the first study. However, due to the ongoing process of discovery inherent to the flexible design of this study, the analysis process evolved beyond the approach of the first study. Certain elements asked for elaboration and will be explained in the chapter that follows.

7.1 INTRODUCTION

My original intention was to video record 4 courses of 8 lessons. Although one strives for rigour in 'real world' research, it nevertheless has to remain flexible to the realities of situations. Due to circumstances beyond my control, one course concluded with 7 lessons and one course had a lesson that was only partially recorded. This did not affect the analysis because not all recorded information would be subject of the analysis.

The tapes were converted to DVDs with chapters to facilitate specific observations and fast finding. Copies of the DVDs were given to the participating teacher/internal observer. All but two lessons were taped with two cameras – one stationary camera on a tripod and another mobile one manually operated. In the largest group comprising 10 children, it was not possible to record the movement responses in a continuous way. Because of the group size many movement responses of the children were not visible on either camera.

7.2 METHOD OF ANALYSIS

Qualitative research is regarded as emergent design (Robson, 2002; Merriam, 1998), the process and discoveries emerge by doing (Merriam, 1998). It is the journey of the researcher that takes shape during the process (Holliday, 2007). According to Robson: “There is no clear and single accepted set of conventions for analysis [of qualitative data] corresponding to those observed with quantitative data” (Robson, 2002). The best way to deal with the data comes to the surface during the research journey.

The analysis of the video-recorded material centred on actual overt behaviour – the movement responses of the children. Therefore, first I engaged in a process of immersion in the images, while going back and forth between the reviewed literature, the results of the first study, the observations of the internal observer and the teacher interviews. Immersion is perhaps best described as a fluid, interpretative process that calls for the expert knowledge of the researcher (Robson, 2002), to experience the dimensions of a setting (Mason, 2002) and to gain a primary entrance for analysis (Ridder, 2007). From this I derived a three-level process of analysis:

- the creation of a detailed description of the movement responses per child:
a horizontal analysis
- the comparison of certain movement behaviours in order to detect possible patterns: a vertical analysis
- the construction of coordinating themes by an interpretation of the found similarities in movement responses.

As a result a number of themes emerged by way of thematic analysis (Boyatzis, 1998). These themes will be described in chapter 8.

In the first study the unit of analysis was the same as an activity. In the second study it appeared that it was possible to define units of analysis within an activity. I redefined the unit of analysis (Yin, 2003), or boundaries and dimensions (Masons, 2002). Because the activities were defined by their movement and musical learning aims they could now be regarded as closed though flexible units within a music lesson. The total time for each unit was not defined in advance and could also differ per offering and per lesson. This depended on the musical responses of the children, their concentration span per activity and the number of repetitions offered by the teacher.

In the first study I saw that movement responses to music appear within the context of a song – the time-stream of a song – in order for them to be considered musical movement responses. Therefore, the actual singing time of the song created the boundaries of the unit. This excluded elements that pertain to an activity from a pedagogical point of view. For example in activities where objects were used there was a certain amount of time reserved to distribute the objects and at the end of the activity to collect the objects to be put away. However, in some instances it was

necessary to begin the analysis during the distribution of objects because often the song was simultaneously being introduced and relevant movement responses could be detected. As a result it was possible to regard an activity as an event in which multiple units of analysis could appear. I now considered the unit to be the one time singing of the song within an activity.

A second result was that this created a large amount of information per activity. Most interestingly I saw more movement responses on the DVDs than with the naked eye during a MoL lesson. The DVD's made it possible to see what was happening more broadly and more intensely because units could be repeatedly viewed. Therefore a third result was that the method of analysis should be microanalysis. This is "the detailed analysis of a small but relevant amount of data drawn from a single experience with a [child], or a [unit]" (Wosch & Wigram, 2007). Microanalysis can take different shapes. Both quantitative and qualitative approaches are present and video files as well as audio files are used as data sources for example in music therapy (Wosch & Wigram, 2007). Microanalysis is a method used in music therapy and music education. Amongst others, Trevarthen and Malloch (2000) have used microanalysis in their research concerning the musical communication between babies and mothers. In order to understand amongst others the timing of the communication, the interaction between baby and mother was described in units of seconds. Young (2003b) has used microanalysis in her study of spontaneous instrumental music making of three- and four-year-olds in typical pre-school educational settings in London. Departing from grounded theory methodology criteria-driven analysis of larger groups was used. In selected cases Young used detailed microanalysis.

My aim was to look very closely to the movement responses of the children and the DVDs gave me the opportunity to detect even the smallest movements that might be of relevance. Because of the redefining of the unit of analysis for the second study, each turn of the singing of a song in an activity I could now regard as a single personal experience of a child that could be analysed. My initial aim was to create a detailed report of the literal movement responses of each child per activity for every time a song was sung within an activity. As there was the requirement that the teachers should repeat a song during an activity a minimum of four times, this proved to be

highly intensive work resulting in a large number of written reports. Rostvall and West, discussed the theoretical underpinning of the methodological decisions made in an Swedish research project on musical interaction and learning. They acknowledged the fact that it is quite unusual in video microanalysis to analyse all the data available because “video recordings create enormous amounts of data”. (Rostvall & West, 2003). Usually the choice to analyse certain portions of the data is based on some form of pre-selection (Rostvall & West, 2003). Young (2003b) describes this clearly.

“Portions of the original data were abstracted from the final total of 17 hours of videotape and collated onto one single edited videotape. Although there were many instances of more than one child playing together with the instruments, the complexity of analysing these social play episodes risked overloading the study. The single-child play episodes, taken from the original videotapes, were repeatedly reviewed for any regularities and patterns that might begin to emerge” (Young, 2003b, p. 50).

Ridder (2007) in her research design created an analysing process “to reduce data in a systematic way” (Ridder, 2007, p. 55). Ridder’s qualitative research focused on the communicative responses of clients in music therapy. Using the medium of video/DVD, multiple sessions with different persons were recorded. First a general overview was created of all the recorded material thereby reducing the data to a minimum through the use of fixed registration time by means of criteria. For example: “when the music starts and stops (e.g. when the therapist sings)” (Ridder, 2007, p. 56). To allow for microanalysis to be effective, “the maximum number of clips to analyse was 4 – 7 [per client], all together not exceeding five minutes” (Ridder, 2007, p. 59). The clips were selected by a music therapist “who has important background knowledge about the music therapy course as a whole” (Ridder, 2007, p. 59). Also “each clip showed events that illustrated the client’s response in the music” (Ridder, 2007, p. 59). Thereby focussing on actual observable behaviour.

Both Young and Ridder collected a large amount of video-data in a musical setting and focused on specific relevant portions of the video-data to analyse in depth. Expert knowledge was required to determine the relevancy of the portions within the research project in order to make the selection of these portions/clips. This gave a further important perspective on how I should treat the approximate 12 hours of video-data that I had collected. In order to get relevant detailed as well as manageable

results only certain data/activities should be analysed in depth and other activities should be analysed on a much broader much less detailed scale.

The first level in the analysis process was the creation of a written report, a detailed description of the movement responses of the children as they were seen on the DVDs of 4 selected activities. These activities I had selected on the basis of their relevancy in the present context. My personal background as a MoL teacher and the experience of the internal observer provided the expert knowledge background to make a relevant selection.

This selection was further based on three elements: the amount of information that I could harvest from the data of certain activities, the amount of extra information necessary to support the analysis of certain activities and the total amount of information that could be reasonably processed in the study. I found it very important to give an extensive description of the analysis of the selected activities (see chapter 8), because this kind of dealing with data within the context of early childhood music education has not been described often and should be open for debate. Meaning that it is important for potential readers to have evidence (Holliday, 2007) of how I arrived at my results.

I was now able to define the first descriptive level as a horizontal analysis and the second level as a vertical analysis. These terms I adopted from Holck (2007). Holck in her description of an ethnographic approach to video microanalysis in music therapy used horizontal and vertical analysis to facilitate pattern generalisation. She based these terms on the transcription process she used:

“One way of recording the interactions for further analysis is to start with the classical notation system and to add gestural and facial movements over/under the notation line. A time line with seconds (clock time) is drawn first, and music and gesture are placed in relation to the line” (Holck, 2007, p. 32).

The unit of analysis as I defined it – the one run of a song in an activity – unfolds along a musical timeline: the time-stream. Also a song in MoL generally takes about 8 to 18 seconds. (There are shorter and longer songs, however in MoL short songs are part of her philosophy: a song should preferably not exceed approximately 60 seconds.) Therefore, analysing the movement responses of a child within a timeframe of seconds

during the time-stream of a song could be appropriately named horizontal analysis, because of the similarity in directional and temporal features as described by Holck.

“In the vertical analysis the chains of interactions are compared across the material, for the purpose of finding interaction patterns to determine whether or not two interactions are alike” (Holck, 2007).

I translated this into a broader horizontal area, namely the movement responses of the participating children in a certain activity to find similar movements behaviours.

The second level was the comparison of certain movement behaviours in order to detect possible patterns on a manifest level, which is direct observable information (Boyatzis, 1998): overt behaviour.

I made an effort to find similar instances of the personal movement responses of the children. Personal, because within the MoL context the children are not asked to imitate the movement models of the teacher in detail, but give a personal rendition instead. Simultaneously these personal responses can provide an indication of a personal musical representation. Although the personal experiences of the teacher/internal observer will be described in the context of understanding of observation perspectives in 7.3.2, it is interesting to read what she wrote about personal movement responses in the present context:

“For a starting teacher/observer a lesson on the MiM DVDs might look like ‘all children are doing something different’. Consequently the thought could emerge that ‘this is not what/how it should be’. When, in the framework of the study, you take the time to analyse the individual contributions of the children it appears that almost all of their actions meet the demands of the activity and its objects. You may conclude that all children express, through their actions, the characteristics of a song” (see appendix E).

Young (2003b) described a similar observation:

“There was also the difficulty of trying to get beyond what is, at first, fully recognizable and familiar as young children ‘just playing’ as they are wont to. There is a level of ‘obviousness’ that has to be challenged. It is the failure to move beyond this level, I suggest, that has resulted in many researchers accepting the broad ‘exploratory’ descriptor unquestioningly for children’s music play” (Young, 2003b, p. 50).

Microanalysis, next to a more exploratory analysis, I found to be a justified method in the present study because it was possible to see on a detailed basis the similarities of the personal movement responses of the children. Returning to the quote of the internal observer above: “All children are doing something different” became: all children are engaged in the movements in their own personal way but nevertheless are responding to the movement example of the teacher. Secondly, this method could support Young’s (2003b) observation to go beyond an exploratory description.

The third level was the construction of coordinating themes by an interpretation of the found similarities in movement responses. According to Young (2003b) “the evolution of categories of behaviours is a long process of constant comparison”.

Movement analysis has been described in general movement contexts and movement education contexts, often incorporating the Laban system (Moore & Yamamoto, 1988, Davies, 2003; Macintyre & McVitty, 2004). Although inspired by their approach, I needed to construct themes in accordance with the aim of musical movement: to support the musical learning process. (Connecting the movement responses to the Laban system would have asked for a different strand of inquiry and might be a subject for a different study.) The description of the movement responses had to be interpreted in the musical context.

In terms of an interpretative design the music education setting could be compared to a defined cultural setting with boundaries and rules constituted according to its context of music education: a phenomenon that accommodates a certain complexity to unravel. In this process of organising the data, thick description proved to be helpful, because it was necessary to go beyond the mere fact of literally describing what a child shows to the underlying reasons why this behaviour could be seen and its possible purpose. I had to include many facets that make up the experience (Holliday, 2007). Thick description is a concept developed by Denzin (1994)

“A thin description simply reports facts, independent of intentions and circumstances. A thick description, in contrast, gives the context of an experience, states the intentions and meanings that organized the experience, and reveals the experience as a process” (Denzin, 1994, p. 505).

The movement responses of the children were related to different elements and influences within the event and thereby a process began of what Boyatzis refers to as “thematic analysis”:

“a theme is a pattern found in the information that at the minimum describes and organizes possible observations or at the maximum interprets aspects of the phenomenon” (Boyatzis, 1998, p. VII).

The themes found were constituted by the recurring movement responses of the children in the units of analysis during an event and the complexity of influences on the movement responses. Practically spoken the whole analysis process was not an exact three-level process. The analysis could occur on all three levels at the same time when appropriate. This was especially the case in the more advanced stages of the analyses where themes had started to emerge.

7. 3 ANALYSIS PERSPECTIVE

In order to have the study firmly grounded in practice so that results could be applied to practice, the involvement of the teacher/internal observer was vital. Knowledge of the area was a prerequisite for both the researcher and the teacher/internal observer in order to be able to make relevant observations. Boyatzis refers to this as

“theoretical sensitivity” of the researcher: “[...] a researcher needs to have the patience to perceive themes or patterns and the ‘lens’ through which to view them” (Boyatzis, 1998, p. 8).

Nevertheless this process of recognition rooted in experience has to go beyond the familiar: in order to make relevant observations the familiar has to be perceived as strange (Holliday, 2007). Considering that both the participating teacher and myself were firmly rooted in the MoL way of working the challenge was to go beyond pure evaluative pedagogical observations. Consequently as the process progressed it became clear that the close involvement of the participating teacher /internal observer created a form of formative action research (Hultberg, 2005). Formative action research I take in this matter as expressed by Hultberg “the collection of data by teachers in the naturalistic context of their own lessons” (2005, p. 212). This can be compared to “researching your professional practise” by Radnor (2001). According to Radnor

“the professional educator is a knowledge worker in two fundamental ways. The content of the work engaged in is knowledge, and in order to engage in the work of enabling others to learn, the practitioner has to know how the process of knowing works” (2001, p. 3).

Knowing how the process of knowing works demands a change in observation perspective of a teacher:

“the strong involvement required for teaching may cause problems in changing the perspective to that of an observing researcher exploring how the chosen teaching strategies, and changes to these, may influence learning conditions” (Hultberg, 2005, p. 212).

7.3.1 Understanding of perspectives

Being an early childhood music teacher an interesting phenomenon occurred. During the process of analysing the data and reporting my findings, I found that my daily profession of teaching music to preschool children interfered with this process. While my personal practise has most certainly been enhanced by the research process and its results, at first it was difficult to see my observations as results. Because of being able to find many of my findings back in practise, it almost dismissed them as being actual results of the studies because there they were and could therefore not be actual findings anymore. I took the perspective of a MoL teacher and focussed on ‘how things worked’ in the lessons. At the same time it was very interesting to see the findings of my research unfolding before my eyes in practise.

It appeared that the challenge was to go from a “didactical” approach (Gestel et al., 2010) to an approach more in tune with the qualitative scientific nature of analysing the data. The internal observer over the years had created certain habits in evaluating a MoL lesson for improvement on a course level and on a personal professional level, including evaluative questions aiming to enhance the music educational process. The whole research process became a personal learning experience for her, which reflected in a positive way on her professional attitude and teaching. This was possible because she was involved in the project from the very start and was considered an important partner in the study as well as a source of knowledge.

“During the research I was ‘forced’ to observe in a different, more thorough way. Being involved in scientific research, in which one of the starting points is a ‘real life’ setting, makes you continuously reflect on the aims and their consequences. You learn even better how to connect with the development of the children and this will be of benefit to the children and the parents” (see appendix 6).

Tentatively two different processes could be distinguished which served two different perspectives:

- does it work: has the pedagogical process been served
- how or why does it work: underpinning theoretical reasons

This is a free translation of the “two sharply contrasting kind of knowledge” of McIntyre (2005), used in educational practise and in educational research: “knowledge how and knowledge that”. Although McIntyre states that educational research leads by definition to “knowledge that”(propositional knowledge) because they are obliged to prioritise methodological elements above practicality of results, he proposed criteria to “bridge the gap”. Through dialogue, the relationships can be explored between the two kinds of knowledge and teachers can test the research-based proposals “through action research in their own teaching” (McIntyre, 2005, p. 362).

The teacher/internal observer described it this way:

“As a consequence of my involvement in this research project my competences as Music on the Lap teacher have been broadened and deepened. A process of unravelling and formulating relevant information was set in motion through questions from and conversations with the researcher. What could be described as unconsciously competent has grown towards consciously competent” (see appendix 6).

In this perspective the process itself of the study provided the means to improve practice. Moreover it was possible for the participating teacher to implement the results of this study directly in to her own practice as a MoL teacher and also in the MoL teacher training course.

“This also has far-reaching consequences for my work as a training teacher of Music on the Lap. In transferring this knowledge it becomes easier to take steps

in the learning process in order to accompany the students in their process of growth towards being a licensed MoL teacher” (see appendix 6).

7.4 Across the boundaries

Due to the real world setting a few children crossed the age boundaries set for this study. They were all in close range to the actual age boundaries of 18 to 36 months. The youngest participant was 14 months when she started to participate in the course. One girl appeared to be almost 4 years old. Because of the large age-gap between her and the rest of the group I decided to exclude her from the analysis.

The task of this chapter was to elaborate on the procedures of analysis as were described and carried out in the first study. The following chapter will present the results of the analysis of the second study.

8 REPORT OF OBSERVATIONS OF THE SECOND STUDY

8.1 INTRODUCTION

My initial starting point for this second study was that movement might be considered a supportive symbolic action in the musical learning process. For the children to benefit from the movements that are being offered to them in a musical learning environment I observed that different elements appeared to support the movement representation process. These elements have been grouped under several themes that serve as the coordinators of the different elements. The five themes are: Movement, Objects, Representation, Teacher Influence and Information Construction. The themes and their constructive elements although presented separately are highly intertwined and as a result within a description of a certain theme cross-linking with other themes was unavoidable.

This study aimed to give a detailed view on musical movement activity in a real world music education setting, thereby going beyond the more general observations that were the usual method in studies that most closely relate to this one. As a result of the emphasis in this thesis on detailed movement behaviour observation, I was able to look with considerable attention to detail at the children's movement actions. This micro-analytical approach resulted in absorbing highly detailed descriptions, offering fascinating and valuable informative insights. Because we cannot see into children's heads, the small differences and variations in the children's movement responses gave me significant information from which to theorise some underlying representational constructions of the movements.

Observations of children who for some reason did not respond with movement in a certain unit or event, were excluded. The possible range of elements involved in order to understand unresponsiveness, justifies a separate study. These explorations would have to be an extra strand apart from my primary stance that movement to music is an important way to support the musical learning process and a way to show musical knowledge. Especially for the age group at hand: children aged 18 to 36 months. I was specifically exploring overt visible movement responses. It is not the case that young children musically learn exclusively through movement and that they do not learn

through for example listening. However, the research project is concerned with movement and not with listening. The crucial aspect of the thesis is musical movement representation in the musical learning process.

I also noticed that parents do have an important influence on the movement responses of their children: their overt behaviour – responding to the child, participating level, engaging in the make believe – seemed to motivate and support the children. Last but not least, it might very well be that personal characteristics of the children influenced their movement responses. Nevertheless, reasons for any cause for unresponsiveness fell outside the scope of this study.

8.2 THE ACTIVITIES

These sections will first give an overview of 4 analysed activities. A choice had to be made for only a selection of the videoed activities because it was not possible to describe the analysis of all the activities in great detail within the context of this project. Furthermore, too many thematic elements might have challenged the clarity of my argument. The wealth of information and diversity of themes found was taken as an indication that the activities could actually be treated as separate case studies themselves, which could be an approach for future analysis of the remaining material. The remaining activities will be briefly discussed.

Because the activities were the main structuring events of the second study and encapsulated the units of analysis, observations will be described per activity in which the coordinating themes will find their place.

8.2.1 Terminology

From this point onwards the participating teacher/internal observer will be named the teacher and my own role as a teacher in this study I have named co-teacher. The reason for this is that it became clear that I was “wearing two hats”, meaning that I was present in this study in two capacities with different points of view: a researcher point of view and a teacher point of view. In paragraph 7.3.2 I have described the different kinds of knowledge involved in teaching and investigating. Although this did not appear to have a diminishing effect on my contribution as a teacher, which might for these reasons have had an effect on the movement responses of the children, I wanted to acknowledge the possible impact.

Furthermore I created the concept of the Action Zone: this is the actual circle of people in which the musical learning process unfolds. Often it was seen that some children walked or ran around the circle of teacher, parents and children or they would step outside this circle. A speculation is that perhaps for that specific moment they responded to some personal needs besides the requirements within the educational environment. Turning their attention away from the musical process to something else might create a moment of relaxation in which the constant stream of information could be shut off for a moment. Creating a breach in the attention span might be necessary by a physical action. At one point in ZG1 Tamara was not present in the circle, but when the song started she came back fast into the circle, sat down on the floor in front of the teacher and started clapping. Interestingly she did not start clapping outside the circle but began her clapping action when being inside the circle.

When using the term 'event' I will be referring to an activity as a whole, from start to finish. A unit of analysis, as explained in 7.2, denotes one round of the song within an activity. An offering refers to the whole activity within a lesson and also to its constructional elements. For example the third offering is the third time an activity is presented in a course. An activity was only presented once during a lesson within a course. I created a code, for example DG1-3/2, to denote the place in a course of a certain observation. DG1 is the Diemen course for the age group 18 to 25 months, -3 is the third offering of an activity and /2 is the second unit in that offering. ZG denotes a Zevenhuizen course.

8.2.2 Composition of groups

Due to the fact that all courses were regular courses for which the parents had paid – the courses would have taken place also when the study would not have been conducted – it was not possible to refuse children if they fell outside the set age boundaries that were established at the beginning of the study. This was an additional effect of the real world setting of the study. One girl was 45 months when the courses started. Considering the large age gap between her and the rest of the group, her musical movement behaviour was not included in the analysis.

Course location	Activity set	Number of children participating	Youngest	Oldest	Mean ages
Zevenhuizen	ZG1	5	18 months	24 months	21 ½ months
	ZG2	6	26 months	41 months	34 months
Diemen	DG1	4	14 months	24 months	18 months
	DG2	10	22 months	36 months	29 ½ months

Group composition

For an explanation of the activity sets see chapter 6.6.2. Except for one child who had the same age as the oldest in the ZG1, three children were younger than the youngest child in ZG1. The total age range of the children receiving the first activity set was 14 to 24 months at the start of the courses. The total age range of the children who received the second activity set was 22 to 41 months. An important note is that the DG2 group had 10 children present almost all of the lessons during the course. Although almost each time two cameras were present, because of the group size most children were only visible on camera during certain moments and not continuously. Therefore from this group only a selection of movement responses could be described. Different camera positions were tried out but this did not have an improving effect.

8.2.3 Construction of themes

The construction of the themes was based on the combination of two processes that took place simultaneously during the analysis of the data of the second study. My intention before the start of the analysis of the second study was to group observations under several headings, therefore I was consciously looking for elements that would have similar characteristics to be placed under one theme. This could be derived from the comparison of movement behaviours, the manifest level which is direct observable information (Boyatzis, 1998): overt behaviour. The *movement theme* was created in advance because movement is the target subject of this study. The *teacher influence theme* was initiated by the second study in which it had become clear that a teacher can influence the movement responses of the children in many ways. The quest was to expand this finding and to possibly define different elements. The *objects theme* was also initiated by the results of the second study and my aim was to look at different aspects of objects in an activity that would influence the movement responses. The *information construction theme* had emerged from the analysis of the second study. Notably the different personal responses of the children

were an indication of a personal construct of an activity and my aim was to support this by observed elements in the activities.

8.3 CLAP CLAP THIS IS WHAT THE HANDS DO

KLAP KLAP



Clap clap clap clap, like this go the hands

8.3.1 Structure

This activity pertained to the first activity set for the age group **18 to 24 months**. According to the observations of the first study it was defined as a rhythmical activity with rhythmical movements. Rhythmical movements have a contact surface on which the rhythm will sound. The musical learning aim was to synchronise body movements with the tempo of the music: to express in movement the beat. The body was partly involved with repetitive motor actions: clapping. The advised tempo for this activity – conforming to the procedures as were explained in chapter 6.6.1.1, p. 121) – was 148 beats per minute (bpm). The activity was a clapping activity where the children would be seated on the lap of an adult on a chair or on the floor. Some children would stand up on their own initiative to clap.

8.3.2 Approach to practice

The song was very short and lent itself for multiple repetitions within a unit and during the event. The number of repetitions depended on the underpinning musical learning aims set by the teachers. While the primary musical learning aim for this activity for both teachers was the same: synchronising a movement to a beat, a secondary aim was individually chosen by the teachers. The short length of this particular song and

the different underlying musical learning aims resulted in the teachers making personal decisions on the length of the activity and the length of a unit within the event. Consequently both teachers offered the continuation of this activity – the prolongation of a unit – in a different way. The teacher repeated the song many times, while at different lengths placing a timing-moment with the words “And stop!”. This gave the children the possibility to step into the time-stream, to adjust and to stop and start again when desired. It also provided a way to literally practise continuation (Malbrán, 2001), a motor action: practising endurance. The co-teacher presented this activity in slots of four repetitions of the unit, changing the melody of the last repetition to mark the ending – the last two bars – by finishing at the tonic, thereby changing the course of the melody. The purpose was to make the children and parents familiar with the classical four-bar construction. In summary the second aim used by the teacher was a timing-moment and the co-teacher used the experience of a musical form aspect as a secondary musical learning aim. The difference in choice for a secondary musical learning aim did not influence the primary learning aim because the clapping itself remained the same. The difference was the construction of the units within in the event (DVD examples CC1 & CC2).

