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Scaryfunny

A Qualitative Study of Risky Play Among Preschool Children

Thesis for the degree of Philosophiae Doctor

Trondheim, May 2010

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Norwegian University of
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ISBN 978-82-471-2097-2 (printed ver.)
ISBN 978-82-471-2098-9 (electronic ver.)
ISSN 1503-8181

Doctoral theses at NTNU, 2010:69

Printed by NTNU-trykk

"Vågestykke", Brit Paulsen, 2009

Vågestykke

subst. n **vågestykke** () ['ʊoːgəstykə] handling som krever mot og dristighet *(The Free Dictionary)*

Contents

Abstract

Risky play seems to be a natural part of children's play and action, and children seek out chances for engaging in challenging and thrilling play wherever they are. During the last few centuries this has brought on a discussion about children's safety in their play environments. As a result of this discussion, many countries have enacted laws and regulations concerning children's play and play environment. These constraints on children's freedom to play have now been criticized by several researchers as a sad result of the safety-obsession in today's western societies that in the end results in less physically fit children with low motor control and low risk mastery. Still, many preschool staff, parents and child care providers perceive the balance between letting children encounter risks and challenges and preventing serious injuries during play as a difficult matter. Although the current "safety versus risk" discussion has resulted in a growing number of studies on children's risk-taking, research trying to take the children's perspective on this phenomenon is scarce. The present study's overall aim is to contribute to a better understanding of the phenomenon of children's risky play – particularly with the aim of trying to grasp children's perspective.

The first research question of the study (paper I) was: *How can we indentify and categorize children's risky play in preschool?* Observations and interviews with preschool children and staff revealed six categories of risky play: 1) play with **great heights** – danger of injury from falling, 2) play with **high speed** – uncontrolled speed and pace that can lead to collision with something (or someone), 3) play with **dangerous tools** – that can lead to injuries, 4) play near **dangerous elements** – where you can fall into or from something, 5) **rough-and-tumble** play– where the children can harm each other, and 6) play where the children can **"disappear"/get lost**. The categories developed in paper I were used as tools to explore risky play in further observations and interviews of preschool children and staff.

The second research question (paper II) was: *What characteristics identify children's play as risky?* Analysis of observations of children engaging in risky play revealed two categories of characteristics by which to judge risky play: a) Environmental characteristics (such as height of climbing structure, surface hardness, steepness of sliding features, etc., as well as surveillance of adults), and b) Individual characteristics (such as the height and speed pursued by the child, the rashness of movements, motor control, focus/concentration, etc.). Individual characteristics are assumed to be highly influenced by the child's subjective perception of

risk, while both environmental and individual characteristics contribute to the objective risk in the play situation.

The third research question of this study (paper III) was: *How do children express their experiences of engaging in risky play?* A phenomenological analysis was conducted on observations of children's risky play, with the aim of detecting how children expressed their experiences of engaging in risky play; bodily, facially and verbally. The phenomenological interpretation showed that children's experiences of engaging in risky play range from pure exhilaration, through exhilaration and fear at the same time (exhilaration bordering fear), to pure fear. Interestingly, the results indicated that experiencing both exhilaration and fear at the same time was the primary goal of engagement in risky play. The intensely thrill of the experience of mixed emotions when balancing between exhilaration and fear without switching to pure fear resulted in expressions of "fearful joy" such as screaming, high-pitched laughing and loud yelling because of the pleasure of the intensely high arousal the children experienced in these situations.

This was explored further in the fourth research question (paper IV): *Why do children take risks in play?* Interviews with preschool children analyzed within the frame of Reversal Theory revealed that children's motivation for and experiences of engaging in risky play formed a phenomenological structure where the contrast and ambiguity between the experiences of pleasant emotions versus unpleasant emotions were key concepts. This led to a contrast of arousal-increasing strategies versus arousal-reducing strategies and to the actions of approach/engagement versus refusal/withdrawal. The results showed that children experience both fear and excitement in risky play and that this ambiguous feeling is the central motivation for engaging in this play. It is the feeling of being on the edge, balancing between the pleasant emotions and the unpleasant emotions, that rewards the child with the most intense pleasure and excitement.

By explorative means, the present study shows that it is possible to identify and categorize characteristics of risky play and that these categories can be useful for further research on the issue. By phenomenological and interpretive means, the study also provides a better understanding of how children experience partaking in risky play and why they like to engage in it. In this thesis, both these findings and the prior literature reviewed in the introduction section are discussed in relation to a model of risk-taking decisions and their influencing

factors. In addition, an evolutionary psychological perspective of why children seek out risky situations forms a basic theoretical understanding for this phenomenon. As such, this study is a contribution to an emerging theorizing upon the phenomenon of children's risky play and could form a basis for further theorizing on the issue. The focus on children's perceptions and experiences of their engagement in risky play adopted in this study gives a better understanding of the phenomenon of risky play, and hopefully it will inspire to an increased focus of research on children's natural urge for risky play and its costs and benefits.

Acknowledgments

This study was carried out at the Department of Psychology, Norwegian University of Science and Technology (NTNU), and was financed primarily (2 ½ years) by Queen Maud University College for Early Childhood Education (DMMH) and secondarily (½ years) by NTNU. I am particularly grateful for DMMH's generosity of giving me the opportunity to dive deep into my favorite issue: children's risky play. Working on this study and this thesis has been an inspiring and pleasurable journey, although sometimes a bit of a frustration as well. But somebody told me, about the time when I started this journey, that graduate work is like a roller coaster ride, and the truth is: I love roller coasters! You get ups and downs and a lot of thrill and excitement.

Even though I have sometimes felt all alone in my exploration of and interest in children's risky play, I have never lacked strong support, great supervision and a lot of fantastic help. I will therefore send my gratitude to some of those who have made the end of this journey possible.

- First of all, I would like to thank all of the preschool children and preschool staff who participated in this study. I also thank the children's parents for agreeing to allow their children to participate. Without you, this study would not have been possible.

- I would like to extend my warm and heartfelt gratitude to my supervisors, Øyvind Kvello and Gunvor Løkken, for the most excellent and inspiring supervision I could ever dream of and to Hilmar Nordvik, who believed in my project in the first place and made it possible for me to start working on my PhD. Hilmar also served as my supervisor until he retired in 2007, and he was a great inspiration and a wonderful discussion partner.

- Special gratitude also goes out to the staff at DMMH's library, Kjersti and Anne Lise. You have received the numerous questions and references I have sent you during these years with a smile and a great commitment to service. I cannot think of anything you haven't been able to obtain for me. Thank you!

- Thanks also to all of my wonderful colleagues at DMMH, and of course especially to my very dear colleagues and friends in DMMH's Department of Physical Education: Trond, Rune, Anne, Kathrine and Ollis – you are the best!

- Also, special thanks to the PhD-forum at the Department of Psychology (NTNU), where I have been able to discuss my research and my ups and downs and ask important questions, as well as gaining insight into all of the other PhD students' diverse research projects. I have learned a lot!

- I would also like to send my warm gratitude all the way "down under" to Australia and the friendly and helpful staff at Macquarie University Institute of Early Childhood, who hosted me for five weeks and treated me like a friend and colleague. Particularly, I wish to thank Professor Shirley Wyver and PhD student Helen Little, who share my interest in children's risky play.

- To all of my friends and family who have supported me, especially my mum and dad, who have always let me take risks and embrace challenges: I cannot thank you enough.

- Finally, to the three most important people in my life, Rune and our children Simen and Sara; my deepest love and thanks to you for all of the love, inspiration and support you provided during this period.

Trondheim, 2009
Ellen Beate Hansen Sandseter

List of papers included in the thesis

Paper I

Sandseter, E. B. H. (2007). Categorizing risky play - How can we identify risk-taking in children's play? *European Early Childhood Education Research Journal, 15*(2), 237-252.

Paper II

Sandseter, E. B. H. (2009). Characteristics of risky play. *Journal of Adventure Education and Outdoor Learning*, 9(1), 1-19.

Paper III

Sandseter, E. B. H. (2009). Children's expressions of exhilaration and fear in risky play. *Contemporary Issues in Early Childhood, 10*(2), 92-106.

Paper IV

Sandseter, E. B. H. (2010). 'it tickles in my tummy!' - Understanding children's risk-taking in play through Reversal Theory. *Journal of Early Childhood Research, 8*(1), 67–88.

1.0 Introduction

The present thesis is a combination of a rather extensive theoretical and methodological review and four papers on which this review is based. The choice of writing a collection of articles rather than a monograph is based on the wishes to communicate my research to both Norwegian and international fellows and also to obtain some scientific approval of my work and writings. Still, doing qualitative research calls for a certain transparency of my work, and it is important that the reader is offered some insight into theoretical and methodological background beyond what is possible to present in a paper format. This inevitably means that there is a danger of repeating central parts of the content both in the thesis and the papers. The aim of this thesis has been to present the theory/literature, methods, results and discussion linked to all four papers in a holistic way by relating them to a common theoretical model for describing risk-taking and its influencing factors. As such, the papers could be viewed as attachments to the thesis. Still, the papers separately give more detailed insights into the particular research questions on which each of them focuses.

1.1 Background

Risk-taking seems to be a natural part of children's play. Children frequently seek and engage in challenging and risky forms of physical play, even though and in some degree *because,* it is related to fear and thrills and involves the real possibility of getting hurt (Aldis, 1975; Smith, 1998; Stephenson, 2003). In modern western society there is a growing focus on the safety of children in all areas, including situations involving playing. Due to these concerns the issue of children's risky play and to what extent one should try to regulate it is an ongoing discussion (Furedi, 2001; Gill, 2007; Guldberg, 2009; Hughes & Sturrock, 2006).

This has further raised questions on the balance between safety legislation and litigation on one hand and the benefits such play offers to children's development on the other hand (Ball, 1995, 2002, 2004; Boyesen, 1997; Breivik, 2001; Caesar, 2001; Chalmers, 2003; Freeman, 1995; Furedi, 2001; Heseltine, 1995; Little, 2006; New, Mardell, & Robinson, 2005; Satomi & Morris, 1996; Sawyers, 1994; Smith, 1998; Stephenson, 2003; Stine, 1997; Stutz, 1995; Zeece & Graul, 1993). An exaggerated safety focus in children's play is problematic because, while children should avoid injuries, they might need challenges and varied stimulation to develop normally both physically and mentally.

Even though the debate on play safety, overprotection, and the importance of children's freedom to encounter risks in play has brought forward a number of contributions and viewpoints from several researchers, writers, politicians and other debaters, there is a scarce amount of scientific research on what risky play is (what kinds of children's play can be evaluated as risky and by whom), what characterizes the risk in risky play, how children experience engaging in risky play, and why children engage in this kind of play. The aim of this thesis is to explore these matters by adopting an explorative and interpretive as well as phenomenological approach in order to understand and theorize on the phenomenon of children's risk-taking in play more thoroughly.

1.2 Structure of the thesis

The overview of the literature presented in this thesis (pages 15-42) is aimed at providing the reader with some insight into the present knowledge on the phenomenon of children's risky play and its influencing factors. The point of departure (pages 17-20) for this overview is a general definition of risk and a model put forward by Adams (2001) for explaining what influences risk-taking decisions. The contents of this model will then be related specifically to children's risky play.

First, what we know about risky play in the larger context of play in general and about risk-taking forms of play in particular will be reviewed in order to clarify how risky play is to be understood in this thesis (pages 20-24). Second, individual differences in the propensity to take risks and the perception of danger will be explained by research on sensation seeking as a part of personality and temperament among children and how it affects children's engagement in risky play (pages 24-28). Third, rewards and "accidents," or the possible benefits and costs of risky play, will be reviewed (pages 28-32). These include positive and negative emotional experiences, risk mastery and injuries. Fourth, factors external to the child by which risk-taking in play is influenced, such as setting, context and cultural differences, will be presented (pages 32-36). In this section, the focus is on features of the play environment (affordances) and adults' supervision of children's playing, including cultural differences in the latter. The last part of the literature overview (pages 36-42) is a presentation of how risk-taking in general and children's risky play in particular can be viewed from an evolutionary psychology

perspective. This forms a theoretical underlying basis by which to understand the human drive for thrills and risks in terms of its evolutionary functions.

Both the shared overall objective of the thesis and the objectives of each of the included papers will then be presented (pages 42-44). Following this, the method (pages 44-89) of the study is presented. The method section is rather extensive due to the nature of qualitative methods. The reader is provided with a discussion of the theoretical and methodological approaches taken in this study (pages 44-49), and then the data collection, the body of data, and the analyses are described (pages 49-78). In addition, there is discussion of the ethical issues (pages 78-82) of the present study, as well as the trustworthiness (pages 82-89) of the research process and its results.

Next follows the summary of the results and main conclusions in each of the papers on which this thesis is based (pages 89-99). Then, these results are discussed (pages 99-110) more generally in relation to the prior literature and theory presented in the introduction section. The discussion also includes limitations of the study, suggestions for further research, and implications of the study. A copy of each of the included papers is attached as the last part of the thesis (page 126) followed by relevant appendices.

1.3 Adams' model of risk-taking decisions

When children engage in risky play, they continuously make risk-taking decisions about taking or not taking a risk and how to handle this risk. The concepts of risk and risk-taking are complex, and the understanding and use of these terms in this thesis requires clarification. According to Adams (2001), risk comes in many forms, such as physical risk, social risk and economic risk, with innumerable subdivisions of these categories. Thus, the word "risk" would bring forth different associations for different people in different settings, and a broad and overarching definition would be difficult to establish. Adams (2001, p. 26) broadly defines the term "risk," as used in everyday life, as "unquantifiable danger, hazard, exposure to mischance or peril." With this definition, Adams puts a greater focus on the variability and uncertainty in the issue of risk than the formal risk assessment and risk management literature and policy have when trying to calculate the objective risk in different situations.

Adams (2001, p. 13) acknowledges that there is an objective risk, but emphasizes that this risk cannot be quantified or predicted: “The problem for those who seek to devise objective measures of risk is that people to varying degrees modify their level of vigilance and their exposure to danger in response to their *subjective* perceptions of risk.” As such, the subjective perception of risk is the risk a person perceives at the moment, independent of the actual or objective risk present (Boyesen, 1997; Teigen, 2001), i.e., how the individual him/herself evaluates the probability of something dangerous happening and how imminent the danger is perceived to be. In this thesis, Adams’ definition and interpretation of the risk concept are used as a framework for understanding the risk involved in children’s play. The focus will primarily be on the subjective level; in other words, on how children perceive the risk in their play and how they seek out, encounter and manage this risk. Still, the existence and identification of objective risk represented by factors external to children’s perceptions and actions, although not measurable, is also considered relevant.

As Adams’ (2001) definition of risk implies, the individual’s subjective perception of the risk and how to deal with it is of vital importance for the amount of risk present in a situation and the management of this risk. Adams suggests that individuals' risk-taking decisions in everyday life are a matter of behaving in a way that balances each individual’s propensity to take risks, the potential rewards of risk taking, the perceived danger in the situation and accidents or losses the individual has experienced (one’s own or others’), as shown in figure 1.

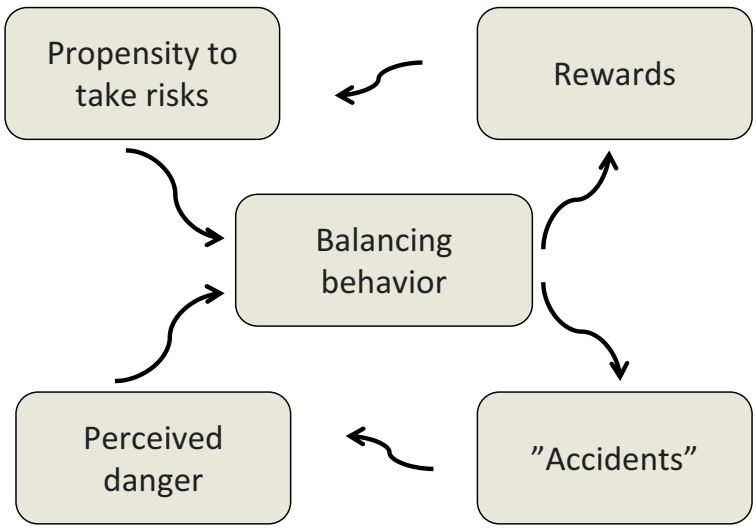

Figure 1: The risk “thermostat” model by John Adams (2001). The model shows how the individual’s propensity to take risks, perceived danger in the situation, possible rewards and possible accidents as a result of the behavior interact and influence each other and the individual’s risk taking decision (balancing behavior). It is not possible to calculate or predict the objective risk as a result of this interaction. As such, the model’s modest claim is symbolized by wiggly lines.

This model portrays the complexity of general individual risk-taking decisions and their influencing factors. Adams (2001) states that the propensity of an individual to take risks is influenced by the potential rewards, while the perceived danger is influenced by former experiences of accidents. The rewards and accidents can be one’s own or others’ that we have observed or learned about in other ways. The core of this model, *balancing behavior*, is the individual’s *risk-taking decisions,* where the perceived danger is weighed against the propensity to take risks. The behavior results at last in further experiences of either accidents/losses or rewards. This model is the most basic version of Adams’ risk “thermostat” model, and one could argue that it is quite simplistic. One would assume that there are more connections between the factors (for instance, would propensity to take risks influence the individual’s perception of danger?) and that external factors would also play a part in an individual’s risk-taking decisions. It is fair to say that Adams also argues that other people, using their own risk “thermostats,” the environment in which the individual makes his/her actions and cultural filters, will influence the risk and the individual’s risk-taking decision in more elaborated versions of this model. This simplistic version of the model will be used as the basis for the structure of the review of knowledge of the factors that influence the individual’s risk-taking decisions, in this case children’s risky play. The reader of this thesis will notice that the headings in the following literature review are named according to the

factors in Adams' model. Suggestions for other connections and factors will be introduced during the literature review and elaborated in the discussion section.

When relating this model to children's risky play, the play activity represents the *balancing behavior* in which children make several risk-taking decisions based on their *perception of the danger*, their *propensity to take risks* and their former experiences of *rewards and accidents* in similar risky play. Children can both experience rewards and accidents themselves and watch other children try out risky behaviors, incorporating these observed experiences of rewards or accidents into their own risk-taking decisions. This will contribute to their further decision to engage in risky play or not, and if they do, how they participate in the play. They balance their play behavior in view of their past negative experiences in order to avoid repeating them (Adams, 2001).

Such a focus on not only behavior in itself, but also on the intentions, meanings and motivations for the behavior, calls for the use of the word *action* rather than behavior in Adam's model. The term "action" includes the intentions and meanings as well as the cultural and situational characteristics for human action (Graue & Walsh, 1998) and is therefore better suited for use as the term for describing children's risk-taking decisions in play (see the discussion section). When the term *behavior* is used in the following theoretical section, it is because much of the literature on children's actions still uses this term.

To enable a better understanding of children's risk-taking in play as a background for the papers included in the thesis, I will, in the following section, present what we already know about children's risk-taking in play and review this knowledge in the light of the influencing factors included in Adams' general model.

1.4 Balancing behavior as play

When related to Adams' (2001) risk-taking model, children's decisions to engage in risky play and how they engage in this play represent the balancing behavior. This calls forth a need for an overview of what risky play is in the larger context of play and what is already known about the nature of risky play. In the larger world of play and play research, risky play is only one aspect.