The teachers did not present the children with a difference in dynamics: clapping loud and soft. This might have been fully intentional, in order to restrict the offered elements to a minimum in this age group, and can be related to the building of an activity: not all possible musical elements are introduced at once. Therefore the children might construct their representation more easily and concentrate to master the given element, a single movement.

Another difference that apparently affected the movement responses of the children was that in ZG1 this activity would start when all were sitting on chairs. In DG1 the chairs were not used in this activity. Therefore the point of departure for the movement responses created different bodily positions. Sitting on the floor with the parent literally around them often inhibited the children to move freely. Nevertheless it gave ample opportunity for kinaesthetic reference. The chairs were regarded as an element in the musical learning environment and not an object as it can be used in the musical learning process.

8.3.3 Movement

Basically this activity consisted of one movement: clapping. The observed clapping position of the children is most likely a natural way of clapping in this age group. It was continuously observed during both courses. The fingers of the hands point more or less upwards and the hands are flat. The hands and wrists move as a whole often also involving the rest of the arms (DVD example CC3). The teacher during the course basically always clapped the same way when this activity was offered. Her hands were in the same line as the arms and the hands did not move separately from the arm. Often she put her arms a bit up so that the position of the top of the fingers was in the region of her chin thereby demonstrating her clapping prominently. The teacher imitated the way the children performed the hand movements, as did the co-teacher. The teacher had expressed that because of the investigative nature of the courses she was more and also differently conscious of the children's actions and adapted her musical movement behaviour accordingly over the course. At the beginning of the second study she was aware of the results of the first study. She could therefore adapt accordingly so that the children could participate fully without having to adjust their preferred hand position to a clapping position the teacher might have taken without being explicitly aware of her function as a possible movement role model and its possible consequences.

The children were seen to make personal variations on the basic clapping movement. This concerned mainly the distance between the hands while clapping. Probably the children were experimenting with their bodies to find out how they could clap. The two oldest children in both courses (both were 24 months when they started) at moments also presented a clap slightly from the wrist, meaning that the wrist and arm did not move as a whole. At one moment Tara – the oldest of the ZG1 group – is even experimenting with a different clapping position: one hand above the other, she kept her hands horizontal. However this was not continued because the activity stopped after that moment. At a later instance in the course she showed this clapping position again for a short while.

Often the children would somehow involve their accompanying adult in their clapping movements. Clapping against the hand of the adult or even on different body parts of

the adult was seen. The adults, when the children would not clap on their own would often stimulate their children by involving them in their own movements. This was particularly seen with the youngest children. In ZG1-1 for example Stijn was not clapping. At one point he started to slowly participate when lying on his mother's lap. After some time he held one hand in the air so that his mother could clap against his hand. His other hand was holding her other hand and this way he could feel the rhythm because his mother was moving her hand on the beat. At the same time he watched the teacher and stopped exactly when the teacher did, which I take as an indication that he was participating but in his own way. In a later lesson, when this activity was offered again, for a short moment he presented this same clapping variation.

8.3.4 Representation

I propose a tentative suggestion here that it might be possible for the children to experience two streams of incoming and outgoing information at the same time on a sub-intentional level during an event. All three girls in the ZG1 course were seen to clap at moments but simultaneously, derived from their gaze, were clearly distracted by something else. Nevertheless they would clap on the offered beat of the song during these short moments, giving direct movement responses even when the beat was much slower than their personal tempo. The question is if this sub-intentional level is supported by the time-stream after multiple exposures. A further observation was that during the continuation of the clapping movement, prolonged units – the song facilitated a flexible time-stream length – a form of emerging bodily awareness seemed to be possible in the present context. The three girls in ZG1 were seen to look at their hands at moments as if to get visual feedback about their own movements. Tamara even at one moment started with wide claps – and is therefore delayed in tempo – then looked at her hands and while turning from teacher to her mother she adapted to the offered tempo and for a moment she showed her right hand to her mother and touched this hand with the other as if to explore it. Exploring the actual “material” used to create a response. After this moment Tamara started to clap again and stopped at the right moment when the singing stopped without looking at the teacher. The ZG1 course was taking place in a big room with ballet mirrors (mirrors from top to bottom against one wall). Tara in ZG1 at one moment was studying her

clapping while looking at her self in the mirror and at the same time had direct movement responses. In *One Two* I will describe another observation in relation to this “double streaming” of information.

8.3.5 Temporal representation

The advised tempo for this activity was 148 bpm. It was seen that this tempo was generally too slow. Most children would clap in a higher tempo. The teachers adapted to the clapping tempo of the children during the course. Tempo also appeared to be related to the kind of arm movements the children made; the amount of energy they would put into the movement. Bigger movements created a slower beat synchronisation. During the ZG1 course it seemed that a tempo of around 170 bpm would be most likely a suitable tempo for the children to clap to. However during ZG1-4 it seemed that a slower beat, 154 bpm, was partly – alternating in and out of tempo – matched by Tara and Tamara. Tempo adaptation was also seen when for a moment Tamara (ZG1) adapted her clap by making the distance between her hands bigger – energy input – and therefore was able to almost match the tempo of the teacher for a moment. This might have been a result of the repeated exposure to this activity, indicating that when children can first experience the beat in their own natural tempo and synchronise with it, in a later phase deviations from this natural tempo are possible. This might also be a result of the observed body awareness as discussed above (8.3.4). In one instance in ZG1 Tamara’s clap is wide with most of the arm involved. But then she looked at Tara and diminished her movements to a smaller clapping position. Tamara had adjusted the main energy input of her arms to her hands according to Tara’s example. In this case Tara served as a role model. Amanda during ZG1-3 of this activity in the course asked for one more time. She was busy crawling to the teacher and therefore missed the start moment of the unit. She crawled back a bit and then had a few slow claps. Then she was trying to find a good sitting position and started clapping while looking at her hands with a wide clap but adjusted to a small clap immediately and consequently matched the offered beat.

8.3.6 Kinaesthetic reference

In the DG1 course it was seen that the parents involved their children often in different ways of joint clapping, thereby providing kinaesthetic reference. When the children

would be sitting on their laps (on the floor) the parents would clap in front of the children and often the children would put their hands around the hands of their parents. The youngest children, especially in DG1, seemed to benefit from kinaesthetic reference first before actively joining the clapping on their own. The parents played a large role in this and most likely this group could benefit from the active involvement of the parents: meaning that the parents would move a lot themselves and presented the children with possibilities to engage them in clapping. For example Jack's father would hold up one hand for Jack to clap against as a next step.

In DG1-2 Jack first starts clapping on his own in and out of tempo. During the second phrase of the song he placed his hand over the arms of his father and pulled his father's arms down. Then he placed his hands over and a bit under his father's hands. It looked as if he was stirring his father's hands but at the same time is moved by his father's tempo. It is important that children can choose to express a different initial movement category but still experience, though implicit, the same musical learning aim of an activity. These movements might be categorized as independent. Another example in DG1 is Myrthe who was hopping up and down on her mother's legs. One hand was in her mouth and the other next to her head. Her mother wanted to take her hands to start clapping but Myrthe decided otherwise: she placed her hands around the clapping hands of her mother. She was not holding them as to ride along with her mother's clap but she was clapping on her mother's hands herself and her claps after a moment were very well timed. This kind of movement behaviour has been seen more often. It also stresses the need for good observation. The primary aim of the activity is experiencing a sense of beat and although the exact movement aim has not been reached at this very moment, this child is clapping in time and can experience the beat in her own personal way.

One of the parents in DG1 demonstrated an interesting way to mark the structure of the song – the musical form – by putting his son into motion in two different ways. It was a very short moment however this parent gave an example of how structure can be kinaesthetically offered. The activity was presented during the last unit in a variation: *Step step this is what the feet do*, intended as a transition to the next activity in which the children would stand up and step around. While sitting on his lap, Jack's

father moved his feet synchronically to the beat in a simultaneous way and on the second half of the song in alternation. During the alternation movements Jack's father moved Jack's feet to the rhythm of the song – which in MoL typically progresses simultaneously with the lyrics – and therefore he made a reference to the rhythm of the song.

These examples might be an indication that the combination of kinaesthetic reference with movement by self is supporting the feeling of the beat. This was already observed from Olivia in the first study during *Mommy bear and baby bear* (5.7.5, p. 92). Olivia was marching hand in hand with her carer. Her carer was shaking her hand on the beat while holding it. Olivia was walking on the beat in synchronisation even when this beat at that time was a bit too slow in relation to her personal tempo.

8.3.7 Teacher influence

There was a difference to be seen between the two courses concerning the consistency of movement responses by the children in this activity. Although it was possible to attribute this to the differences in age, another possibility was that the differences also resulted from a different teaching approach. For example, in DG1 because of the age of the group the co-teacher was using a large doll that would function as a model child for the parents and the children. A literal, tangible example is believed in MoL to have the benefit of not having to speak and explain too much to the parents about what the actions involve and at the same time giving a visual example. In this particular case the co-teacher had the example doll on her lap while offering the activity. This was done to offer the possibility to the parents of clapping in front or around the child. The doll was not used as an object for musical representational purposes but purely as a movement model. The doll in this case had a second function: to offer the parents an alternative option to give their children kinaesthetic reference when the child would perhaps not start clapping itself by putting their arms underneath the arms of their child and then clap. This position appeared to be too restrictive for the children to have room for their clapping. One mother at one point decided to start to tap on her daughter's back. This way her daughter had much more room to clap. Another mother did the same by leaning back and pulling her arms away. Then the co-teacher introduced a variation of the activity: clapping on the knees. This

variation was introduced too soon without creating a new sitting position. Therefore the children did not have the chance to clap on their own knees. It was seen that children and parents were trying to find a new position to enable the children to clap their knees.

In both courses the children started to make bigger movements – for example stepping, crawling, “walking” on the knees – which could be taken as an indication that they were ready for more or bigger movements than clapping. The teacher mostly responded to this, the co-teacher responded less, probably because I wanted to continue the clapping to augment the amount of data for the study about this activity. These were clearly moments when the researcher conflicted with the teacher in me during the actual musical learning process. In order to keep the children motivated it is important that the children’s attention possibilities as well as their need for bigger or different movement should be honoured.

8.3.8 Information construction.

The children were seen to be able to match their clapping to the offered beat when presented in their personal tempo. The didactical act of repetition is taken here to create an understanding of the activity: it supported the creation of the boundaries of the song – the time-stream – in which to place and experiment with movement possibilities as well as providing the opportunity to experience a form of body awareness. The time-stream serves as a temporal opportunity in which the children can start to regulate their tempo by adjusting their clapping movements when the movement responses are established – how to sit, how to clap: body position. As a consequence over time attention becomes available to regulate the temporal elements of the activity. This asks for a clear building of the activity in a lesson and over a course; a step-by-step process in which the children can build their representation of the activity resulting in purposeful movement responses. In ZG1-4 the teacher prolonged the first unit of this activity much longer than in previous offerings. The children had ample time to adjust their movements and to step in to the time-stream and literally practise continuation (DVD example CC4). It might be that familiarity with the activity, a literal knowing what to do, made it possible to prolong

the unit in which the children could find their personal way of responding and adjust to the temporal elements.

8.3.9 And beyond

Because of the results of the observations I decided to use the musical learning aim of a timing-moment in my own practice when performing this activity with children in the same age group, thereby following the example of the teacher. Apparently the timing-moment – stop-moment – which then comes unannounced and at different lengths after each turn of the song, incorporated a moment of excitement. This element of surprise motivated the children to continue clapping each new round because it is probably exciting not to know when the stop-moment comes. A tentative conclusion might be that this heightens the children's attention to the activity and stimulates their movement responses. Some support for this can be derived from Zeedyk (2006) who claims that in communicative exchanges "a lack of precise fore-knowing is central to sustaining engagement" (Zeedyk, 2006, p. 328). In other words, when looking upon music as a form of communication (Greenberg, 1979) it might be that the incorporation of a timing-moment, which in turn delivers an element of surprise, facilitates a prolonged interest and thereby a motivation to keep clapping. The continuation of the clapping then can provide the children with movement experiences that support the representation of the beat and provides some muscular training to develop continuation in terms of Malbrán (see 9.3.2 of this chapter). It would be very interesting to investigate this further in a separate case study of this activity in which different ways of offering could be explored based on musical learning aims.

8.4. LOOK AN AIRPLANE



Kijk eens een Vliegtuig

M. Albers (naar engels idee)

Kijk eens een vlieg - tuig hoog in de lucht. Het vlieg-tuig gaat snel, het vlieg-tuig gaat vlieg! Het cir-kelt nu
 rond en rond en rond, het vlieg-tuig gaat lan - den op de grond. Brrr brrr brrrrr

Look an airplane high in the sky. The airplane goes fast, the airplane goes quick. It's circling now circling now circling around, the airplane goes landing on the floor.

8.4.1 Structure

This activity pertained to the first activity set for the age group of 18 tot 24 months. According to the observations of the first study it was defined as a gestural activity with gestural movements. A feature of these movements is that there is no contact surface. This activity also involved the use of objects. The aim was to follow the lyrics of the song through the articulation of the body extended by an object. The primary musical learning aim of this activity was the experience of melodic elements and the secondary musical learning aim was the experience of a form aspect. The musical form aspect of this event was created by A. lifting the plane from the floor while making a brrr sound, B. flying the plane and A¹. landing the plane. A third musical learning aim was vaguely established at the start of the course: the experience of a three-quarter beat but was not expressed in the lesson preparation. There is an indirect connection with musical elements. The movements can function as a kinaesthetic experience of contour aspects in music, inducing initial notions of melodic elements supported by the lyrics of the song. This would be in line with Bamberger's (1991) felt paths: notions of up and down, high and low, horizontal and vertical. The advised tempo for this

activity was 160 bpm. The objects were folded paper planes in one colour with an orange ribbon as a tail. The teacher had attached two long tails to the planes; the co-teacher had attached only one ribbon that was also a good bit shorter than the two-tail version.

8.4.2 Approach to practice

In choosing the activities for the second study from the total range of possible activities, the aim was to offer the children with one example of each activity category as they were created in the first study. Based on the results of the first study each of the four participant groups was offered two gestural activities, one with and one without objects. Both teachers found that the category gestural activity with objects for the age group 18 to 25 months to their knowledge did not exist in MoL. To accommodate the study we used an existing gestural – being moved – activity and added objects, hereby changing the possible learning aims of the activity and consequently putting it in the initial movement category of putting something in motion. Although this might be regarded as a manipulation of the real world setting which would go against the interpretation of case study as formulated by Yin (see 4.4, p. 59), it is nevertheless common practice in MoL to devise new activities or make variations on existing activities. Furthermore, because of certain elements incorporated by the teacher – the co-teacher followed her example – this activity crossed the boundaries of the unit of analysis which would normally have to start at the beginning of the song. The unit started before the singing of the song because when the paper plane took off from the floor, the teacher and the parents made a lip-vibrating sound, *brrr*, to imitate the sound of an airplane. The movement of going up of the airplane can be regarded as being symbolic of contour/pitch information and therefore the boundaries could be stretched beyond the singing of the song (DVD example LA1 & LA2).

Differences were observed between the teacher and the co-teacher in their approach to the offering of the activity. During the lyrics “it’s circling now circling now circling around” the co-teacher made a 360 degree bodily turn while holding the plane. The teacher was not seen to perform this action. Furthermore the co-teacher displayed a different way of presenting the activity by first demonstrating and singing a whole unit

before distributing the objects. The co-teacher was seen to do this often for every child separately.

8.4.3 Movement

The paper planes offered ample movement possibilities. They would go in any direction the children wanted them to go. Whole body movements were seen in flying the planes. Planes were swung around at the tail, moved up and down by the tail, slid over the floor and dragged by the tail over the floor. Holding the plane by its body it was swung through the air, went up and down, made full circles and was kept stationary high above the head. The plane was also held in one hand with its tail in the other hand. On a few occasions Amanda was collecting planes and made a row of them on the floor.

The multiple movement possibilities of the planes can be described by an example of the actions of Tamara during ZG1-2/1. She was the first to receive a plane, lifted it by the tail and went as high with her arm as she could. Then she moved it up and down vertically and then lifted the whole plane with two hands holding the tail. Then she placed it on the floor while holding the tail with one hand and with the other picked up the airplane at its body in the process squeezing the whole thing back to its folding construction. She continued by lifting the plane two times up and also looked up at the same time. Her eyes followed her blue plane. She then looked at teacher at the end of the song but did not land her plane. She watched for a moment and walked out of the action zone. There she began to move her plane up and down, holding it by its body and holding the tail in her other hand.

Making the plane fly, putting the object in motion, often appeared to involve movements of the whole body in this age group. Except for Tara, who was already two years old, she also displayed smaller movement by using only the arm as did Myrthe who was the oldest of the DG1 group.

Tara in ZG1-2 at one moment moved her plane around the teacher during the second half of the song; most likely in response to the teacher who flew her plane around one of the children. Jack in DG1 tapped with his plane on the floor now and then. He

imitated his father. Perhaps this might be regarded as another example of the extra body movements as was seen by Madeleine in the first study to mark the moment. Although these movements are not related to timing or beat they seem to establish a certain movement response which has just been given: a confirmation movement. By tapping the floor Jack's father perhaps was demonstrating the spot on which the plane had to land, a marking movement. In the following paragraphs more confirmation movements and related observations will be described.

8.4.4 Objects

All the children took their time to explore the planes and what they could do with them. The exploration of this object was a continuing process in all observed offerings of this activity in both courses. For Stijn the plane was a motivation to start moving. He almost did not participate in the clapping activity but now at one point he dragged his plane behind him in and out of the action zone. Different ways of holding and grip were seen of the object in both courses. Tara, Myrthe and Jack were seen to actively trying to get a grip on the plane. In the DG1-3/4 Myrthe made a flying movement with her plane according to the teacher's model, holding the plane by its body in the "right" position. In DG1 the children did not use the tail of the plane as a way to hold the plane except for Zora who was the youngest (14-months-old). This might be because the tail was much shorter than the tail on the planes in ZG1. Holding the plane by its tail and even putting the tail in the mouth were seen as variations on the "adult paper plane grip" (between thumb and index finger in the middle of the bottom of the plane). How to hold the plane was an elaborate experimental phase. Tara was seen to experiment with this "adult grip" helped by her grandmother.

The shape of the planes did seem to have an influence on the movement responses of the children. Ways of holding the object were different with the planes with the two long tails and therefore evoked more and other movements than the planes with the one short tail in the DG1 Course. The question was if the movements could represent the musical learning aims through the use of these objects. Interestingly the addition of the tails in two shapes, in fact this could be regarded as a minor alteration to the construction of the planes, made two musical learning directions possible which in turn could transform the underpinning musical objectives of this activity. The first issue

is if it is necessary to hold the plane correctly (the “adult grip”). In order to realise a process of experiencing the musical learning aims it is perhaps better to hold the plane by its body and not by its tail, because this induces a different way of movement. However, for example dragging a plane by its tail does have a function. The children can experience the object in a different way and can examine it on its movement possibilities. Getting acquainted with the object and understanding its movement possibilities I consider an important form of symbolic musical play (more about this in 8.4.8). Furthermore the long tails induced more total body movements because often it was seen that the planes were held in both hands where the body of the plane was held by one hand and the tails in the other hand. Holding a plane in one hand most likely directs the focus of the movement to movements of a separate body part. Nevertheless, to put it simply: how does a teacher want the children to move and to what end? Considering that the movements create an indirect representation – gestures, no contact surface – there is no direct symbolic relationship between the movements and the musical objectives. Also the level of motor development might create a challenge for the children to follow the model of the teacher. The symbolic function of the plane probably would then be implicitly understood when the object itself is explored, examined and the movement possibilities are known. The next section might give some further insight into this matter on the level of representation.

8.4.5 Representation

The primary musical learning aim of this activity was the experience of melodic elements where the movements of the plane were considered to be symbolic of contour/pitch information. This form of representation is indirect and high and low – the contour of a melody – is implicitly transported through the action characteristics of the plane. The movement characteristics are then implicitly used to support musical learning. I also consider the movements of the plane to create a form of causal knowledge (Gopnik, 2009) (see 6.3.1), knowledge about how an object works in the music education environment. The point is that the action – movement and sound – characteristics are derived from the real world airplane and are transported to its representation: the paper airplane. Therefore it is perhaps possible to speak of a double translation: elements of the real plane to the paper plane and paper plane movements to musical elements. The question this raises is whether this is a realistic

approach. Adults generally know what a plane is and have often flown in a plane but for the children this might be a whole different matter. Referring to elements of probably unknown origin might therefore create a different representation than foreseen or no representation at all. The symbolic function of the movements and elements is based on an adult perspective and should therefore be approached with caution when making tentative claims.

I will give an example of how the activity was interpreted. In DG1-1/2 Myrthe already displayed much of the activity according to the model of the co-teacher. First she inspected the plane and then started flying it by holding the plane by its body and putting it high above her head. Then she walked a bit and made a full circle with her body, followed by two whole circles keeping one of her arms down. After standing still and watching the co-teacher for a moment at the end of the song she brought her plane down on the floor with a tiny bang (as much of a bang as paper plane can make). Then she lifted the plane again while standing up saying “*Boom!*” at the same time. The *boom* is most likely the result of other activities in which it is customary to accompany a timing-moment – for example falling or sitting on the floor – hereby verbally marking this timing-moment. Interestingly Myrthe in her movement responses already incorporated a timing-moment, a musical learning aim that was not at first formulated by the teachers but emerged out of conversations after the data collection (see 8.4.8). Myrthe continued these kinds of movement responses throughout the course.

8.4.5.1 Whole body movements

At moments it looked as if the children transported the actions of the plane to whole body movements, especially in making big circles with the body itself. However, this might have been a result of the three quarter beat of the song (see 8.4.6) and also the influence of the model of the co-teacher as well as a possible need to express the movements by the whole body. Also in the representation of temporal elements it was seen that the children often used the whole body (see 8.4.6). Sometimes the children even responded only with the body without an object or by combined two movements where one of the movements was a movement of the natural movement repertoire.

This specific activity most likely required representing musical elements on a whole body level next to the use of objects in this age group.

In DG1-2 when Zora (14 months the youngest in this study) received her plane she held it by the tail and made a whole body circle. In the 2nd unit she showed quite an array of movements holding the plane by its tail, making a whole body circle, making swaying movements, making a circle with the plane and going to the floor at the end of the song. In the second unit she continues to make all sorts of movements with her plane amongst others shaking it up and down energetically. In ZG1 when sitting on the floor Tamara moved her whole body up when the teacher moved her plane up and then she fell to the floor with her upper body.

In DG1 Myrthe made some circles with the plane and then while letting the plane go down she held it with both hands. While holding the plane with both hands in front of her tummy she moved in whole body circles. There were even moments with a slight synchronisation with the beat of the song. She continued making these circles also after the song had finished until she fell down to the floor because of losing her balance. When standing up she was laughing out loud. Later on she displayed the same circling movement and fell to the floor as a result of this again. Her mother commented: "You are the plane".

In the DG1-1/2 Jack took off with his plane from the floor, made a few swaying movements with it and landed it on the floor at the end of the song. Myrthe, Jack and Zora, were seen to make swaying movements during DG1, a movement from their natural movement repertoire. During DG1-1/5 Myrthe was combining dependent movement and movement from the natural repertoire. While she was making swaying movements – left to right and back and lifting her foot when being at the other horizontal end – she held the plane in her left hand, holding it half high and is circling the plane. Then, simultaneously with the swaying movement, she made a switch of the plane from one hand to the other and back again, holding it the "proper" way. She was more or less in time when she brought her plane to the floor at the end of the song. There is also here a confirmation movement: a small extra push of the plane on the floor. During DG1-3/2 Jack started walking with slow steps bouncing his body up and

down at the same time, which might be cautiously interpreted as an attempt to synchronise with the beat. He held his plane in the air, while crossing the action zone, the whole time (DVD example LA3). Again a combination of two movements as Myrthe showed.

In ZG1 it was seen that the children often moved to the song without a plane (see also 8.4.6). In DG1 Myrthe's mother raised her plane from the floor intensely with a woosound. Myrthe followed her mother's actions with her left hand, which was the hand without the plane, and went up with her hand following her mother's plane simultaneously with her eyes all the way up. Only then she raised her other hand with the plane. At one point Myrthe was even running full circles around her mother who simultaneously was performing all the movements of the event. It is likely that the movement model of the co-teacher has inspired this movement response and although it was meant as a transport of the plane movements to whole body movement, the model of the teacher might have had direct implications without the mediation of the movement of the plane itself.

8.4.5.2 Movement elements

At the beginning of ZG1-3 the teacher used a different approach. She continued the song of the previous activity with a variation of the lyrics. This song was half as long as the airplane song. Also the teacher took only one movement, the circling of the plane, and expressed this in the lyrics of the song. Furthermore she asked the children: "Can the plane make a circle?" The result was that Tamara was turning herself while holding the plane in the middle of the action zone. She then ran out of the action zone and circled around the zone a few times. Tara was making circles with her plane in one hand, using most of her arm in the process. Amanda was waving her plane by its tail from left to right and then slowly tried to make circling movements. Perhaps a single movement and a short song as well as appropriate verbal guidance promoted the movement responses of the children. The teacher's next step was to ask if the plane could make a very high circle. After lifting her own plane Amanda, Tara and Tamara followed her example. Even Marijn at one moment lifted his plane up into the air.

Many children displayed a stationary movement of the plane for certain duration like holding the plane in the air, in front of the body or on the floor. This can be interpreted as a selected response: a personal choice out of all the movement possibilities available. Furthermore I consider this to be a possible underlining of the need for an offering in phases. In the DG1-1/2 unit Jack (16 months old at the start of the course) lifted his plane very high up and kept it there while walking to his father, losing his balance in the process and then fell to the floor. His father helped him to stand up and at the end of the song they both went to the floor with their planes. In DG1-4/3 Jack raised his plane when teacher was almost up during the taking off of the plane. He stretched as far as he could with two arms holding his plane in one. Then he took the plane in his other hand and is holding it by the edge making it point like a rocket going up in the sky. He dropped his other arm and looked at teacher. A few moments later he was even trying to stand on his toes appearing to reach as high as possible. In DG1 at one moment Zora had one arm up without a plane but then somehow saw that the idea was to put the plane up in the air and she switches arms thereby bringing the hand with the plane in the air.

It is interesting to consider the fact that continuous movements – that is moving constantly throughout a whole unit – were almost not seen. The stationary holding of one posture was more often seen. Only the two oldest children were seen at a few occasions to move continuously throughout a unit. This might imply the necessity of a certain level of motor development. Neural motor pathways first have to be in place to be able to perform certain movements (Eliot, 1999). “Their final function depends on practice” (Eliot, 1999, p. 288), repeated experience with continuous movement in the musical learning process is then a condition to be met in the approach to practice.

8.4.6 Temporal representation

Both teachers very well kept the advised tempo deviating here and there within small limits. In conversations with the teacher during the data collection we arrived at the conclusion that although the song is notated in a three quarter beat – and has been used for years as such – it might actually be a 6/8 beat: a barcarolle. A speculative conclusion may be that the beat might have induced body movements originating from the natural movement repertoire. Parents were inspired to move the children to

the beat of the song. The mother of Tamara swayed her on the beat during the first offering of this event while she and Tamara were not holding a plane. One of the adults held Marijn in her arms and landed him on the floor on the beat of the song.

An example of a possible mediation by the beat is the following. During ZG1-2/2 Amanda and Marijn seemed to portray the beat of the song through whole body movements. Amanda stood up and ran half a circle before coming back in the action zone on time for the second part of the song. It looked like she was moving her body on the beat of the song. After coming back in the action zone she lay down on her back during "it's circling now, circling now, circling around". She had her legs up and rolled on her back from left to right. Marijn was lying on the floor next to his carer, looking at the teacher. At the end of the first part of the song he looked up. Then he made a few slow tiny crawling movements, very fluently, and then rolled elegantly on to his back with a movement of his arm perhaps attempting to synchronise with the beat. I also observed this movement of rolling on the back on the floor from Tamara in a later offering of the activity.

8.4.7 Teacher influence

The teacher through verbal guidance facilitated the children's initial exploration of and thereby acquaintance with the object. Reassuring the parents that it was fine to handle the objects the way the children did was needed to facilitate the children with freedom of movement. In ZG1-2/4 the teacher applied a form of progressive structuring of the movement responses by verbal guidance. To engage the children she said for example: "Okay, now show me what this plane can do". At the beginning of the 5th unit she said: "Now stand up, because then your plane can go much higher. Let your plane fly!"

The model of the co-teacher seemed to highly influence the active bodily participation of the parents, which in turn shaped an extra model for the children. However I cannot exclude personal and individual characteristics of the parents here. Not every adult is at ease with an open display of personal body movements. In ZG1 Tara for example was accompanied by her grandmother, who was somewhat limited in her movement responses because of her age.

8.4.8 Information construction

Considering the observed combined body movements it appeared that within this age group the synchronisation of the beat in this activity often involved the whole body. The handling of the object itself might have created implicit notions of high and low, melodic aspects. These actions often appeared to be separate from temporal elements. Only Tara in ZG1-4/2 was seen to move her plane clearly on the beat of the song while sitting in front of her grandmother on her knees. Interestingly the musical learning aims did not incorporate the experience of the beat. The 6/8 beat in this line of reasoning brought to the surface the challenge of expressing in movement melodic aspects and temporal aspects simultaneously, because they were often observed as separate movement actions. A transfer of the movements of the plane to whole body movement is therefore probably not what is happening. The 6/8 beat of the song and the movement model of the teachers might have actually evoked the body movements of the children that looked like an interpretation of the flying movements of the plane. I think it is important in this matter not to create a non-existing connection based on adult ways of interpretation, most importantly because this clouds the construction of the music education pathway directed at promoting musical learning through movement. As already mentioned the requirements to be able to experience the movements, and their extension the plane, as an action symbol, most likely asks for a double translation (8.4.5) process on top of which the movement possibilities of the plane set a further challenge. Departing again from the stance of Byrnes (1999) “the primary evidence that the person has specific knowledge is that the individual can evoke the relevant representation when cued in some way”, the cue in this case is not the most obvious one. My defence for basing this activity on an existing activity (see 8.4.2) is that it is common practice in MoL to devise new activities or make variations on existing activities. Although not weakened, in the light of these observations as described above altering an existing activity had far-reaching implications. Simply taking an activity from the ‘being moved’ category and adding an object to put it in the ‘putting something in motion’ category has created the necessity of re-considering the musical learning processes underpinning the activity which surrounded this song. For example in ZG1-3/2 Tara was holding the plane by its body with one hand, waving it in the air back and forth quite nicely to the beat, her body going along with her arm. The plane was above her head, her arm stretched. At the end of the song she placed the

plane down on the floor. Although a very good rendition of the modelled actions, her actions should not be considered one to one symbolical movement actions of contour, beat synchronisation or musical form. They could however be interpreted as symbolic play, a pre-stage of symbolic movement actions. Consequently from a musical learning point of view then these movements become purposeful. The connection between the movements and their referents then can be made the other way around. Instead of considering the movements, which are initiated by the use of an object and supported by the lyrics, as indirect representations of musical characteristics, the bodily movements evoked by the temporal aspects of the song could function as the initial starting point. Verbal Guidance in this process is of the essence. Myrthe's mother in this matter gave a good example by at one moment saying to her daughter "you are the plane". Bodily experience can then be transferred to the movement characteristics of the plane. In view of this age group and its possibilities I therefore suggest that there are two possible participation forms: symbolic musical play and symbolic musical learning. I will elaborate on these concepts in the next chapter. The objects in this activity consequently can receive a different meaning from these two perspectives. It can be either a musical action symbol from which meaning is derived or it can be an object of projection, in which case it receives its meaning from the bodily actions of the child. For example the tails of the object provided an alternative way to hold the planes, which did not seem during these observations to create either a movement reference to the beat of the song or the possible indirect experience of melodic elements. However, to put it simply, the paper planes are much more fun with a nicely coloured tail – and as a consequence are more motivating to play with – and do offer more ways to put the object in to motion. Therefore the exploration phase of this activity – symbolic play – can provide the children first with meaning and causal knowledge: what is it and what can we do with it, especially because of the possible existence of a double translation. While it serves as a motivational agent to start moving, its qualities and characteristics should be made clear in order to handle the plane in a more advanced stage as a symbolic musical object. The lyrics as well as the verbal guidance then can support the act of meaning-giving in saying what the paper construction represents and what its physical actions can be. A structured didactical building of the activity is necessary to allow the children elaborate exploration time.

8.4.9 And beyond

During conversations with the teacher after the actual data collection it appeared that this activity had undergone a significant transformation on a theoretical level concerning the attachment of movement to musical learning aims as a result of this research project. The question of which aspect is being accentuated through movement had become imperative. The implicitly pronounced third musical learning aim – a timing-moment – was made concrete also because it had received tentative support in a tangible form as a result of the analysis. In DG1 at the beginning of the third offering Jack's father had placed Jack's coat spread out in the middle of the action zone: he considered the floor to be cold and the coat was intended to sit on. His action unintentionally created a very interesting tangible element to support the construction of the activity in terms of the second musical learning aim: experiencing a form aspect and directing the landing movement. While the lifting off of the plane received a supportive meaning aspect through the *brrr* sound, the landing of the plane besides the *brrr* sound now had an actual spot to which the going-down movement could be directed. In the 2nd unit Roxanna is the first who used this element by dropping her plane for a moment gently onto the coat. At the beginning of the 4th offering I saw an interesting possibility to get all participants on camera using the blanket – the replacement of Jack's jacket – which was in the centre of the action zone, because there were two stationary cameras at that moment. I asked the parents to stay close by the blanket during the activity. At the end of the first unit in the 4th offering Myrthe landed her plane on the edge of the blanket. During the second unit Zora ran over and made stepping movements on the blanket and Myrthe slid her plane a bit over the blanket. At the end of the 2nd unit Jack landed his plane on the blanket all by himself. In the 4th unit the co-teacher decided to land her plane on the blanket in response to the movement actions of the children. Jack's father landed his plane on the blanket at the end of the song and Jack followed his example. After this unit, Myrthe moved her plane a bit, holding it by its tail this time, over the blanket and Zora sat down in front of the blanket. At the end of the 5th unit Jack's father called him to put his plane on the blanket during the landing moment of the song. Jack indeed did put his plane on the blanket. Then he placed the tail of his father's plane on the blanket because it was lying beside it. The question is: did the blanket help to make the concept of landing more concrete? Did it represent a marking in the space of the

room to direct the movement responses to facilitate orientation? I propose a tentative interpretation that the added element, the blanket, provided an extra visible and tactile element that made the meaning of the landing stop concrete. Further investigation is necessary to provided more understanding of this element.

8.5 PLITSE PLETSE PLATER

Mona Pollentier
(spreektekst Annie Langelaar)

Plitse Pletse Plater

Plit - se plet - se pla - ter, 't eend - je zwemt in 't wa - ter,
spreken: plit - se plet - se plant, 't eend - je op de rand.

Splitter splatter splotter, duck swims in the water, splitter splatter, spletch, duck goes on the edge.

8.5.1 Structure

This activity pertained to the first activity set for the age group of 18 to 25 months. The song is a combination of singing and rhythmical speaking. According to the results of the first study it was defined as a timing activity with objects. The aim of this type of activity is to anticipate one movement for it to be on time: the timing-moment. This movement may stand out against another secondary movement or it can be the end of a repetitive movement: noticing endings (Young & Glover, 1998). The primary musical learning aim was to offer the experience of a timing-moment. At the end of the song – duck goes on the edge – the aim is to put the duck “on the canal bank” (floor) next to the “water” (sheet) on the last note being also the last word of the song. The secondary musical learning aim was to experience the beat: tapping with a duck on a sheet, portraying the splitter, splatter, splotter. Both musical learning aims were expressed by rhythmic movements – one of the movement types as defined in the first study. Rhythmical movements have a contact surface on which the rhythm will sound. The contact surface in this case was the floor on which a blue sheet was spread out representing the water in which the ducks would “swim”. The advised tempo was bpm 148. The objects were toy ducks in different colours and made of hard and soft material. In a later stage also small plastic tubs were used that replaced the blue sheet.

8.5.2 Approach to practice

The introduction of the activity contained a difference between both settings. In ZG1 the teacher had used the ducks in an activity before the first offering of *Plitse Plitse Plater*, therefore only the addition of the blue sheet was needed to introduce this activity. The children consequently were already acquainted with the objects and had had ample time to experiment with the objects in the previous event. The children could choose from many ducks. In DG1 the co-teacher offered the activity and its objects as a new separate event. Also the co-teacher “appointed” a duck to a child with a general verbal explanation that there must be a duck for everyone including parents. Duck trading was fine, but duck taking was not appreciated!

The teacher at first introduced only half of the song with sliding movements of the duck over the sheet, portraying the swimming of the duck in the water. A range of different movement made by the teacher was observed, amongst others wildly racing ducks over the water and tapping next to the sheet. In further offerings the teacher offered fewer movement variations during a unit. The co-teacher presented the whole song in the first offering and also introduced tapping movements and the timing-moment. Her modelling throughout all the first 15 units of this event was practically the same. From the 8th unit the co-teacher announced that the ducks would go swimming and she made sliding movements in circles on the sheet replacing the tapping movements. The last three units the tapping returned.

Both teachers presented tapping-, sliding- and timing-movements. The difference was that the teacher presented them not as a variation of the activity but as movement possibilities within a unit. The co-teacher assigned different movements to separate units.

The teacher offered each child more than one duck. In MoL it is advised to give each child two copies of an object, one for each hand. The underlining notion being that this way both hemispheres will be addressed in the movements. The co-teacher decided for one duck per person to focus on the movements themselves. (DVD example PPP1).

In ZG1/3 the teacher took a different approach than in the previous two offerings. A marching activity came before and not an activity with ducks. The sheet was placed in the middle of the action zone and the teacher presented the activity with one duck only and sang the whole song and tapped at the same time. Then a big bag with all kinds of ducks was emptied on the floor and the children were invited to pick a duck. The 4th offering, as before, already had the ducks available from the previous activity.

Both teachers initially used a variation on the lyrics. Instead of duck goes on the edge they used the words “duck goes on the side” to accommodate the timing-moment next to the sheet.

The co-teacher had many more units in every offering of this activity than the teacher and already during the second event offered alternative places for the timing-moment like the knee and the head. During most of the units the co-teacher directed herself to one of the children and tapped or swam with her duck in front of them. This was possible because of the small group size.

Instead of using a blue sheet during a unit, further on in the course all children were offered a small tub in which they could put the ducks to tap. This way also the original lyrics of the activity were supported “duck goes on the edge”, referring to the origins of this activity: a song to sing in the bath. Each child-parent pair received one tub. (DVD example PPP2). The co-teacher presented this activity by tapping the duck on the bottom of the tub and putting the duck on the edge on the timing-moment. Depending on the responses of the children the co-teacher was also tapping the duck at the bottom of the tub when it was upside down. The teacher had a much more diverse presentation of the activity in which tapping, sliding and the timing-moment were seen on different moments in the song and different spots on the tub. The teacher in ZG1 offered the new object – the tubs, the replacement of the water – during the 5th offering. The first presentation was with one duck and one tub. The teacher gave ample time to introduce the variation of this activity. Then she distributed the tubs and ducks. Everyone had one duck now.

8.5.3 Movement

The basic movements of this activity were to tap with the duck on the water (sheet on the floor) to portray the splattering (*plitse pletse plater*), sliding over the water to portray the swimming of the ducks and third to put the duck on the canal bank (next to the sheet) or on the edge of a small tub.

In the DG1 course it was seen that the children sometimes tapped the ducks together. The co-teacher used hard plastic ducks which might have been more conducive to tap together than the soft ducks. The teacher remarked that this might be regarded as sound exploration. Finding a good sitting position to tap appeared to often inhibit the tapping. Also finding a good body balance appeared to be a challenge now and then. Similar to the *Look an Airplane* activity whole body movements were seen. When the activity was presented with the tubs (see 8.5.4.1), sliding the duck over the edge, tapping the duck on the bottom of the tub and tapping it on different parts of the tub were seen as well as trying to balance the duck on the edge of the tub.

In ZG1-4 the teacher in four of the five units during this event gave different models of movement behaviour, expressing the multiple possibilities of movement responses the children could engage in. Most likely the cause of a whole range of movement responses the 4 children present in this lesson showed. Amongst others: ducks go in and out of the water; are thrown away; some children placed themselves in the middle of the water; handling of one duck and two ducks was seen; sliding movements over the water with a duck; collecting ducks; putting ducks in a row; tapping movements in parallel and in alternation and putting ducks on the side next to the sheet. Although the majority of the movements did not appear to be related to either the beat or the timing-moment, a few synchronised movements were seen. Many of the movements received a verbal comment of the teacher in which she described the action a child was performing or could perform.

8.5.4 Objects

The first movement response behaviour in ZG1 that was observed in this activity was the exploration of the objects. The objects appeared to be interesting to the children and were inductive to a range of play possibilities. At the same time children also

explored the objects for the possible ways they could respond with them to the activity: the rhythmic movements and the timing-moment. Concerning this last item, an important difference between the objects in both courses became apparent. In ZG1 many ducks were sometimes offered of different shapes and made of different materials. Many of the ducks were made of a soft, flexible material with a diversity of colour. The co-teacher used only hard plastic ducks that were all of the same shape and came in three monochrome colours. Concerning direct representation it was seen that the construction material of the ducks played an important role in the movement responses. Both teachers saw that the fluffy ducks were nice soft toys; some children even rubbed them against their faces. However, the children devised different actions for them not related to the musical learning aims because there was no direct feedback of the action: the ducks make no sound when being tapped with. There was no auditory feedback of the action. It was seen that some children discovered that the hard plastic ducks were much more suitable to tap with. The children in the DG1 group had hard plastic ducks from the beginning and consequently could receive auditory feedback from the start. So in order to reach the musical learning aim of the activity the material of the objects was important. If a movement is to be supported by an object for musical learning purposes and should bring about purposeful movement responses, the properties of the objects that are used should match the movement aim to create the possibility of (in this case) direct representation.

8.5.5 Representation

The children were very much engaged in the activity and from this observable behaviour I can suggest that it was motivational to participate. Many different movement responses were observed in both courses. The objects were extensively explored and used. Many of the movements however did not relate to the temporal aspects of the activity. The tubs seemed to elicit more tapping movements than on the sheet. During the first offering Tamara displayed an interesting understanding of the function of the sheet. When pointing at the water/sheet, she said “no bath”, thereby possibly expressing her understanding of the make-believe part of this activity. Although the children performed all the movements offered by the teachers, it appeared that the activity first progressed on a symbolic play level. The objects were most likely instrumental for this to happen. Understanding the objects on a

kinaesthetic level was seen through what I have earlier mentioned as being stationary movements. The movement possibilities of the objects were explored this way by what I consider to be an extension of the confirmation movement: defining a movement by prolonging it. Holding a movement position stationary was seen before in the activity *Look an airplane*. For example in DG1-4/3 Jack stretched his arms up in the air as far as he could holding his plane in one hand and stood on his toes for a long moment. In the present activity in DG1-7, Jack had two long moments of holding his duck on the bottom and on the edge of his tub. Tara in DG1-5/1 was holding two ducks firmly on the bottom of a tub. The often seen extended timing-moment with the duck on the edge of the tub might fall into the same category of prolonged confirmation movements. In ZG1-5 the teacher offered prolonged sliding with a duck over the edge of the tub. The parents in DG1-7 also displayed this movement behaviour with the duck and tub, although the co-teacher had not offered this. The timing-moment of the activity with the tub – putting the duck on the edge of the tub on the last note/word – seemed to receive this way a possible pre-confirmation: defining the edge, feeling the edge through a prolonged movement. Tamara, Marijn and Tara were trying to balance their duck on the edge of the tub and Amanda was tapping on the edge before the timing-moment. On some occasions Stijn and Jack were seen to slide their duck over the edge of the tub. This form of play I think might be an important pre-stage, defined as a prolonged or extended confirmation movement, to literally get in touch with the objects and experience their properties and movement possibilities: to feel what they can do. A further extension of a stationary confirmation movement might be found in a movement example by Tara in DG1-2. At one moment Tara was totally prepared to start the next unit: she kept her ducks hanging above the sheet while looking at the teacher and was perfectly on time with her first tap when the song started. This I would interpret theoretically as a stationary or prolonged confirmation movement with a possible preparatory intention.

Furthermore the number of objects to work with created movement responses which were not modelled by the teachers. The number of available ducks in the ZG1 course for example motivated Amanda to make a row of ducks. In DG1-2 Tara tapped her two ducks in alternation on the sheet and responded to the timing-moment. Also Tamara in ZG1-4/2 displayed alternating tapping movements while swaying her upper body a

bit. Most likely the handling of two ducks at the same time created this response. Alternating tapping movements are usually not offered before the age of two in MoL, because this asks for a more advanced level of motor development. Nevertheless, it is often seen in practice that children do initiate these movements at a younger age spontaneously. The offering of a duck for each hand can then become a conscious act on the part of the teacher: providing the opportunity to tap in alternation. The co-teacher offered the children only one duck and consequently alternating tapping movements were not possible. A pedagogical implication is that the underlying musical learning aims as well as possible motor developmental aims direct the choice of the number of objects to work with.

As mentioned earlier, the tapping of two ducks together can be regarded as a form of sound exploration. For example in DG1-2/1 Roxanna had two ducks and tapped them together. The hard plastic ducks in this case were more suitable for these kinds of actions than the fluffy ducks. There is also the possibility of regarding this as a movement action with a causal effect: the tapping makes a sound. For example in ZG1-5 Marijn performed tapping movements on the edge of the tub and experimented on different parts of the tub and even his hand. It could be said that Marijn was experimenting with sound. Marijn and his carer first started with one soft duck, very fluffy but then Marijn got a hard plastic duck from the teacher. The feel and sound from these two ducks was completely different and it might explain the different movement responses Marijn showed. The plastic duck made an actual sound on the bottom of the bucket which might explain his firm tapping on the bottom.

In DG1-2/7 the co-teacher presented a variation of the timing-moment: the duck could be placed on the head instead of the side. By only putting her hand on her head Myrthe at once understood that the duck could be placed there and then placed her duck on her head. The co-teacher missed a further action of Myrthe were she placed the duck on her toe as another alternative for placement of the duck. This was later seen on the DVD. Myrthe's suggestion might be taken as an understanding of the different options for a duck to be placed. Later on in DG1-3/8 Jack placed his duck on his head on the timing-moment with only a small delay. A suggestion for further investigation might be if the literal feeling of the timing-moment by placing the object on the body would

support the reaching of a direct timing-moment. Another small support for this is the fact that Marijn tapped with his duck on his hand for a moment.

8.5.6 Temporal representation

In general the teacher offered a slower tempo than the advised 148 bpm, around 100 bpm. The co-teacher's average tempo was a bit higher and revolved around 120 bpm. A further observation was that the song might have an inherent tempo that stands apart from the personal tempi of the children. This was derived from the fact that it was not possible to sing *Plitse Pletse Plater* in the advised tempo: the lyrics would have to be articulated too fast to remain pronounceable for the children.

The temporal elements in this activity were the synchronisation to the beat of the tapping of the ducks on the sheet and on the tub as well as the timing-moment at the end of the song: placing a duck either next to the sheet or on the edge of the tub. Another element was the rhythm of the lyrics in the time-stream which might have functioned as an anchor for a movement response. In DG1-2/1 both Roxanna and Myrthe had a timing-moment on the word *plant* (spletch), meaning that after this moment they did not continue their tapping on the beat. Myrthe even marked this moment with a long bow-like movement of the arm. The time-stream anchor in this case was the word *plant*. The lyrics of the song provided the rhythm of the song – which is not the beat – because in MoL lyrics should follow the rhythm of a song in terms of syllabic placement. One note per syllable, so *du-u-u-ck* is not allowed. Consequently the children can experience the rhythm of a song by mediation of the lyrics. The structure of the song in this case provided the time-stream anchor. This anchor might then function when appropriate as a musical learning moment. Consequently it is possible to say that this song incorporated two timing-moments: the ending of the song and on the word *plant* (spletch).

A further result of the underlying temporal elements of the song might be an action performed by Myrthe. In between two units Myrthe gave 5 taps with her duck on the bottom of the tub which were almost on the rhythm of the unit just heard. Then she also took her mother's duck and with the two ducks she made 5 taps on the bottom of the tub again. The question is if the repeated 5 taps were a rendition of the first 5

notes of the song, because Myrthe tapped the rhythm, the quavers, not the crotchets. The ducks and the tub then might have elicited this movement behaviour. Later on after DG1-7/9 Myrthe sang out loud *plit-se plet-se pla* which reminded me of the two times of 5 taps observed earlier, because the last *ter* of *plat-er* was not sang. This vocal response resembles her tapping response and might be a vocal confirmation of her overt movement behaviour.

A tentative connection can be made with tapping in alternation with two ducks. In DG1-2 Tamara at one moment tapped her two ducks in alternation on the sheet on the beat of the song in the double tempo. Meaning that she was tapping on the quavers. The teacher had a tempo at that moment of around 95 bpm which also might have facilitated the tempo of tapping in eights. As already mentioned, other children also made tapping movements in alternation. Offering two ducks might then stimulate a response to the rhythm of the song as Myrthe probably did in a tapping and vocal fashion. This can have consequences for the underlying musical learning aims and the amount of objects offered to the children.