1.4.1 Conceptualizing play

The conceptualization and definition of play in general and the distinctions between different categories of play have been debated, and a unified conclusion has still not yet been stated (Bishop & Curtis, 2001; Blatchford, Creeser, & Mooney, 1990; Fromberg & Bergen, 2006; Jenvey, 2002; Rubin, 1980; Smith & Vollstedt, 1985). According to Fromberg and Bergen (2006), this is due to the difficulty of defining play because it is a relative activity with shifting functions and forms in different settings and among different individuals and different age-groups. Pellegrini and Smith (2005) argue that play is primarily something that children and young people do, while Sutton-Smith (1997) views play as a lifelong activity that occurs in different forms at all ages. Research has also revealed explicit individual and cultural differences in play (Fromberg & Bergen, 2006). When trying to define play, one must take into consideration the individual differences among players, the variety of play expressions with multiple categories and subcategories, often overlapping, as well as the play setting and context (Johnson, 2006).

Several attempts have been made to define and characterize children's play. A common characterization of play is that it is inner directed, with the activity being more important than its ends (Bekoff & Byers, 1981; Martin & Caro, 1985; Pellegrini & Bjorklund, 2004; Pellegrini & Smith, 2005; Smith & Vollstedt, 1985), and that this activity provides children with an optimal experience of arousal, excitement, fun, merriment, joy, and lightheartedness (Sutton-Smith, 1997). Within this definition, categorizations of different play types have been made. Bekoff and Byers (1981) divide play into three categories: social play, where the activity is directed toward another living individual; object play, where the activity is directed toward an inanimate object; and locomotor play, where the activity carries the individual in seemingly frantic flight about his/her environment; other traditional categorizations of play include functional play, constructive play, symbolic/fantasy play and games with rules (Sawyers, 1994), rough-and-tumble play (Blurton Jones, 1976; Humphreys & Smith, 1987; Smith, 2005), physical activity play, object play and pretend-/role- and sociodramatic play (Smith, 2005).

More extensive categorizations with long lists of play types have also been made. For instance, Blatchford, Creeser, and Mooney (1990) named twenty-four different play types based on Opies' (1969) definitions of children's games played on streets and playgrounds,

and Hughes (2006) identified sixteen types of play among children in his playwork research. Pellegrini and Smith (2005) point out that in the case of play, most of us recognize it when we see an individual doing it, but that recognition of the phenomenon is not the same as agreement on its definition. As such, the definition of play and its different categories is an ongoing debate in which most researchers have a somewhat similar view of what constitutes play, but distinguishing between play types can be done based on slightly different criteria from one study to another.

1.4.2 Defining risky play

The somewhat confusing and unclear definition and categorization of play in general hinders the attempt to identify risky play within the larger concept of play in general. No former definition or categorization of risky play has been found, although Ball (2002) describes children's risky play as play that offers children opportunities for testing boundaries and exploring risk and that has a probability of resulting in harm or injury. A tentative definition and description of the phenomenon as it is understood in this thesis is that *it involves thrilling and exciting forms of physical play that involve uncertainty and a risk of physical injury* [italics added]. The focus in this thesis is on three- to five-year-old children in the Norwegian preschool setting.

Within the landscape of different play types, this kind of play would partly share characteristics with several different play types included in prior categorizations. It could involve elements from locomotor (Sawyers, 1994) and physical activity play (Smith, 2005), rough-and-tumble play (Blurton Jones, 1976; Humphreys & Smith, 1987; Smith, 2005), as well as play with objects (Smith, 2005). In relation to Hughes' (2006) taxonomy of play types, risky play would share parts of the characteristics of deep play (confronting risks and fears and interfacing mortality and death), exploratory play (exploration of the unknown and of new and different ways of playing), locomotor play (intense movement and physically active play), mastery play (testing and challenging own physical and psychic abilities and mastery of the environment), object play (exploring the use and manipulation of different objects), recapitulative play (evolutionarily adaptive play types), and rough-and-tumble play (different kinds of play fights and battles).

As shown, the relation between the content of risky play and the different types of play in general is also a complex one, and placing risky play within just one of the former developed play types is impossible. Risky play will therefore in the following be used as the term for the kind of play on which this thesis focuses, and risk-taking in play as the activity children perform in risky play.

Even though (previous to this study) there is no categorization of risky play, it is fair to assume that it involves several activities and actions identifiable in children's play. Children's physical risk-taking most often takes different forms than more extreme adult physical risk-taking activities such as bungee jumping, parachuting, or SCUBA diving. Children search for their thrills and excitement through play activities. While reviewing research on children's play in search of examples of risky forms of play, I came across some studies on risky play in particular and some studies on play in general describing play that could be evaluated as risky. Stephenson (2003) found, through observations and interviews of four-year-old children on the issue of risk-taking in play, that examples of risky play were activities such as sliding, swinging, climbing and bike riding. The four-year-olds expressed that attempting something they had never done before, feeling on the borderline of being out of control (often because of height or speed) and overcoming fear were important criteria that make an experience seem risky. Stephenson concluded that risky play primarily takes place outdoors, often in the form of challenging and adventurous physical play activities. When suggesting what to look for in children's deep play, Hughes (2006, p. 42) writes:

> *...we should look for children attempting to engage in experiences for the first time. These would normally entail risky or demanding motion – such as complex swinging, climbing to height, balancing over drops, or unorthodox activity such as riding a bike down a slide. Look for hesitancy and fear.*

In Smith's (1998) phenomenological study of children's risk-taking in play, he describes kinds of play such as climbing to substantial heights, sliding, jumping down, balancing, and swinging with high speed. Similarly, research shows that climbing - often combined with jumping down from great heights, and swinging - often experimenting with different and challenging ways of swinging, is especially perceived by children as fun and thrilling (Coster & Gleeve, 2008; Davidsson, 2006; Mårtensson, 2004; Readdick & Park, 1998). Studying children's general play in a Norwegian nature- and outdoor preschool, Kaarby (2004) also

observed some risky kinds of activity play, such as climbing up very steep hillsides and sliding down again, climbing up and jumping down from big rocks or small cliffs, climbing in trees, shooting with bows and arrows, rolling on the ground, balancing on stones, fallen trees, etc. and whittling with a stick. Letting the children venture out on their own away from the surveillance of caretakers is also expressed as risky (Smith, 1998), and both Kaarby's (2004) and Davidsson's (2006) studies revealed that the children loved to walk off into the woods and go exploring away from the eyes of adults. Research also shows that rough-and-tumble play, as described by several researchers, includes a potential of harm to the participants (Blurton Jones, 1976; Humphreys & Smith, 1984; Smith, 2005). It involves the chance of children unintentionally hurting each other while wrestling, fighting, fencing, etc., and there is a fine balance between the activity maintaining play and a real fight.

1.4.3 Implications for this study

Even though some of the studies mentioned here enable the identification of risky kinds of play, my starting point for this study was that a more thorough exploration of the nature of risky play, in the views of both children and adults, is needed as a contribution to the discussion on risk and safety in children's play and for further research and understanding of this phenomenon. In the further work on this study, I will draw upon all of the research reviewed here. However, since my research aims at being explorative, I will approach the phenomenon of risky play broadly. Ball's (2002) rather broad description of risky play from an adult perspective as play that offers children opportunities for testing boundaries and exploring risk and that has a probability of resulting in harm or injury and Stephenson's (2003) description of risky play from a child's perspective as play on the borderline of being out of control (often because of height and speed), play involving overcoming fear, and play attempting something never done before, will be the starting point of my search for an identification and categorization of risky play.

1.5 Children's risk propensity and perception of danger

In Adams' (2001) risk-taking model, the individual's propensity to take risks and their perception of danger in the situation is important for the risk-taking decision. According to several researchers, the propensity to take risks and how an individual perceives danger are closely bound to personality and the presence of a risk-seeking personality trait or telic

(arousal-seeking) dominance (Apter, 1984, 2001, 2007a; Costa & McCrae, 1992; McCrae & Costa, 1997; Zuckerman, 1994). A risk-seeking person will experience high arousal as a pleasant emotion and tend to increase it (Apter, 2007a). The person then often deliberately moves as close as one can to the edge between danger and trauma because this is where the level of arousal is highest (Apter, 2007a; Gerkovich, 2001). This indicates that people with a high propensity to take risks will perceive the situation as less dangerous than a person with a lower propensity to take risks.

Studies show that, similar to adults, children's desire for risky play and willingness to take physical risks are highly influenced by their level of sensation seeking and how they perceive a risk situation, proving that children who are exhilarated by risks are more likely to engage in physically risky play and behavior (Cook, 1993; Cook, Peterson, & DiLillo, 1999; Miller & Byrnes, 1997; Morrongiello & Lasenby-Lessard, 2006; Morrongiello & Matheis, 2004, 2007; Morrongiello & Sedore, 2005).

1.5.1 Children's risk-taking personality/temperament

An Extraversion/Surgency factor in children's temperament has emerged through studies of children's temperament and has been clearly shown to exist in children from three to seven years old and, in some studies, even among children as young as three months of age (Putnam, Ellis, & Rothbart, 2001; Rothbart, Ahadi, Hershey, & Fisher, 2001; Rothbart, Derryberry, & Hershey, 2000). This factor includes traits similar to excitement/sensation seeking and risk-taking personality among the adult population (Horvath & Zuckerman, 1993; McCrae, et al., 2000; Putnam, et al., 2001; Zuckerman, 1979, 1994). Similarly, Morrongiello and Lasenby-Lessard (2006) found sensation seeking to be a measurable trait among children, and this trait was related to more actual risk-taking behavior and a greater number of experienced injuries. Children's propensity to take risks in play and their perception of danger in the situation is thus most likely strongly influenced by their personality/temperament.

According to Reversal Theory (Apter, 1981a, 1982, 1984, 1989; 1992; 2001, 2007a, 2007b; Apter, Kerr, & Cowles, 1988)), the thrill of the risk and the arousal it produces can be experienced either as pleasant/good or unpleasant/bad, depending on the metamotivational state (or mode) the individual is in at that particular moment. In Reversal Theory, a sensation seeking personality is called *paratelic dominance*, described as tending to be more in a

paratelic state rather than a *telic* state (these are opposite meta-motivational states). In a telic state, the individual is characterized by being serious-minded, goal-oriented, sensible, cautious, and arousal-avoiding, while in the paratelic state, the individual is characterized by being playful, activity-oriented, adventurous, thrill-seeking, and arousal-seeking (Apter, 1984, 2001, 2007b).

In this view, the concepts of telic and paratelic states within Reversal Theory seem to be compatible with the phenomenon of children's risky play as children seem to be in a paratelic state while playing: playful and activity-oriented, looking for fun and immediate enjoyment (Apter, 2001). This is exactly how play researchers have described children's play: as a voluntary, intrinsically motivated and optimal experience that brings arousal and feelings such as excitement, fun, merriment, joy, and lightheartedness, where the activity itself is more important than its ends (Bekoff & Byers, 1981; Martin & Caro, 1985; Pellegrini & Bjorklund, 2004; Smith & Vollstedt, 1985; Sutton-Smith, 1997). As such, play seems to be an obvious paratelic activity (Apter, 1982; Kerr, 1986), and risky play, with its arousal-increasing nature, would fit into the behavior of a child in a paratelic state (Apter, 2007a; Gerkovich, 2001).

In a telic state, the individual will experience high arousal as an unpleasant emotion, while in the paratelic state the individual will experience high arousal as a pleasant emotion. According to Apter (1991), the paratelic play-state includes a notion of being inside a protective frame where one can feel secure and unthreatened and where one perceives risks as less dangerous than in the telic state. This indicates that most children are somewhat sensation seeking and seek heightened arousal when in the paratelic state and engaging in play activities (Apter, 1982).

This is supported by research showing that all children in general are explorative and both seek and prefer risky play, such as physical risk-taking activities and play where the ability to fight and physical strength are tested (Ball, 2002; Readdick & Park, 1998; Smith, 1998; Stephenson, 2003; Stine, 1997). Thus, one can assume that most children have a relatively high propensity to seek and explore challenges through risky play, but that their degrees of sensation seeking/paratelic dominance as well as the state, paratelic or telic, in which they are at the moment will influence the potential of experiencing a risk situation with positive or negative emotions, and also how imminent they perceive the danger in the situation to be.

1.5.2 Sex differences in children's risk-taking

Even if all children seek out risky forms of play, research indicates that there are sex differences in the degree of sensation seeking personality. A number of studies on adult populations have reached the conclusion that men are more excitement seeking than women (Zuckerman, 1979, 1994). This seems to be the case across cultural differences, with consistent findings in the USA, England, Scotland, Japan, Thailand, Canada, Australia and Spain (Zuckerman, 1994). Similarly, a large meta-analyses by Costa, Terraciano, and McCrae (2001) concluded that men score higher on excitement seeking than women.

These sex differences are also found among children. Torgersen's (1985) study of children's temperament revealed that boys scored higher on the temperament dimension of *activity level* than girls at six years of age, but not in infancy. Similarly, Rothbart (1988) concluded that infant girls showed a higher amount of temperamental characteristics, such as hesitation and inhibited approach, than boys. Goldsmith et al. (1997) used several temperament measures and found that among children of toddler and preschool age, boys were higher than girls on *activity level* and *high pleasure*, while girls were higher than boys on *inhibitory control*, *perceptual sensitivity* and *effortful control*. In Goldberg's (2001) reanalysis of Digman's Child-Personality Data of teacher descriptions of elementary-school children, the girls tended to be described as less extroverted than the boys. These results indicate a sex difference in the Extraversion/Surgency temperament dimension in childhood.

In support of the finding of sex differences in Extraversion/Surgency temperament, research looking at children's behavior and play preferences also finds sex differences in the willingness to take risks and engage in risky play. Several researchers have documented that boys are more willing to take risks than girls (Ginsburg & Miller, 1982; Morrongiello & Matheis, 2007; Morrongiello, Midgett, & Stanton, 2000; Morrongiello & Rennie, 1998), and S. J. Smith (1998) found that more boys than girls participated in playground risk-taking. Research has also found that boys engage in exceedingly more challenging physical play and rough-and-tumble play than girls (Blurton Jones, 1976; DiPietro, 1981; Eaton & Enns, 1986; Humphreys & Smith, 1984, 1987; MacDonald, 1998; Pellegrini & Smith, 1998; Power, 2000; Smith, 1997, 2005). This is also confirmed in studies controlling for different maturational statuses between boys and girls (Eaton & Yu, 1989). Boys are documented to have significantly lower risk appraisal than girls, and thus boys perceive the chance of being

injured in a risk situation to be lower than girls do (Hillier & Morrongiello, 1998; Morrongiello & Matheis, 2007; Morrongiello & Rennie, 1998). Research also indicates that boys are more likely than girls to report that they have recently been involved in testing their limits and engaging in risk-taking behaviors (Cairns & Cairns, 1994). MacDonald (1995) compared a number of studies and concluded that boys, early in childhood, already have greater *behavioral approach* and more intense gross motor activity than girls do.

Supporting these sex differences in risk appraisal and the willingness to take risks, research also indicates that boys have a higher injury liability than girls (Boles, Roberts, Brown, & Mayes, 2005; Coppens & Gentry, 1991; Matheny, 1987; Morrongiello & Rennie, 1998; Ordoñana, Caspi, & Moffitt, 2008; Rosen & Peterson, 1990; Schwebel, Brezausek, & Belsky, 2006).

1.5.3 Implications for this study

This literature review shows that children's propensity to take risks and their perception of danger are closely related and establishes important factors determining their motivation for engaging in risk-taking activities and how they approach risky situations. Most of the research on children's sensation seeking personality/temperament and their risk-taking in practical situations are conducted in laboratory-like settings and with questionnaires (often competed by parents). Even though this important research will be drawn upon in the discussion of the findings in the present thesis, the further work in this study aims at exploring children's risky play with a more qualitative phenomenological approach by talking with the children and observing them in naturalistic settings. Reversal Theory is a structural-phenomenological theory of motivation, emotions and personality (Apter, 2007b), and its concepts of paratelic versus telic states will thus be most central in the present exploration of children's motivation for and experience of engaging in risky play.

1.6 Rewards and "accidents" in children's risky play

Adams' (2001) risk-taking model suggests that the balancing behavior of risk-taking decisions is highly influenced by the individual's former experience of positive or negative outcomes of handling risky situations; in other words, rewards or accidents. There are both potential rewards and potential costs (accidents) involved when engaging in risk, and an

individual will try to obtain the rewards and avoid "paying" the costs. This is also the case when children decide to engage in risky play. Adams (2001) points out that the risk-taking decisions of young children are individual risk management; a balancing act takes place in the head of the individual, "calculating" the chance of getting injured against the possible reward.

1.6.1 Rewards of risky play

On a conscious level, the benefits and rewards of risky play are the positive experiences one can gain. Intense exhilaration is one of the potential rewards of engaging in risky situations (Cook, 1993; Cook, et al., 1999). According to Sutton-Smith (1997), an important part of the reason for children' s play is that it provides an optimal experience of arousal, excitement, fun, merriment, joy, and lightheartedness, and that the child can actualize his/her potential through this voluntary, intrinsically motivated activity. Similarly, Apter (2001) describes play as an activity motivated by the search for fun and immediate enjoyment. The joy of mastering new and challenging tasks, often on the borderline of control, is found to be a driving force and rewarding experience when children engage in risky play (Stephenson, 2003).

Similarly, Coster and Gleeve's (2008) study on children's views of risk-taking in play revealed that feelings such as fun, enjoyment, excitement, thrill, pride, achievement and good self-esteem were reasons for engaging in risky play. The children in Coster and Gleeve's study clearly stated that this kind of play was both fun and scary at the same time and that experiencing these contrasting feelings was exciting. The expression of these exciting feelings can, according to research, take the form of smiling, laughing, shrieking, screaming, yelling loudly or dancing a little jig (Aldis, 1975; Smith, 1998; Stephenson, 2003), or verbal expressions, such as smiling broadly and saying, "I am so glad I have done that" after managing a risky task (Stephenson, 2003) or "I did it! I did it! Did you see me? I'm going to do it again!" (Smith, 1998). The experience of pleasurable excitement will also make the children repeat the play almost obsessively (Sutton-Smith, 1997).

In risk-taking behavior, the excitement, exhilaration and intense pleasure one can experience from mastering risks and gaining a high level of arousal will be experienced as a reward (Adams, 2001; Apter, 2007a; Gerkovich, 2001; Zuckerman, 1994). In the light of Adams' (2001) model, these pleasant experiences are the most important rewards influencing children's risk-taking decisions in play.

Other benefits of children's engagement in risky play are the “lessons for life” that they unconsciously learn while practicing handling risks. Risky play, as several researchers argue, is a way for children to enhance their risk mastery skills. Aldis (1975) points out that much of children’s play is related to fear and that young children actively seek out the thrills of fearful situations such as, swinging and jumping from high places. Children approach the world around them through play, they are driven by curiosity and a need for excitement, they rehearse handling real-life risky situations through risky play, and they discover what is safe and not (Adams, 2001; Apter, 2007a; Gill, 2007; Smith, 1998; Sutton-Smith, 1997). From a risk-theoretic perspective, this means that children gain a more realistic notion of the objective risk in the situation (Adams, 2001); in other words, the subjectively perceived risk in the situation is nearing the objective risk (Boyesen, 1997; Teigen, 2001).