In ZG1-4/3 the understanding of the time-stream was possibly confirmed by a vocal response by Tamara. Although in time for the timing-moment she does not finish by placing her ducks on the side. After some looking around where to put the ducks she placed them on the floor and said “ready!”. Apparently she understands that when the ducks are on the side, the song – the time-stream – has ended. I consider her verbal response a confirmation of this. More verbal responses confirming a timing-moment have been observed. During DG1-7/10 Myrthe again had a good timing-moment and while planting her duck on the edge she said out loud: “edge!”. Even Zora the youngest participant in DG1-7 after the first unit walked over to Myrthe and placed her duck with force on the bottom of Myrthe’s tub and she said “side!”.

In some instances it was seen the time-stream allowed for the bodily preparation of the timing-moment. In DG1-2/3 Myrthe was eating her duck and watched. But then she started to prepare the timing-moment with a slow bow to the sheet. Somehow she held back and her duck arrived delayed on the sheet. This same movement behaviour was seen from Tamara in the ZG1 course. Again in DG1-2/5 Myrthe showed

a movement with the torso towards the floor next to the sheet, preparing for the timing-moment. She is on time – a direct movement – but has a delay in her downward movement so that the duck reaches the floor this time ahead of the moment. This was seen during the first study where Madeleine's preparing for a special moment took some bodily preparation, resulting often in being delayed. In DG1-2 Marijn was mainly playing with his ducks, sometimes throwing them away, but also after the first three units he had a delayed response to the timing-moment: he placed one duck with a dramatic forceful movement on the sheet. The strength, size and direction of a movement can indicate that a certain response was intentionally made. These movements might appear to look "dramatic". Also, these moments often were observed after the song as if there is an intention to perform a certain action but the anticipation or preparing of the movement took time. Perhaps the actual feeling of the causal relation, the impact of the response, might be necessary. Myrthe was seen to put the duck on her own initiative on her foot and leg. The feeling of the timing-moment at one point probably caused Jack to have a direct response. In DG1-3/9 when singing *water* his father took his hand with the duck from his head. Then Jack bowed forward and made two taps on the sheet on time and then with one straight movement went to his head, putting his duck there on time for the timing-moment (DVD example PPP3). Also Roxanna displayed a timing-moment on her knee in DG1-5.

Most timing-moments in general, direct, delayed or ahead of tempo were seen from Myrthe and Tara, the two oldest children of both groups. Tapping movements were seen by most children but more often than not unrelated to the beat or rhythm and rarely in a continuous way. For example in DG1 there is lots of tapping with the ducks individually by the children, but every time they choose their own moments. Another verbal response was observed from Tamara. In ZG1-4/5 Tamara placed her duck in the water while saying "plop, plop", most likely a response to the tapping which portrayed the splashing of the duck on the water.

8.5.7 Teacher influence

Both teachers showed inconsistencies in verbally guiding the movement actions in this activity. For example the co-teacher in DG1-5 offered 6 units of tapping the ducks and had the same modelling every time but did announce the activity by: "My ducks are

going to swim!”. Although this did not in anyway prevent the children from participating, the connection between the action symbols – the objects as an extension of movement – and their meanings might have been fortified by consistent verbal support. The important thing was that the movement actions of the children received verbal support because for example the emphasis of the teacher on the edge with different movements – the sliding – and verbal explanation appeared to have an effect. This might be regarded as a pre-stage of arriving at the timing-moment: leading the children to the edge in a playful way.

8.5.8 Information construction

The offering of this activity demanded a clear construction of the musical elements in which the use of specific objects played an important role. The difference in the practice approach of the two teachers provided an important clue. The issue addressed here is the influence on representation in this activity. It might have been that because of the sole adding of one object in the first offering of ZG1, the blue sheet might not have come across as the introduction of a new activity but the extension of the former activity with an added object and a new song. However, the teacher might have intended to use the first offering as a first encounter with all the concepts used and portrayed in this activity. Her personal comment was that “the children did not seem to understand yet what had to be done. It is a new activity”. She observed that during the second offering the children stayed more around the water, indicating that the sheet, the physical centre of the activity, played a more important role and perhaps had taken on meaning. The diversity of the objects might have evoked a primary interest in the play possibilities of the ducks – there was much to discover in terms of tactile qualities and handling of the objects – excluding a supportive relation to the musical learning aims. Also, throwing out a whole bunch of ducks from a bag might have created a stimulus for play because the children could choose their own duck and because all ducks were different attention was probably first directed to taste. During the ZG1-4 the teacher remarked: “the children are given room to play and experiment. There are many different ducks and because of that the children need time to look, touch and feel them”. The impression was that the children in DG1 gave more purposeful movement responses than in ZG1: more direct and imitated movements after the model of the co-teacher. In view of the musical learning aims the

intention was to have tapping movements to experience the beat and a movement on the side (or edge of the tub) to experience a timing-moment. However, objects can be used to create musical play. Then the function of the objects is different. In play the children can explore causal relations and experiment with the objects what they are and can do. Therefore at second view offering the objects in a certain way did create the possibility of symbolic play and as such appeared to be an important pre-stage in the musical learning process in order to attach meaning to the action symbols. In 9.3.5 I will elaborate on the element of symbolic play.

8.6. ONE TWO

Eén Twee  Herma Hopster



Een, twee, doe nu maar mee

Hier zijn de stok - jes om te tik - ken,

ook voor jou, tik maar wat je wil.

Al-le-maal een stok-je en nu is het stil.

One, two, just join the play. Here are the little sticks to tap, also for you, tap what you want. Everyone a little stick and now there is silence.

8.6.1 Structure

This activity pertained to the second activity set for the age group of 25 to 36 months. It was categorised as a rhythmical activity with rhythmical movements supported by objects. This activity can also be categorised as a timing activity because of the stop moment at the end of the song. The choice depends on which musical learning aim a teacher wants to emphasise more: experiencing a sense of beat or experiencing a timing-moment. Consequently the primary and secondary musical learning aim can switch rank. Nevertheless, both musical objectives are always a part of this activity. The objects used were self-made round wooden sticks with a coloured top of about 4 centimetres. The advised tempo was 141 bpm.

8.6.2 Approach to practice

Both teachers presented this activity with a combination of two movements: tapping the sticks together and lifting the sticks upright in the air after the song. The teacher took the last note of the song and replaced it by an upright lift of the sticks. The co-teacher also lifted her sticks in the air but after the stop-moment, the last note, and not always. The co-teacher also introduced tapping parallel on the floor right from the

first offering and a dynamical variation, tapping quietly, already during the first event. The teacher presented the children with tapping quietly on the legs only during one unit. The sticks in the ZG2 group were a bit shorter and thicker than the sticks in the DG2 group.

8.6.3 Movement

The most frequently observed movement was tapping the sticks together. This was also the prominent movement offered by the teachers. Many children appeared to tap with one stick on the other stick that was held stationary. For example in DG2-1/3&4 Darren and Luuk were seen to have one stick stationary and they tapped on it with the other hand. At one point in ZG2-1 Félice was seen to rest the stationary stick on her leg. Tapping two sticks together asks for the combination of two movements: one stick will move downward and the other stick will move upward. Perhaps this combination of movement is not as motorically achievable as it appears.

The teacher held her sticks upright in the air on the last note of the song. This movement I consider another extension of the stationary confirmation movement but now in a dependent movement fashion. Confirming a moment in the musical time and simultaneously supporting the meaning of the lyrics. As such it is here transformed to a didactical movement.

Finding a good sitting position to tap was often observed. During ZG2-2/4&5 Marit was seen to experiment with her body position. Going from standing to sitting on the knees during tapping was a challenge. Sara in ZG2-2/9, tapping along in parallel movements, demonstrated how she found her balance when lying on her tummy on the floor. She lifted her arms from the floor and kept her feet crossed together with her under legs totally up for counterbalance. She performed the stop moment with a last tap on time and then lifted her sticks (the dependent stationary confirmation movement). She had one resting moment when she put her elbows on the floor for a brief moment and then they went up again. Throughout this whole action she kept a steady beat and had direct responses.

In ZG2-2/7 Nina, Floris, Marit and Sara displayed alternating tapping movement with their sticks although the teacher never gave this movement example. Sara performed these alternating tapping movements while lying on the floor on her tummy. Alternating in this case means that the sticks are tapped changing the position of the upper stick to the under stick and back again.

In the DG2 course many different sitting positions were seen while the children were sitting on the floor. Two children stood up to tap almost right away. The sitting positions allowed the children to either tap the sticks together or tap on the floor. Tapping on the floor was observed in two ways: in front of the body between the legs or beside the body next to the legs. These tapping movements can be categorised as tapping in a small position or tapping in a wide position. The wide position often involved more use of the total arm than the small position.

During DG2-2/1 Tim and Darren tapped their sticks on the floor, Tommy waved them in the air, Luuk and Wolf tapped them together. The co-teachers model was tapping the sticks together. However the floor had been suggested in the previous event (the lesson before when this activity was presented) so this might have evoked the difference in tapping positions. Interestingly, Darren because he had a wide tapping position tapped slower than the offered beat: the co-teacher's tapping tempo was about 138 bpm. This was already a faster tempo than during the first event. Most likely a wide position needs a slower tempo to synchronise with than when tapping in a small position. This was also observed in the *Plitse Pletse Plater* activity during the clapping movements. In DG2-3/2 most of the children tapped in wide position causing a constant delayed response by Ronin and Rosa.

8.6.4 Objects

The movements appeared to be influenced by the way the objects, the sticks, were held. In the ZG2-1/6 unit Sara only had a few taps because she was trying to get a good grip on her sticks. She is in time for the timing-moment but the objects appeared to have an effect on her movement responses. Luuk in DG2-1/3 was seen to hold his sticks at the ends resulting in wobbly movements. Many children were seen to hold their sticks at the end, resulting often in a waving-like floppy movement. Tapping the

sticks together was challenging in this manner. Tommy made very fluffy movements with his sticks up to a point where he left them behind and continued his motion by waving his hands. The length of the sticks appeared to play a role. Sticks could be shorter to improve manageability. A floppy grip might not be conducive for a proper kinaesthetic information transport. It looked like the older children did have a better grip on the sticks or they arrived at a better grip sooner during the event than the younger children. Issues of motor development might play a role. Learning how to hold and handle the sticks might be an underlying motor learning aim as a prerequisite for musical learning. Considering this, perhaps the learning aim of timing in this activity should come first and beat control second, because the children obviously needed time to first control their tapping, the muscular activity itself. At the same time they can experience one moment for it to be on time – the timing-moment at the end of the song – and from there, move on to beat synchronisation.

Considering that my focus is on the musical learning aims and not possible general learning aims like motor development – which is a good objective in itself – it might very well be that especially for the younger children the sticks should be shorter in order to get a good grip on the objects. This way the children would probably arrive at more purposeful movement responses sooner when the element of bodily adjustment would be diminished. Nevertheless the objects were appropriate for the activity in terms of purposeful movement responses related to the musical learning aims.

8.6.5 Representation

Nina, aged 37 months in DG2-2/3, displayed a thorough understanding of the activity. (DVD example OT2) Nina stood still in the middle of the action zone and displayed direct tapping responses, her right hand tapping the stick in her left hand which was held stationary. At the end she stopped on time and put her sticks up in the air. Before putting up her sticks she made a very short energetic movement with her under arms as if to mark the up/stop moment of the song, what I have named a confirmation movement. Arriving at the timing-moment while lifting up the sticks in the air for most children though was a movement action that took some time to emerge.

The DG2 course – it was not seen in the ZG2 course – might have provided an example of the transfer of one musical element, dynamics through the use of a different

movement: the coupling of a specific movement to a musical characteristic. The co-teacher in DG2-1/6 already introduced quiet tapping as opposed to loud tapping but the children responded barely. Most likely this unit with the variation was introduced too soon by the co-teacher. In the 7th unit the co-teacher offered the quiet variation one more time but only Ronin tapped softly with her sticks on the floor. During DG2-1/10 the co-teacher again offered the dynamical variation unit but with a different tapping movement: the sticks were tapped together at the ends, thereby keeping the sticks horizontal. This provoked similar movement responses of most of the children who were present. During DG2-2/2 the dynamic variation was once more presented and all the children were now involved in the modelled movement action. In the 3rd unit most of the children also had captured the timing – on top of the end – tap movement. Because of the painted ends, providing an orientation element on the sticks at one site, it was possible to extend the quiet tapping with the ends by turning the sticks 180 degrees to tap the other ends. In ZG2-6 the teacher offered the possibility of tapping quietly on the legs, but only for one unit because this was envisioned as a transition to the next activity. The interesting question this raises is whether a music dynamic characteristic can take on meaning through a different way of moving with objects. (DVD example OT1)

Some children were seen to respond by whole body movements related to the natural movement repertoire. Sara was seen making swaying and hopping movements on her bottom during ZG2-2 and Tommy in the DG2 course most of the time was standing and involved his whole body in his tapping. In DG2-1/8 Tommy was standing and waving his sticks in the air on the beat. Half way the song he hopped a bit up and down faster than the tempo. He stopped moving after the timing-moment.

A short moment of overt kinaesthetic empathy was seen. Floris during ZG2-2/5 was looking at Sara who was hopping up and down on her bottom while sitting on her knees with direct movements. Consequently he was seen to synchronise his tapping movements with Sara's portrayal of the beat. The fact that I did not observe kinaesthetic empathy directly does not mean that it was not happening. Although we can not actually see the mirror neurons coming into action (see 3.5 p. 50), the fascinating issue is that the ongoing collaborative interaction might very well have

been supported by kinaesthetic empathy. However, while my study is concerned with the understanding of individual responses, collaborative interaction is a dimension beyond its boundaries.

8.6.6 Temporal representation

This activity had two temporal elements related to the musical learning aims: synchronising a tapping movement to the beat and the timing-moment.

It appeared that in general the first element the children seemed to understand was the timing-moment. The children in ZG2 were able to pick up the timing-moment during the course of the first event and therefore most likely the understanding of the time-stream was possible within one event. At the end of DG2-3/1 all children stopped at the timing-moment. At the end of ZG2-2/3 everyone, except Sara, had the timing-moment perfect, resulting in appreciative shouts from the parents and carers. Important is that all children faced the teacher during this unit, they could see her very well, only Sara had to look at her left to have a full picture of the teacher, suggesting that especially in the beginning of an event, the children might need a combined corresponding sensory model of aural and visual information to anticipate the timing-moment.

Nina, one of the oldest children in the DG2 course, gave a good example that repetition is an important element in learning an activity over time. Nina was not present during the offering of the first event of this activity. During ZG2-2 Nina was already tapping on the beat. The stick in her left hand was changing position as if she was experimenting with how to hold it, how to tap. (This corresponds with the first stage of handling objects in an activity: exploration (see also 9.4, p 198). She was walking around a bit during her tapping. She did not stop at the timing-moment. In the same event Marit was also experiencing this activity for the first time and like Nina did not respond to the timing-moment. Both girls needed a few units to “get” this moment. At the end of the DG2-1 event after the 14th unit all children had the timing-moment correct. Even some children held up their sticks at the end. Darren in DG2-1/5 was sitting with his back towards the co-teacher tapping the sticks of his mother. Although not seeing the co-teacher he had the timing-moment perfect at the end of a

unit, probably indicating that when this moment – the timing-moment – is understood, visual information is less or not necessary anymore.

The synchronising of the tapping movements was reached through a process of repetition in which movements were seen that were mostly ahead of tempo and in and out of tempo in both courses. In ZG2 the teacher's tempo went from 123 bpm in the 1st to 135 bpm in the 3rd unit. Félice and Sara appeared to be trying to synchronise with the movements of the teacher. Floris tapped much faster than the teacher's tempo. Interestingly, he did not look at the teacher which Félice and Sara did. This might be a further indication that a visual input is important in the first stages of an activity.

During the distribution of the objects in ZG2-2 the children took a spontaneous tempo of 131 bpm and their parents and carers adopted this tempo. The teacher however started in the 1st unit with a tempo around 155 bpm which was the average tempo Floris took during ZG2-1. During the first unit the children kept revolving around 131 bpm regardless of the offered tempo of the teacher. At the start of the 2nd unit the teacher consequently took a slower tempo of 140 bpm. Perhaps the tempo of 131 bpm approached the general personal tempo of the children more than the 155 bpm.

In ZG2-2/5 Floris displayed direct tapping movements and a perfect timing-moment with his sticks up in the air. He even skipped one beat, most likely to re-synchronise with the beat and then continued with direct movements. Marit was also seen to skip a beat altogether by stopping her movements and then picked up the offered tempo. This might demonstrate that some children, after repeated exposure to the activity, could explicitly represent the beat of the song. Moreover, it seemed that some children at moments were able to move beyond their personal tempo to a slower tempo after extensive exposure to this activity. During the distribution of the sticks in ZG2-3 the teacher offered a tempo of 124 bpm. Nina started to tap much faster but when looking at the teacher she slowed down and adapted to the teacher's tempo.

8.6.7 Teacher influence

At the beginning of ZG2-2/3, 3 children went to the floor and sat on their knees. This was a direct response to the body model of the teacher. The teacher's aim was to go from standing to sitting during this unit because the previous activity had been performed standing. The teacher went from standing to sitting upright on her knees on the floor which caused many children to discontinue at moments their tapping in order to reposition their bodies. The children showed a lot of deviations from the tapping model of the teacher: sticks held differently for example. A lot of experimenting with body position was seen as well as getting a good grip on the sticks in relation to the body position.

The co-teacher displayed a multitude of movement possibilities with the sticks during the first offering of this activity. In retrospect this was simply too much information for a first offering. The children had to adjust to a different movement model too often and would have benefited more of the offering of a single movement in the first event.

8.6.8 Information construction

Through a process of body adjustment, tapping adjustment, adjustment to the time-stream (timing-moment) and tempo adjustment as well as tempo adjustment of the teachers, the children could arrive at an overall construction of the activity in which they could display purposeful movement responses. It was possible to derive a phased learning process of movement responses in this activity.

1. Understanding the time-stream by representing the timing-moment
2. Synchronising to the beat
3. Replacing the last note by holding the sticks upright to mark the timing-moment (only in the ZG2 course).

Although this suggests a step-by-step process, the activity itself was offered as a whole and through personal selected responses the children could build their knowledge of the activity in phases.

During the ZG2-2 course at one point the teacher said: "this activity really goes well". Giving positive support and feedback to the children is an element of verbal teacher guidance and can therefore be placed under the header of Teacher Influence and is important for the children to know that they can continue their chosen actions. Then

the question became: *what* went well? The first clue is the tempo of the song. I observed that all the children gave direct movement responses. This was a visual observation, based on my own experience as a musician and music teacher. A strict measurement in milliseconds might expose multiple personal deviations from exact beat synchronisation. But within the context of a music lesson a teacher has to rely on visual observations combined with receiving auditory information of a rhythmical musical movement action. Looking for direct movements responses equal to exact measurements is unrealistic and not desirable within a musical learning process. Nevertheless, by giving direct movement responses a tentative explanation might be that the children could represent the beat because they gave desired or purposeful responses. This would be in line with Byrnes (1999) and Macintyre and McVitty (2004) who consider overt behaviour an indication of a form of representation and therefore an outcome of learning. The aim of the activity was to let the children experience the beat of a song and to synchronise their movement responses in order to evoke kinaesthetic traces of temporal musical elements. The main cue in this learning process is the re-offering of the activity itself. And when conditions will remain the same throughout the course for this activity it might be expected to see even more direct movement responses. The re-presentation is relevant in this process because a personal imitation is hoped for of the movement example of the teacher, although imitation is not quite the appropriate term in this context. Music is an art form that unfolds over time so being on time, giving a direct movement response, means that the musical moment needs to be anticipated. Anticipation therefore is considered to have a representational function in this context.

In 8.3.4, I proposed a tentative suggestion that it might be possible for the children to experience two streams of incoming and outgoing information at the same time on a sub-intentional level, which would not influence their movement responses. However, this might need a corresponding visual element when objects are involved. In ZG2-1 Félice, Floris and Sara were distracted during their tapping and they looked somewhere else. Floris slowly slowed down his tapping. The tapping of Félice and Sara became floppy. The interesting matter is that they did not look at their tapping at the time. So to what extent is it necessary to look at your sticks while tapping to get the tapping aimed? Sara was seen to participate very well but because she was looking at

the teacher most of the time in ZG2-1 and the fact that she was holding her sticks at the edges, she often missed a tap because the sticks did not touch each other. In comparison: Tara of 24 months in DG1 was looking in the mirror and could go on clapping, also when distracted by another child. The point is she did not have sticks therefore the extra handling of objects might have made a difference and the visual feedback of Tara's clapping might have helped. In the analysis of the first study I proposed that operating in different modes at once – a single or dual mode response: moving or singing, or moving and singing – required the children to pay attention to different stimuli at once: a visual stimulus: the movement example of the teacher; an aural stimulus: listening to the singing of the song and a tactile stimulus: feeling the performing of their own movements, creating the necessity of the use of half-automatizations, which require little attention involvement (Ashcraft, 1998). "There is a limit to how many different things we can attend to and do at once" (Ashcraft, 1998, p. 69). Different kinds of information streams then provide different challenges: most likely therefore promoting selected responses in order to construct a representation of an activity.

8.6.9 And beyond

In my regular work as a MoL teacher I offered an activity – a different song than *One Two* – with sticks to a group of children aged 2 to 3. After a few units of tapping I announced that this time we would play in a soft manner. Even before I could present a movement model for this unit, demonstrating how to tap with the sticks using the edges, a few children had already turned their sticks horizontal and held the edges of the sticks together. Interestingly, in this course it was the first time that I presented a soft tapping version with sticks. The children that demonstrated this movement after the verbal announcement remembered the movement from the course before the present one were it was presented with another song. Hence, this might be considered an example of connecting a musical element with a specific movement.

8.7 SEQUENTIAL ACTIVITIES

The initial idea was to collect data from 4 sequential activities (see chapter 6), two with and two without objects. However, we had found that in sequential activities objects were not used. The analysis of the remaining two activities, one for each age group, presented some further challenges. First it was seen that in order to facilitate a vertical analysis both teachers should offer an activity in the same manner. Practically spoken this means that the movements in an activity in both courses of the same age group should be the same. Secondly the question arose how musical learning aims can be reached in a sequential activity. Making more than two movements in an activity appeared to be a challenge for the children. The analysis revealed that this movement category needs further research.

8.7.1 Hands on your side

Handen in je zij Annie Langelaar



Han-den in je zij, ik ben zo blij, han-den op je rug en nu weer f'rug.
Han-den op je knie van tie-re-lie-re-lie, han-den op je buik en nu ist uit.

*Rembrandt Harmensz van Rijn
Portret van een man met
de handen in de zij 1658*



Hands on your side, I am so happy, hands on your back and back again. Hands on your knee go tierelielie, hands on your tummy and now it's finished.

This activity pertained to the second activity set for the age group of 25 to 36 months. It was categorised as a sequential activity with gestural movements and a few rhythmical movements. In the first study the musical learning aims were the experiencing of timing-moments and experiencing the beat. This raised the question of whether it had been reasonable to assign a musical learning aim based on rhythmical movements.

The analysis brought to light that there was a difference in approach to practice between the two teachers, which had consequences. The co-teacher had an added three claps on the knees movement that qualified as a rhythmical component in terms of a musical learning aim. However, the teacher did not use these movements in her offering of this activity. The advised tempo of 150 bpm was based on these few rhythmical movements in the activity – clapping on the knees – but this tempo might have been too fast for the activity as a whole. This became clearer in a second difference: a new didactical strategy that the teacher used in the DG2 group. In this group the teacher presented the movements first without singing. The children were literally taken through all the movements with verbal guidance before an event started. The co-teacher later on adopted this strategy but in a different way: by asking the children to show one of the 7 movements without singing before each unit of an event. A third difference was that the teacher did not offer the ready movement at the end of the song – arms opening to the left and right and had a different movement when the hands would come back from behind to the front of the body. A fourth difference was that the teacher offered this activity when the group was sitting on chairs. In the DG2 group all sat on the ground. This might have been a reason why the parents in the DG2 supported their children by much more kinaesthetic reference than was seen in ZG2 because often the children would sit on their laps.

Although the lessons were viewed and discussed during the data collection, these differences only came to light prominently during the analysis. This was most likely a result of an already thorough analysis of other activities. The interesting point was that this activity had many ways of being offered. It did however impede the vertical analysis.

Nevertheless a few interesting elements were seen. A few children made confirmation movements: it looked like they were marking the timing of a certain movement (see 5.7.6). For example a single movement – a shaking movement – of the torso or the head came after the return of the hands from behind the back to the front of the body. A full sequence of movements – all the movements in the right order – was almost not **seen**. Over the course of the four offerings most children did seem to grasp more of the movements in the time-stream but mostly by imitation of the example of the

teachers and not by anticipation. Some children in ZG2 did performed three tapping movements on the knees during tierelievelie without an example from the teacher. This might be an indication that the incorporation of these rhythmical movements by the co-teacher might be a “logical” consequence of the structure of the song. In some instances it looked as if the movements supported the words to go along with that moment. These words were pronounced clearly like ‘terug’ (going back) and ‘uit’ (ready).

Grasping the multiple movements in this activity appeared to be a complicated process. Although the lyrics were supportive of the movement actions – literally singing what to do – the order of the movements and applying them to the right temporal moment in the song was a challenge. Often it was seen that children would put their hands back behind their back instead of on the belly or knees. In both courses it was seen that when the movements were presented without singing, more children were involved in making the movements. This last element might be very important for future study of this activity, along with gaining more insight in motor possibilities and perhaps also the amount of movements in an activity. Most likely before any musical learning aim can be assigned, the activity should be didactically structured and more tailored to the motor and temporal capabilities of the children.

8.7.2 Clap your hands now

Klap eens in je handjes Traditional

Klap eens in je hand-jes, blij blij blij. Op je mooi-e bol-le-tje al-le-bei.

Hand-jes in de hoog-te hand-jes in je zij,

zo va-ren de scheep-jes voor-bij. Zo va-ren de scheep-jes voor-bij.

Clap your hands now, glad glad glad. Both on your lovely head. Hands go up, hands go on your side, this is how the little boats sail.. This is how the little boats sail.

This activity pertained to the first activity set for the age group 18 to 24 months. According to the observations of the first study it was defined as a sequential activity. Considering that the musical learning aims of this activity were restricted to the order of the movements a tempo was not advised. As a result of the first study it was conceived as a single mode activity, a mode most likely appropriate for this age group.

This activity was very much liked by the children in both the DG1 and the ZG1 groups. In the ZG1 course they repeatedly asked for one more time. There was however little to no progression to be seen in the capturing of the order of the movements. The children mainly performed the swaying movement at the end – hands in the side/‘this is how the little boats sail’ – probably because this movement connected with their natural movement repertoire.

There was a notable difference between the approaches to practice of the teachers. In the DG course the children and parent were sitting on the ground during all the events and in the ZG course the parents/carer were sitting on chairs except for the fourth offering. Because in the Zevenhuizen group the children would stand next to the chairs of their adult companions there was more room for the swaying movements. As a result, proportionately more swaying movements were seen in the ZG1 course.

This Dutch traditional song is very popular amongst parents and grandparents. Therefore the song is used often in MoL courses: to connect with the adults and to offer them a song they can sing along with right away. Nevertheless the number of movements to perform was considered to be too many for this age group to benefit from musically. Most children “selected” one or two movements to perform and the movements were not regularly continued through all the events. However, in both courses the two oldest children – they were both 24 months when the course started – did the activity very well. They sang along audibly and performed the whole sequence of movements regularly although mostly without any temporal reference.

Offering this activity to this age group is clearly fun and in a playful way the children can experience a sequential activity. It is not that this activity should not be offered to children under the age of two. The matter is that possible musical learning aims should be approached very carefully.

8.8. TIMING ACTIVITIES

These were two straightforward activities in terms of movement responses and musical learning aims. The basic elements were the tempo offerings of the teachers and the supportive kinaesthetic reference of the parents and carer. Over the course of the events almost all children were able to experience the timing-moment and the beat.

8.8.1 Step step step

Stap stap stap

A. Engels

Stap-pen stap-pen stap-pen stap-pen op m'n nieu-we
schoe-nen, Stap-pen stap-pen stap-pen stap-pen
lo-pen waar ik wil. Stap-pen stap-pen
stap-pen stap en nu sta ik stil!

Step-ping step-ping step-ping step-ping on my new shoes. Step-ping step-ping step-ping step-ping walking were I want. Step-ping step-ping step-ping step-ping and now I stop.

This activity pertained to the first activity set for the age group of 18 to 25 months. According to the results of the first study it was defined as a timing activity without objects. The aim of this type of activity is to anticipate one specific movement. This movement is the timing-moment. The aim is to be on time: to perform this specific movement on the beat. "Noticing the end" (Young & Glover, 1998) of a song – to stop on time – is also a timing-moment.

Considering the temporal similarities with the *Clap Clap* activity the first question was: why was this categorised as a timing activity instead of a rhythmical activity? This activity involved walking around on the beat, therefore it was an activity with large motor movements. The *Clap Clap* activity had small motor movements, clapping, so the attention was directed at other body parts: the legs. The lyrics were decisive in this


matter. *Step step step* was a longer song than *Clap Clap* and the lyrics supported the action of stopping at the end of the song. *Clap Clap* was literally about clapping and the lyrics did not give any support for a stop moment. As a result the primary musical learning aim for *Step step step* was the experience of a timing-moment. The secondary musical learning aim was the experience of a sense of beat. Hence the structure and lyrics of the song provided important clues for the primary and secondary musical learning aims. Most children were able to stand still at the right moment at the end of the song after being exposed to a few units. The two oldest children in the groups – one in each – were the fastest in responding to the stop moment. The lyrics were supportive in this. During the fourth events all children were able to stop at the right moment in both groups.

The advised tempo for this activity was 132 bpm for the crotchet. It was seen that a faster tempo of 170 bpm was more suitable for the children to be able to walk on the beat. There was a difference in approach of the tempo between the teacher and the co-teacher. The teacher took an average tempo of 145 bpm. The co-teacher mainly used an average tempo of 90 bpm but walked in double tempo: on the quavers instead of the crotchets. Therefore the walking tempo effectively revolved around 170 bpm. This faster walking tempo was most likely an appropriate tempo because in DG1 all the children were able to walk on the beat for rather long periods.

In both groups most and sometimes all children walked hand in hand with their parent or carer. This seemed to have a positive effect on their walking on the beat. In the last DG1 event two parents were walking on the crotchets although the co-teacher was walking on the quavers – ‘double tempo’. Their children were seen to try to adapt to the walking tempo of their parents. Not without difficulty because sometimes they skipped to the double tempo of the co-teacher. The important thing was that they were aware of a different way of walking of their parent and tried to adjust to their tempo. Zora, the youngest of 16 months, even made very decisive stepping movements in this slower tempo. Already observed by Vaughan (1981), children are aware of the possibility of adapting to a slower tempo when they have been offered their natural tempo first. Kinaesthetic reference – holding hands – is conducive for supporting the feeling of the tempo. Therefore in order to reach the second musical learning aim – experiencing a sense of beat – a teacher should observe closely the


movement responses of children in order to connect with their natural stepping tempo. As a result the original song of this activity was modified after the analysis to support the secondary musical learning aim. In bars 1, 2 and 5 and 6 I added quavers to support the stepping tempo. The final result is the song above.

8.8.2 Mommy bear and baby bear



Mama beer en Baby beer

Marijke Giesveldinger



Mommy bear and baby bear walk together up and down. Lift a paw and put it on the ground. So in a circle they walk around.

This activity pertained to the second activity set for the age group of 25 to 36 months. It was categorised as a timing activity with rhythmical movements without objects. The rhythmical movements are the marching movements on the floor, which is the contact surface. Therefore the first musical learning aim was the experience of a timing-moment and the second the experience of a sense of beat. The timing-moment in this activity takes place half way the song when there is a specific moment to lift one foot (paw) of the ground. This makes this activity more challenging – keeping your balance on one foot – than *Step step step* and is therefore more suitable for older children. This activity was considered to be a further step in the musical learning process of timing and beat aims. The advised average tempo of 132 bpm was more or less within the limits of the range of the natural tempo by which the children responded. Perhaps a bit faster might be a good directive for this activity. However, it is always at the discretion of the teacher to find the appropriate tempo by observing the group.

I observed that the same tempo elements applied to this activity as in *Step step step*. To reach the second musical learning aim a close observation of the walking tempo was needed to connect to the children's natural movement tempo. To lift a foot (paw) at the right moment took some time. During the second event the children were more able to anticipate this moment and prepare themselves physically to lift their foot: they knew the song. The parents helped the children by holding their hands during all events. Some older children tried to walk and lift their foot alone without help. After some time they were able to do this but timing elements disappeared because the physical support for the balance of the parents was missing.

A last point is the moment when the foot was put on the ground. The teachers chose different moments in bar 6. The teacher timed this moment on the word 'grond' (ground) and the co-teacher timed this moment at the word 'zet' (put). The foot went up on 'hoog' (up) at the beginning of the second half of bar 5. It therefore might be more logical to put the foot down in the second half of bar 6 during the word 'grond' (ground). This way the timing of lifting a paw and putting in back would be the same in both bars to facilitate a logical coherence in the timing of the two movements. It was not seen that this difference in the two groups caused timing challenges. Nevertheless, the approach of the teacher might be more conducive for a clear representation of timing-moments in the time-stream.

8.8.3 Walk in a circle

Herma Hapster

Loop in een kringetje, loop maar rond.
Hoor je de triangel dan zit je op de grond. (ting...)



Walk in a circle, walk around. When you hear the triangle, you're sitting on the ground.

This activity pertained to the second activity set for the age group of 25 to 36 months. It was categorised as a timing activity with rhythmical movements with objects. The rhythmical movements are the marching movements on the floor, which is the contact surface. Therefore the first musical learning aim was the experience of a timing-moment and the second the experience of a sense of beat.

However, after the data collection during the analysis through conversations with the internal observer, it became clear that this activity – although very much liked by the children – was not suitable to be analysed within a movement representational context. Strictly speaking it was not an activity with objects although it was categorised as such in the beginning. The difference was that the children did not handle the object themselves. The object present, singular, was the one which was handled only by the teacher. A flute, triangle or a piano was used to turn the attention of the children to a specific moment in the activity through the sound of the object.

Also the categorisation as a timing activity appeared to be inappropriate. The aim was to walk around on the beat of the song and sit on the ground at a specific moment, which was announced by the sound the teacher made. The point was that the children could not anticipate this moment. They could only react to this moment with no idea in advance when the moment would come. The sitting down movement was not a response in the time-stream but a reaction to a sound. The secondary musical learning aim – experiencing a sense of beat – would have added no new information because it could be compared to the secondary aim in *Mommy Bear and Baby Bear*. Hence, this activity eventually fell out of the context of the study. It might be more appropriately categorized as a listening activity with movements and as such has a great value for the stimulation of listening skills.

8.9 GESTURAL ACTIVITIES

8.9.1 Ora viva



Ora viva, I turn my hands, I turn my hands. Ora viva, I turn my hands trala!

This activity pertained to the first activity set for the age group of 18 to 25 months. According to the results of the first study it was defined as a gestural activity without objects. The teachers offered the following movement: the hands were held up and turned around their axes from the elbow.

This activity presented a different challenge: the children did not make the offered movements. They were either beyond the motor capabilities of the children or they were not at all understood in the context of the song. As a result temporal elements and representational elements could not be experienced. The teacher in one of the interviews said the following about this activity: “This movement is probably less logical than turning the hands around each other with the underarms horizontal. So perhaps have a progression from one movement to the other over two lessons and it might be interesting to ask how they did it at home. Then you might see what is more logical/natural from a motor developmental perspective. Perhaps the movements would be done at home more naturally according to what the lyrics indicate. In the lesson the teacher is the role model and the children are imitating”.

This underlines the need for a thorough knowledge of the motor capabilities of the children for MoL teachers and probably early childhood music educators in general.

Secondly, the suggestion to observe this activity at home might become part of a new study, possibly through video diaries, of the children's movement responses at home to facilitate the musical learning process in the music education environment.

8.9.2 The wheels of the bus

De Wielen van de Bus Engels kinderlied
Ned. tekst Luuk v.d. Vegt

1. De wie-len van de bus die draai - en rond, draai - en rond, draai - en rond, de
2. De mo-tor van de bus doet broem, broem, broem, broem, broem, broem, broem, de

wie - len van de bus die draai - en rond, als de bus gaat rij - de
ma - tor van de bus doet broem, broem, broem, - - -

The wheels of the bus go round and round, when the bus starts moving.
The engine of the bus goes broem broem broem, when the bus starts moving.

This activity pertained to the second activity set for the age group of 25 to 36 months. It was categorised as a gestural activity without objects. Although many movements were used in this activity it was not categorized as a sequential activity because the movements did not appear in sequence during a unit. Each unit had its own movement depending on the item of the bus that was addressed. The teachers were free to offer several different units – movement variations for the different verses – or just one. There had been no suggestion for a possible tempo. Because of the many movements we had decided to let tempi emerge from the activity itself.

For this activity there was no preconceived idea of what might happen. Therefore there were no musical learning aims. The activity was chosen because of the many movement possibilities and the fact that the lyrics firmly supported each movement. It was hoped that the supporting lyrics – singing what the bus “does” - and the single mode structure of each unit: one movement per unit, would facilitate for example the temporal elements of the activity.

There was a difference in teacher approach. The teacher would offer only two movements during the first event and added two movements in the second event. The third and fourth events had all the movements. The co-teacher offered all the movements (verses) in the first event. Also the teacher offered one extra movement – the lights of the bus – that the co-teacher did not offer. Secondly, the teacher took slower singing tempi and the turning of the wheels movement was faster than the co-teacher offered. And last: the teacher took much more time to guide the children through all the movements by also offering them without singing. Sometimes she added a vocal element like the sound of the wipers of the bus. The no-singing condition was always offered rhythmically and gave the children a change to concentrate on the movement itself without the time-stream of the song. As a result more children in the ZG-2 course made the movements during the events than in the DG-2 course. In this activity it was clear that the co-teacher had a very chaotic way of presenting the movement possibilities. I should mention that as a consequence, concerning this activity, because of the study and the multiple views, I have been able to improve my personal offering of this activity in my professional practice. Thereby modelling my behaviour after the model the teacher presented, in particular the verbal support. Also I now mainly offer this activity to children 3 to 4-years of age which does seem to work much better.

On the whole the question arose as to what extent this activity was appropriate for the age group. Although more and more children made the movements over the four events, performing the movement examples of the teachers appeared to be a challenge. Many uncoordinated movements have been seen: attempts to make the movements but not reaching a full, personal, rendition. Temporal aspects – sense of beat, timing-moments – were mostly absent. Only the movements of opening and closing the doors had a clear temporal element – the clapping of the hands together as the doors close – that was partially experienced. Moreover, the teacher offered other movement possibilities than the co-teacher for the bus door. Where the teacher had a big slow movement – the arms would go left and right and then would meet with a clap in front of the body – the co-teacher had a small movement of opening and closing the hands while they kept together at the wrists. Later on the co-teacher also had a big movement but with straight arms instead of curved arms. As a result it was

difficult to compare all the door-movements because most children in this case did something different. For example: some children would stretch their arms and others had curved arms; some children would only use their hands and others would use their whole arms, depending on the example of the teacher and co-teacher. Another point was that the door-movement of the teacher was the same as the wiper movement only without the clap. The difference made it difficult for the children to separate the door-movement from the wiper-movement.

All the factors mentioned above made it difficult to perceive a clear musical learning process in this activity. The movements had been offered assuming that the children would understand them and therefore would be able to participate fully and consequently experience musical elements. The fact that we – the researcher and the internal observer – unintentionally, had not formulated a musical learning aim for this activity was perhaps predictive of the complexity of this activity. This is not to say that only activities should be offered that have clear and structured musical learning elements attached to them and that a certain amount of musical learning has to be experienced by definition. What this activity does offer are the multiple movement possibilities to practice and the support of movement of the concepts in the lyrics – as long as the movements are clearly distinguishable. As such this activity might possibly fall in to the musical symbolic play category for this age group: a pre-stage of structured musical learning (see also 9.3.5).

In research terms this activity brought to light that each concept in the lyrics should have a separate definable movement to be representative of a single concept. Secondly, to facilitate a vertical analysis the participating teachers should first match the movements they are going to offer. There were many more movement possibilities within the units of which we had not been aware beforehand.

8.9.3 Wie waa waaien

Wie Waa Waaien

Thea Zaat
bew. J. Retra

Wie waa wai - en zwie - ren zwaai - en, mooi - e lint - en
in het rond. Mooi - e lint - en in het rond.
hoog in de lucht en dicht bij de grond.

Wie waa blowing, swinging swinging, beautiful ribbons go around. Beautiful ribbons go around. High in the air and close to the ground.

This activity pertained to the second activity set for the age group of 25 to 36 months. It was categorised as a gestural activity with objects. The objects were long plastic rather thick garlands in the DG-2 course and long small ribbons attached to a stick of about 20 centimetres in the ZG-2 course. These objects were exchanged between the two courses to observe possible differences in the appropriateness of supporting the musical learning process by these objects. All the children had a garland or ribbon in each hand and swung them around on the beat by making axial movements. The objects could swing around their bodies from left to right and back. This movement emerged out of the movement responses of the children themselves. Apparently this movement was favourable to participate in the activity with the objects.

During one of the teacher interviews and informal conversations with the teacher/internal observer it became clear that the choice of tempo and the choice of objects in this activity was the main crucial point. Most of the children could experience a sense of beat when the tempo of the song was appropriately adjusted to their movements. An observed resulting preferable tempo will not be given here because this not only depends on the group at hand but also on the objects to be used. The children could not manage ribbons that were too long. (Some children would

often stand on them by accident.) Ribbons – in this case the garlands – which were too short had not enough ‘waving capacity’ to allow for a good flow in the movements. Somehow the ribbons which were attached to a stick had a far better ‘waving capacity’ than the garlands.

The teacher at one point after the song offered the activity with the support of different pieces of instrumental music on CD (one per event) to offer a movement possibility without singing. Again, different tempi were suitable for different children most likely depending on their natural tempo.

One girl in the ZG-2 group of about 27 months after some experimenting had found the perfect way to put herself in to motion with the ribbons on a piece of instrumental music. The tempo matched her natural tempo. She continuously moved during the song and perfectly on the beat. Afterwards she literally let herself fall on the ground: she was exhausted.

8.10 RHYTHMICAL ACTIVITIES

One more rhythmical activity was offered to both groups. These activities largely resembled *One Two* with objects and *Clap clap this is what the hands do* without objects. As these activities already have been thoroughly described, only new interesting elements will be discussed.

8.10.1 Tap along



Tik maar mee!

Margré van Gestel

Wil je tik - ken? Tik maar mee. Hier zijn stok - jes 'tzijn er twee.
Tik - ken tik - ken wat je wil, Lui - ster goed, nu is het stil.



Do you want to tap? Tap along. Here are the sticks, two of them. Tapping tapping what you want. Listen well and now there is silence.

This activity pertained to the first activity set for the age group of 18 to 25 months. It was defined as a rhythmical activity with objects. The primary musical learning aim was experiencing a sense of beat and the secondary experiencing a timing-moment. The objects used were self-made round wooden sticks with a coloured top of about 4 centimetres and self-made drums of about 13 centimetres in diameter and 16,5 centimetres high.

The difference in teacher approach brought to light an interesting point. The co-teacher offered the children the drums from the start and only added the sticks during the fourth event. The teacher first offered the sticks and then during the second event added the drums. Therefore it was possible to see that with only the drums the children had more movement possibilities to respond by to the song in terms of temporal elements. The sticks were too challenging to handle and were more used to play with. Tapping on the drums with the hands in a parallel fashion appeared to be

the best way to let the children experience the beat and the stopping at the end of the song. Experimenting or playing with the drums was also an important part of this activity: getting acquainted with the objects. Again, this activity offered this way would fall under the header of musical play. Nevertheless, the objects used can provide the children with a way to experience possible musical learning aims. This is not to say that the use of sticks should not be offered, on the contrary. Depending on what a teacher aims for in a musical activity, objects can be offered for the children to experiment with and to offer the opportunity to acquire a form of causal knowledge.

8.10.2 Clap along

Klap maar mee L. v.d. Vrijboef-Patiens

Klap klap klap maar mee, met je hand - je al - le voet.

Als je zit of als je staat, kun je klap - pen in de maat.

Clap clap clap along, with your hands both of them. When you're sitting or when you're standing, you can clap on the beat.

This activity pertained to the second activity set for the age group of 25 to 36 months. It was categorised as a rhythmical activity without objects. The primary musical learning aim was the experience of a sense of beat and the second the experience of a timing-moment namely the end of the song. Both teachers offered the clapping model (the fingers of the hands point more or less upwards and the hands are flat, see 8.3.3). All children were clapping along during the second event. The co-teacher also offered the timing-moment, stopping at the end of the song. All children in DG-2/1-2 stopped on time, so this musical element was easily understood. The teacher did not offer the timing-moment but kept on clapping most of the time during all events of the song, thereby concentrating only on the primary musical learning aim. The main point of discussion was the tempo of the song. This song had the possibility

of being offered in a fast tempo while only clapping on each first beat of a measure or a slower tempo and clapping on all quavers. The teacher took the 'slower' clapping tempo – average bmp 117 – and the co-teacher took the 'faster' clapping tempo – average bmp 160. (The brackets indicate that these concepts are relative.) It was seen that some children synchronised their responses with the slower tempo and some children with the faster tempo. A few children had direct movement responses, in both the fast and slow version, but most children were alternating in and out of tempo. The interesting point was that it was possible for some children to synchronise their responses with the slower beat, slower than the personal movement tempi that have been described in this study so far. An idea as to why this could happen is pure speculation, but it might have something to do with previous experiences in synchronising movement responses. Also, in 8.5.6 an observation was made that the song *Plitse Pletse Plater* possibly had an inherent tempo that stood apart from the personal tempi of the children. The same might be the case here. However, inherent tempi of songs and the consequences for rhythmical movement responses should be interesting material for a different study.

This chapter has given a detailed description of the children's movement actions and responses during MoL lessons drawn from close and finely timed microanalysis as well as a broader analysis of the video data. This detailed description, although complex, was necessary to give an insight in to the very small variations in responses that were the indicators of how the children would engage in the musical activities.

The next chapter will present a synthesis of the observations of the first and second study in relation to the literature chapter providing a theoretical framework.

9. DISCUSSION & IMPLICATIONS

9.1 INTRODUCTION

In this study I embarked on a journey to acquire a deeper understanding of the way movement could serve the musical learning process of young children and what possible implications there might be for the early childhood music education environment. In taking movement as a kinaesthetic representational entity through which young children can learn, understand and represent music, thereby departing from the conception of the mind and body as inseparable and supported notably by the works of Bruner (1981), Metz (1989), Kemp (1990), Bamberger, 1991, Young (1992 & 1996), DeLoache (2000), Reybrouck (2001) and Flohr (2005), I could define movement in combination with its representational qualities as an enactive musical symbol. The next step was to understand how the movements could become purposeful enactive musical symbols in the early childhood musical learning environment to arrive at the building of theory. Therefore a question was: how does musical movement representation emerge within a music educational context? This foremost implied an active process and therefore the most appropriate environment to study this process was a regular music educational environment in order to detect the constitutional elements pertaining to this process. Based on the notion of “co-perception” of Reybrouck (2001) and the inclusion of old elements (memory) and the notion of new elements that present themselves at the same time in a certain situation of Martinez (1999), I considered movement not only to be a way for the children to understand the musical information offered to them in the musical learning environment, but also an important way, overt movement behaviour, through which the children would manifest their musical understandings. Overt musical movement behaviour I consequently considered a manifestation of a relevant representation (Byrnes, 1999). Subsequently the observation of the actual movement responses of the children – the data collection – in a music education setting was conducted to gain an understanding of the conditions necessary as to how the children could be put into purposeful motion from which they would benefit in a music representational way. Because the movements offered in the music educational process go beyond the natural movement repertoire of the children when they freely – without any modelling or example – move to music, it appeared that the intended musical action symbol,

movement, and its referent had to be connected by the act of meaning-giving. This is a necessary step because as Young argued, the connection between movement and music is an arbitrary connection and “cross-modal imagery is often used metaphorically as an aid to grasping” (Young, 1996). The act of meaning-giving appeared to be supported by didactical aspects in the musical learning process. Amongst others clearly defined musical learning aims could constitute the movements and their musical referents. Meaning that my definition of musical movement as well as its conceptualisation is a prerequisite to create a process of movement representation.

I think it is important to say that all stands or falls with how movements are being conceptualised by early childhood music teachers. I found that when movements are deprived of their ability to carry meaning and connotations, there is no point in didactically supporting musical learning through movement because the movements have no reference to any musical characteristics or quality. There is a premise here, namely that young children should be capable of obtaining a certain form of musical knowledge through experience. This experience then can be shaped through active participation by purposeful movement. Furthermore, to externalise what they know young children need to be able to prompt the desired action when asked or stimulated (Byrnes, 1999). The issue is how and to what extent young children should and can be stimulated to do this. Apparently before starting the music representation process through movement, conditions need to be met within the educational environment to evoke purposeful movement responses. Temporal elements are hereby essential not in the least because music is a temporal art and timing appeared to be a factor in mastering the movements and connecting them to their symbolic purposes.