Boyesen (1997) states that in order for a child to “learn” how to master a risk situation, s/he will necessarily need to somehow approach the situation, and thereby increase the risk. Also, Ball (2002) and Stutz (1995) emphasize the importance of letting children develop a sound sense of risk through taking risks in play, and a study investigating play providers’ views of children’s risky play in the UK reported that enabling children to test their abilities, develop skills for use in the wider world and learn about the real consequences of risk-taking are the most important benefits of risks and challenge in play (Greatorex, 2008). Aldis (1975) exemplifies how children progressively encounter risky play and seek out thrills in a gradual manner, which allows them to master the challenges involved. Research has also indicated that through physical activity and risk taking in play, children show improved motor skills and spatial skills and learn risk assessment and how to master risk situations; their subjective perception of the risk becomes more realistic (Ball, 2002; Boyesen, 1997; Fiskum, 2004; Fjørtoft, 2000; Grahn, Mårtensson, Lindblad, Nilsson, & Ekman, 1997; Smith, 1998; Stutz, 1995). Through risky play children prepare for handling real risks and dangers – it is a serious risk-management exercise (Adams, 2001).

1.6.2 “Accidents” in risky play

Injury is a possible outcome when engaging in risky play, and the counterpart of the positive emotions a child can experience in risky play is the fear or anxiety of getting injured (Cook, 1993; Cook, et al., 1999). Coster and Gleeve (2008) found in their study of play and risk-

taking that sometimes children tried something risky but did not want to repeat it because of the overwhelming fear they experienced, and sometimes watching others do it or just thinking about the possible negative outcome of the risk-taking action would keep them from trying at all. The expression of these negative emotions in a child can take various forms, such as withdrawal and flight (Zuckerman, 1994), protection mechanisms like freezing/becoming immobile, escape/avoidance, defense and appeasement (Buss, 2004), or what Cook et al. (1999) call "protective behavior," such as behaving in a timid and frightened manner (moving slowly, holding onto something, shaking, slumped shoulders), seeking assistance from adults, trying but giving up the activity, and refusing to do the activity at all. Stephenson (2003) also describes some expressions of fear during her observations; the four-year-old children expressed this by calling out for help, moving silently and in a focused manner when climbing, hesitating, body stiffening and expressing verbally how scary they think the situation is.

Still, in spite of sometimes experiencing the feeling of fear, children often take risks in play and expose themselves to the risk of being injured. Because of the injuries occurring on children's playgrounds and the wish to create a safe play environment for children, formal risk-managing strategies have emerged in several countries. These primarily include regulation of physical features of children's play environments and playground equipment, such as maximum fall height, impact of absorbing surfaces, sharp edges, unstable equipment and the likelihood of being trapped, pinched, crushed or struck (Ball, 2002, 2004; Chalmers, 2003; DSB, 1996; Little, 2006; Mowat, Wang, Pickett, & Brison, 1998). These laws have been made on the basis of accident research showing that the majority of playground injuries result from falls from swings, slides, climbing frames, bicycles or other equipment and from being hit, pinched or crushed in swing equipment (Ball, 2002; Bienefeld, Pickett, & Carr, 1996; Chalmers, et al., 1996; Illingworth, Brennan, Jay, Al-Ravi, & Collick, 1975; Mack, Hudson, & Thompson, 1997; Peterson, Gillies, Cook, Schick, & Little, 1994; Phelan, Khoury, Kalkwarf, & Lamphear, 2001; Rosen & Peterson, 1990; Sawyers, 1994; Swartz, 1992).

Statistics of playground accidents from several countries show, however, that despite recent safety legislation to govern playground equipment in order to make play safer, playground accidents have not decreased (Ball, 2002; Briss, Sacks, Adiss, Kresnow, & O'Neil, 1995; Chalmers, 1999, 2003; Phelan, et al., 2001). Still, the most serious playground injuries that result in death or severe invalidity are rare (Ball, 2002; Bienefeld, et al., 1996; Chalmers,

2003; Chalmers, et al., 1996; Phelan, et al., 2001). In the UK, one fatal injury occurs every three or four years (Ball, 2002). Most playground injuries are bruises, contusions, concussions and fractures resulting from falls from or collisions with swings, slides, climbing frames or other equipment (Ball, 2002; Bienefeld, et al., 1996; Illingworth, et al., 1975; Mack, et al., 1997; Phelan, et al., 2001; Sawyers, 1994; Swartz, 1992), bicycling (Chalmers, et al., 1996; Peterson, et al., 1994), and a few due to rough-and-tumble play (Humphreys & Smith, 1987).

Research on the nature of childhood injuries actually shows that the most common risk factors for injury on playgrounds are not features of the equipment, but rather children's actions, normal rashness and improper usage of the equipment (Ball, 2002; Coppens & Gentry, 1991; Illingworth, et al., 1975; Ordoñana, et al., 2008; Rosen & Peterson, 1990). It seems that no matter how safe the equipment is designed to be, the children's need for excitement makes them use it dangerously: "they will take risks which even the best of playground designers could not anticipate" (Smith, 1998, p. 55). This is also in accordance with the findings that high sensation seeking children are more injury prone than are less sensation seeking children (Morrongiello & Lasenby-Lessard, 2006).

1.6.3 Implications for this study

Even though the reviewed literature shows that severe accidents in children's play are quite rare, the fear of being hurt or injured represents the negative emotions linked to the "accidents" factor in Adams' model. On the other hand, the literature shows that positive feelings, such as fun, enjoyment, excitement, thrill, pride of mastery, etc., represent the rewards of engaging in risky play. The further work of this study will draw upon these descriptions of positive and negative experiences and expressions of them when exploring how children experience risky play situations.

1.7 Environment and culture as interactive factors

The simplest version of Adams' (2001) risk-taking model describes the factors *within* an individual by which risk-taking decisions are influenced. In a more extended version of the model, he shows that risk is an interactive phenomenon where both the culture and environment in which we live as well as the other people present are interactive agents. This interaction influences the risk in the situation and the risk-taking decisions made by the

individuals involved. Similarly, the literature on what play is emphasizes that children's play should be regarded in the light of settings, contexts and cultural differences (Fromberg & Bergen, 2006; Johnson, 2006). This means that one must include play environment, culture and other people present as factors influencing children's risky play. How the play environment, as well as adult supervision and cultural ideas about child safety, can influence children's opportunities for engaging in risky play will be addressed in the following.

1.7.1 Affordances for risky play in play environments

Even though children naturally seek to engage in risky play, features of the play environment influence children's play by affording certain types of play activities. Gibson's (1979) theory of affordances states that the physical environment in which we live affords different actions and behaviors. The affordances of the environment include what it "invites" us to do, and the concept of affordances includes both the environment and the person, meaning that the affordances are unique for each individual and correspond with the individual's body size, strength, skills, courage, fear, etc.

Further developing Gibson's theory as a means to understand children's play and activities, Heft (1988) argued that children's outdoor environments afford different types of play and that children perceive the functions of the environments as invitations for certain activities. In his work on affordances in children's play environment, Heft (1988) elaborated a taxonomy of environmental features affording activity, such as *climb-on-able feature*, *jump-up-on/down/off-able feature*, *swing-on-able feature*, and *run-on-able feature*. In a further work on this theory and what characterizes a child-friendly environment, Kyttä (2004, p. 181) distinguished between *potential affordances*, which are specified relative to an individual and, in principle, able to be perceived, and *actualized affordances,* which are that subset of the former that the individual perceives, utilizes, or shapes. In this lies the notion that a child-friendly environment should have extensive affordances for play and activities and the possibilities and freedom of actualizing these affordances.

Lee (1999) sought to understand the interaction of the physical environment and children's play by interviewing guardians and caretakers on the issue of children's play experiences in regard to different types of play activities. Lee distinguished between three types of playgrounds: 1) traditional-equipment play area, 2) contemporary-design playground, and 3)

natural-design playground. The traditional playground includes equipment such as swings, slides, seesaws, merry-go-rounds, sandboxes, and monkey bars. The contemporary playground involves novel forms with different heights and textures, all in aesthetically pleasing arrangements designed by architects or landscape architects. A natural playground contains wild, natural areas where materials such as wood and ropes are used. Lee found that children reacted to natural playgrounds enthusiastically and actively and that natural playgrounds afforded most challenging play. On the other hand, traditional playgrounds afforded the least challenging play and the most non-play (wandering or standing).

Fjørtoft (2000) found that functional play, such as gross-motor activities and basic skills (running, jumping, throwing, climbing, crawling, rolling, swinging, and sliding), was predominant when children played in nature as opposed to playing on a traditional preschool play area and that landscape structures such as steep slopes, rough cliffs, and trees afforded play such as climbing and sliding. According to Fjørtoft, preschool children consider traditional playgrounds as more boring than natural playscapes, and children develop better motor abilities when playing in nature as opposed to traditional playgrounds. In accordance with this notion, Kaarby (2004) found, in a study of children's play in an outdoor preschool (playing in nature areas), that physical activity play such as climbing up very steep hillsides and sliding down again, climbing up and jumping down from big rocks or small cliffs, climbing in trees, throwing javelins or cones, shooting with bows and arrows, rolling on the ground, balancing on stones, fallen trees, etc., and fencing with sticks were prominent most of the time.

All of these studies support Gibson's (1979) assumption that a natural environment affords more intense and varied physical activity than a standardized playground. As such, features and qualities of the play environment are expected to influence the nature and extent of children's risky play, and the formal legislation (see the section "Accidents"), regulating how the play environment is constructed and what it contains, will thus be decisive for limitations and the affordances in the play environment (Gibson, 1979; Heft, 1988; Kyttä, 2002).

1.7.2 Supervision and cultural differences

In Gibson's (1979) theory of affordances, other individuals also offer affordances by inspiring or constraining actions. Kyttä similarly argues that children's ability to move around freely,

the *independent mobility license,* is important for enabling children's free action and their urge to escape the control of adults, and, thus, is closely linked to the ability to actualize affordances. Play usually happens under adults' supervision, constraining what children are allowed to do and where they are allowed to go (Kyttä, 2004). In this sense, adults are helping to ensure children's safety when playing, and at the same time they represent the most important constraints on children's opportunity to experience risks and challenges.

Adams (2001) points out that many of the risky decisions involving children are made by adults because children are generally under the surveillance of adults. Bundy et al. (2009) found that teachers who were concerned about children's risk on playgrounds seemed to manage their own anxieties rather than the risk itself. Therefore, children's risk-taking decisions are also influenced by supervising adults' evaluations of the risky situation and their decision to act upon children's risk-taking in play. On one hand, research has indicated that lack of supervision is one of the causes of childhood injuries in play (Morrongiello, 2005; Morrongiello, Carbett, McCourt, & Johnston, 2006; Rosen & Peterson, 1990; Taylor & Morris, 1996). In accordance with this, studies have shown that children attending child care centers, institutions in which supervision by adults is usually rather extensive, experience fewer injuries than children spending their days at home with their parent(s). Also, injuries in child care centers are mostly minor (Briss, Sacks, Adiss, Kresnow, & O'Neil, 1994; Leland, Garrard, & Smith, 1993; Schwebel, et al., 2006). On the other hand, studies indicate that supervision by overprotective and anxious mothers increases the chances of child injuries (Dal Santo, Goodman, Glik, & Jackson, 2004) and that such overprotective behavior by parents may elicit anxiety in their children, as well as a decreased sense of control over dangerous situations (Allen & Rapee, 2005).

According to Smith (1998), the optimal way for caregivers and supervisors to handle children's risk taking is to let children encounter risks and challenges within a relatively safe play setting. The play providers in Greatorex's (2008) study argued that thorough risk assessment and guidance of each individual child, with consideration of his/her individual character and ability as well as the staff's individual abilities, were important considerations in supervising children in their risk-taking play. When this strategy succeeds, the children will gain valuable experience with risky situations.

There is probably a cultural influence on how caregivers and adults carry out supervision of children (Guldberg, 2009; Little, 2008). For instance, according to Guldberg (2009, p. 60), "the Norwegians have a special love for outdoor pursuits and are reluctant to restrict children's freedom to roam outdoors - without adults watching them – to the same extent that other nations do". Similarly, New et al. (2005) point out that Norwegian, Swedish, Danish and to some extent, Italian preschool teachers have fewer concerns about children's risk-taking than do American preschool teachers. Research on requirements for playground safety in Australia (Little, 2006), New Zealand (Chalmers, 2003; Greenfield, 2003), Britain (Ball, 2002, 2004) and the USA (Caesar, 2001; Sawyers, 1994; Swartz, 1992; Wardle, 1997; Zeece & Graul, 1993) indicates that the efforts to regulate and strictly monitor the children are stronger in these countries than in Scandinavian countries, where the benefits of mastering risks, experiencing various weather conditions and exploring the national landscape are widely acknowledged and encouraged (New, et al., 2005).

1.7.3 Implications for this study

The reviewed literature shows that both the play environment and the nature of adult supervision of children's play seem to be important factors determining if and how children engage in risky play. In this study, these perspectives will be taken into account when exploring what characterizes risky play and what makes risky play risky, although a more detailed analysis of these matters is conducted and presented in two papers that are not included in this thesis (Sandseter, 2009a, 2009b).

1.8 An evolutionary perspective on children's risky play

> *...one of human children's evolved mental mechanisms is the module to face danger...including the emotions of fear and caution, phobias for stimuli such as heights, confinement, risky social encounters, and venomous and predatory animals, and a motive to learn the circumstances in which each is harmless (Pinker, 1995, p. 420).*

A person's propensity to take risks and thereby his/her perception of danger in a situation is, as shown in section 1.5, a part of the person's personality/temperament. Personality/temperament theories describe how a person with a certain trait or dominance most probably will act in a given situation. Still, these theories do not explain the underlying reasons why humans possess individual differences in personality. According to Buss (1997, 2004), evolutionary psychology can constitute the so far missing holistic theoretical

framework for the knowledge of these differences. Buss (1997) states that the conceptual apprehension of the most important motives, drives or goal-oriented tendencies should constitute the core of any important personality theory. These are concepts that show what directs the organism and makes us do one thing rather than something else. From an evolutionary perspective, the human being is regarded as a complex collection of integrated mechanisms formed by natural selection to solve a series of adaptive problems in our surrounding environment, such as sweating to regulate bodily temperature and liver function to remove poison from the body (Buss, 1996). Just as the human body is functionally designed to solve adaptive problems, the human mind, is according to Buss (1996), designed with a series of mechanisms to solve adaptive problems. The following section of this thesis will present the evolutionary adaptive functions of children's risky play; how can we understand the fact that children consciously seek risks and danger through their play even though it involves the risk of being seriously injured?

1.8.1 Play as an ontogenetic adaptation

According to Aldis (1975), an important adaptive function of play is to gradually make children able to master risks that they will have to face as adults in emergency situations. In an evolutionary selective model, Sutton-Smith (1997) argues, play creates uncertainties and risks that children rehearse when managing both fictive and real play situations. Similarly, according to Bruner (1976), play provide a less risky situation than "real life," thus minimizing the consequences of one's actions.

Bjorklund and Pellegrini (2000) discuss children's play as an ontogenetic adaptation. In their opinion, the function of play is an interesting issue since the earlier literature defined play as an activity that serves no apparent purpose, with the means of the behavior being more important than the ends (Martin & Caro, 1985; Pellegrini & Bjorklund, 2004; Smith & Vollstedt, 1985). Bjorklund and Pellegrini (2000) ask how a behavior can be developmentally important, yet serve no apparent purpose. This is in particular an interesting question when considering risky play, where the possible outcome may potentially be injury and sometimes even death. Bjorklund and Pellegrini state that the benefit of a behavior is its function, and that the cost is the risk it imposes. From an evolutionary perspective, the behavior will be naturally selected if the benefit of the behavior is greater than the cost. Bekoff and Byers

(1981) state that play in general would have been eliminated, or never would have evolved , unless it had beneficial results that outweighed its disadvantages.

There is now a consensus that play can have both deferred and immediate benefits (Bekoff & Byers, 1981; Pellegrini & Bjorklund, 2004; Pellegrini & Smith, 1998). It is not only an imperfect version of adult behavior (Bjorklund & Pellegrini, 2000). Through play, children learn skills that are important for adulthood (Bjorklund & Pellegrini, 2002; Pellegrini & Bjorklund, 2004; Pellegrini & Smith, 1998). Still, some of the presumably adaptive characteristics of infancy and childhood are not adaptations for later adulthood, but rather have been selected to adapt individuals to their current environments, play being a specific adjustment to childhood (Pellegrini & Bjorklund, 2004; Pellegrini & Smith, 1998). According to Bjorklund and Pellegrini (2000), this view is consistent with the perspective that a functional pressure of natural selection also exists in childhood.

1.8.2 The evolutionary functions of risky play

The willingness to take risks seems to be an evolved biological/genetic heritable characteristic. Individual differences are in general documented to show moderate heritability (30-50%) (Buss, 2004). Several studies of children and adults have found that there is considerable heritability of personality and temperamental characteristics and the development of temperament (DiLalla & Jones, 2000; Henderson, 1982; McCrae, et al., 2000; Rothbart, Chew, & Gartstein, 2001; Strelau, 1993), particularly in the case of the extraversion/sensation seeking dimension (Buss & Plomin, 1984; Fulker, Eysenck, & Zuckerman, 1980; Henderson, 1982; Torgersen, 1989; Torgersen & Kringlen, 1978; Zuckerman, 1994). The heritability of individual differences, especially the willingness to take risks, indicates that these differences are results of adaptation and natural selection (Buss, 2004). The question then becomes: what benefits of risky play outweigh the potential costs?

The risky play observed by Stephenson (2003) is described as activities including height and speed, such as sliding, swinging, climbing and bike riding. Similar activities were exemplified as risky by children in interviews (Greatorex, 2008). The benefits of these kinds of play may be learning about one's ecology, exploring the environment (Bjorklund & Pellegrini, 2002) and practicing and enhancing different motor/physical skills for developing muscle strength, endurance, skeletal quality, etc. (Bekoff & Byers, 1981; Bjorklund & Pellegrini, 2000; Byers

& Walker, 1995; Humphreys & Smith, 1987; Pellegrini & Smith, 1998). All physical practice and training might be relevant for the developing child. These kinds of play also involve training on perceptual competencies, such as depth-, form-, shape-, size-, and movement perception (Rakison, 2005), and general spatial-orientation abilities (Bjorklund & Pellegrini, 2002). These are important skills both for survival in childhood (immediate benefits) and for handling important adaptive tasks in adulthood (deferred benefits).

Children venturing out on their own away from the surveillance of caretakers was also mentioned as a risky kind of play (Smith, 1998). According to Smith the urge to walk off alone in new and undiscovered environments without supervision from adults is a way of exploring one's world and becoming at home in it. Bjorklund and Pellegrini (2002) similarly argue that children come to know their environment through continuously exploring new areas and objects. According to Bjorklund and Pellegrini, the fact that boys engage more than girls in exploration and also explore larger areas than girls is related to what Bowlby called the environment of evolutionary adaptedness (EEA), where males were hunters and had to be able to safely move around in diverse and large areas away from home. This is in accordance with the research of Silove, Manicavasagar, O'Connell and Morris-Yates (1995) arguing that a lower level of separation anxiety among boys than girls is due to the adaptive pressure for boys to learn hunting skills and the courage to venture far from the home, while girls were adapted to learn skills for nurturing and creating safe environments for child-rearing. It seems that children attain enhanced familiarity and competence about their environment, its potentials and its dangers through exploring its features (Bjorklund & Pellegrini, 2002).