My aim in this chapter is to discuss the results of my observations supported by the observations of the internal observer of the two studies and to merge them into a coherent framework. To provide an extensive report of my findings regarding the movement responses of the children I will connect where possible to the discussed literature. I will discuss these findings in separate though interconnected paragraphs according to the themes that have emerged. All observed movement was situated within the context of regular Music on the Lap (MoL) courses. A MoL course is

constructed out of activities: the singing of songs that are always accompanied by a motor activity and often either a musical instrument suitable for young children, or a toy (Alberts & Rikhof, 1998). These activities were the main musical events that created the framework of observations from which the findings were derived. As the study progressed I realised that the theorising of musical movement representation and pedagogical theory became increasingly intertwined. Because the study was firmly grounded in actual music education – as opposed to a laboratory situation – the theory of movement representation became closely embedded in pedagogical activity as a result of the found conditions for the bringing about of purposeful movement responses.

The study was conceived as a continuous, cyclic process and was therefore open to new information at any stage of the process. A number of cited authors in the following discussion were not mentioned in the literature review. The results of the studies made them important to support my argument.

Considering that this study aimed for the understanding of certain aspects of musical movement representation, I do not pretend to have arrived at a full understanding. However, I think there will be enough material that qualifies for application in practice and further research.

9.2. MOVEMENT

In order to capture and structure the movement responses of the children within a musical activity, as a result of the pilot study I created initial movement categories. These categories were created based on a clustering of similar movement responses within the MoL setting. Primarily intended to structure the observation of movement these categories appeared also to be beneficial as a didactical appliance in the structured offering of movement in a MoL lesson. I therefore considered them to be basic movement categories:

- moving with support (moving together, e.g. holding hands during marching)
- movement by self (without any help)
- being moved (by parent or carer, e.g. cuddly songs)
- putting something in motion (a toy, music equipment)

Within these categories it was possible to distinguish dependent movements: movement responses based on the movements that were offered by the teacher, and

independent movements: movements made by the children without an example of the teacher. Because this study intended to look at movement within a musical learning process, it became the teacher's task to expand by modelling and training the range of movements of the children to go beyond the natural movement repertoire. Sims already suggested this course of action in 1985 (see 3.2.2). The actions of the teacher were taken to be the primary instigator of the responses of the children. An activity could therefore be constituted as a closed musical event in which the children could place their dependent movement responses. Consequently it was possible to assign activities to more elaborate movement categories that were derived from a reworking of the basic parameters of music. Furthermore to assign movements that might be considered representational of certain musical characteristics to a movement category was possible through the creation of movement types that could appear within a movement category.

Two broad types of movement were observed: rhythmic movements and gestural movements. Based on the basic movement categories and the observed movement types as well as the general construction of the MoL activities, 4 activity categories and functions could be derived from the observations of the first study: a rhythmic activity, a sequential activity, a timing activity and a gestural activity. (A more extensive description of these movement types and functions can be found in chapter 5.8.2 p. 105.)

The framing of the movement responses in this study made it possible to observe different underlying structures and conditions. These appeared to be necessary to promote purposeful movement responses. These structures and conditions will be discussed in relation to the observations of the second study in the following paragraphs.

The literature review and the results of the first study had provided information in order for me to argue that movements can be regarded as enactive music symbols: "representing [musical] events by the actions they require" (Bruner, 1981, p. 152). Considering movement responses to be an indicator of musical understanding, a prior connection of a certain movement with a certain musical referent should be

established in an explicit or implicit way: the act of meaning-giving. It was found that this connection appeared to be verbally created by the lyrics of a song and through verbal teacher guidance. It also appeared that the musical learning aims, which are normally established in the lesson plan before the offering of an activity, have an important part to play. For musical action symbols to take on meaning, the observations in the second study indicated that it is possible to distinguish two ways, though intertwined, along which movement responses may unfold:

- through a holistic way of absorbing the musical information which is supported by the integrated offering of all the different elements pertaining to an activity resulting in symbolic musical play (see 9.3.5) in turn providing the musical learning context in which movement can take on meaning
- through the implicit or explicit symbolic function of the movements in relation to musical characteristics through a partitioned process of meaning-giving in a more structured musical learning environment.

In order to arrive at the possibility of experiencing movement as a musical action symbol, freedom of movement, personal body control and understanding of the activity are prerequisites. MoL emphasises personal bodily responses: the example of the teacher gives an indication of how the movements can be performed and not a model that has to be imitated exactly. This aspect leaves room for the children to find their own way of performing the movements and participate through a personal response. I found that this is a necessary element for the children: to be able to experiment with their body and to build a personal construction of the activity. As already stated in the analysis of the first study, repetition in this process appeared to be crucial. Considering that the children are engaged in a musical learning process, the element of time provided the children with the possibility of gradually understanding what an activity is about, find their personal way of responding through movement and consequently implicitly or explicitly attach (musical) meaning to their movement responses. Using movement in an early childhood education environment in this framework consequently asks for a firm pedagogical and didactical underpinning of the musical learning process.

Similar as in the analysis of the first study it was possible to distinguish two kinds of movement responses: dependent musical movement behaviour and independent musical movement behaviour

9.2.1 Dependent movement responses.

An overall inventory of the offered movements in the activities offered in the second study resulted in the following list: clapping; tapping with objects; gesturing with and without objects; marching on the beat. The children themselves provided an elaboration of these movements by displaying multiple personal variations. These personal movement responses besides being personal interpretations of the offered basic movement repertoire were also an indication of a personal way of constructing and building an understanding of the activity and its musical learning aims. These personal differences were expressed by:

- selected responses: not all the offered movement possibilities were performed at once or according to the teacher's model, the children were often seen to respond only to certain elements of an activity or by giving a personal partial rendition of the activity
- intensity of movement: the personal differences in energy input into the movement responses resulted in deviations from the movement model and might be considered personal bodily experiments to master the offered movements
- the different ways of handling an object: movement possibilities were influenced by the features of the objects and evoked personal movement experiments with the objects.

As a result I distinguished a possible movement subcategory. Within the movement category of rhythmic movements (incorporating a contact surface therefore creating the possibility of direct representation) a wide position and a small position of the movement actions was observed. For example clapping with a large distance between the hands using more energy input of the arms and tapping with the sticks next to the body on the floor I denoted as a wide position. Tapping the sticks together or in front of the body on the floor and clapping with a small distance between the hands I denoted as a small position. These observed differences in energy input appeared to have an impact on the tempo – the beat – of a unit and were therefore considered of

importance to the underlying musical didactical choices a teacher can make. The movement model in relation to the choice of tempo a teacher offered influenced the synchronisation with the beat. This in turn had implications for the experiencing of the time-stream of a song: the time-stream is the musical timeframe of a song in which the children can embed their movement responses for the movements to take on musical meaning. The implications for the use of objects I will discuss in paragraph 9.4 of this chapter.

9.2.2 Independent movements.

These kinds of movements represented personalised responses by the children themselves often unrelated to the boundaries of a unit and were sometimes initiated by the specific use of objects by the teacher in an activity. For example the offered amount of ducks in *Plitse Pletse Plater* – a duck in each hand – motivated the children to start tapping in an alternating way, though this movement was not offered by the teacher. Independent movements when often performed outside the boundaries of a unit – tapping, clapping for example – and can be used as an indication of a personal tempo display by the children to which the teacher can model the tempo of her or his movement behaviour.

A non-modelled movement was what I have named the confirmation movement. This movement I observed in the analysis of the first study and more instances were observed in the second study. These kinds of movements are not directly related to timing or beat but seem to confirm a certain movement by repeating this movement or prolonging this movement. Repeating a movement can be either before or after this specific movement. For example giving an extra push before raising the sticks in the air or tapping on the floor with a paper plane after it has been landed. The timing-moment on the edge of the tub was confirmed by an extended sliding of the duck over the edge of the tub and a plane was kept stationary high up. Confirming a certain movement might add to an extended understanding of this movement in time and as such can be considered a personal way of kinaesthetically “getting in touch” with the movement. A confirmation movement can also be applied as a depended movement as the teacher showed during the timing-moment of the activity *One Two*. On the last note of the song the teacher held her sticks upright in the air. Confirming or marking

hereby a moment in the time-stream and simultaneously supporting the meaning of the lyrics. Further investigation will be necessary to establish these kinds of movements as purposeful in the musical learning process.

The movement categories were very applicable in this study and generated an appropriate framework for the movement responses of the children. I also consider them to be very useful in early childhood music education practice. I do not however claim to be exhaustive in describing possible movement categories and their functions. In comparing the categories I have created with the movement categories of Greenberg (1979) (see 3.2.3) common aspects found are the emphasis on meaning and structure as well as the type of rhythmical movement. However the elaboration of these aspects is different in both approaches. The common denominators nevertheless do suggest that some general underlying principles might be found in categorising movement in early childhood music education. Therefore my suggested categories might be useful to early childhood music education practice in general beyond the setting of Music on the Lap.

9.3 TEACHER INFLUENCE /APPROACH TO PRACTICE

Metz (1989) had already indicated that the guidance of the teacher in music-related responses appeared to be of influence. Therefore an objective of the second study was to acquire more understanding of the role of the teacher in the musical learning process. This resulted in my observation that the teachers served as important models of bodily action in different ways. The verbal guidance and temporal structuring, as well as the tempo adaptations of the teachers were seen to be important to support the bringing about of purposeful movement responses.

9.3.1 Body role model

Metz (1989) told us “teacher interaction with the children [...] revealed that increases in music-related responses were dependent on the guidance of the teacher”. An aim in this study was to explore what the influence of the teachers’ guidance would be on the movement responses of the children and how this would manifest. The influence of the teacher appeared to be of great importance and manifested itself on different levels.

Departing from the existence of kinaesthetic empathy (Montero, 2006; Moore & Yamamoto, 1988) (see 3.3.5), the movement model of the teacher should be within parameters of motor possibilities of the children to promote physical identification with the body model. “Seeing others move, we kinaesthetically represent their movement on our bodies” (Montero, 2006). This implies that a teacher should find corresponding body positions and ways of moving according to the children’s example. For example, it was seen that during the clapping in *Clap clap this is what the hands do* the teacher clapped in a way that the children could physically model. Consequently the children were able to synchronise their movements for a large part with the tempo of the song also because the teacher adapted her tempo to the personal tempi of the children. In this process repetition also provided time, in and over the event for teacher and children to adapt. I found that in order to promote kinaesthetic empathy the bodily examples of the children could provide an important overt clue for the teacher.

Another example is that the co-teacher was often found to sit cross-legged. This body behaviour was not seen in any of the children. As soon as the co-teacher saw this she changed her body position in accordance with how the children would normally sit. This might seem trivial, however in copying the general sitting position of the children the co-teacher was also more aware of the way the movements were offered and the responses to her model of the children. The teacher at one moment during a unit went from a standing to a sitting position. Most of the children responded at once, while some children responded a bit later. This change in body position caused most children to have an extended moment of repositioning their bodies and renew their grip on the objects. And as a last point: adding objects to support the bodily model of a teacher – in this study the co-teacher used an example doll – might create a form of “over-modelling” and consequently can have a restrictive effect where freedom of movement is needed to bring about purposeful movement responses.

9.3.2 Verbal guidance

Through verbal guidance the teachers appeared to structure the narrative of the activities, thereby facilitating exploration of the movements and the objects. The children were verbally invited to take part in a unit: “Let’s take off for the last time”,

“One more time” or “There we go again, clap along”. For example the children would start to clap at once when asked: “Can you clap your hands?” before the singing had started. The start of a song or time-stream was supported by either an invitation “Here we go again” or a description of the action to undertake “The plane goes up in the air”. Verbal support was also used to single out and describe a possible movement action: “Can the plane make a circle very high?” Verbally supporting the result of a movement action, which also marked the end of the song/time-stream: “The plane has landed”, was also observed. The children appeared to respond well to verbal guidance and therefore I suggest that consistency of verbal support to let movements take on a specific meaning – providing a connection of a certain movement with a certain musical referent, explicitly or implicitly – promotes the representational process as well as the information construction process of an event.

9.3.3 Temporal guidance

The teachers provided the temporal structure of an activity through the number of repetitions and through a process of tempo adaptation of the songs. A number of activities appeared to be challenging for the teachers to reach the advised tempi as they were described in the methodology chapter II. Both teachers were used to specific tempi during their many years of teaching and over time certain tempi had become more or less fixed. A process was observed of arriving at the advised tempo for the children to be able to give direct movement responses through literally going faster when this seemed appropriate. This would not occur during a song but when a song was repeated. A constant monitoring of the children’s responses to the offered tempi took place. Consequently it was possible to observe more and more direct movement responses. The teacher responded that she was surprised that the “new” tempi had a positive effect. A quote from the interview with the teacher: “What I saw was that in the *Clap your hands* activity – I sang it faster today than I would normally do – that the movements worked at once, also in this faster tempo. I was actually amazed by this. Normally I do this much slower. Because you want to give the children time to respond and you see that with this group that when you take a faster tempo, they respond as easily. More in time than I had expected”.

9.3.4 Approach to practice

Teachers have personal ways of structuring the musical learning environment which is most likely an inherent logical outcome of their personalities as well as how they have developed in their professional lives. These differences I consider important because children have many different personalities and personal ways of learning. As a result a certain approach pertaining to a teacher might be more suitable for a certain group of children. It is at the teacher's discretion to choose the most appropriate approach. Within these personal structures however a distinct didactical approach in reference to the underpinning musical learning aims is desirable in view of the information construction process of the musical elements offered in an activity. For example the offering of variations in an activity – in terms of objects or movement variations – most likely would benefit when presented not too soon and after a certain amount of time in which the children first can acquaint themselves with the basic movements of the activity. In the case of objects: the first presentation of the movements might come across more clearly when the children are not required to respond at the same time but are allowed to literally watch first what the actions involve. This nevertheless depends on the underlying general structure of an activity a teacher offers. A teacher might decide for a holistic approach – musical symbolic play – thereby offering the whole of the activity at once and engaging children in a process in which they can decide for themselves to what elements they want to respond to. The notion of musical symbolic play will be further discussed in paragraph 9.3.5 .

Two paths could be distinguished along which the teachers appeared to influence the movement responses of the children within a musical event:

- the preparation of the musical learning process: preparing the event or activity incorporating movement choices supporting the musical learning aims
- the guiding of the musical learning process: through a supportive and modelling role during the event (body model, verbal guidance, adaptation to the children's musical behaviour).

Offering a music activity in an early childhood music education setting should imply that there are ideas about the underpinning of the musical learning process. Perhaps even a very pragmatic stance should be taken here: what is it going to take to get

there. There, being the actual obtainment – be it explicit or implicit – of musical knowledge by the children. It became important to look closely at the musical learning aims of an activity because they influenced the choice of movements for an activity. Promoting movement as a musical action symbol requires a well defined musical learning aim, thereby making explicit a meaningful connection with the envisioned movements in an activity in order to experience certain musical elements be it implicit or explicit. To make a purposeful link between the movement responses and their intended musical referent, I found that a condition was that the musical learning aim had been described.

9.3.5 Musical symbolic play

As a result of the analysis of the second study the notion of musical symbolic play came to the forth. Being an emerging concept within the context of this study I placed it under the header of teacher influence because this was observed while studying the approach to practice of the teachers. The manner in which the teachers personally structured the musical learning environment – preparation and guidance – appeared to create time and space to understand the activity and its music symbolic referents on an exploratory level. Two approaches to practice in this context could be derived from the analysis of the second study:

- Musical symbolic play: the teacher offers all aspects of the activity and gives ample room to promote experimentation and exploration supported by verbal guidance providing meaning to the actions. Over time the children then can connect with the symbolic musical function of the activity by first experiencing the movements on a kinaesthetic level and the building of causal knowledge of the object.
- Musical symbolic learning: breaking up the activity in its elements supported by the musical learning aims and offering these to the children in a separate sequential manner supported by verbal guidance providing meaning to the actions.

In practice the actual choice will be a result of group composition. No group of children is the same and a teacher will have to make an assessment which path to follow to accommodate the group at hand.

Wright (2003b) in this matter might provide useful support. She makes a distinction between teaching and knowing. "Teaching has more to do with the teacher's perspective, objectives, and attempts to communicate, but knowing evolves from the learner's explorations and attempts to invent, develop and test ideas" (Wright, 2003b, p. 188). The musical learning process then can be approached in two ways: teacher driven or child driven. This study was mainly concerned with the first approach, teaching music to young children through movement, but we – the researcher and internal observer – observed that allowing children to explore the elements and concepts offered in the musical learning environment through a less structured offering, what I have named holistic in paragraph 9.3.4, especially in the age group of 18 to 25 months, might be supportive of movement representation. This emerging notion of musical symbolic play within an educational context was notably seen in the activities *Look an airplane* and *Plitse pletse plater*. Both activities used objects to support the musical learning process and might therefore have been suitable to observe musical symbolic play. The symbolic function of the objects as an extension of the movements most likely created a challenge on a representational level, thereby implying the need for symbolic play as a pre-stage of more structured symbolic musical learning processes. This is supported by Tomassello's (1999) claim that the understanding of symbolic play does not come sooner than around the age of two. According to Berger and Cooper (2003) "during play, children participate in intrinsically motivated pleasurable actions where the process, not the product, is the goal" (Berger & Cooper, p. 152). Mol is primarily based on process evaluation. Nevertheless the use of musical learning aims and lesson plans suggests the aiming for a structured approach in order to arrive at some form of music educational product. Intentional symbolic play could be incorporated in the musical learning process as a differentiation of structural approaches to arrive at purposeful movement responses. Moreover it could become part of a musical learning programme that can structure over time the adaptation to the level of symbolising of the children. Consequently the need for a clear conceptualisation of musical symbolic play becomes imperative.

A full conceptual discussion at this point risks diverting from the main path of discussion in this chapter. I do however think that some tentative idea could be derived here that a pre-phase in the musical learning process which is less structured but does contain all the elements that would qualify the action as music education,

might introduce the children through a form of experimentation and exploration to the musical concepts by symbolic play. When looking at it this way the teachers in the second study have provided an example of a structured musical learning process (the co-teacher) and a guided symbolic musical play process (the teacher). Young (2003) considers musical play a way to engage in musical activity, a form of musical participation in need of a proper conceptualisation: “In comparison with other areas of play, say in art, language, construction, models of practice in early years music based on children’s own self-led music are poorly developed” (Young, 2003a, p. 17). Furthermore Young states that young children can benefit from adult musical models but actual participation in the musical activity – a personal response – should also be initiated on their own initiative and terms because adapting to external models asks for a considerable development of skills. Young concludes, “it is a question of balance”. A further step then should be to investigate a guided symbolic musical play process within a musical learning setting on its possible merits in comparison to a more structured musical learning process and how these two would relate to each other in a musical learning setting.

9.4 OBJECTS

Objects were regarded in the present context as an extension of the body: an extension of the exteriorising of musical elements through movement responses. The angle of observation was the use of objects as a support of the music representational process. Metz (1986) in her study used objects to elicit movement thereby assigning a different function to objects, which, justified in itself, represented a different angle of approach. The guiding question was what possible criteria and conditions could be imposed on the use of objects in the musical learning environment to promote musical symbolic relationships to further musical learning. The premise taken here was that objects could be used to convey explicit and implicit characteristics of music by being put into motion and by attributing music representational qualities to the objects through a process of sense making.

As a result I derived a three-step process from the observations.

Exploration: I observed that objects first had to be explored and experimented with to discover their properties and movement possibilities. Time to “meet” with the object

appeared to be important to arrive at a form of causal knowledge and to literally get a grip on the object in order to handle it. It was seen that getting the right grip did not interfere with the movement responses, but it did often delay the participation and temporal responses of the children. Therefore in terms of handling and grip, the use of objects should not exceed the motor capabilities of the children.

Participation: when the children were acquainted with the objects they would incorporate them in their movement actions. The children sometimes cheered when the objects were (re-)offered, especially when they already knew them and had seen them before in the course.

Representation: possible observations in relation to the third step I want to approach with caution. Although many purposeful movements with the objects were seen, any claims about actual implicit or explicit representation I consider to be premature. In terms of Tomasello, Striano and Rochat, (1999) acting symbolically upon an object is probably for the larger part a matter of imitating the movement actions of the adults that were present during the courses, notably in the age group 18 to 25 months. Nevertheless, the motion of the objects might provoke initial kinaesthetic traces of meaning that I consider to be an important pre-stage of actual musical representation.

The observed process corresponded with the acquiring of representational insight as was found by DeLoache (2000) when she investigated the development of early understanding and use of symbolic artefacts: objects. Detecting and representing a relation between the symbol, the object, and its referent, a musical characteristic, because of an absent direct physical similarity between the symbol and its referent could therefore only rely on “the level of information provided about the symbol” (DeLoache, 2000, p. 329). In this respect the bodily model of the teacher becomes all the more important. Consequently also verbal explanation and support through the lyrics of the songs of the object’s actions are important elements to attach meaning to the movements of an object. Initiation of the act of meaning-given can be provided in the shape of musical learning aims. If it is clear what the musical learning aim of the activity is, the objects used can become part of the representational mode (direct or indirect) and this way receive their meaning and function. Musical properties then can

be implicitly attached to the movements of the objects. For example tapping the ducks on the water: experiencing a sense of beat and flying the airplanes: contour information – melody. The movement actions with a duck might be considered an example of direct representation: the action creates sound and can therefore be directly experienced because there is a causal relationship: tapping and therefore direct auditory feedback. The plane movement actions I consider to evoke an indirect representation because there is no direct causal relationship. The experience this way of the object becomes a literal meaningful action: a duck can splotch (tap) on the water, the time-stream of the song provides the temporal element to which the duck can splotch and at the same time a child can experience a sense of beat. The issue is that the musical element of synchronising a movement to a beat itself will most likely be an implicit representation. The splotching of the ducks however in relation to an offered beat can leave a kinaesthetic trace that might be attached to a musical element in a later stage.

Another point is that the movement – and sound – actions in the case of the ducks and the paper planes were derived from the real world properties of ducks and planes and as such were transported to the objects, causing the ducks and paper planes themselves to function as a representation. This might be considered a double translation process: properties of the real plane to the paper plane and paper plane properties to movement. This process might possibly inhibit a straightforward music representational process by the children. Young children quickly understand logical sequences in the handling of objects and their specific properties and possibilities (Bauer & Mandler, 1989). However, the question is to what extent young children can grasp this complicated meaning giving process and can arrive at an implicit musical understanding through the use of objects. Moreover, imposing meaning onto an object in this manner is a pure adult approach. According to Troseth, Bloom Pickard and DeLoache (2007) “using a symbolic object as a source of information about something else requires some appreciation of the relation between the symbol and what it represents”. In what I have provisionally named the double translation process, this appreciation includes also a certain understanding of the fact that the plane for example is not a real plane. It is a representation of a plane. A real plane cannot simply go in all directions we want it to go. The paper plane version can and therefore certain

movement elements can be attached to it to support the musical learning process. An interesting subject that requires further investigation.

Furthermore I observed that for objects to support movement representation the material and construction of the objects should be appropriate to establish a causal relationship between the object and its intended symbolic referent designed by the musical learning aims. For example the soft fluffy ducks were motivational to participate but they did not create a direct representation: they made no sound. An objective of the activity was – a musical learning aim – that through tapping the duck a sense of beat could be experienced. It appeared that auditory feedback, the audible result of a causal relationship, was necessary to engage the children in tapping their ducks.

9.5 REPRESENTATION

Consistent with the reviewed literature it appeared that musical representation through movement was a multi definable process. This process seemed to be active on different intertwined levels. Musical learning through movement is conceived in the present context as the understanding and reproducing of the movements, where a certain level of movement response performance incorporates the understanding of the movements. Different levels of representation could be distinguished: musical representation, kinaesthetic representation, temporal representation and episodic representation. Episodic representation appeared to function as a form of coordinated representation, comparable to the overall structure of an event (activity) in a music lesson. According to Martinez (1999) “representations are problem- and context-sensitive”. The context being the musical learning environment of Music on the Lap, the total of possible musical representations emerged from this context and will therefore be discussed within this context. Possibly more levels of representation can be derived from the data, however for the purposes of the present study these four modes emerged as the most dominant.

9.5.1 Episodic representation

Episodic representation was defined in the literature review chapter as a representational system incorporating the element of time – an inherent factor of

music and music lessons –, all media of sensory input and the processing of a particular personal incident within a specific context (Martinez, 1999; Baddeley, 1999). The music education environment presented the children with multiple personal events in the shape of musical activities. These events contained a large amount of information for the children to understand and act upon. Therefore some sort of underlying structural principle should be provided to help the children make sense of the whole range of information streams. My suggestion is that the total of musical events can be compared to “a coherent set of occurrences over time and space” (Flavell, Miller & Miller, 2002, p. 107) thereby using the representative elements of a script. Although Flavell et al. formulated this idea from a psychological cognitive developmental perspective, using an information processing point of view instead of an information construction view, I have found it to be useful and informative in the context of the construction of event knowledge, which is a feature of episodic representation.