Rough-and-tumble play also involves great physical and motor stimulation (Bekoff & Byers, 1981; Bjorklund & Pellegrini, 2000; Byers & Walker, 1995; Humphreys & Smith, 1987; Pellegrini & Smith, 1998). Another possible function of rough-and-tumble play is to enhance social competence. Flinn and Ward (2005) argue that the necessary competencies to gain control over other people and the resources in the local ecology by manipulation and superiority over others are favored by natural selection and require a lifetime of learning and experience starting in infancy. This will in the long run enhance survival and reproduction. Social physical play, like rough-and-tumble play, enhances children's social competencies, such as affiliation with peers, social signaling, as well as good managing and dominance skills within the peer group (Humphreys & Smith, 1987; Pellegrini & Smith, 1998). It also provides

for practice of complex social skills, such as bargaining, manipulating and redefining situations (Smith, 1982).

Researchers also state that rough-and-tumble play also serves deferred benefits, particularly for boys who most often engage in this kind of play, of gaining competence in aggression, fighting, social competition and experience in dominant and subordinate roles, all social competencies that are useful for adult life (Bjorklund & Pellegrini, 2000; Jarvis, 2006). For preschool-aged children, there is rarely an aim to hurt the other, and both parties partake in this as a playful activity (Humphreys & Smith, 1987). Still, research suggests that rough-and-tumble play in preschool- and primary-school aged children provides practice of regulating aggressive behavior (Dodge, Coie, Pettit, & Price, 1990). Not being able to regulate aggression and hostile behavior in rough play situations also seems to be disadvantageous for the social development of a child because aggressive and bullying children are often disliked by peers (Boulton & Smith, 1994, 1996; Dodge, et al., 1990). There is also a continuity in physical aggression behavior from childhood to adolescence (Broidy, et al., 2003; Scholte, Engels, Overbeek, Kemp, & Haselager, 2007). Rough-and-tumble play thus seem to have important functions, both immediate and deferred, for motor practice, social skills practice, aggression regulation and physical health.

1.8.3 Evolved sex differences in risk taking

The general sex difference between boys and girls in the willingness to take risks, perception of risk and the degree of sensation seeking personality may have an evolutionary function related to survival tasks in the environment of evolutionary adaptedness (EEA). Several authors (see e.g. Bjorklund & Pellegrini, 2000; Bjorklund & Pellegrini, 2002; Ellis & Bjorklund, 2005; Jarvis, 2006; Pellegrini & Bjorklund, 2004; Smith, 1982) state that the documented sex differences in play styles are consistent with the evolutionary adaptive problems men and women have had to solve. Men have had to prove themselves as strong, safe, protective and worthy partners for the women with whom they wanted to produce offspring (Ellis, 1992). This would in the past have implied the willingness to take great risks (Kruger & Nesse, 2004; Wilson & Daly, 1985), including traveling away from the home base to hunt and fight wild animals and protecting the partner and offspring from enemies and other "hostile forces of nature." Women, on the other hand, would have to have been more cautious in order to survive and secure reproductive success and then serve as the primary

caregivers for their children, staying at the home base performing gathering tasks. It is worth mentioning that factors modifying sex differences in risky play could be present in some cultures. Scandinavian studies have not been able to find sex differences in risk-taking behavior among young people (Björck-Åkesson, 1990; Hansen & Breivik, 2001), maybe due to more equal sex roles in Scandinavian upbringing practices and a widespread acknowledgment of risk and challenges as part of both boys' and girls' natural play and development (Hansen & Breivik, 2001; New, et al., 2005). Still, sex differences in the desire for risky play could possibly be viewed as an adaptation to enhance competencies important for survival in the history of evolution.

1.8.4 Anti-phobic effects of risky play

Another recently described evolutionary function of children's risky play is the anti-phobic effect such play may have (Sandseter & Kennair, in preparation). This suggested function of children's risky play is based on research suggesting that several of humans' fears and phobias, such as fear of heights, fear of water and separation anxiety, appear naturally at a developmentally relevant age as a part of the child's maturation due to interplay between genes and the environment and vanish again due to a natural interaction with the relevant environment and the anxious stimulus as part of normal development (Poulton & Menzies, 2002a, 2002b). Poulton and Menzies suggest that the liability to these fears and phobias is non-associative innate and originated as adaptive fears that are necessary to keep the child safe, alert and careful when dealing with potentially dangerous situations.

Research on fear of heights has shown that sustaining injury due to falls both before age five and between ages five and nine is associated with the absence of fear of heights at age eighteen (Poulton, Davies, Menzies, Langley, & Silva, 1998). Thus, risky play with great heights will provide a desensitizing or habituating experience, resulting in less fear of heights later in life (Sandseter & Kennair, in preparation). Similarly, research on separation anxiety shows that the number of separation experiences before age nine correlates negatively with separation anxiety symptoms at age eighteen (Poulton, Milne, Craske, & Menzies, 2001), and research on fear of water has concluded that there is no relationship between experiencing water trauma before age nine and the symptoms of water fear at age eighteen (Poulton, Menzies, Craske, Langley, & Silva, 1999). These findings suggest that risky play where children separate from their caretakers by exploring new and unknown areas and play near

and in water also have habituating effects on the innate fears of separation and water (Sandseter & Kennair, in preparation). As such, Sandseter and Kennair suggest that one of the most important aspects of risky play is the anti-phobic effect of exposure to typical anxiety-eliciting stimuli and contexts, in combination with positive emotions (thrills, excitement and fearful joy) and relatively safe situations. The children learn to cope with and no longer to fear potentially dangerous situations.

1.8.5 Implications for this study

In this thesis, the evolutionary personality perspective on children's risk-taking is an important underlying theoretical understanding of the phenomenon. Exploring evolutionary functions of risky play empirically is not the aim of this study; the exploration of this perspective is instead theoretical and emerged through an analysis of theories and prior literature. This theoretical perspective forms a basis for all four papers in this thesis, and it is particularly brought into the discussion of the phenomenon of risky play in three of the papers (Papers II, III and IV).

1.9 Objective of the study

The introduction of this thesis shows that a child's risk-taking decisions in play are influenced by a number of factors, both within the individual child and in the environment in which he/she lives and plays. The present study's overall aim is to gain a better understanding of the phenomenon of children's risky play – particularly by understanding children's own perspectives. Thus, the focus of the empirical part of this thesis is *children* and their engagement in this kind of play.

The empirical study is drawn on the theory and former research presented in the introduction section; the identification of risky play (*balancing behavior*) is performed on the basis of former research on children's play, particularly risky kinds of play, and how both the child him-/herself and the environment and culture influence this (*environment and culture as interactive factors*); the exploration of why children take risks in play and how they experience engagement in risky play is based both on the theory of the *propensity to take risks/perception of danger* and the potential *rewards and accidents* of risky play, and is conducted within a phenomenological approach. As argued, an underlying theoretical basis

for the understanding of children's risky play in this thesis is the *evolutionary psychological perspective* of the adaptive functions of children's risk-taking. As a holistic means of theorizing on risky play, Adams' (2001) model is used as a framework for the presentation of both former knowledge and the empirical findings in this study, and a synthesis of this material is presented in the discussion as a revised version of Adams' model.

The empirical study in this thesis is based on four papers. The more particular objectives of each of the four papers are:

Paper I: Categorizing Risky Play – how can we identify risk-taking in children's play?
During the preparations of this PhD I found a number of papers and news items (from the internet, newspapers, etc.) referring to and using the terms *risky play* and *risk-taking in play* without having a proper definition of what kinds of play this referred to. Since this thesis was partly to be based on observations of children's risky play, the question arising was: *how can I identify risky play when observing preschool children's play?* The aim of this study was thus to explore risky play and to develop meaningful categories of risky play for further research and understanding of the phenomenon.

Paper II: Characteristics of risky play
As shown, a proper definition and categorization of children's risky play has been missing in the literature dealing with this issue. Having developed meaningful categories of risky play for use in further studies, the question of *what makes children's risky play risky*, implying a more thorough search for risk characteristics beyond the categorization, was still unanswered. The aim of this study was to determine what characteristics to judge risky play by: in other words, what identifies play activity as risky?

Paper III: Children's expressions of exhilaration and fear in risky play
As demonstrated in the introduction of the thesis, the literature on children's play quite unanimously concludes that children naturally seek and conduct exciting forms of play that involve a risk of physical injury (risky play). This suggests that there must be some rewarding experience to be gained from engaging in this kind of play. At the same time, we know that taking risks includes the danger of injury and negative experiences. The aim of this study was

to explore in depth children's expressions of how they experience engaging in the phenomenon of risky play.

Paper IV: 'It tickles in my tummy!' – Understanding children's risk-taking in play through Reversal Theory

Why do children take risks in spite of the fact that doing so can be harmful and even fatal? The literature reviewed in the introduction of this thesis shows that there are several factors influencing children's risk-taking decisions in play. One of these factors is the child's individual and personal propensity to take risks. The aim of this study was to explore the question of why children take risks in play and, using Apter's Reversal Theory on the motivation and personality required for arousal seeking (risk-taking actions), to describe a phenomenological structure of children's risky play.

1.9.1 Summary of objectives of the papers

The overall objectives of the papers and this thesis as a whole can be formulated as a set of simplified research questions:

(1) How can we identify and categorize children's risky play in preschool?
(2) What characteristics identify children's play as risky?
(3) How do children express their experiences of engaging in risky play?
(4) Why do children take risks in play?

2.0 Method

2.1 Theoretical and methodological approaches

Several authors of books on qualitative research stress the importance of the researcher's being visible and known to the reader through a presentation of the researcher, her theoretical and methodical background, and her methodological approach (Atkinson, Delamont, & Coffey, 2003; Creswell, 2007; Glesne, 2006). As Miles and Huberman (1994, p. 4) states: "…to know how a researcher construes the shape of the social world and aims to give us a credible account of it is to know our conversational partner." By this, they mean that

researchers should make their preferences and background clear to the reader. I will therefore try to give a brief presentation of the aspects of my background that may have shaped my methodological approach in this thesis.

> *In an ideal world [...] whatever research strategy is being followed, research problems, research design, data collection methods, and analytic approaches should all be a part of an overall methodological approach and should all imply one another. (Coffey & Atkinson, 1996, p. 11)*

I have never previously thought much about where to "place myself" within the different paradigms and methodological approaches of research. I come from a diverse and "multi-methodological" field of research, where a more pragmatic approach to the choice of research designs and methods prevails. My discipline is sport and physical education. Sport and physical education is a scientific field of research that includes a multitude of different scientific subjects and research approaches. The diversity of subjects covers a wide range, from biological and physical research (medical and nature science), via psychological, sociological, pedagogical and anthropological research (social science), to history research (humanistic science). As such, the methodological approaches within this field of research are several and diverse, and I have become delightfully emancipated from having to choose a methodological paradigm and its methods and then stick to them. Instead, I have made use of different methods and approaches according to the research questions I have chosen.

2.1.1 A pragmatic approach

With my "multi-methodological" background, I have felt a bit reluctant to compartmentalize my own methodological approach and commit to one or another paradigm. The numerous papers and book chapters on paradigms and approaches within qualitative research can also be confusing and contradictory, as each paper and each book chapter operates with its own, often diverse, version of typologies and lists of paradigms and approaches, with more or less incommensurable packages of assumptions, subject matters and techniques. According to Coffey and Atkinson (1996), these are typologies and paradigms that erect barriers and oppositions, so that we ultimately lose creativity and genuine variety within and between research fields. Instead, Coffey and Atkinson call for the freedom to explore and exploit a variety of approaches with playfulness and curiosity so that new insights may and will be generated. When reading about the different qualitative paradigms (Alvesson & Skoldberg,

2008; Creswell, 2007; Denzin & Lincoln, 2005; Flick, 2006; Glesne, 2006; Grbich, 2007; Miles & Huberman, 1994), I considered the possibility of placing myself within them, and Patton's (2002) description of "the pragmatic researcher" made me sure that if I were to place myself within any research approach, it would be the pragmatic approach. Within the pragmatic approach, the researcher does not commit to and operate within one single paradigm, but maintains an eclectic strategy of tactically mixing methods appropriate for the specific research question he/she wants to explore. This is similar to Fick's (2006, p. 25) concept of *hybridization,* which he explains is: "…labeled as the pragmatic use of methodological principles and avoidance of restricting subscription to a specific methodological discourse." Creswell (2007) also describes a pragmatic research methodology where the main aim of the researcher is to conduct research that best addresses the research problems by using multiple methods, both within qualitative and quantitative research traditions. According to Patton:

> *Being pragmatic allows one to eschew methodological orthodoxy in favor of methodological appropriateness as a primary criterion for judging methodological quality, recognizing that different methods are appropriate for different situations. Situational responsiveness means designing a study that is appropriate for a specific inquiry situation or interest. (Patton, 2002, p. 72)*

The study described in this thesis is, as such, a study based on a pragmatic research approach. The choice of methodology and methods is based on what I presume are the most appropriate methods to explore, gain more insight and seek attempted answers to the research questions I have within the limits of the time, resources, and situational framework available to me.

2.1.2 Research background

Still, returning to Miles and Huberman's (1994) argument of the importance of the reader knowing her conversational partner, I will provide some information and reflection on my background and how it has shaped my (pragmatic) choices of methods, analytical strategies and writing style in this thesis:

I am a female native Norwegian assistant professor at Queen Maud University College for Early Childhood Education in Trondheim, Norway. Queen Maud has one of the largest early childhood education programs in Norway and hosts approximately nine hundred students per year. I have worked at Queen Maud since 1999 teaching physical education; a subject

including a broad array of themes, such as children's motor development, anatomy, physiology, health development, and physical activity (including several practical themes). My educational background is a bachelor's degree in sport science and psychology and a master's degree in sport psychology. As I mentioned, sport and physical education is a "multi-methodological" field of research. Still, my own research experience has primarily revolved around issues concerning *children's and adolescents' urge for risk taking*, particularly focusing on risk taking through physical activity and physical play. The theoretical background of my earlier work has primarily been within personality psychology, theory on risk and risk taking, evolutionary psychology, and theories on play and children's play activity. The methodological orientation of my former research has primarily been within quantitative research, but with several smaller studies using qualitative methods or triangulation with both qualitative and quantitative methods. As such, my background lies in a so-called post-positivistic or realism approach, or a "truth and reality-oriented approach" as Patton (2002, pp. 91-96) names it, where one sees the world as not knowable with certainty (as opposed to the positivists); there may be several perceptions of "truth" and knowledge about the world around us influenced by historical and political contexts (Patton, 2002), and may I add, individual perceptions. The post-positivist paradigm calls for the use of multiple methods, both quantitative and qualitative, multiple levels of data analysis, and a focus on how to validate your findings and scientifically report them in a structured manner (Creswell, 2007).

As a reader of this thesis, you will be able to recognize my truth- and reality-oriented worldview. I am a very structured person, and I prefer organizing my life and tasks in structures. This is also evident in the way I write up my research. As a structured person and also one with a truth- and reality-oriented worldview, I write my research using the language and concepts of mainstream science (such as research questions, data collection, results, conclusions, etc.) and with the form of a scientific report resembling the structure of a quantitative research report (Creswell, 2007; Glesne, 2006; Patton, 2002). In addition, I feel a need to validate my research in some way. I worry about its validity, reliability and objectivity:

> *You realize that completely value-free inquiry is impossible, but you worry about how your values and preconceptions may affect what you see, hear and record in the field, so you wrestle with your values, try to make any biases explicit, take steps to mitigate their influence through rigorous field procedures, and discuss their possible influence in reporting findings. (Patton, 2002, p. 93)*

In this thesis, there is a section where I discuss the quality/trustworthiness of my research, even though I use language and concepts that are more suitable for qualitative research (Miles & Huberman, 1994; Patton, 2002). In addition, and maybe as a result of this need to validate my research, you will notice that I do not write extensively about myself. In this thesis, I write myself into the research by using first-person pronouns (Creswell, 2007) when describing the processes of approaching the field of research, the data collection and the analysis of data, but I do not take an extensively self-referential tone. This is not a choice made to try to hide myself as the researcher and my influence on my research and findings; I actually emphasize my role as a continually active interpreter and selective researcher throughout the research process. I do not distance myself from the discussion of "crisis of representation"(Atkinson, et al., 2003; Denzin & Lincoln, 2008), and I focus not on presenting research as reports and representations of "the Other" (Denzin & Lincoln, 2003) but rather on acknowledging the researcher by self-reflexively writing her into the research reports as an active part of the research (Grbich, 2007; Richardson & St.Pierre, 2008). I agree with the notion of a heightened self-awareness of my active partaking in my own research and the influence I have on my material and my findings as a qualitative researcher. This is especially important when the researcher tries to take children's perspectives, as I do in this study. Still, I agree with Atkinson et al. (2003) and Creswell (2007) that the contemporary focus on self-referential works should not overshadow the actual social world and its phenomena on which we are doing research and trying to gain knowledge. I will therefore not put myself as the researcher in focus in this thesis, but rather focus on my research questions and my research participants while still being aware of my inevitable influence as an active researcher.

Even though some of my research questions still involves wanting to find out how certain things and phenomena in the world behave, can be explained and are connected with each other, I am curious about phenomenological questions, such as how a particular thing or phenomenon in the world is experienced by the individual experiencing it. This is why the research questions in this thesis are a mix of trying to learn something relatively "objective" about the phenomenon under study (Questions 1 + 2: What are the categories of risky play, and what characterizes risky play?) and trying to explore how engaging in this kind of play is

experienced by the children doing it (Questions 3 + 4: How do children express their experiences of risky play, and why do children engage in this kind of play?). With my pragmatic approach to finding the most appropriate methods for my research questions, I therefore use methods both belonging to the truth- and reality-oriented approach, where the foundational questions ask what is going on in the real world and what we can establish with some kind of certainty, and the phenomenology approach, where the foundational questions ask what the meaning, structure and essence of the lived experience of a certain phenomenon is for a person or a group of persons (Patton, 2002, pp. 91, 104). In addition, my theoretical perspectives and discussions of these issues rely on an evolutionary psychology based on an ecological psychology approach, where the foundational issue is the nature of the relationship between human action and the environment, and a personality psychology approach resting on the core question for psychology: why do individuals think, feel and act like they do? (Patton, 2002, pp. 80, 118). As such, I base my theoretical preconception and discussion on literature from a wide range of perspectives, both qualitative and quantitative.

My pragmatic approach also shines through in the descriptions of the analysis I have conducted on my data material. Instead of committing myself to either an inductive or a deductive logic of analysis, I perform analyses within the notion of what Coffey and Atkinson (1996, pp. 155-156) call “abductive reasoning” or “abductive inference”. According to Coffey and Atkinson, the outset of this strategy comes from a pragmatic approach to research, but fits with much of the exploratory inquiries conducted within qualitative research. This is a combination between inductive and deductive reasoning, where the researcher explores both her own empirical data and former theories or former research. This means a constant interplay between the ideas, theories and others' research of which we have knowledge and on which we base our curiosity, and the empirical data themselves. According to Coffey and Atkinson, the theories and former research we bring into the analysis and evaluate our empirical data “through” can come from various and diverse philosophical and methodological paradigms.

With my pragmatic approach, but still colored by my truth- and reality-oriented background, I will now present the methods and research strategies by which I conducted the research in this thesis; I will give you a description of my data collections, the body of the data material I collected, how I analyzed these data, and a discussion of the trustworthiness of my findings.

2.2 Data collection 1 (Paper I)

2.2.1 Participants

The participants in this data collection were two groups of children (total N=38) and staff (total N=8) from two different Norwegian preschools. The two preschool groups were chosen as participants for this study according to purposeful sampling because they constituted information-rich cases (Berg, 2007; Merriam, 2002; Patton, 1990, 2002). The criteria of being purposeful for this study were having varied arenas for play, including indoors, an outdoor playground and hikes to nature areas, and having extensive opportunities for using these play environments.

Group 1.1 was one of the units of a private preschool affiliated with a technical science company and the local university, offering kindergarten and preschool for their employees' children. The preschool is situated on top of a hill in the middle of a residential area. The preschool playground is a large area around the preschool building, approximately 2900 m², consisting of some ordinary swings, sand pits, an old wooden rowboat (partly covered with sand), an outdoor amphitheater, a climbing tower, a play hut, a couple of switchbacks, some balance beams, some trees and bushes, and a mix of grassy ground and asphalt/sand. The outdoor playground is surrounded by a fence with a locked gate. In addition to playing on the preschool playground, this unit frequently took trips and hikes to nature play areas outside the preschool, usually forest areas or the seashore. The group consisted of nineteen children from three to five years old, with an equal number of boys and girls, and four staff members, three women (aged forty-six, fifty, and sixty-four) and one man (aged thirty).

Group 1.2 was the nature and outdoor unit of a private preschool affiliated with a local oil company offering kindergarten and preschool for its employees' children. The preschool was situated in a forest area close to the oil company's work buildings, quite close to the seashore. The preschool playground was a large forest area, approximately 8000 m², containing a playhouse, a lavvo ("same-tent") and a turf hut, some sand pits, some ordinary swings, a giant's stride, a climbing tower, play huts, a couple of switchbacks, lots of trees and bushes (forest area), and a mix of grassy ground, forest floor covered with leaves, sticks, stones and mud, and ground and paths covered with sand. The preschool area was surrounded by a fence with a locked gate. In addition to playing on the large forest playground, this unit also frequently took trips or hikes to other play areas outside the playground, usually to the

seashore, forest areas, and other nearby playgrounds. The group consisted of nineteen children from three to five years old, with an equal number of boys and girls, and four staff members, two men (aged twenty-eight and thirty-four) and two women (aged thirty-eight and fifty).

2.2.2 Data collection

The observations

I spent four days as an observer in each of the preschool units, observing children and staff. Information about the project and the voluntary nature of being observed was given to the preschool staff and the children and their parents, and informed consent was obtained (further described in the section "Ethics"). I participated in all of the preschool's activities on the chosen days, including indoor and outdoor activities and other hikes or trips. The plan was originally to observe only four- and five-year- olds, since the study was intended to focus on this age group, but upon starting the observations it soon became clear that the three-year-olds would be included to some extent in situations where they participated in play with the four- and five-year-olds. The observational data were recorded as field notes.

From the start, I tried out different levels of participation (Flick, 2006) when observing the children and staff, from participating in children's play at one extreme (even climbing up to the tops of trees with them), with small breaks to write field notes, to some periods of trying to stay hidden in the distance and record field notes continuously. After trying out these different approaches of participant observation, I decided to take a withdrawn role while still being visible and known to the environment.

As such, I chose to be a withdrawn participant, not unlike the observer role described by Corsaro (1985) in his research on friendship and peer culture in children's early years. Corsaro calls this a "reactive strategy" where the researcher focuses on not acting like the other adults in the preschool. I thus tried to be as "invisible" as possible, moving around in the children's "field of action." In this way, I was present where the children played, always with pen and paper accessible, and continuously recorded what happened. At regular intervals, more in-depth notes were made about particular situations that occurred. When the children invited me into play I politely refused and if they asked for help, for instance to put a lost mitten back on

their hand, I asked them to ask one of the staff for help instead. After a short period of attention to the new and unknown adult moving around them, the children quickly became adapted to my presence and the fact that I did not act like the staff, and they stopped addressing me and took only minor notice of me. This is in accordance with Berg's (2007) and Ratcliff's (2003) experiences that the effect of subjects altering their normal actions when observed is short-lived, and prior observational studies of preschools show that the children relatively quickly become used to an observing adult in the preschool (Løkken, 2000).

A participating observer, even a withdrawn one, will never be completely invisible to the children observed (Graue & Walsh, 1998). Still, in this study, from my withdrawn position I experienced that the children played freely and participated in the preschool's daily activity with little or no effect from being observed. The data are thus naturalistic observations of the children's play in their natural preschool setting (Greig & Taylor, 1999; Patton, 1990, 2002).

The observation process started out quite open and I tried to capture as much as possible of what happened in the children's play, including what games they played, expressions of thrill, excitement or fear, and how the staff reacted in different play situations. Still, the observations were colored by my prior knowledge and comprehension of risky play as well as the research questions. As such, the observations were somewhat guided by "sensitizing concepts" (Patton, 1990, p. 278). As the process proceeded, my observations gradually became more focused on the essential aspect of interest: the recognition and identification of risky play (Flick, 2006). In the end, saturation was reached where the observations did not provide any further examples of risky play.

Within two days of a given observation, I wrote out the field notes electronically, as well as memos and reflections on the process of observations and methodological/practical choices I made during the observation process (Graue & Walsh, 1998). This was done in order to identify and capture feelings, thoughts and questions concerning the observations that I may have had and that would be valuable information for later analysis and interpretation.

The interviews

The interviews were conducted subsequent to the observational period and were carried out in each of the preschools' staff rooms to avoid interruptions from other children or staff. Since

the main focus of the study was four- and five-year-old children, the children in this age group were asked to participate in an interview and informed that they were free to refuse participation (further described in the section "Ethics"). Seven (N=7) of these children agreed to participate. All of the staff members (N=8) agreed verbally to participate in an interview, and one of the interviews was conducted with two members of the staff participating together. This was partly because they preferred to participate together and partly to give me experience in carrying out a group interview. Still, my experience was that single interviews produced more data and better insight into this issue (risky play) than group interviews, and the following interviews were conducted one-to-one (researcher–interviewee).

To ensure that the most central issues of inquiry were pursued during the conversations, all of the interviews, both with children and staff members, were semi-structured (/-standardized) (Berg, 2007; Greig, Taylor, & MacKay, 2007; Patton, 2002) using an interview guide list of questions and issues that were to be discussed and explored with the children and staff. The list included some broad predetermined questions, but was flexible on wording of questions and in following up interesting statements from the subjects. The interest was in knowing what kind of play they thought was risky or scary and why they thought so. I asked both children and staff what play children typically engaged in the different environments, and also if some of the play could be described as risky. The subjects were also asked how risky they evaluated several described play situations to be, such as: "sledging down a snowy steep hill with my head first." I also displayed pictures of different play situations to the interviewees (only the children) for them to judge the risk in the situation.

All interviews were recorded on an Mp3 player and uploaded electronically as an audio file (Windows Media Player file). The audio files were then transferred to CDs and prepared for transcription.

2.2.3 Description of the body of data

The observational data consisted of eight days of observations, with each day lasting about six hours. I wrote field notes continuously in small notebooks. I then wrote these field notes out electronically into forty-eight pages of transcriptions in double-spaced 12-point font. A typical example from the transcriptions of field notes follows:

Fredrick 5 years and Ian 5 years – Group 1.1
Fredrick and Ian have started climbing another tree – it hangs a little over a downhill slope partly covered with bushes. Fredrick is about 2-3 meters above ground. He hangs from a tree branch by his arms and lets himself go down into the bushes beneath.
Another boy, Stian (4 years old), is standing on the ground watching and says: Cool Fredrick!!!!!
Fredrick encourages Ian to do the same. Ian considers it for a while – it looks as if he wants to jump, but that he doesn't really dare. Now several of the preschool boys are watching and waiting for Ian to jump. Eventually he withdraws and climbs down from the tree. Fredrick and Ian walk off down the hill and into the woods alone.

A typical example from the memos and reflections made during the transcription process is:

06/10 2005 – Group 1.2
It was interesting to watch how relaxed the staff was regarding dangerous and risky elements in the children's play environment. Sometimes my instincts told me (as an observer) to intervene in the situation because the children were at risk (for instance, playing at the top of a very high cliff/rock wall), while the preschool staff present seemed totally relaxed and carefree. But my role in the children's play situations was made clear prior to the observations, and I was only to take a withdrawn position and not to intervene at all. The staff was to make their own decisions on intervening in the play, which was totally their own responsibility. Not mine.

1310 2005 – Group 1.2
The children are usually free to engage in the activities they wish and to explore what they want when on hikes. There are hardly any constraints from the staff.
What the children seem to prefer is to climb – in trees, on rock walls, cliffs or steep hillsides. They also seem to like to run around – as fast as they can! Jumping down from great heights is also very popular. It seems that the boys like these kinds of activities best, but also some of the eldest girls engage in these forms of play. The boys seem to be the ones who start the climbing activity, and they often challenge and dare each other on how steep and high they climb – this is my impression even though they don't always verbally declare the dare. It's like a kind of silent dare in the "atmosphere."

Similarly, the interview recordings were transcribed into electronic text documents by a professional transcriber. The choice of using a professional transcriber instead of doing the transcriptions myself was made because of my limited time and capacity. To avoid losing important information and statements during the transcription, the transcriber was instructed to make a thorough verbatim transcription (Patton, 2002; Poland, 1995) of all words and sounds expressed on the tape, including all broken sentences, interruptions, pauses, slang or other individual words or phrases (even those that did not make sense for the transcriber) used by the interviewee. By not doing my own transcriptions, I also lost the opportunity to become

immersed in the data and, in this way, generate emergent insights and interpretations during the transition between fieldwork and analysis (Patton, 2002). To compensate for the loss of emergent insights and interpretations during the transcription process, I therefore listened to the interviews in full while consulting the text (Patton, 2002), making corrections and writing down reflections, recollections and preliminary interpretations. However, when quoting parts of the interviews in this thesis, the transcriptions are translated into English and somewhat edited to enhance readability and to remove speech defects or language errors that would do an injustice to the credibility of the child's responses (Greve, 2008).

The interview transcriptions consisted of one hundred and eighteen pages of transcriptions from the interviews of the staff (N=8) and eighty-nine pages of transcriptions from the interviews of the children (N=7); all transcriptions were made in double-spaced 12 point font. A typical sequence in the interview transcriptions is exemplified here:

M= Maria 5 years old, I = interviewer
M: I chose to play very scary things
I: Yes, do you think this kind of play is scary? (picture of rock climbing)
M: Yes, but I still want to do it!
I: Would you still do it? Why is that?
M: I think it's great fun!
I: You think it's great fun when it's very scary?
M: Yes! I do!
I: Why is that?
M: Sometimes I like being in the dark… even though I'm scared of the dark…
I: You do?
M: Yes!
I: Why do you like doing it even though you think it's scary?
M: It just is like that…..I don't know why….. It just is like that…
I: Yes. It's quite strange? When you're actually scared, but you still like doing it?
M: Yes, that's very strange (she looks thoughtful)

The transcriptions from both the observations and the interviews were summed up in summary notes consisting of the main data and results from both the observations and the interviews. This summary note was a twenty-six-page file, in double-spaced 12-point font.

2.2.4 Analysis

The collected data were analyzed according to the research question the study was designed to explore: *How can we identify and categorize children's risky play in preschool?* This was

done using content analysis as described by Patton (2002) and Berg (2007). The aim of content analysis according to the above authors is to reduce a given body of textual qualitative data material (derived from interviews, observations, diaries or documents) and attempt to identify its core consistencies and meanings by the technique of coding and generating categories.

According to Patton (2002), there is no clear distinction between pattern analysis, theme (or thematic) analysis and content analysis. Content analysis reveals patterns of codes that, when clustered together, will form major themes (or categories). This analysis can be done either inductively, in which the patterns and categories are found within one's data, or deductively, where the data are analyzed according to some predefined framework of codes or categories derived from theoretical models or theoretical assumptions (Grbich, 2007; Patton, 2002). Sometimes a mix of both is used in combination, called abduction (Coffey & Atkinson, 1996), using "sensitizing concepts" derived from former research, other literature, theory and the research questions in focus (Patton, 2002, p. 278). According to Patton, sensitizing concepts give the analyst a general sense of what to look for in one's data material, although the data must still speak for themselves since these concepts can never substitute for the direct experience with the body of descriptive data.

I first read through the present data thoroughly to gain an overview of the body of results. This showed that risky play primarily took place in children's *outdoor play*, and thus my further focus of analysis was on the data collected during the children's outdoor play. With this focus, the data were thus reduced into manageable chunks by abstracting irrelevant parts of the raw data material (Miles & Huberman, 1994). I then analyzed the data to find codes and categories of risky play. Based on the prior literature and the research question in focus, the analysis was done with some presumptive criteria or sensitizing concepts (Patton, 2002; Pellegrini, Hoch, & Symons, 2004) of the characteristics of risky play. The starting list of criteria for risky play were: Play that has a probability of resulting in harm or injury, play that offers children opportunities for testing boundaries and exploring risk (Ball, 2002), play on the borderline of out of control (often because of height and speed), play involving overcoming fear, and play attempting something never done before (Stephenson, 2003). These were chosen because they were relatively broad descriptions of both an adult's (Ball) and a child's (Stephenson) perception of risky play. These criteria provided a framework for what to look for, but were still open enough to allow categories to emerge from the data.

In the analysis, I sought to find both observed and spoken examples of risky play. The codes emerging from the data were then compared and organized in some broader categories related to the presumptive criteria for risky play. The categories were primarily labeled in-vivo, meaning phrases, words and descriptions used by the subjects (children and staff) (Flick, 2006; Miles & Huberman, 1994), but also constructed in relation to the starting list criteria from the prior literature (Flick, 2006).

Second opinion

The categories of risky play found through this analysis were, together with the summary note of results, presented to a preschool teacher who has long and varied experience with children's play in preschools. This preschool teacher evaluated if 1) the categories developed were reliable according to the data, and 2) the categories made sense in relation to experiences of children's play in preschool. Modifications of the categories were discussed with the teacher. This was done to get an independent second opinion of the interpretation of the data and the emerging categories for the purpose of increasing the trustworthiness and fit of the results (Miles & Huberman, 1994).

The final outcome of this analysis was the construction of six main categories (or themes) of children's risky play, derived from interviews with both children and preschool staff about their view on what risky play is and from observations of children's play and the staff's reactions to different kinds of children's play, as verified by an independent second interpreter.

2.3 Data collection 2 (Papers II, III and IV)

2.3.1 Participants

The participants in this second data collection were two groups of children and staff from two different Norwegian preschools. Similar to data collection 1, the groups were chosen according to the principle of purposive sampling because they constituted information-rich cases (Berg, 2007; Merriam, 2002; Patton, 1990, 2002). In data collection 1, one of the findings was that risky play most often occurs in children's free play outdoors, and for this

reason the purposive criterion for the preschools in data collection 2 was that the preschool spent a great deal of time outdoors in varied play environments. I also made a choice to include both an ordinary preschool and a nature and outdoor preschool. Norwegian nature and outdoor preschools spend most of their time outdoors in nature areas, and outdoor life and play and learning in nature environments are emphasized. This is a preschool type that is growing in popularity and number in Norway (Lysklett, 2005; Lysklett, Emilsen, & Hagen, 2003), and because of the extensive use of nature areas for outdoor play, the assumption was that observations from this kind of preschool would be both purposeful and interesting. Since most Norwegian children still attend ordinary preschools, this kind of preschool was also represented in the sample.

Group 2.1 was one of the units in an ordinary municipal preschool with no specialties concerning pedagogical or practical features. The preschool is situated in a residential area surrounded by some private houses, some blocks of flats and a shopping center. The preschool's playground is quite a large playground around the preschool building, surrounded by a fence and a locked gate, with approximately 2500 m² of flat surface with grass, gravel, and some asphalted paths and two elevated levels (approximately two meters above the rest of the surface) of small grassy hills. The playground has several fixed pieces of playground equipment, such as a climbing tower, two ordinary playground swings made of tractor tires, a play hut, two or three climbable trees, a wooden boat used as a sand pool, one switchback situated on one of the elevated hills, and a curved switchback running down from the climbing tower. In the winter, the preschool staff prepared a small skating rink within the preschool playground.

During the data collection period, I joined the unit on two hikes. One hike was to a nearby forest area with mostly flat forest surface and lots of climbable trees, with paths leading across and around the area, and the other hike was to a nearby hilly area with a small forest with climbable trees, a swing (rope in a tree), and some cliffs situated in the hills. In both of the areas there were wind-fallen logs and branches, and there was no fencing surrounding either of the two areas.

The group consisted of sixteen children aged four and five years, three boys and thirteen girls, and four female staff members (aged thirty-two, forty-six, fifty-six and sixty).

Group 2.2 was a private nature and outdoor preschool situated in a forest and did not have a fixed playground or surrounding fences. The area was hilly, with a mix of slopes, hills, cliffs, and relatively flat natural forest areas with grass, bushes, trees, etc. There was also a gravel yard immediately outside the preschool house. The nature environment in the vicinity of the preschool building consisted of a great forest with several climbable trees (from small trees to trees up to seven or eight meters high), several small rocky walls, cliffs and climbable big rocks, a steep and very high (more than fifty meters high) hillside including projecting cliffs and stone edges, wind-fallen logs and branches, a giant's stride made of a rope tied in a tree branch (three- to four-meter pendulum), a pond/small lake approximately fifty meters from the preschool house, and a fire pit in the gravel yard.

This preschool went on two hikes during the data collection period. One hike was to a nearby hilly forest area (in the winter) with several long and steep snowy hills and a dense Norway spruce forest, and the other hike was to a nearby pond/small lake surrounded by a large forest with lots of climbable trees, steep cliffs and large rocks. In both the areas, there were wind-fallen logs and branches, and there was no fencing surrounding either of the two areas.

The preschool had only one unit with children from three to five years. All of the four- and five-year-olds participated in the data collection. The group of children therefore numbered thirteen, five boys and eight girls. There were four staff members participating in the data collection, three men (two aged twenty-nine and one aged twenty-eight) and one woman (aged twenty-nine).

2.3.2 Data collection

Observations

I spent nine days in each of the preschools, including the hikes, resulting in a total of eighteen days of observations. Based on the results from data collection 1 showing that risky play most often occurred in children's outdoor play, I focused on observing only outdoor play. I observed both the children's play and the staff's supervision. As in data collection 1, information about the project and the voluntary nature of being observed was given to the preschool staff and the children and their parents, and informed consent was obtained (further described in the section "Ethics"). Based on my experiences of trying out different levels of

observer participation in data collection 1, I took a withdrawn position, trying to be as "invisible" as possible. Similar to data collection 1, this resembles a "reactive strategy" described by Corsaro (1985). Still, the contemporary view on observational research acknowledges that this is an interpersonal interaction between the researcher and the participants (Angrosino, 2008), and the goal of not influencing the participants is unattainable. I was visible and known to the environment, moving around in the children's "field of action," recording video of situations of risky play and taking field notes. As in data collection 1, a polite refusal was made when children invited me into their play, and I instructed them to ask the preschool staff when they asked me for help.