The total time of a lesson is fixed in advance and within this time frame different shorter or longer musical time-streams – the activities – will take place, offering different meanings and elements. The coherence of the total of events – the musical information – is pre-structured by the teacher through the creation of a lesson plan in which the events to occur are described along with their guiding learning aims. The structure of the lessons, a sequence of musical activities within a certain order (the lesson or didactical plan), can be compared to what Flavell et al. name a script: “a generalized, temporarily and spatially organised, sequence of events about some common routine with a goal” (Flavell, Miller & Miller, 2002, p. 106). The musical activities or events can be conceived as musical routines that can be learned and understood through repetition in a lesson and over a course. In the present situation these common routines have aims in accordance with the musical learning aims of MoL. A lesson itself, because of its fixed structure and repetitions – always starting with the same *Hello* song and ending with the same *Goodbye* song – can be compared to a common routine. The sequence of events within a lesson – except for the opening and closing song – is flexible to a certain extent. Generally no more than two new activities are offered in a lesson within a course. The last two lessons in a course will not offer new activities because there will not be sufficient time left to repeat these

activities. As a result, a course has a certain more or less fixed number of activities that constitute the total of events within the lessons.

Acting upon the offered musical routines depends on knowledge of past events combined with future outcomes of a certain action (Martinez, 1999) (see 3.3.2). Scripts provide children with stability because they tell the children “how things are supposed to go” (Flavel et al., 2002, p. 107) thereby allowing to predict what will happen next.

This idea of a script in the musical learning process is tentative and deserves more investigation. Nevertheless for the purposes of the present study I consider it a useful preliminary concept.

To stimulate episodic representation in the musical learning environment, I observed that the construction of event knowledge, incorporated the coordinating themes found in this study. These events – the musical activities – were subject to change: variations in the musical learning process supported by for example the offering of a variation in the lyrics, which can be regarded as an alteration of the scripts. Unification of the changes in an event during the course was provided by the time frame or time-stream of a song. The temporal framework provided the general underlying cohesive element.

Imberty (2008) from a more philosophical standpoint of view expressed the following idea about time:

“To think about time, but also to feel time as a substrate of our internal experience, is first and foremost to have a sense of connectedness: not only of the connectedness of past, present and future weaving an orientation within which our lives are projected, but also of the connectedness of our emotions, our feelings, our experiences that tie together the threads of our personal story as they do those of others with whom we interact.”

Also according to Imberty:

“[...] the narrative form constructs the unity of time, parses the reality of human becoming, for a world of language and signs which the infant will only access later. The temporal aftermath is thus a semiotisation of action, or to be

more precise, it is what enables the semiotisation to develop through a lasting time (*durée*), so that something takes form and acquires sense through time” (Imberty, 2008).

Consequently it was possible to look upon the musical activities – occurrences, events in the time-stream – as a form of musical narration. Also Flavell et al. (2002) related scripts to narrative thinking. If the narrative form as Imberty says constructs the cohesive underlying temporal framework, than language and most notably the act of meaning-giving play a crucial role in the construction of event knowledge. Semiotisation of action may be a result of prolonged offering of musical events, however considering the arbitrary relation between language and musical movement action as well as the inherently abstract characteristics of music, I suggest that it is vital to imbue the narrative with meaning in order to arrive at semiotisation through the act of meaning-giving. Semiotisation in this process I take as overt language signs – lyrics of a song, verbal guidance by the teacher – as carriers of meaning. A prerequisite then becomes to make certain that the children are capable of understanding the language used in the musical learning environment. Especially because when for example looking at the activities *Plitse Pletse Plater* and *Look an airplane*, you might say that there is a small story, a narrative unfolding. Moreover, the narrative most likely provides the basis of musical symbolic learning and play. According to Siegler and Alibali “understanding of communication, and of the social world more generally, influences children’s learning of word meanings” (Siegler & Alibali, 2005, p. 207). The musical narrative events offered to the children then should relate to the world of the child to give it meaning. A condition that was met by the activities offered in the MoL environment. The lyrics of the songs were tailored to the daily lives of the children. A second prerequisite is the verbal guidance of the teacher to support the understanding of the narrative. This aspect has emerged from the analysis of the data of the present study.

9.5.2 Musical movement Representation

Musical movement representation was defined in the literature review as an enactive representation, “representing events by the actions they require” (Bruner, 1981), comprising a coupling of action and perception: the interaction of actual incoming

information and information stored in memory, in which movements would function as enactive musical symbols. I propose that young children need to make movements in order to externalise their musical representations. In turn their movement responses – overt musical behaviour – were considered to be a visible cue (Byrnes, 1999) of acquired representational knowledge. The study explored the possible conditions that would further the use of movement responses in a music educational setting.

Musical movement responses were seen to be supportive of the musical learning process as a way to obtain and show musical knowledge through the development of appropriate bodily skills. The children's movement actions provided an integration of the different aspects that comprise musical knowledge. Through a process of providing appropriate cues by the teachers the desired movement responses could be provoked: verbal cues from the teachers but also from the parents; the objects itself could be a cue for action regardless of temporal elements and visual cues in the shape of a movement model by the teacher.

9.5.2.1 Modes of information streaming

Considering that musical movement representation is an integrated process of perception and action, the children were presented in the musical learning environment with different modes of perceptual action. As a result of the analysis of the first study I proposed the use of single and dual modes, where singing and moving were both being seen as a single mode of musical action. This was related to the possible amount of attention that could be invested in a single or dual mode action. Also the second study indicated that singing and moving at the same time is a skill that develops over time and children should not be expected to respond in a dual mode fashion in the early stages of musical learning. Further development of these notions can result in the offering of musical modes that are constrained by the musical environment. A single mode response movement can be extended by what I have named direct and indirect representations, representing characteristics of music through movements that have a direct or indirect causal relationship.

Movement category: rhythmical movements – contact surface – auditory feedback – direct causal relationship. Movement category: gestural movements – no contact

surface – no auditory feedback – indirect causal relationship. Consequently the symbol-referent relationship can also be of a direct or indirect nature.

Another observation was that as a consequence of the coupling of action and perception, incoming streams of information and simultaneous streams of outgoing movement actions seemed subject to a few conditions. A large number of movement responses were seen to take place inbetween the units of the events. Considering the multiple streams of information the children received a visual, auditory, verbal and kinaesthetic (empathy) stream of information, it might be that in the moments inbetween the units there was room in the body and brain to evoke an outgoing stream of movement action while there is nothing else going on musically speaking.

Receiving visual information during the movement actions in some cases enhanced the performance of the movement responses. Looking in a mirror while clapping caused Tara to become aware of her own clapping and she was therefore able to synchronise with the offered beat. The children in the second study were often seen to look at the teacher while performing the movements as if to receive corresponding information about their movement behaviour (perhaps support for the existence of kinaesthetic empathy). While visual information might enhance movement responses, objects might inhibit the outgoing streams of movement responses. Division of attention caused a few children to diminish their tapping movements in the activity *One Two*, while their attention was caught by something unknown outside the musical action zone. During *Clap clap this is what the hands do*, the children at times were distracted by something but this did not seem to inhibit the flow of their movement responses.

9.5.3 Kinaesthetic representation

Kinaesthesia was defined in the literature review as a sense by “which we acquire information about the positions and movements of our bodies via the vestibular system and receptors in joints, tendons, ligaments, muscles and skin” (Montero, 2006). Kinaesthetic representation is brought about by muscular sensation: movement. Dalcroze referred to it as “motor-tactile consciousness” (Jaques-Dalcroze, 1921/2000, p.4). The debatable issue is if on a musical level kinaesthetic representation of musical

elements and musical movement representation might be considered the same; especially because both reside in a temporal domain.

9.5.3.1 Kinaesthetic reference

Possibilities for representation on a kinaesthetic level were most notably seen in what I have named kinaesthetic reference. Kinaesthetic reference is literally feeling by the child the movements the adult makes in reference to an activity. For example when children are being put into motion. This concept was first introduced by Metz (1989) (3.2.4 p. 37) who named it tactile modelling: for example a child's hands would be swung back and forth by an adult to the music. I have extended this concept into the area of representation. The parents would often put the children in motion through part of an activity. But also the children themselves engaged in joined movement attaching themselves for example to the hands or arms of their parent to "ride along" on their movements. By putting a child in motion I observed that musical elements of a song were kinaesthetically transferred. For example the feeling of a certain beat or rhythm or the musical form. The observation that children would engage in joined movement appeared to be important for the age group of 18 tot 24 months. Children were seen to perform movements on their own bodies and also on the bodies of their parents when this was not modelled by the teacher. Another related example was observed during the activity *Look an airplane*. The song/activity inherently had no auditory feedback because no direct representation was intended in this activity. The two teachers structured the activity into an A B A¹ shape, a reference to musical form: the taking off, flying and landing of the plane. Purely by accident in the last lessons where the plane activity was offered by the co-teacher, through the placing of a coat in the middle of the room by one of the parents, a landing spot had been created. This landing spot probably created a feeling of a direct representation because now the children had a fixed place where their planes could land. Although this was seen for a short moment, it implied the suggestion for the concretising of certain movement aspects of this activity. The landing spot was visualised and tangible. The causal relationship is then provided by a tactile element. It might therefore be that direct representation is more preferable above indirect representation in this age group.

9.5.3.2 Kinaesthetic empathy

Kinaesthetic empathy was defined as the physical identification (Moore & Yamamoto, 1998; Montero, 2006) with the movements offered by the teacher. Although the feeling of movement when seeing movement has received support on a neurological basis – mirror neurons (Molnar-Szakacz & Overy, 2006) – actual examples of kinaesthetic empathy were not seen. Only one possible single instance was observed from Floris: he synchronised his tapping movements with the hopping movements of Sara. Children were seen to observe the teacher – visual information – often, especially in the first stages of an activity. Phillips-Silver and Trainor (2005) had found that seeing an adult move to two rhythms did not result in a preference for either rhythm by the 7-month-olds, while the same children did express a preference for one of these two rhythms when being bounced to these rhythms. The question is under what circumstances kinaesthetic empathy might function. Is this related to age and do young children benefit more from a peer physical movement example than an adult movement example? This would even more stress the fact that teachers should adapt to the movement examples of the children to create a physical model they can feel and understand.

9.5.4 Temporal representation

Temporal representation was defined as the representation of beat and rhythm through regular (movement) actions within a certain timeframe. I proposed that “synchronizing a motor action to an external rhythm” (Pouthas, 1996) is an important aspect of musical movement representation because it provides the underlying pulse that constructs the musical timeframe in which the children place their movement responses.

9.5.4.1 Keeping the beat

Different authors, as explained in the literature review, considered synchronisation with the beat to be an “inappropriate practice” (Flohr, 2005) in early childhood music education because “most of them will not be able to do so” (Flohr, 2005, p. 103). Other authors did attribute rhythmical synchronisation possibilities to young children. Miller-Bryant (1983) saw that “fast tempi are more conducive to rhythmic responses than slower tempi” thereby providing an important condition to synchronise

movement with the beat. I observed that this was indeed the case. When the beat of a song corresponded to the personal (or natural tempi) of the children many synchronised movement responses were seen. These tempi were indeed faster than the average tempi adults would choose in an activity to synchronise their movements with. The investigation of natural or personal tempi – spontaneous motor tempi (Provasi and Bobin-Béque, 2003) – was not conclusive in providing average natural tempi of young children. Teachers will therefore need to observe the children closely and adapt to the tempi they display. I observed that when children are given the possibility to first experience the beat of a song in their own personal tempo, they are capable of deviating from this tempo in a later stage and synchronise to a slower beat when appropriate. Children above the age of 2 were even seen to skip a beat in order to re-synchronise with the offered beat in an activity. Teacher influence was seen to be important in the offering of a tempo but also in the offering of a specific movement to synchronise the beat with. The children would present a different, often slower, personal tempo when the offered movement would be in a wide position (see 9.2.1). Tempo then can literally be changed when the input of energy would be changed and the experience of different beats can be supported by the adaptation of the movement.

I found that the way towards synchronising movements to a beat will be paved with moments of no synchronisation, half synchronisation and direct synchronisation: a musical learning process. Already observed in the first study, the second study confirmed the following four elements pertaining to this process:

- a direct movement response: in tempo, a synchronised response
- a movement response ahead of the tempo: a response faster than the offered beat
- a delayed movement response: slower than the offered beat
- a movement response alternating in and out of tempo.

The children should be allowed in the musical learning process through these 4 phases to arrive at direct movement responses.

9.5.4.2 Not imitation but anticipation.

When an activity was offered for the first time the children first needed to become

acquainted with the movements as the teachers offered them. This might be regarded as a form of imitation. However, I observed that the children would have to engage in anticipation in the time-stream in order to be on time: preparing the timing-moment and preparing (through the 4 phases as mentioned in 9.5.3.1) direct movement responses. Imitation by definition is a delayed response. Music is an art form that unfolds over time so being 'on time', giving a direct movement response, means that the musical moment by definition needs to be anticipated. The concept of imitation as used by Swanwick and Tillman (see 3.2.4) concerned an adaptation to something musical in the outside world. They also considered musical expression to be a form of imitation (Swanwick and Tillman, 1986, p. 336). These are other conceptualisations of imitation than a physical imitation of a movement. Different uses of the concept of imitation clouds a possible useful purpose of the concept in early childhood music education. I propose therefore that imitation is most likely not an appropriate term to be used in the musical learning process in the context of movement responses.

As a result of the study I found that the concept of anticipation appeared to be crucial. Anticipation in the present context is the preparing of a movement response in the time-stream of a song. Reybrouck considered "processual predication an important tool for dealing with music" (Reybrouck, 2001, p. 125). "If movement is a dynamic change in spatial position occurring over time, then the perception of time must play a role in the perception of movement. (Moore & Yamamoto, 1988, p. 55). The time-stream of a song provides the temporal framework in which the children can place their movement responses. The underlying pulse, the beat, creates the time-stream. Knowledge of the time-stream of a song – through repeated offering during a music course – allows the children to synchronise their movement responses with the beat and timing-moments: knowing what is to come and when.

In the sequence of moments to anticipate – the time-stream – the timing-moment was seen to be the first element the children would capture. During the search for appropriate activities for the second study I found that most activities for the age group 18 to 25 months contained timing-moments as their primary activity aim. Sensing the beat was often a secondary aim. A timing-moment is a concept that has been used in MoL for a long time. As such this concept is not a merit of this study. The

present study has however brought to light that the timing-moment might function as a kind of pre-phase for the capturing of the beat. Synchronising with the beat is a continuous experience. A timing-moment is a momentary experience in the time stream of a song. On top of this maturation in terms of motor development might play an important role. This can be related to the ability of continuing a certain movement response. Keeping a steady beat by a repetitive movement is most likely a challenge on a motor developmental level. Offering a continuation of a certain movement might support a literal development of a motor response, which at the same time might be conducive for the building of knowledge of the time-stream to engage in anticipatory representation.

Another feature of the time-stream and its constructional elements is that the children can anchor their movement responses to these elements. According to Mang: “the sounds of words often operate as an anchor to the musical elements, especially the melody and the formal structure of the song” (Mang, 2005). By adopting this term from Mang I also expanded it, taking the meaning of the words as an important anchoring element. As I already have explained, meaning is a vital element in the musical representational process. The time-stream can take on meaning not only on an abstract level by synchronising with the beat, but also on a more concrete level by the concepts that are presented in it through the lyrics of the song to which the time-stream pertains.

Important to mention is that the discussed representational items are tentative suggestions for a possible musical movement representation framework in early childhood musical learning processes. Further investigation is needed to extend the present notions into a workable definition of musical movement representation and its implications for practice in early childhood music education.

9.6 INFORMATION CONSTRUCTION PROCESS

Within the music education environment, the musical learning process of the children was conceived as a process of information construction, in which a subjective representation of reality was constructed, that could build on prior and incoming musical information. It appeared to be important to understand how an activity was

constructed and how it was presented to the children to see what kind of construction strategies and elements would influence the movement representational process. The representational organisation of the musical information was influenced by the construction of the musical activity. An activity consisted of different elements: there was the song, the objects, the movements, the musical learning aims and the guidance of the teacher. All these elements together played a role in the musical representational process of movement. Clear musical learning aims in an activity appeared to be necessary to guide the constructional process. To know what is the aim of an activity influenced the choice for certain movements, the way the movements were performed and the choice of objects to support the movements. This provided the children with the means to actually experience the musical elements through movement or movement extended by an object.

In different perceptual modes the children could absorb the movement information. Visual: the children saw the teacher modelling the movements. Auditory: the children heard the music – the singing of a song – and the verbal guidance of the teacher accompanying the movements. Bodily: the children felt the movements when they would perform them and they felt the objects that they used. Through these different modes the children could construct a personal representation of the musical information offered in an activity. Young children are already capable of “integrating and co-ordinating information coming from different senses” (Slater & Lewis, 2002, pp97). Apparently “the synchronous presentation of the word and the object it names assists the child in learning the arbitrary word-object associations” (Slater & Lewis, 2002, pp98). In the present case this refers to the arbitrary movement-meaning associations, where the meaning is supported by the lyrics of the song and the verbal guidance of the teacher.

As music is an art form that unfolds over time, the temporal characteristics of an activity were the main context in which the musical information could be understood and remembered. The actual construction and performance of the movements was always taking place within the time frame – literally the singing of a song – of an activity: the time-stream. The temporal properties of an activity appeared to be essential in two ways: the repetition of an activity and the tempo of the song. Because

representations are personal and constructed in a personal way the children needed time to create a personal strategy to learn the movements and implicitly attach them to musical properties. Considering that there were multiple streams of information (visual, auditory and bodily) it was seen that the children would build their representation through a process of selected responses. Meaning that they would not perform all the movements in an activity at first offering or perform the movements in the shape as they were offered. Over a certain period of time the children would step by step incorporate all the movements offered during an activity and gave an accurate, though personal, rendition of the movements. According to Martinez (1999) “representations are byte-sized and therefore adapted to the constraints of working memory”. Repetition therefore is crucial over a period of time, this way the children can build their representation of the activity.

All children displayed personal variations of the movement models of the teachers: no response was exactly the same amongst the children and no response was an exact rendition of the movement model. Also the children often chose to respond by a partial imitation of the movement model – especially at the beginning of the offering of an event – and different choices were seen in this process. Consequently these personally selected movement responses offered an indication of a personal representation and construction of the musical information. The building of a representation of an activity over time is subject to a process of selective attention. “There is a limit to how many different things we can attend to and do at once” (Ashcraft, 1998, pp.69). For example, although Stijn (see 8.3.3) did not imitate the movement model the teacher gave, through a personal interpretation of the clapping movement he nevertheless showed that the boundaries of the song – the time-stream – was most likely understood, by stopping at the right moment. I consider the children to be co-constructors of the musical information presented to them by way of their personal strategies in responding through movement. The children were actively building up their knowledge (Riegler, 2003). Bamberger refers to this as a generative process: “the active organisation in real time of sound/time phenomena ‘out there’” (Bamberger, 1991, p. 9). By using the term organising, Bamberger does not refer to a decoding process in terms of labelling. This implies that the information received is implicit and has to be given meaning in order to make sense. To provide the children

with information that makes sense and can be remembered it was seen that the act of meaning-giving took place in different ways. Through the lyrics of the song – singing what you do – the objects – to support the lyrics and the movements – and the verbal guidance of the teacher – verbally supporting the actions, the movements were placed in a meaningful time frame, a “narrative form” in movement can take on meaning.

9.7 EMBODIMENT

At the beginning of this study it was my intention to see if it would be possible to connect to the concept of embodiment as expressed by Varela, Thompson and Rosch (1991) in the context of musical movement representation of young children in an early childhood music education setting. Cognition in their view is grounded “on the sense-making activity of beings that actively generate and sustain themselves, and thereby bring forth their own domains of meaning and value” (Thompson, 2009). The results of the study showed the prominent presence of the act of meaning-giving in the movement representational process. Furthermore the children are considered to be co-constructors of the musical information presented to them and can therefore be regarded as beings that actively generate their own domains of meaning. Although this is a partially developed underpinning, musical movement representation I believe can be regarded as a form of embodied cognition. The enactive approach deserves a more elaborate explanation. An important subject therefore for future investigation, especially considering the age group at hand.

9.8 IMPLICATIONS FOR FURTHER RESEARCH AND PRACTICE.

Besides the aforementioned issue of embodied cognition and other suggestions made in this and previous chapters for further research, the present study provided a number of subjects that clearly fell outside the physical capacity of the study but are well worth to look into in future projects.

Notably the role of motor development in relation to movement responses would be an interesting subject. We found that certain movements in an age group – for example the age group 18 to 24 months – appeared to be beyond comprehension. The question is why. It could be that the intended symbolic relation of the movements with the song was beyond – implicit – comprehension and perhaps therefore the children did not make the movements because they did not make any sense to them. But it

could also have been possible that these specific movements were beyond the personal motor capabilities of the children. Personal, because children develop in different manners and at different speeds. Moreover, if the children are able of kinaesthetic empathy than what level of motor development is needed to kinaesthetically represent – performing motor actions – the movements they see? Because the movements that are offered in a music education environment go beyond the natural movement repertoire of the children, a thorough understanding of the possibilities of performing the movements that are offered is most likely needed.

Nevertheless, another aspect might also be of influence. Perhaps peer modelling might be more effective in grasping and performing the movements. At some moments we saw that a child would adjust her movements to the movements of another child. This might be an indication that besides the modelling role of the teacher, peers are also important. Perhaps in some cases even more important. In view of kinaesthetic empathy: could it be that the physical example of a similar body has another or perhaps even better kinaesthetic impact than the role model of an adult?

On the matter of sequential activities, a further theme might be to look more in-depth into the possible causal relationships between the different movements. Causal relationships in this case are logical orders based on reality. For example, you first wash your hands then you will dry them, not the other way around. Are the children helped by such relationships to understand better the musical elements a teacher wants to convey? In what way can these short chains of movements support the musical learning process? Consequently: does the number of movements to be performed with success in a sequential activity depend on possible causal relationships? This activity category deserves a further study of its own to explore these issues further.

During one of the last lessons of the DG1 course a parent had brought a blanket to put on the floor to sit on. We were singing the song *Look an Airplane*: a gestural activity with objects. The objects were the paper planes in this case. At one moment the blanket was incorporated into the activity. The children started to use the blanket as a landing spot for the paper planes at the end of the song when the plane is supposed to

land. The questions is: did the blanket represent a clear marking in the space of the room and as such facilitated the orientation of the children to land the plane? Did the blanket help to make the concept of landing a paper plane more concrete? Perhaps the blanket represented a tangible element in the musical learning environment to make the concept of landing a plane more concrete. The answers to these questions might further the understanding of the use of visual representation in the musical learning process.

The lyrics of the songs play an important role in the process of meaning-giving. Singing what you do supports the movement responses in an activity. It might be interesting to investigate if the children, after extensive exposure to an activity, would be able to represent a song through movement without the lyrics. This I base on a very recent observation I made in my capacity as an early childhood music teacher. I asked a group of children aged 3 to 4 to hum the song while tapping their sticks together. It was the ninth lesson in the course and the children had been exposed to the song/event 5 times before, using either clapping movements or tapping with sticks. Interestingly all 5 children began to hum right away and kept humming the whole song. My aim was to observe if they would still be able to anticipate the timing-moment at the end of the song: would they stop on time? All the children stopped on time. Only one child had an extra tap with her sticks. The question is: did the children sing the words internally or did they use another form of representation to anticipate the time-stream of the song? This is a worthwhile subject to explore further.

The parent diaries.

In order to find out what effect the music lessons had on the home situation, with a focus on movement, and if the home situation would show different or more musical movement responses than the music education setting, the parents had been given a diary. The rationale for the diary was based on the fact that parents often reported that their child was singing and moving at home, while in the lessons no response or much less response was seen from their child. This question was based on my personal experience as a teacher and MoL colleagues have also frequently observed this phenomenon. The parent diaries were a valuable means of gathering information.

However, the use of parent diaries raised some issues. There were inadequacies in the kinds of questions that were asked. More research is needed to establish what questions are suitable for the parents. The idea of parents (or carers) acting as co-observers needs elaboration in order to make them an integral part of an investigation. The parents would benefit from more guidance in how to observe their children; specifically in knowing what to look for. Using parent diaries as a method, particularly if it is combined with actual visual material of the movement responses in the home situation – parents could video-record their children for example – could be an investigation in its own right providing valuable material about how to support the musical learning process in educational environments and how to extend this process to the home environment.

Concerning the results of the present study: the implications for practice are many. Nevertheless, the early childhood music teacher him/herself will have to make the decisions about the way she or he wants to organise the music lesson. MoL would not prescribe specific ways of teaching. I agree with this. Some elements for practice that emerge of this study might however be of general use. For example the use of tempo in an activity. To promote the musical learning process, a teacher will need to observe the children closely and adapt to the tempi they display, thereby becoming an appropriate bodily role model. Through repeated offering of the songs during a music course, the children can acquire knowledge of the time-stream of a song and this allows them to synchronise their movement responses with the beat over time.

Secondly, the teacher could decide – depending on the composition of a group – on either an approach based on musical play or a more structured or phased approach towards a music course. The movement categories and movement types should function as a didactical aid. The construction of a musical movement plan in advance can help the structured offering of movement as musical action symbols in a lesson.