Similar to the observations in data collection 1, the observations were naturalistic (Greig & Taylor, 1999; Patton, 1990, 2002). This means that the children were observed playing freely in their natural preschool setting. Still, the observational strategy adopted in this data collection was selective. Video recordings and field notes of interesting risky play situations in a naturalistic setting were collected based on categories of risky play developed during data collection 1 and the analysis of this data material (table 1).

Table 1: Categories and subcategories of risky play developed during the analysis of data collection 1.

Categories	Risk	Sub-categories
1: Great heights	Danger of injury from falling	Climbing Jumping from still or flexible surfaces Balancing on high objects Hanging/swinging at great heights
2: High speed	Uncontrolled speed and pace that can lead to collision with something (or someone)	Swinging at high speed Sliding and sledging at high speed Running uncontrollably at high speed Bicycling at high speed Skating and skiing at high speed
3: Dangerous tools	Can lead to injuries and wounds	Cutting tools: Knives, saws, axes Strangling tools: Ropes, etc.
4: Dangerous elements	Where children can fall into or from something	Cliffs Deep water or icy water Fire pits
5: Rough-and-tumble	Where the children can harm each other	Wrestling Fencing with sticks, etc. Play fighting
6: Disappear/get lost	Where the children can disappear from the supervision of adults and get lost alone	Go exploring alone Playing alone in unfamiliar environments

The choice of such focused observations was made both to secure a thorough focus on what the study aimed to explore (risky play) and to limit the amount of data gathered to what is readily analyzable (Silverman, 2005). Field notes were written when video recording was not possible. While conducting the observations, I aimed at finding what Smith (1998, pp. 50-51) calls “the well-placed bench”; an image of the researcher’s most optimal place for observing children’s play at the playground. In this position, I would be able to sense and capture in the data both the child’s actions and the significance of these actions through noticing the child’s gestures, body language, facial expressions and verbal sounds, and the intensity of these expressions.

The use of video as a tool in observation offers both advantages and disadvantages for the researcher and the research process. The most obvious advantages relevant in this study are the possibility of obtaining data that capture a more detailed picture of the children’s actions, gestures, expressions and nonverbal behavior and interaction, as well as the utility of being able to revisit the recorded situations and to some extent repeat the observations when transcribing and analyzing the data material (Flick, 2006; Greig, et al., 2007; Ratcliff, 1996).

This also enables the researcher to view and analyze the raw material from different perspectives, returning to the data with different analyzing techniques or different theoretical orientations, as done in this study. In the present study, I also experienced the advantage of vividly recollecting the atmosphere, tension, and additional context of the observed play situations when revisiting the videos. These are details that are not visible on tape and that an observer who did not obtain the video recordings would not be able to notice and identify.

One of the disadvantages of using video recording in observation is reactivity from the persons being observed (Ratcliff, 2003). Complete invisibility of my participation was impossible (Graue & Walsh, 1998). Ratcliff (2003) reported that children made faces, grinned, used exaggerated movements and obscure gestures to get attention in front of the camera in the early phase of his study, but several researchers have experienced that this attention is short lived and that children quickly get accustomed to the observer and the camera (Berg, 2007; Løkken, 2000; Ratcliff, 2003). In the beginning of the present study, the children seemed very interested in me and my video camera, but they soon lost interest and just minded their own play and activities. They would notice me being there, but they did not mind or alter their behavior or actions because of my presence. A citation from the field notes of one of the observations exemplifies this:

> *The researcher notices three boys near some trees on the playground and approaches them to see what they're up to. The trees are decorated with some ice-sculptures hanging from the branches. The three boys have brought a couple of large bottle-boxes and started to pile them on top of each other. The researcher approaches the boys partly hidden by a tree, and stops to watch them [no video is taken at this point]. One of the boys climbs the pile of boxes to reach the ice sculptures and starts to tear them down while the other two support him from falling. They scowl around to see if anybody can see what they are doing [they're probably not allowed to destroy the decoration] when suddenly one of the boys becomes aware that the researcher is watching them. The boy turns to the others and says: "look, she is watching us" The boy on top of the pile turns around and gazes at the researcher and then says: "oh, it doesn't matter – she doesn't understand anything of what we're doing anyway…"*

As indicated by this citation, the children became adapted to my presence and more or less perceived me only as an unimportant "object" in their play environment. Another disadvantage of video observation is the selectivity of the researcher when deciding on what situations and moments to record (Flick, 2006; Ratcliff, 2003). On the other hand, a selectivity of observations may also be an advantage that helps the researcher to focus on the observations that are interesting in the context of specific research questions (Pellegrini, et al.,

2004). In this data collection, the video recordings were selective and focused on the categories of risky play due to the aim and design of the research project, and thus the problem of selectivity was somewhat reduced because of an intended selectivity. Still, I sometimes experienced having to choose between several simultaneous situations of emerging risky play and then selectively chose to videotape novel situations or the most risky situations. The videotapes thus do not give a total picture of all potentially risky play situations that took place, but rather give a richer and more detailed description of the risky play categories and how children engage in such play. I have tried to be as transparent as possible in documenting and reflecting on why and when I turned on the camera, and a citation from the methodical memos written on the end of one of the observation days shows some of these reflections:

> *I notice that my decisions to turn on the video camera in certain situations are based on both the sound that the children make when they play (joyous screaming, laughter, shrieking, fearful joy), and their facial expressions (excited, exhilarated, tensed, joyous, smiling, fearful, anxious or worried), but also the atmosphere in the situation (e.g., someone is very quiet because one must concentrate on mastering something very tricky, or because one is about to do something that is forbidden, or an atmosphere of silent daring between children – all giving a kind of electric excitement in the air). These are unconscious decisions made by me continuously while walking around among the playing children, and the decisions are made because I sense that something interesting is about to happen right there and then.*

Even though selectivity is a disadvantage of video observation, Flick (2006) argues that video recordings also reduce the selectivity of several other methods due to the ability to review the observations for more information. Flick points out that selectivity is a limitation of research methods in general. Selections and focuses on certain phenomena or questions lie in the very nature of research. Flick therefore calls for the parallel use of several methods, where video observations, fieldwork, interviewing etc. are combined. In the present study, videos were combined with field notes, memos and interviews. The last disadvantage of video observation that will be mentioned in this thesis is the extensive amount of video descriptions that it produces (Ratcliff, 2003). This gives detailed and exhaustive data on the issue under study, but it also makes the process of analysis more time consuming and overwhelming because of the incredible amount of information available in the video material (Ratcliff, 2003). In the present study, the amount of video recordings was somewhat reduced to a more manageable size due to the strict focus on situations of risky play. Also, when the observations did not provide any further knowledge or information to enlighten the research questions, saturation was reached and the video observations were ended (Flick, 2006).

I transcribed the field notes and the video recordings into an electronic Microsoft Word file. The transcriptions of the video recordings were detailed descriptions of what was going on in the play situations recorded; describing what the child/children did in the situations – all their actions – and the environment where these actions took place, what they said or what sounds they made while performing these actions, what their facial expressions looked like, and what bodily gestures or characteristics were seen in their movements. The field notes written out electronically were a mix of my descriptions of risky play situations and further notes of interesting situations and my reflections. While transcribing the video clips and writing out the field notes, I wrote down additional memos to capture my preliminary interpretations and emerging insights on the data, reflections on the transcription process and interesting questions arising during the transcription process.

Interviews

A subset of the children was asked to partake in a one-on-one qualitative interview with me in the staff room in each of the preschools. The selection of children was made to limit the number of interviews to a manageable size for analysis. I therefore made a decision to include all of the children who had already turned five years of age and all the children turning five years of age in the current year. According to the ethical guidelines in this study (further described in the section "Ethics"), the children were informed that they were free to refuse to be interviewed. Nevertheless, when asked to be interviewed, all of the children agreed to participate. In the ordinary preschool, twelve children (N=12) were interviewed, nine of whom were five years old and three of whom were four years old (one boy and eleven girls). In the nature and outdoor preschool, eleven (N=11) children were interviewed, six of whom were five years old and five of whom were four years old (five boys and six girls).

The interview is a method of obtaining children's perspectives on certain phenomena or issues (Greig, et al., 2007). The interviews in this study were primarily conducted to explore why children take risks in play and how they experience engaging in this kind of play (paper IV). According to Grieg et al. (2007), interviews that aim to explore the perspectives of topics that are meaningful and important to the interviewee need less structure, while interviews performed to obtain facts will have more structure. Since the aim of the present interviews was to explore children's sense-making and experience of risky play, I took a semi-structured

(/-standardized) interview approach (Berg, 2007; Greig, et al., 2007; Patton, 2002). This meant using an interview guide of questions and issues on which I based the interview, while still being flexible and open to stories the children wanted to tell or to new perspectives brought into the interview by the children. This was done to ensure that the most central issues of inquiry were pursued with all of the children (Patton, 2002). The interview guide was based on the six categories of risky play developed during data collection 1 and the subsequent analysis and aimed to explore children's motives for engaging in risky play, what kind of risky play they preferred when in preschool and why, and their experiences of engaging in different categories of risky play.

Having spent four to five months in the preschools observing the children, I was familiar with the children. Still, the introductory questions of the interview were questions about name, age, and if the child liked being in preschool. Patton (2002) advises not to start an interview with such boring questions, but the experience in this study was that the children loved to talk about how old they were and their daily experiences of spending time in preschool. In the present setting, these questions led to a mutual confidence between the child and me as the researcher. In the rest of the questions, I invited the children to describe the kind of outdoor play in preschool that was fun, thrilling, and scary, why they perceived this kind of play in this way, and how they felt while engaging in this play. The children were also asked why they chose to participate in this play if they already hadn't talked about this. Keeping to the interview guide, I made sure to gain information about both play in the winter (in Norway, this normally means a snowy playground) and in the summer (the interviews took place in May/June) and ensured that the six different categories of risky play were mentioned and discussed with the children.

The role of the researcher as an interviewer is important, particularly when interviewing children. Many children are, according to Graue and Walsh (1998), not used to being approached by adults who want them, the kids, to teach the adult about their lives. Children instead expect that when adults ask them questions, the adult either already knows the answer or they are being confronted with something they have done wrong (Graue & Walsh, 1998). The issue of establishing trust between the interviewer and the child is thus an important issue, as is negotiating the process with the child to establish consent on what the interview is all about and how it should be done (Graue & Walsh, 1998). In the present study, the children were, as already mentioned, familiar with me due to my period of presence as an observer. In

addition, I could relate to situations of risky play that I had observed the children engaging in and bring these into the interview as examples and as a basis for conversation. The children were therefore very cooperative and anticipative in the interview situation; they spontaneously talked about the issues I brought forward, and they freely told stories about their play and activities in preschool. My impression is that I gained trust and created a comfortable interview situation. This impression was confirmed by the staff, who gave the feedback that some of the children had asked to be interviewed once more because they thought it was such a good conversation and so much fun to participate.

Each interview lasted about twenty-thirty minutes, and all interviews were recorded on audiotape (Mp3). The decision to record the interviews was made to ensure that all of the details of what the children said during the interviews were captured; in addition, recording the interviews enabled me to pay full attention to the child participating in the interview (without being partly hidden behind a notebook). There are conflicting views on using a recorder while conducting interviews. Flick (2006) argues that this is a good way to save interviews and that one should not be too anxious about using a tape recorder since most interviewees have no problems with being recorded. On the other hand, Graue and Walsh (1998) are of the opinion that using tape recorders can easily distract children in the interview situation. In the present study, the tape recorder was a very small Mp3 player, approximately 1x2x4 cm, and after it was explained that this little object recorded our conversation, the children did not pay much attention to it. The recorded interviews were stored as audio files (Windows Media Player) on a computer and CD and prepared for transcription.

2.3.3 Description of the body of data

Observations

The observational data from data collection 2 consisted of field notes from approximately ninety hours of observation spread over eighteen days and six hours of focused video clips recorded during these days. The field notes were written out, and the video recordings were transcribed in detail. All of the observational data were then gathered in a Microsoft Word file of one hundred and eighty-one pages of double-spaced 12-point font. A typical example from the transcriptions of the play situations from the video tape follows:

<u>Group 2.2 on a hike to a landscape of forest and hills in the winter (ages in brackets)</u>
Tom (4), Emma (4) and Stina (5) partly lie and sit on a sledding mattress on top of a long steep snowy hill. They push themselves out from the starting point and start sledding down the hill. Very soon they gain a very high speed, and they lose control of the mattress and it starts spinning around as it races down the hill. They scream and laugh as they slide down. Halfway down the hill, Emma and Stina are thrown off the mattress and tumble over each other – they laugh and scream excitedly and with fearful joy. Tom continues to race down the hill alone on the mattress while screaming and laughing, and at the bottom of the hill he finally is thrown off the mattress as well. The two girls come running down the rest of the hill and throw themselves onto the mattress and Tom, who lies in the snow, and they all scream and laugh vigorously. When they calm down, they get up and start walking up the hill again.

All of the situations of risky play recorded as video clips were, after being transcribed into text, read through and categorized according to the six categories of risky play developed during the analysis of data collection 1 (paper I). To obtain an overview of the contents of the data material, all of the play situations in each of the categories were counted and summarized. The following table (table 2) describes in numbers the data material from group 2.1 (the ordinary preschool in data collection 2), both during play on the preschool playground and on the hikes.

Table 2: Number of observed situations of risky play on group 2.1's preschool playground and on hikes. The situations are categorized according to the six categories of risky play developed during the analysis of data collection 1.

Preschool playground	**N of obs. = 51**	**Hikes**	**N of obs. = 22**
<u>Great heights</u>	**<u>Total = 22</u>**	**<u>Great heights</u>**	**<u>Total = 13</u>**
Climb trees	16	Climb trees	11
Climb on play hut	3	Climb rocky walls	2
Climb in climbing tower	1		
Balancing on tree branch	2		
<u>Speed</u>	**<u>Total = 22</u>**	**<u>Speed</u>**	**<u>Total = 7</u>**
Swing	10	Swing in Giant's stride	3
Bicycle	3	Roll or slide down steep hillside	4
Ski	1		
Sledge (on snow)	5		
Run fast	1		
Skate	2		
<u>RTP</u>	**<u>Total = 5</u>**	**<u>RTP</u>**	**<u>Total = 1</u>**
Play fencing with sticks	3	Chase and catch	1
Play wrestling/fighting	2		
<u>Dangerous tools</u>	**<u>Total = 2</u>**	**<u>Disappear/get lost</u>**	**<u>Total = 1</u>**
Whittle with knife	2	Go explore alone in the woods	1

Of the fifty-one situations of risky play observed on the preschool playground in group 2.1, twenty-two of the situations were situations of play in great heights, and twenty-two of the situations were situations of play with high speed, while there were five situations of rough-and-tumble play and two observations of children playing with dangerous tools. In the category of play at great heights, climbing on different features, particularly in trees, was the most common activity, but a couple of occasions of balancing on tree branches were also observed (combined with climbing). Swinging on the swings was the most common activity in the category of play at high speed, and in addition there were some occasions of other high-speed play, such as bicycling, skiing, sledding on the snow, running and skating on ice. There was not much rough-and-tumble play in the video observations, but a total of five observations showed situations of play fencing, -fighting and –wrestling. Only boys were involved in these five situations. The videotapes showed two situations of play with dangerous tools (whittling with knives). No observations of play near dangerous elements or play where children could disappear/get lost were observed, as seems natural because of the fact that this was a fenced in and safely constructed (according to the safety legislation) public playground.

On the two hikes this group went on, one to a nearby forest area with mostly flat forest surface and lots of climbable trees and the other to a nearby hilly area with a small forest with climbable trees, a swing (rope in a tree), and some cliffs, the observer recorded twenty-two situations of risky play. Of these situations, there were thirteen situations of play at great heights; most of them involved the children climbing trees. There were seven situations of play with high speed; rolling or sliding down a steep hillside and swinging in the giant's stride. Only one situation of rough-and-tumble play was recorded: a situation of a chase and catch game, and similarly, only one situation of play where children could disappear/get lost was observed, where children went off into the woods alone to explore without supervision by the staff.

The following table (table 3) describes in numbers the data material from group 2.2 (the nature and outdoor preschool in data collection 2), both during play on the preschool playground and on the hikes.

Table 3: Observed situations of risky play on group 2.2's preschool playground and on hikes. The situations are categorized according to the six categories of risky play developed during the analysis of data collection 1.

Preschool playground	**N of obs. = 55**	**Hikes**	**N of obs. = 31**
Great heights	**Total = 15**	**Great heights**	**Total = 11**
Climb in steep hill with cliffs	5	Climb in steep hill with cliffs (+ RTP)	2
Climb in steep hill with cliffs (+ RTP)	5	Climb a tree on top of a steep cliff	6
Climb trees	2	Climb trees	3
Climb on rocky walls	2		
Climb fence on top of a cliff	1		
Speed	**Total = 33**	**Speed**	**Total = 17**
Swing (rope in tree)	8	Sledge and slide down steep hillside	17
Sledge/slide on snow or rocky wall	17		
Ski (downhill)	8		
RTP	**Total = 3**	**RTP**	**Total = 1**
Play fencing with sticks	3	Play fight with dirt	1
Dangerous elements	**Total = 3**	**Dangerous elements**	**Total = 2**
Play near a pond/small lake	2	Play near a pond/small lake	2
Play on top of a steep cliff	1		
Disappear/get lost	**Total = 1**		
Play alone in the woods – out of sight	1		

Of the fifty-five risky play situations, play at high speed (thirty-three) and play at great heights (fifteen) were the most common kinds of risky play. The fifteen situations of play at great heights were all situations of climbing. In ten of these situations, children climbed the steep and very high hillside with cliffs and stone edges described under potential affordances. Half of these situations can be described as a combination between rough-and-tumble role play, where the children climbed the hill and simultaneously fought each other, pretending to be Spiderman, King Kong or other superheroes. The rest of the situations were tree climbing, climbing rocky walls and one situation of two boys climbing a fence that sat on top of a steep cliff to guard the children from unintentionally falling down. The thirty-three situations of play at high speed were mainly sledding on the snow in the winter or sliding down a rocky wall and swinging in the giant's stride swing in the tree outside the preschool. Skiing fast downhill was observed in eight situations, and three situations of rough-and-tumble play were observed in addition to the rough-and-tumble play situations described as a part of climbing on the steep hillside. These were situations of boys fencing with sticks and play fighting. Play near dangerous elements was observed in three situations. In two of the situations, it involved

children playing near the pond/small lake situated close to the preschool, and in one situation two boys played on top of a steep cliff. Play where children can disappear/get lost was observed in one situation. This was a situation where some girls set out in the woods to play alone outside the staff's field of view. There were no situations of play with dangerous tools in the video recordings.

On the two hikes this group went on, to a nearby hilly forest area (in the winter) with several long and steep snowy hills and to a nearby pond/small lake surrounded by a large forest with lots of climbable trees, steep cliffs and large rocks, I recorded thirty-one situations of risky play. Of these situations, seventeen were play at high speed; all were situations of sledding down steep hillsides. Play at great heights, such as climbing trees and cliffs, was observed in eleven situations. Two situations of play near dangerous elements were recorded where the children played unsupervised near a small lake, and one situation of rough-and-tumble play, where two boys were play fighting with "dirt cakes," was recorded.

Interviews

Upon completion of the interviews, the audiotapes were professionally transcribed into Microsoft Word files by a professional transcriber. The choice of using a professional transcriber instead of doing the transcriptions myself was, as in data collection 1, made because of my limited time and capacity. To avoid losing important information and statements during the transcription, the transcriber was instructed to make a thorough verbatim transcription (Patton, 2002; Poland, 1995) of all words and sounds expressed on the tape, including all broken sentences, interruptions, pauses, slang or other individual words or phrases that each of the children used. By not doing my own transcriptions, I also lost the opportunity to become immersed in the data and by this generate emergent insights and interpretations during the transition between fieldwork and analysis (Patton, 2002). To compensate for some of this loss of insight, I listened through each of the interviews while consulting the transcriptions (Patton, 2002), making corrections and noting down descriptions of emotional contexts or other aspects per recollection from the interview situation. Also, similar to the display of the interviews in data collection 1, the transcriptions from the interviews of data collection 2 quoted here are translated into English and somewhat edited to enhance readability and to remove speech defects or language errors that would be an injustice to the credibility of the child's responses (Greve, 2008). The interview transcriptions

from all of the children (N=23) in both of the preschools consisted of three hundred and sixty-three pages of double-spaced 12-point font. The content of the interviews was a conversation between me as the researcher and the child (interviewee) about if and why he/she engaged in risky play, what kinds of risky play he/she liked to engage in while in preschool and how he/she experienced engaging in different kinds of risky play. A typical sequence from the interview transcriptions is shown in this example:

S = Simon 5 years old, I = Interviewer

S: *I sometimes climb trees*
I: *Do you? Isn't that scary?*
S: *No*
I: *Isn't it?*
S: *Well, yes – a little…*
I: *A little?*
S: *Yes, when we climb all the way high up to the top of the tree*
I: *Ok, why is that scary then?*
S: *Because we can fall down!*
I: *Ok. But you do it anyway…?*
S: *Yes*
I: *Why do you do it even though you think it's scary?*
S: *Because it's so much fun to climb trees!*
I: *Ok. So you do it because you think it's fun…even though it's a little scary?*
S: *Yes!*
I: *But isn't it strange that you wish to do scary things?*
S: *No, I like to do scary things!*
I: *You do?*
S: *Yes, it's so much fun!*
I: *Ok. So it's both fun and scary at the same time?*
S: *Yes!*
I: *How do you feel when it's both fun and scary at the same time?*
S: *I know… Yes, I know what it feels… I feel completely WILD!*
I: *You feel wild?*
S: *Yes! When coming down from the tree. Then I feel wild… because my whole body shakes like this [he shows the interviewer by shaking his whole body]*
I: *Ok. So you feel it in your body?*
S: *Yes. In my tummy. My tummy shakes and tickles, sort of…*

To gain insight in the child's inner experiences of engaging in risky play, I approached the child with a mix of direct questions ("Isn't that scary?"), elaborative questions ("Ok, why is that scary, then?"), wondering ("But isn't it strange that you wish to do scary things?"), and repeating the child's answer to seek confirmation of my understanding ("You feel wild?").

As a whole, the body of interview data from data collection 2 showed that climbing was the most common kind of risky play among the children in both of the preschool groups. All of the interviewed children in both groups stated that they often liked to climb trees, both on the preschool playground and when on hikes to other areas. Also, climbing on other things, such as the roof of a play hut, the climbing tower, rock walls and steep cliffs, was mentioned by some of the children. Within the category of play at great heights, several children also mentioned jumping down from trees, rocks or other heights, and sometimes jumping down from the swing (while moving at speed). Balancing at heights was also mentioned by one of the children during the interview.

Within the category of play at high speed, most of the children mentioned swinging and sledding on snow in the winter. Several of the children in both groups also mentioned skiing downhill, bicycling fast and running fast as activities they liked to engage in. Sliding (without snow) down the switchback in the ordinary preschool and sliding down cliffs or steep hills in the nature and outdoor preschool were also mentioned by some of the children. In addition, some of the children in the ordinary preschool mentioned skating fast on the skating rink prepared by the preschool staff in the winter.

Rough-and-tumble play, such as chase-and-catch games, snowball wars, wrestling, fighting, fencing, and battle games where the children took roles as different superheroes (such as Batman, Tarzan, Spiderman, King Kong, etc.), were also common activities among the children in both groups. Several of the children also stated that they engaged in play with dangerous tools, such as whittling with a knife or playing with a hammer and nails.

In the interviews, I also invited the children to express why they engaged in risky play and how they experienced engaging in different kinds of risky play (as shown in the citation above). These expressions show that children experience both intense joy/excitement and fear/anxiety when engaging in risky play, and that they experience both positive and negative emotions within one single activity. The following citation from the interview transcriptions exemplifies this:

A = Anne 5 ½ years old, I = interviewer

A: It's very fun...but also a bit scary...to bicycle so fast in a turn that I almost crash

I: It's a bit scary because you almost crash?

A: Yes, but it's still great fun! It tickles in my stomach when I bicycle that fast – that's what makes it so enjoyable, that makes it so fun!

The pleasant emotions that risky play generates seem, according to what the children express through the interviews, to be the primary motivation for engaging in this kind of play. This is explored more thoroughly in paper IV.

2.3.4 Analysis

In qualitative research such as this, the analysis process starts while observing (video recording) or asking interview questions and does not end until the final written report or paper is finished. Richardson and St. Pierre (2008) even describe how the process of writing is a form of analysis, where thinking and rethinking your data while writing make new theories and ideas emerge. In this thesis, the choice of presenting both the prior literature and the present empirical findings in the framework of Adams' risk "thermostat" model has been such a way of thinking and rethinking the data and knowledge. This has led to a new way of theorizing about children's risky play in a holistic perspective as complex risk-taking decisions with several influencing factors. The outcome of this theorizing will be further presented in the discussion section. Even though analysis is a continuous process throughout a research project, I will in this section focus on describing the process of how I handled and organized the raw data from the observations and interviews in data collection 2.

The observation data and the interview data from data collection 2 were analyzed separately. A number of different PC programs for computer-aided analysis of qualitative data and video material in particular exist on the market (see e.g. Coffey & Atkinson, 1996). The program NVivo for analyzing video observations, interview recordings and photo material was considered, and a trial version was tested out. However, I experienced a sense of losing contact with the details in the data material to a more technical and static overview, and decided to analyze the material by hand in a more old-fashioned way, both by color marking and handwritten notes in the margins of a paper copy of the transcripts and by manual electronic handling of the data in Word files. This practice was performed on both the observation data and the interview data.

Analysis of the observation data in data collection 2

The analysis of the observation data, transcripts from the video recordings and field notes from data collection 2 started with a common overall analysis to identify, organize, manage and retrieve the most meaningful bits of the data: the key themes and patterns (Coffey & Atkinson, 1996). As a starting point, the transcriptions were first read through to gain an overview of the content of the data. Then I read through the data once more, looking at what kinds of play and actions the children performed in each of the video clips or field notes sections. At this stage, all of the material was coded and sorted in relation to the six categories of risky play developed in data collection 1 (paper I) and chunked under the labels *play with great heights*, *play with high speed, play with dangerous tools, play near dangerous elements, rough-and-tumble play, and play where children can disappear/get lost*. I performed this coding process using a code list created in advance (Coffey & Atkinson, 1996) while still being open to new codes and categories that could emerge from the data material. This resulted in an organization of the data material according to the six categories of risky play, confirming the categories developed in paper I, as well as identifying several sub-categories within each of the categories (Sandseter, 2007). During this process, the irrelevant video clips and field notes, for instance, video takes that did not result in risky play, were removed from the data material. The material within each category and its codes were then handled in what Coffey and Atkinson (1996) call a quasi-quantitative way by aggregating and mapping the incidences of situations from each of the categories (see tables 2-3). This was not done to perform statistical analysis on the data, but merely to get an overview and visual impression of the body of data at hand.

I then conducted a further analysis of the observation data separately according to each of papers II and III's research questions.

Paper II: The research question in paper II was: *What characteristics identify children's play as risky?* This research question actually emerged as an interesting issue during the first level (described above) of coding and clustering of the observation transcripts. While reading and coding the data, I realized that the data contained interesting information on what characteristics to judge risky play by. According to Coffey and Atkinson (1996), one of the important outcomes of the coding process is that the researcher may notice new and relevant

phenomena and begin thinking of the data in new and different ways that allow for new and interesting ideas and analyses. As such, the coding process in itself is an important heuristic device.

To further explore the characteristics of risky play, the observation transcripts in each of the six categories of risky play were analyzed by conducting analytical coding (Richards, 2005). Analytical coding is the process of interpreting and reflecting on the meaning of the data to arrive at new ideas and insights relevant to the phenomenon under study. This entails exploring, reviewing and rethinking the data material to give a growing and more in-depth understanding of the categories in the data. The analytical coding process aims at finding codes that describe risk characteristics in each of the six risky play categories. These codes emerged from the data as I identified and interpreted them. The codes were then organized into chunks across the risky play categories to find common characteristics of risk in children's play. In the end, the chunks of risk characteristics found in the data material were interpreted in relation to prior research on each of the categories of risky play. The final outcome of the analysis was the identification of two categories of risk characteristics that make risky play risky, with several subcategories related to the two main categories (see paper II).

Paper III: In paper III, the research question was: *How do children express their experiences of engaging in risky play?* This research question emerged as an issue while I was reading prior research on children's evaluation and appraisal of risk. Studies on how children react to risk situations on the continuum between pure exhilaration and pure fear (Cook, 1993; Cook, et al., 1999), as well as theories on normal human reactions to threats (Buss, 2004), were thus the starting point for my interest in this question. The nature of this research question is phenomenological. It implies a focus on the children's lived experience of engaging in risky play. Thus, to explore how the children expressed their experiences of engaging in risky play, the approach of a phenomenological descriptive analysis was taken (Van Manen, 1997). My aim here was to capture their lived experiences on the basis of what they expressed spontaneously and directly while in the play situation, not on the basis of recollections expressed through interviews, and this meant trying to place myself into the children's experiences and take their perspective.

Starting out at the level where the data material was coded and sorted according to the six categories of risky play, a selective choice for the further phenomenological analysis was made: only three of the categories of risky play were analyzed further. These categories were *play with great heights, play with high speed and rough-and-tumble play*. I made this selective choice because the results in data collection 1 revealed that *play with dangerous tools* and *play near dangerous elements* were categories perceived as risky primarily by the staff and not by the children (see paper I). During the work of transcribing the observation material and later coding the transcripts, it also became clear to me that children's expressions in *play where the children can"disappear"/get lost* were difficult to capture in the video observations because such activities were usually recorded at a distance.

The further analysis was thus conducted on only the three chosen categories. As mentioned, the data material was already sorted and chunked according to the categories, and the transcriptions in each of the chunks were then further analyzed by finding shared codes for the expressions describing the children's experiences, such as facial expressions, bodily expressions and sounds or verbal expressions. I sought out all possible expressions exhaustively to describe and interpret the children's experiences of risky play. The interpretation of the expressions is based on what I see in the situations and draws on my experiences and knowledge (Glesne, 2006). In this way, the interpretive perspective is of course my interpretation of how the children experience and express themselves bodily, facially and verbally in the observed situations.

A phenomenological description is only *one* interpretation of several that are possible, and other perspectives could possibly lead to other interpretations. The final outcome of the analysis was a description (see paper III) and interpretation of the expressions of the emotions of pure exhilaration, pure fear and both exhilaration and fear at the same as children's lived experiences while engaging in risky play (Van Manen, 1997). The expressions were also interpreted in relation to the prior literature on risky play and the emotions of exhilaration and fear and discussed in relation to how risky play is performed and engaged in by children.

Analysis of the interview data in data collection 2

As mentioned, the recorded interviews were transcribed verbatim by a professional transcriber and then read and listened through by me to correct errors and supplement with additional recollected information. Then, the interview transcripts were analyzed according to the research question of paper IV.

Paper IV: The research question in paper IV was: *Why do children take risks in play?* This research question emerged as one of the real basic questions while I was reading theories within evolutionary psychology and personality psychology prior to starting the work of this study. The evolutionary emphasis on humans' primary goals of surviving and reproducing (Buss & Greiling, 1999) was puzzling in the light of the fact that human beings, even small children, voluntarily take risks that may harm them and even cost them their life. Combined with personality trait theories describing a sensation seeking (experience seeking) trait (Costa & McCrae, 1992; McCrae & Costa, 1997; Zuckerman, 1994) that people possess in different amounts, my curiosity was directed towards the question of why children engage in risky play.

I wished to capture both the children's own expressed motivations for engaging in risky play and how they approached and handled risk in their own view in light of their propensity for risk-taking and their perception of danger. Apter's (1989, 2001, 2007b) Reversal Theory was evaluated as the best suited theoretical approach for exploring these issues. The main reason for this is that this theory captures the individual's motivation, emotions and personality (propensities). As such, it deals with action (including intentions and meanings) rather that just behavior (Graue & Walsh, 1998). It also takes a structural phenomenological approach by focusing on the structure of an individual's experiences (Apter, 1981b; Apter, 1991).

Thus, the interview data were, for the purpose of paper IV, explored with the theoretical and interpretive perspective of Apter's (2007b) structural phenomenological theory of motivation, emotion and personality, namely Reversal Theory. Taking a structural phenomenological perspective, and through further reading on phenomenological methods in psychology, I was introduced to the Descriptive Phenomenological Psychological Method (Giorgi & Giorgi, 2003). This is a structured analysis process that follows four basic steps and suited both my data and my research question. I therefore conducted a combination of theory-driven and

data-driven thematic analyses (Boyatzis, 1998; Coffey & Atkinson, 1996; Grbich, 2007) following these four steps. The analysis was theory-driven in the sense that it started out by coding the data according to some of the basic theoretical concepts and themes from Reversal Theory: the telic and paratelic states (Apter, 1989, 2001, 2007a, 2007b). Still, the data were also allowed to speak for themselves within the frames of the Reversal Theory, and as such the analysis is also somewhat data-driven. This combination led to an abductive process (Coffey & Atkinson, 1996), where the analysis oscillated between theoretical deductive concepts and data-based inductive concepts. Following the Descriptive Phenomenological Psychological Method (Giorgi & Giorgi, 2003), the four stages of reading through the transcripts (already coded and organized according to the six categories in paper I) for a holistic impression of the data, re-reading the transcriptions while doing a phenomenological reduction from a psychological viewpoint (marking and coding), transforming the meaningful units into psychologically relevant concepts by introducing the concepts of telic and paratelic states and using a block and file approach (Grbich, 2007) to reduce the data and organize them into a meaningful structure, and determining the structure of the experiences of the phenomenon by organizing the essence and codes of the data from stage three by conceptual mapping (Grbich, 2007). The final outcome of this analysis was a better understanding of why children choose to take risks in play and the phenomenological structure of the motivation and experience of engaging in risky play displayed in a figurative summary represented by a conceptual map (see paper IV).

2.4 Ethics

The Norwegian ethical guidelines for research within social sciences, humanistic sciences, law and theology (NESH, 2006) offer an extensive number of norms for research projects that apply for both institutions and researchers. The norms in these ethical guidelines that are relevant for and taken into account in the present study will be discussed in the following presentation of ethical considerations. According to the guidelines, all research projects that may involve treatment of personal data are notifiable to the Norwegian Social Science Data Services (NSD) for approval. In the present study, both data collections 1 and 2 were submitted to the NSD and approved to be carried out as planned (see appendices 1 and 4).

2.4.1 Informed consent in research with children

Research with preschool children calls for special attention to the ethical issues compared to research on adult participants (Fine & Sandstrom, 1988). The past few decades of research on and with children and the discussion on important aspects of this research have resulted in an appreciation and recognition of the fact that children have the right to be consulted in matters that affect them, including research on and with them (Greig, et al., 2007). One of the norms in the Norwegian guidelines of research ethics is the requirement of informed consent from research participants (NESH, 2006, pp. 13-14). In research with children under fifteen years of age, this principle is usually ensured by seeking an informed consent by proxy from parents or other legal guardians (NESH, 2006, p. 16), but according to Greig et al. (2007), an informed consent (or *assent*) from the child should be sought in addition when minor children are involved and able to give such a consent. Grieg et al. (2007, p. 173) describe:

> *…there has been a sea-change over the past two decades and the majority view in most circles is that children have a right to participate, just as they also have a right to refuse to participate and that research about children should be something that is done with children and not something that is done to children. Regardless of differences in professional stances there are also commonalities between the professions in terms of the need to gain access to children (either by proxy or directly), that informed assent and consent should be sought (from children as well as from significant adults) and that ethical principles of autonomy, beneficence and justice should be adhered to.*

Similarly, the Norwegian guidelines of research ethics clearly state that when able to express their wishes, children should be informed and asked for consent to participate in research projects where they will be under study (NESH, 2006, p. 17). The information given should also be as accurate as possible (aim of research, methods of research and other practical issues), it should be as neutral as possible, it should contain clear information on the voluntary nature of participating, and it should be adapted to the participants' ability to understand the information (NESH, 2006, pp. 12-13). In the present study (data collection 1 and 2), both a proxy informed consent from parents (or other legal guardians) and consent from the children were obtained. A rather detailed description of the research project, its aims, methods and implications for the children was sent to the parents (see appendices 3 and 6). A written consent form was returned if they agreed to let their child participate in the study by being observed and interviewed according to the methodical description. All of the parents asked for informed consent in data collections 1 and 2 agreed to let their children participate.

In addition to the by-proxy consent from parents, the children were informed in easily understood language about the details of the study and their right to refuse participating or to withdraw during the study. According to Grieg and Taylor (1999), it is important to ensure that the children know that they are true volunteers, that they can withdraw from the research at any moment and what their role in the research is. Prior to my arrival, the preschool staff told the children about the forthcoming visitor, what I would do and that they were free to tell me or the preschool staff if they did not want to be observed or interviewed. On the first day of observations, I also talked with the children directly about the same matters. They knew they could say no to me observing them and especially that they could say no when asked to be interviewed. During the data collection, no children refused to be observed. At the start they rather seemed exited by it, even though this decreased rather quickly and they seemed to forget about me being there. When asked to be interviewed, all of the children in data collection 2 agreed. It seemed like the issue I wanted to talk with them about was at the core of their interests and something they were excited and most willing to share their experiences on.

Because this study involved participating in the daily activities of the preschool, observing play and practice (including the preschool staff) and interviews of the staff, an informed consent was sought from the preschool directors and preschool staff as well (see appendices 2 and 5). All of the preschool directors and preschool staff consented to participate in the study.

2.4.2 Confidentiality and anonymity

The ethical issues of confidentiality and anonymity are also one of the norms in the Norwegian guidelines of research ethics (NESH, 2006, p. 18) and a common factor of ethical consideration when doing research with both children and adults (Greig & Taylor, 1999). The meaning of anonymity in research is that no one, not even the researcher, knows the identities of the participants, while confidentiality means that the researcher knows the identities but will not report the results in a way that reveals the identities of the participants (Patton, 2002).