The movement categories and movement types as they are defined as a result of the present study are not definitive and therefore very much open to improvement. Their use in practice hopefully will bring to light their usefulness but also their shortcomings. Practitioners must be free to use them in a way they find fitting for their groups. Restricted guidelines would not be favourable for the maturation of the movement categories and types. Therefore the last practical implication of this study is the need

for an open, investigative and critical attitude of an early childhood music teacher towards the research results.

9.9 REFLECTION ON PROCEDURES

Considering that there was no actual existing framework found for the analysis of movement in real world early childhood music education settings in terms of musical movement behaviour observation, the present study in this matter had an exploratory nature. Through direct observation (videoing), microanalysis, teacher interviews, parent diaries and a field note book an attempt was made to arrive at a form of research rigor according to Burnard (2006). Her view is that research in music education needs more awareness “of the importance for researchers to be explicit about the assumptions and theories that underpin their work, and of being articulate about the research process in achieving research rigour” (Burnard, 2006). Burnard articulated this in response to the expressed need in music education to close the gap between research and practice. According to Hultberg “Researchers in music education need practitioners. Without practitioners there would be no area to explore” (Hultberg, 2005). The study made clear that the participation of the practitioner – the teacher – was essential to make certain that the generated theory would connect to practice and could be implemented in practice. In order to make a firm link between practice and research I found that a form of formative action research could support the role of the participating teacher. Reflection on and evaluation of the lessons is part of the MoL practice, creating a constant process of adaptation to the musical learning situation. This “internal” process allowed for necessary modifications of the “external” process: the overall design of the study. Consequently even during the research process it was already possible to implement findings into the MoL practice. By way of interviews with the participating teacher, additional information was gathered about her views and insights as well as personal discoveries during the data collection of the second study. The interviews, which were conducted in a rather informal fashion, were instrumental in causing the teacher to reflect on her work in a new manner. Important was that the interviews also gave her the possibility, besides reflecting on her functioning as a teacher, to reflect on the research process itself. As a result a small “experiment” was conducted, to see what the influence would be of the change of the use of an object in an activity.

Although it proved to be helpful in the research process and the communications with the participating teacher that I am a MoL teacher myself, also being a teacher in this research project created some conflicting issues. I experienced for example that my knowledge as a practitioner interfered with the process. Resulting in at the beginning of the analysis in merely describing what I saw in the videos as a regular MoL teacher would do. Nevertheless this revealed relevant information on which I could start building the analysis in a much more profound way, thereby taking a qualitative analytical perspective by looking at the familiar situation – the MoL courses – as being strange (Holliday, 2007) in order to get a “fresh” view.

Last but not least: observing movement responses of young children requires detailed observation over time and a micro analytical process. The small differences in the movement responses of each child generated significant information. It is not possible to see into the child’s head, so interpretations should be developed from a thorough understanding of actual musical movement behaviour displayed in a real life musical learning environment.

9.10 CODA

According to Imberty: “Actions embody an intrinsic motivation – which is not given as a conscious aim, pleasure and displeasure being themselves immediate experiences – which hold the energy needed for action” (Imberty, 2008). The quest is to extend this intrinsic motivation to musical action: an appropriately guided purposeful musical movement repertoire that supports the musical learning process. This research project has been able to touch on certain aspects of musical movement representation. Appearing to be a multifaceted process, it was found that the movements should be firmly based in a temporal framework of aural and verbal connotations. Movement can take on meaning in the musical learning environment through a process of physical and verbal guidance in which teachers are instrumental. Through appropriate movement models and motivation towards meaningful movement action, implicit and explicit musical kinaesthetic and musical representational knowledge can be generated.

“Constructionism as an educational philosophy emphasizes that in order to learn about abstract concepts it is necessary to create and experiment with artefacts. In this perspective, understanding and experience are closely related in the sense that learning is considered a process of active knowledge construction rather than passive knowledge absorption” (Riegler, 2003). Music by nature is abstract. If we consider an artefact as being man-made then (intentional) movements, which are in the present case child-made, can be considered artefacts. Movement responses to music – active musical knowledge construction – then are vital in the musical learning process of young children.

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**SCHOOL OF EDUCATION AND LIFELONG LEARNING****ONDERZOEKSDEELNEMER TOESTEMMINGSFORMULIER**

Titel en korte beschrijving van het onderzoeksproject

ASPECTS OF MOVEMENT REPRESENTATION OF MUSICAL STIMULI. A Study of Children aged 18 to 36 months within the setting of Preschool Music Education in the Netherlands.

(Ontwikkelingsaspecten van Bewegingsrepresentatie van Muzikale Stimuli. Een onderzoek naar kinderen in de leeftijd van 18 tot 36 maanden in de context van de Voorschoolse Muziek Educatie in Nederland.)

Jonge kinderen zijn dol op muziek en uiten dit door bewegingen te maken. Muzieklessen voor jonge kinderen gebruiken altijd bewegingen in muzikale activiteiten om de kinderen te helpen uitdrukking te geven aan hun muzikale gevoel. Dit onderzoeksproject bestudeert de muzikale bewegingen die de kinderen maken, met als doel de ontwikkeling hiervan te bekijken en te begrijpen. De bedoeling is om muziekdocenten te ondersteunen in het begrip van de muzikale bewegingen die jonge kinderen maken. Op deze manier wordt hopelijk de muzikale ontwikkeling van jonge kinderen bewuster ondersteund. Dit project zal daarom het muzikale bewegingsgedrag van jonge kinderen bestuderen gedurende 8 lessen in een reguliere Muziek op Schoot cursus door middel van video-observatie van de lessen, een observatie-dagboek en een gemeenschappelijk interview van de ouders/verzorgers.

Naam en status van de onderzoekster:

José Retra, research student (PhD) University of Exeter, UK.



SCHOOL OF EDUCATION AND LIFELONG LEARNING

Toestemmingsverklaring:

Ik ben volledig geïnformeerd over de doelstellingen van dit onderzoek.
 Ik stem toe om deel te nemen aan dit onderzoek. Ik ben mij ervan bewust dat ik mij op elk moment kan terugtrekken.
 Ik begrijp dat de informatie die ik verstrek in vertrouwen behandeld zal worden door de onderzoekster en dat mijn identiteit en de identiteit van mijn kind te allen tijde beschermd zal worden in publicaties van het onderzoeksresultaat.

Ik ga akkoord met het gebruik van het videomateriaal van de muziek cursus voor : het onderzoek, presentaties en trainingssituaties, evenwel zonder enige referentie naar mijn identiteit en de identiteit van mijn kind.
 Indien van toepassing, de informatie die ik geef mag gedeeld worden met eventuele andere onderzoekers betrokken bij dit onderzoek in een geanonimiseerde vorm.

.....
 (Handtekening Deelnemer)

.....
 (Datum)

.....
 (Naam Deelnemer)

Eén kopie van dit formulier is voor de deelnemer; een tweede kopie is voor de onderzoekster.

Belangrijk: indien u zorg of onzekerheid heeft over welk aspect dan ook van uw deelname aan dit onderzoek, dan kunt u contact opnemen met de onderzoekster of haar study supervisor.

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Translation consent form

Title and short description of the research project.

ASPECTS OF MOVEMENT REPRESENTATION OF MUSICAL STIMULI. A Study of Children aged 18 to 36 months within the setting of Preschool Music Education in the Netherlands.

(Ontwikkelingsaspecten van Bewegingsrepresentatie van Muzikale Stimuli. Een onderzoek naar kinderen in de leeftijd van 18 tot 36 maanden in de context van de Voorschoolse Muziek Educatie in Nederland.)

Young children love music and express this by making movements. Music lessons for young children always use movements in musical activities to help the children to express their musical feelings.

This research project studies the musical movements children make in order to understand their development. The intention is to support music teachers in their understanding of the musical movements you children can make. This will hopefully contribute to the musical development of the children. Therefore this project will study the musical movement behaviour of young children during 8 lessons in a regular Music on the Lap course by way of video observation of the lessons, an observation-diary and a common interview with the parents/carers.

Name and status of the researcher:

José Retra, research student (PhD) University of Exeter, UK.

Declaration of consent:

I have been fully informed about the aims and purposes of the project. I agree to participate in this study. I understand that at any stage I can withdraw my participation.

I understand that the information I provide will be handled confidentially by the researcher and that my identity and the identity of my child at all times will be protected in publications of the results of the research.

I agree with the use of the video data of the course for the purpose of: the research, presentations and trainings situations, but without any reference to my identity or the identity of my child. When applicable, the information I give can be shared with possible other researchers involved in the study in an anonymous form.

Signature Participant

Date

Name Participant

The participant will keep one copy of this form; the researcher will keep a second copy.

Important: if you have any concerns about your participation in this project that you would like to discuss, please contact the researcher or her study supervisor.

B PARENT DIRECTION-SHEET

Vriendelijk verzoek om de volgende instructies op te volgen tijdens iedere les.

- * Wilt u alstublieft in een halve circle op de ground gaan zitten, dit vanwege de video.
- * Probeer gedurende de activiteiten uw kind zo min mogelijk te corrigeren.
- * Probeer om ze zoveel mogelijk alles zelf te laten ontdekken. Bijvoorbeeld: Pak niet hun handen vast om te gaan klappen, beter is om hen te laten *zien* hoe u het doet.
- * Indien het noodzakelijk is om het gedrag van uw kind te corrigeren: vraag het uw kind 1 maal, wacht en wees dan duidelijk wat u wilt en handel daar na.
- * Probeer om zo positief mogelijk te zijn over alles dat uw kind doet. Dit zal hen helpen om alles vrij te exploreren.
- * Probeer zo min mogelijk te spreken tijdens het zingen.
- * Wees zo actief mogelijk in het bewegen en zingen als u kunt: u bent een belangrijk voorbeeld voor uw kind, zelfs als uw kind een activiteit alleen maar observeert en niet mee doet.
- * Ik zal proberen zo duidelijk mogelijk te zijn in mij gedrag ten aanzien van de activiteiten. Evenwel, als er iets niet duidelijk is, alstublieft vraag dan om uitleg.
- * Zo nu en dan zal ik het volgende aankondigen: “experimenteer-tijd”, dit is een aanwijzing voor u om alleen de bewegingen die uw kind maakt te imiteren: precies wat uw kind doet. Ik zal ook de bewegingen van de kinderen imiteren.
- * Vergeet niet om uw kind te knuffelen en plezier te hebben!

Hartelijke dank voor uw medewerking!

Kind request to follow the following instructions during every lesson

- Please sit down in a half circle on the floor because of the videoing.
- During the activity try to correct your child as less as possible.
- Try to let them discover everything on their own. For example: do not take their hands to start clapping, just *show* them how you do it.
- When necessary to correct your child’s behaviour: ask your child once, wait and be clear what you want and act upon it.
- Try to be positive about everything your child does. This will help them to freely explore things.
- Try to speak as less as possible during the singing.
- Be as active as you can in your moving and singing: you are an important example for your child, even if your child is only observing during an activity and not overtly participating.
- I will try to be as clear as possible in my behaviour concerning the activities. However, when something is not clear, please ask for an explanation.
- Now and then I will announce the following: “time to experiment”, this is a clue for you to only imitate the movements your child makes: exactly what your child does. I will also imitate the movements of the children.
- Do not forget to cuddle your child and have fun!

Thank you very much for your cooperation.

C PARENT DIARY-SHEET FIRST STUDY

Geachte participant,

Voor u liggen 15 bladen voor 15 activiteiten. Dat wil zeggen: als u, uw kind zich muzikaal ziet uiten dan kunt u dat als 1 activiteit beschouwen.

Noteert u alstublieft alleen die muzikale activiteiten die ook in de Muziek op Schoot Cursus aan de orde komen.

Een laatste blanco pagina is toegevoegd voor al uw overige opmerkingen.

Mocht u vragen hebben, schroom niet!

Hartelijke dank voor uw medewerking!

Jose Retra
Beukenhorst 526
1112 BV Diemen
020 - 4166978

Naam Kind _____

Geboortedatum kind _____

Dear participant,

Before you are 15 sheets for 15 activities. Meaning: if you see your child musically express it self than you can consider this as one activity.

Please write down only those activities which also appear in the Music on the Lap course.

A white page has been added to write down all your remarks.

If you have questions, do not hesitate!

Thank you very much for your cooperation!

Name Child _____

Date of birth of child _____

Titel Liedje**Wanneer gezien/gehoord**

- tijdens eten
- tijdens het spelen
- in bad
- anders

Datum:

-
-
-

Zingt je kind:

- de woorden
- je kind neuriet
- op la la la
- anders

ja / nee

ja / nee

ja / nee

Welke bewegingen maakt je kind?

- die bij het liedje horen
- andere bewegingen
- één beweging
- meer bewegingen
- wil je de beweging(en) beschrijven?

ja / nee

ja / nee

ja / nee

ja / nee

Was het zingen/ bewegen:

- spontaan?
- ingeleid
(jijzelf of iemand anders geeft de aanzet)
- wil je dit situatie beschrijven?

ja / nee

ja / nee

Opmerkingen? Graag!

Alles wat je kwijt wilt.

Translation parent diary-sheet**Title of song****When seen/heard**

- during dinner
- during play
- bathing time
- different

Date:**Does your child sing:**

- | | |
|-------------|--------|
| - the words | yes/no |
| - hum | yes/no |
| - la la la | yes/no |
| - different | |

What movements does your child make?

- | | |
|---|--------|
| - movements belonging to the song | yes/no |
| - different movements | yes/no |
| - one movement | yes/no |
| - more movements | yes/no |
| - would you like to describe the movements? | |

Was the singing/moving:

- | | |
|---|--------|
| - spontaneous? | Yes/no |
| - Introduced | Yes/no |
| (by either yourself or someone else) | |
| - would you like to describe the situation? | |

Observations? Please!

Everything you want to say.

D THE SONGS/ACTIVITIES FIRST STUDY

FIRST STUDY

Blowing bubbles*Bellen Blazen*

Herman Heester

Bel - len bla - zen, doe je mee?

Bel - len bla - zen ja of nee.

Blowing bubbles, will you join us? Blowing bubbles yes or no.

Musical learning aims: voice formation (blowing); experiencing a form aspect: singing – blowing – singing – blowing.

Clap clap this is what the hands do

See second study, activity set 1.

Cleanup song*Het speelgoed in de doos*

melodie traditioneel, tekst: B. Fisser

Het speel-goed in de doos, het speel-goed in de doos. Hei - a vic - to - ria, het speel-goed in de doos.

The toys in the box, the toys in the box. Heia Victoria, the toys in the box.

Used to put objects away after an activity.

Close your eyes

I. Hos

Doe je oog- jes dicht, hand voor je ge-
 zicht, an- d're hand er- bij,
 weg ben jij! Pie- ter

Roepen:

Kiekeboe!

Close your eyes, hand in front of your face, other hand too, you are gone! Pee-a-boo! (Variation)

Musical learning aim: timing-moment peek-a-boo.

Cuddly bear

Knuffelbeer

M. Braam

Beer- tje, beer- tje, knuf- fel- beer, wieg maar zacht- jes
 heen en weer. Ga maar lek- ker sla- pen,
 doe je oog- jes dicht. Wil je nog een kus- je,
 kus- je op je ge- zicht. **SMAK!**

Little bear, little bear, little cuddle bear, rock gently back and forth. Go to sleep, close your eyes. Do you want a little kiss, a little kiss on your face.

Musical learning aim: experience of a 6/8 beat (being moved category)

Hands in the side

Handen in je zij

Annie Langelaar



Rembrandt Harmensz van Rijn
Portret van een man met de
handen in de zij 1658

Hands on your side, I am so happy, hands on your back and back again. Hands on your knee go tierelierelie, hands on your tummy and now it's finished.

Musical learning aims: experiencing timing-moments; experiencing the beat.

Mice

Muizen

Bouwen Breeman



Muis - je Mien, laat je eens zien.

Little mouse little mouse, come out of your house. Little mouse Mien, show your self.

Musical learning aim: a timing-moment

My mouse has disappeared (variation on my hands have disappeared)

aanklinge overbrenging

M'n hand - jes zijn ver - dwe - nen, ik heb geen hand - jes meer.
 Waar zijn ze nu ge - ble - ven? Ha, ha daar zijn ze weer!

Mijn Handjes
zijn verdwenen



My hands have disappeared, I do not have hands anymore. Where could they have gone?
Ha, there they are again!

Musical learning aim: experiencing a timing-moment

Mommy bear and baby bear**Mama beer en Baby beer**

Marijke Greweldinger

Ma - ma beer en ba - by beer
 wand - 'len sa - men op en neer.
 Poot om - hoog en zet hem op de grond.
 Zo lo - pen zij in een kring-ge-tje rond.



Mummy bear and baby bear, walk together back and forth. Lift a paw and put it on the ground. So in circles they go round.

Musical learning aims: experiencing a timing-moment (lifting of the paw); experiencing the beat.

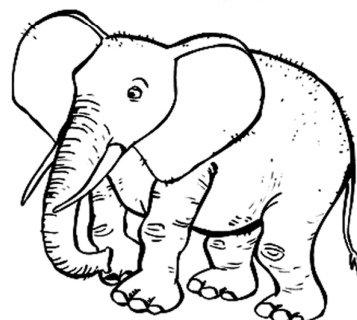
Mouse and elephant

MUIS & OLIFANT

Trip-pe trip-pe trip,
 ,
 zo doet het muis-je

 BOEM BOEM BOEM!!!

 Zo doet de o-li-fant



Triple triple trip, this is how the mouse goes
 Boom boom boom!!! This is how the elephant goes

Musical learning aims: experiencing the beat and the rhythm.

On a Big Mushroom

OP EEN GROTE PADDESTOEL

traditioneel

Op een gro-te pad-de-stoel, rood met wit-te stip-pen,
 zat ka-bou-ter Spil-le-been heen en weer te wip-pen.
 Krak! zei toen die pad-de-stoel met een die-pe zucht,
 en zijn been-tjes vlo-gen hoe-pla in de lucht

On a big mushroom, red with white spots, sat gnome Spillebeen, hopping back and forth.
 Crack! Said the mushroom with a deep sigh, and both his legs went whoopla in the sky.

Musical learning aims: (being moved) experiencing the beat and a timing-moment.

One Two (see second study, activity set 2)

Open and Close

Open en Dicht

M. Hadders

Een ho-ge doos, een ho-ge doos, gaat
o- pen en dicht, gaat o- pen en dicht. Een ho-ge doos, een
ho-ge doos gaat o- pen en dicht!



A high box, a high box, goes open and closes, goes open and closes. A high box, a high box, goes open and closes. (Movement variations have been used: a big box, a small box and a very small box.)

Musical learning aims: experiencing timing-moments when the boxes close.

Tam Tam

TAM TAM

Marijke Ram / Job Eppen

Tam tam tam tam, daar ko-men mu-zi-kan-ten aan; ze
lo- pen keu-rig in de maat bij ons door de straat.

Tam tam tam tam, there the musicians arrive; they walk neatly on the beat through our street.

Musical learning aim: experiencing the beat.

Plitse Plitse Plater (see second study, activity set 1)

The chair is my drum

DE STOEL IS MIJN TROM

Mieke Wytema

De stoel is mijn trom, van je rom-bom-bom

De stoel is mijn trom, van je rom-bom-bom

En draai je hand-jes nog eens om.



The chair is my drum, go rom bom bom. The chair is my drum, go rom bom bom.
And turn around your hands again.

Musical learning aim: experiencing a sense of beat.

The little Duck

Het Eendje

D. van Dijk

Daar komt een eend-je aan-ge-lo-pen,

tie-re-lie-re-lom-dom, tie-re-lie-re-loe. Hij

is uit de sloot op de wal ge-kro-pen,

tie-re-lie-re-lom-dom-doe.



A little duck is approaching, tierelierelom, tiereliereloe. He crawled from the ditch on the canal bank, tierelierelomdom doe.

Musical learning aim: experiencing the beat. The plastic duck is tapping/walking on the floor.

The little Caterpillar**Het Rupsje**

Petra Polman Tuin

Er kroop een rupsje naar het blad.
 Het rupsje at en at en at...
 een gat in het blad.
 Het rupsje sponn en sponn een kokon.
 Kokon..... in de zon
 Vlinder vrij! Vlinder vrij!
 Weg ben jij



A little caterpillar crawled towards the leaf. It ate and ate and ate... a hole in the leaf. It spun and spun and spun a cocoon. Cocoon in the sun. Butterfly free! Butterfly free! And gone you are!

Musical learning aims: speaking rhythmically and a timing-moment.

Those who do not want to walk**Wie niet lopen wil...**

Bron: 50 Kleuterliedjes

Wie niet lo - pen wil, wie niet lo - pen wil, wie niet
 lo - pen wil sta stil. Wie niet lo - pen wil, wie niet
 lo - pen wil, wie niet lo - pen wil, sta stil.

Those who do not want to walk, those who do not want to walk stand still.
 (Different variations were used: a.o. dancing, running and crawling.)

Musical learning aims: experiencing the beat and timing-moments.

Willemijntje**Willemijntje**

Sssssssssssssssssss.....
 Wie zit er achter het gordijntje?
 Dat is Willemijntje!
 Wat doet ze daar?
 Ze kamt haar haar.
 Ze wast haar handen.
 Ze poets haar tanden.
 En dan is ze klaar!
 Dag Willemijntje!
 Sssssssssssssssssss.....



Willemijnt Sssssssssss... Who sits behind the little curtain? That is Willemijntje! What is she doing there? She is combing her hair. She is washing her hands. She is brushing her teeth. And than she is ready! Bye Willemijntje! Sssssssssss...

Musical learning aims: speaking rhythmically; tone duration by the movement of the opening and closing of the curtain.

E TEACHER REPORT

Participation in the MiM project, what did it bring me?

Participation in the MiM project brought me a deeper understanding of child development and an expanded pedagogical knowledge. Participation broadened my skills in choosing and carrying out appropriate activities and guiding the musical development of the children.

Being involved in scientific research in a 'real life' setting makes you continuously reflect on goals and the consequences of these goals for teaching. Gaining specific insight gives the possibility to connect even better songs and movement to the development of children and this will benefit children and parents.

Before the start of this research project MoL had already formulated aims concerning the furthering of motor skills, timing-moments, musical dynamics, furthering the sense of beat, etc. During the research I was "forced" to observe in a different, more thorough, way. My way of observing was "fed" by a more scientific perspective. This process already started during the first study. Looking at the DVDs improved my observation skills. Questions arose about what exactly happened, the influence of teacher's operations/actions and the given possibilities to children to be engaged in musical action. I became more aware of the characteristics of "motor actions", the way they can be captured and labelled in categories and in analysing teacher actions and evaluate how the teacher model has an effect on the emerging of motor actions from the children.

A motor action is always a result of a long process, depending on stimuli in the surroundings: songs, objects, the parent or the teacher. Questions like: "Which musical stimuli evoke an actual response from the child", "How does this response trajectory develop", "Which elements from the outside and from within the child have an influence", were important. In the process of "getting in motion" the whole child is very active, but this is not always visible from the outside!

For a starting teacher/observer a lesson on the MiM DVDs might look like “all children are doing something different”. Consequently the thought could emerge that “this is not what/how it should be”.

When, in the framework of the study, you take the time to analyse the individual contributions of the children it appears that almost all of their actions meet the demands of the activity and its objects. You may conclude that all children express, through their actions, the characteristics of a song. The teacher should honour this and provide possibilities for the children to respond in their own way. In this way the children feel more respected in their actions. Remarks like: “the children did not do what I wanted” will then seldom be heard.

Participating as a teacher in research was stimulating for me.

Questions like: which musical aspects should be transferred, which developmental areas should be addressed, and how to conduct the process, can be answered more accurately. I am able to foresee and respond much better to the musical responses of the children. In this way I learned to “predict” which activities have to be offered, how long activities might/ should take and when to stop. As a consequence of my involvement in this research project my competences as Music on the Lap teacher have been broadened and deepened. A process of unravelling and formulating relevant information was set in motion through questions from and conversations with the researcher. What could be described as unconsciously competent has grown towards consciously competent.

The research project expanded my knowledge and skills in finding the best pedagogical strategies and analysing musical challenges. As a teacher trainer I am able to answer questions like: How can we, as music teachers, guide the children in an optimal way? Are there special points of attention in preparing music lessons with young children? How can the evaluation of a given lesson contribute to understanding, knowledge, skills and new attitudes? My skills in guiding students during the teacher training Muziek on The Lap have improved. Of course situations will occur, especially during early childhood teacher training, in which the materials used are disconnected from the musical learning aims. Students and teachers can benefit from a more “scientific

way” of observation and evaluation in mastering the process of learning how to link musical learning to the abilities of the children.

As an ECME teacher trainer I feel better equipped to guide the students in their musical learning processes because among others:

- I have gained more insight in the multiple constructional layers of the musical learning process of the children

- I have come to acknowledge that even the smallest actions of the children are important

- I can better identify which alterations in an activity influence the actions of the children and as a consequence influence the motivation of the children to participate.

Margré van Gestel