In data collection 1, the detailed description of the research project included a verification of confidentiality (see appendices 2 and 3). I ensured that the data would be collected and handled in such a manner that results would not trace back to any individual participant after data collection and during publication (NESH, 2006, p. 18). A researcher observing, writing

field notes and interviewing the participants is understandably able to recall or recognize the identities of several of the participants afterwards. To ensure confidentiality as far as possible, all names, including the names of the preschools, were replaced with fictitious names or codes when analyzing and reporting the results of the study.

In data collection 2, the description of the research project also included a verification of confidentiality when collecting, handling and reporting the transcriptions of the observations and the interview data. Similar procedures as described in data collection 1 were performed to ensure this. In addition, I asked the parents and the preschool staff for their informed consent to be able to use the video material in lectures and research presentations (see appendices 5 and 6), since this could reveal the identities of the children and staff if a member of the audience recognized some of the participants, therefore implying the norm of limitation of re-use and storing of data material in the Norwegian guidelines of research ethics (NESH, 2006, pp. 18-19). In data collection 2, the parents of one of the children did not consent to the researcher's request to use the videos of their child, and they were, in accordance with the guidelines (NESH, 2006), informed that all video in which their child appeared would be deleted when the study was finished, no later than December 31, 2009.

2.4.3 The responsibility for children's safety in research

One of the norms in the Norwegian guidelines of research ethics (NESH, 2006, p. 12) is that the researcher should avoid injury or serious strains to the research participants. As such, the researcher has a particular responsibility to be aware of interventions and situations that can harm his/her participants and to take actions to avoid this if possible. When researchers enter children's worlds and activities, they will probably at some time arrive at a point where they have to decide between taking or giving up their responsibility as adults in the situation (Graue & Walsh, 1998). This is particularly relevant when observing children, as in this study, in their play situations. The ethical question of adult responsibility is therefore one that requires consideration as one of the methods in this study was to observe children's risky play, including letting the children expose themselves to hazards. Even though the norm of avoiding injury and serious strains (NESH, 2006) is primarily intended for potentially harmful research interventions and not on natural situations such as children's play (as in the present study), I considered the issue of what to do and how to react in potentially harmful situations before entering the field. According to Fine and Sandstrom (1988), the research goals and

nonintervention as a methodological concern must not be paramount to the physical safety of the children participating in the research study. Children's risk-taking in play and physical safety, as argued in the theoretical section of this thesis, is a complex issue. As Graue and Walsh (1998, p. 58) point out:

> *It is one thing to assert that one would not stand by while a child is being injured, another thing to make the decision in the field. One of the reasons kids often avoid adults is because of different views of what constitutes dangerous activity. Nor do adults agree among themselves…The fact is that what constitute dangerous behavior depends very much on who is making the judgment and when.*

In this study, this was particularly difficult because one of the main issues under study was dangerous activity among children and how children and staff evaluated and reacted to the risk. This would mean facing a lot of situations where I would have to decide on intervening or not intervening in risky activities with possible outcomes of harm or injury. I decided to take a withdrawn role, a reactive strategy, with the aim of appearing as invisible as possible while moving around in the children's "field of action." This meant in principle not intervening in the children's play in any way, and this policy was known and endorsed by the preschool staff. Still, as the example from the memos/reflections in data collection 1 (06/10 2005 – Group 1.2) shows, this was not always easy. Some situations caused an urge to help out or intervene in children's risk-taking, but in order to stay true to my methodological choices I usually avoided acting on this urge and left the decisions to the preschool staff. Still, I continuously made my own judgments in the various situations, and in some situations where the staff was not present and the situation could have led to serious physical harm, I made an intervention. One of these occasions was a situation where a girl was trapped in a tree, unable to move her foot and arms and clearly afraid and in pain, with no staff member available to help her.

2.5 Trustworthiness of the present study

The criteria on which the quality of qualitative research should be judged have long been debated, with no resolution (Flick, 2006). Maybe this issue will never be solved, or maybe it should not be "solved" or agreed upon, taking the diverse nature of qualitative research into consideration. The traditional debate on research quality criteria has been between quantitative research's positivistic concepts of assessing reliability and validity and the question of how they should or could also apply for qualitative research (Creswell, 2007;

Flick, 2006; Patton, 2002). This discussion has to a large extent eased off as qualitative research has gained acceptance and respect during recent years, with a growing consensus on the importance of appropriately matching methods to purposes, questions and issues instead of committing to one single methodological approach (Patton, 2002). Still, according to Patton, thinking that qualitative research represents a uniform perspective is a grave misunderstanding. The qualitative research area is in itself complex and diverse, consisting of a number of paradigms and approaches with their own sets of worldviews, criteria for quality, etc.: "People viewing qualitative findings through different paradigmatic lenses will react differently just as we, as researchers and evaluators, vary in how we think about what we do when we study the world" (Patton, 2002, p. 543). These complexities and differing worldviews, even within the qualitative field of research, and the discussions on how to interpret and (re)present what we see, hear and experience are brought forward as "the crisis of representation" by Denzin and Lincoln (2005).

This study must also be judged by the readers of this thesis and their paradigmatic lenses, worldviews, personal backgrounds and experiences, etc. The trustworthiness of the study will ultimately be the readers' experiences of trust in what is presented.

Still, an attempt to evaluate and reflect upon the trustworthiness of the present study will be presented in the following. The account of trustworthiness will be approached through Miles and Huberman's (1994) general standards for the quality of qualitative research. These are criteria of quality based on the traditional criteria applied in quantitative research (the positivistic concepts of reliability and validity), but with issues that reflects the naturalistic nature of qualitative research and with an alternative language and concepts. Miles and Huberman characterize their own methodological position as within a realism approach, with a post-positivist background. This resembles the approach described by Patton (2002) as a "truth and reality-oriented approach," similar to my own approach. The standards presented by Miles and Huberman (1994, p. 278) are also quite extensive at first sight, but as they point out: "these are not rules to be stiffly applied, but queries we think can be fruitfully posed when you are reflecting on the question; how good is this piece of work?" In a study within a pragmatic approach, such as this one, the evaluation of its trustworthiness will therefore be reflected on and discussed in relation to what are evaluated to be the most appropriate queries according to the aim of the study, its research questions and its choice of methods.

In their standards for the quality of qualitative research Miles and Huberman (1994) discuss five main issues that should be taken into account when evaluating and striving for trustworthiness and authenticity of qualitative naturalistic research (traditional terms in parentheses): *confirmability* (objectivity), *dependability/auditability* (reliability), *credibility/authenticity* (internal validity), *transferability/fittingness* (external validity), and *utilization/application/action orientation*. The authors propose several practical guidelines for applying these to qualitative research. In the following, the present study and its methods will be discussed in relation to the first four issues. Other relevant sources will also be cited during the discussion. The fifth issue, application, will be treated later in the thesis when I discuss implications of the study and further research.

2.5.1 Confirmability

The issue of confirmability (objectivity, or sometimes called external reliability) concerns how the study and the presentation of methods and results are relatively unaffected by unacknowledged researcher biases. This means that the researcher must be explicit about the methodical and procedural choices made during the research process and reflect upon personal assumptions, values and biases and how these have played a role in the research (Miles & Huberman, 1994).

In the present study, I have striven to give the reader a detailed picture of the methods and procedures used to explore the phenomenon under study and the bases for making these methodical and procedural choices (see the methods section in this thesis), as well as the theoretical background in which the study is formed (see the introduction section in this thesis). The confirmability of a qualitative study as defined in Miles and Huberman (1994) also involves what Patton (2002, p. 566) calls "the credibility of the researcher." Patton (2002) emphasizes the importance of reporting any personal and professional background that may affect data collection, analysis and interpretation. In this thesis, myself and my personal and professional background are described, as well as reflections on methodological decision making during the research process. I have also striven to describe the body of data material in the study both in broad lines and with examples and quotations from observation and interview transcripts, as well as descriptions of how analyses were conducted, to enable the reader to follow the process of data collection through the handling of the data, all the way to the conclusion drawings (Miles & Huberman, 1994). Still, the phenomenon under study is

explored, described and interpreted by me as the researcher and thus is inevitably influenced by my experiences and prior knowledge. It is important to emphasize that also other interpretive perspectives than those taken here could be both possible and relevant (Patton, 2002).

2.5.2 Dependability/auditability

The issue of dependability/auditability (reliability) concerns the consistency and stability of the research process and its results (Miles & Huberman, 1994). This principle is not always easy to induct in qualitative research, which often does not deal with such strict numerical measures as quantitative research does. Still, Miles and Huberman (1994) set out some queries that can usefully be employed to reflect on the dependability and auditability of a qualitative study as much as possible. Some of these will be considered here.

The research questions should be clear, and the methods of the study should be congruent with the questions. In the present study, the research questions in short revolve around the questions of what risky play is (categorization and characteristics), how children express their experiences of engaging in it, and why they prefer to engage in this play. I considered observations of actual naturalistic risky play among children and interviews of preschool staff and children to be the best methods for exploring these questions, rather than using questionnaires and more static techniques of research.

According to Miles and Huberman (1994), one should also, if possible, look for meaningful impact of theory, parallelism across data sources and/or review results and conclusions by consulting peers or colleagues. In the present study, several data sources are employed to attain both a holistic and an in-depth understanding of the phenomena under study. The categories of risky play were developed on the basis of both observations and interviews, taking into account both children's and staff's actions and views; on some occasions they were parallel and in some they differed, but in this case exploring the different perceptions of risk was one of the aims and contributed to the understanding of risky play. An independent second opinion and a subsequent modification of conclusions were also used to increase the reliability of the categories (Miles & Huberman, 1994; Willig, 2001). A preschool teacher who has long and varied experience with children's play in preschools read through the (reduced) data and the concluding categories and evaluated if 1) the categories developed

were reliable according to the data and 2) the categories made sense related to experiences of children's play in preschool. The observations and interviews in data collection 2 were based on the categories developed in data collection 1, and one of the aims was to see if the categories also applied for settings other than the ones under study in data collection 1. Data collection 2 confirmed the six categories from data collection 1 and further supplemented them by adding several subcategories(see Sandseter, 2007).

Miles and Huberman (1994) also emphasize the importance of considering if the data are collected across the full range of appropriate settings and times suggested by the research questions. The research questions in this study aimed at qualitatively exploring children's risky play in preschool. According to Willig (2001), trustworthiness in a qualitative study is strengthened when data collection takes place in real life (naturalistic) settings, such as in the present study, and not in a laboratory or any other artificial environment. The researcher will inevitably affect the observed individuals (Angrosino, 2008; Denzin & Lincoln, 2005), but my experience in this study was that the children quickly forgot my presence. Altogether, the data collections covered play in different seasons and weather conditions, including fall, winter, spring and summer. This was done to capture the range of how children's risky play differs with seasons and weather conditions and is particularly of interest in Norway, where the play environment goes through dramatic transformations from one season to another due to snow, ice, temperature, etc.

By reflecting on the above queries and trying to comply with them, the aim here is that the reader should be able to see the "track" of the research process and to evaluate if things have been done with reasonable care (Miles & Huberman, 1994).

2.5.3 Credibility/authenticity

The issue of credibility/authenticity (internal validity) deals with the question of to what degree the findings of the study make sense or are convincing to other people reading the report. In qualitative studies, such as a phenomenological study, Van Manen (1997) states that a validating principle is that the reader is able to recognize and recollect his or her lived experience. Similarly, Kvale (1995, 1996) argues that valid knowledge is to be evaluated by its correspondence to the objective world. As already mentioned, a second opinion on the six categories of risky play was gathered to ensure correspondence with the experience of the

practitioners in the field (preschool). In addition, I have presented the findings to the public on several occasions: when teaching student preschool teachers, giving lectures for preschool staff, at research conferences nationally and internationally, in newspaper articles and in scientific papers (peer reviewed), and the public has unanimously confirmed the correspondence of the results with their experiences of children's risky play in their responses.

To ensure that reader will be able to evaluate the correspondence of the results with their own "real world," the researcher must provide a comprehensive, rich, meaningful and detailed description of the data (Miles & Huberman, 1994). In this thesis, the body of data is described in as detailed a manner as possible while trying not to overwhelm the reader with excessively long transcription quotes, where the most interesting points of the research drown in the magnitude of the description (Greve, 2008). According to Poland (1995), writing out verbatim transcriptions, as in the present study, is an essential factor in ensuring trustworthiness in qualitative research. Still, when accounting for transcripts in this thesis, the text is translated into English and somewhat edited to enhance readability and to remove speech defects or language errors that would do an injustice to the credibility of the children's responses and the children's integrity as adequate informants (Greve, 2008).

Another way of examining the credibility and correspondence of the results is to see if triangulation among complementary methods and data sources produces generally convergent conclusions (Jick, 1979; Miles & Huberman, 1994). This study makes use of *within methods triangulation* (Jick, 1979), where I have used multiple techniques or strategies within the same methodological approach. Data from both observations and interviews with both children and staff in four different settings were collected. The categories and characteristics of risky play were verified across the data sources, as well as prior empirical studies, theories, expressions and statements on the issue of risky play from children and staff in the diverse settings. In addition, the use of multiple methods in this study provided a complementary body of data (Darbyshire, MacDougall, & Shiller, 2005) that enabled insights into different aspects and varieties of perceptions and experiences of risky play throughout the whole range of how the phenomenon is displayed in "real life."

2.5.4 Transferability/fittingness

The transferability/fittingness (external validity) of a study is the qualitative methods' equivalent of quantitative methods' generalizability. The question one should reflect on is if the conclusions of the study are transferable to other contexts (Miles & Huberman, 1994).

The present study has some limitations regarding generalizability. The population studied is somewhat small and limited to four preschool groups in one city in Norway. Still, all of the preschools complied with the governmental pedagogical laws and guidelines for all preschools in Norway (NMER, 2005, 2006). Due to 80% coverage of preschools for Norwegian children, both the preschools and the children attending the preschools in the present study are representative of preschools and preschool-aged children in Norway, even though local differences in how preschools practice and handle risky play may occur.

Generalization outside Norway is probably more difficult. The results would most likely apply for similar preschools within Scandinavia, but for several other countries, the Scandinavian liberal attitude toward children's risk-taking is not applicable (New, et al., 2005). Children's possibilities to engage in risky play would therefore be influenced by cultural differences in child care policy and practices. Still, one could cautiously assume that children's urges for risky play and their experiences while engaging in this kind of play are similar for children across different cultures due to the suggested evolutionary and personality origins of this urge (see introduction). Nevertheless, according to Miles and Huberman (1994), enabling the readers to assess the potential transferability and appropriateness of the findings for their own settings requires thorough descriptions of characteristics of the original sample of persons, the settings and the results. In the present thesis, this is accounted for in the method section.

Another kind of transferability that should be considered is theoretical generalization; that is, to see how and to what extent the new findings apply or do not apply to existing theoretical propositions (Miles & Huberman, 1994; Patton, 2002). This study both draws upon prior theories and research and presents findings in accordance with and supplementing these theories and prior research in a way that leads to new theorizing on children's risky play. As such, the view on generalization of this work is not limited to the transferability to other

populations, but also includes the contribution made to a theoretical understanding of the phenomenon.

3.0 Summary of results and conclusions of the four papers

The results from the present study related to each of the four main research questions are presented and discussed in detail in each of the four papers presented in the last part of this thesis. The following brief summaries of the four papers overlap both some of the method presented earlier and the contents of the four papers attached, but aim at presenting the reader with the main results and main points of discussion in each of the papers as a background for the later discussion.

3.1 Paper I

Since children's risky play has been a much debated issue for the last several decades, and yet no research on how to systematically identify this kind of play has been found, the aim of paper I was to identify and categorize children's risky play within the preschool setting. Two Norwegian preschool groups (three- to five-year-olds) and their preschool staff, consisting of a total of thirty-eight children and eight adults, were naturalistically observed during a five-week period and then interviewed on the issue of risky play. The preliminary analysis of the data showed that risky play primarily took place in children's outdoor play, and thus the focus was placed on the data collected concerning children's outdoor play. The data (field notes and interview transcripts) were analyzed by a content analysis strategy (Berg, 2007; Patton, 2002), aiming at identifying the categories of risky play from both the children's and the staff's perspective. It is essential to note that this study aimed to identify not only the kinds of play that involve an objective and actual risk of injury for the children, but also the kinds of play that subjectively are perceived as thrilling and risky from the child's perspective. The analysis resulted in the identification of six categories of risky play (see table 1 page 61). The six categories identified in this study are in accordance with some of the prior studies of children's risk-taking in play on a more general level (see e.g. Aldis, 1975; Coster & Gleeve, 2008; Hughes & Sturrock, 2006; Jambor, 1998; Smith, 1998; Stephenson, 2003).

The data revealed that some of the categories were thought of as thrilling and risky both by the children and the staff, such as categories one, two and five, while others were unanimously perceived as risky primarily by the staff, such as categories three and four (see table 1 page 61). Category six was only perceived as risky by the children. In the paper, it is argued that the reasons for the discrepancy of perceptions of the risk of category six between the children and the staff is that the children in these situations had a strong notion of being left all to themselves and thus experienced a thrilling feeling of fear of getting lost, while the staff normally kept an eye on the children at a distance and felt that they were in control of the situation and that they would be able to assist the children if necessary. The reason for the discrepancy of perception of risk in category four is explained by the fact that when children play near dangerous elements, they are usually preoccupied by the play they are engaged in rather than paying attention to the dangerous element they are playing near. In this sense, the staff, who watches the play at a distance, seems to be more aware of the risk present, and they therefore tend to perceive it as more risky. Similarly, the staff seemed to be more aware of the risk for injury when children played with dangerous tools (category three) than were the children themselves, who mainly thought of it as an exciting activity (although some of the children thought it was scary as well).

These categories thus capture what both the children and the staff perceive as risky in play. The natures of the different categories fit neatly with the children in Stephenson's (2003) study, who described risky play as activities that involve overcoming fear and being on the borderline of going out of control because of great height, high speed, handling a dangerous tool, playing near a dangerous and harmful element, playing on the edge between rough-and-tumble play and real fighting, or getting lost or hurt when going exploring alone. Sometimes these risks genuinely exist in an objective sense, and sometimes they are just perceived by the child or the staff involved. Regardless, they contribute to a thrilling and exciting experience for the child.

3.2 Paper II

The six categories of risky play developed through data collection 1 and the writing of paper I were then used as a basis for the further exploration of the phenomenon of risky play and how it can best be understood. The aim of paper II was to further elaborate on what makes risky play risky. By what characteristics can play activity be identified as risky? The data in this

paper were focused video observations and observational field notes (selectively focused on the six categories of risky play from paper I) from two groups of children and staff in two Norwegian preschools. A total of twenty-nine children and eight preschool staff members were observed during eighteen days within a period of about five months. All of the preschool's outdoor activity on each of the observation days was observed.

The data material consisted of transcripts of the video observations and the field notes, and the data were analyzed by analytical coding (Richards, 2005) to find codes that describes risk characteristics in each of the six risky play categories. The main results showed several characteristics of risky play. Some of the characteristics were shared by several of the risky play categories and subcategories, while others applied only for one or two of them. When chunking the characteristics across the six categories of risky play, two risk characteristic categories were identified. In one chunk, the characteristics labeled a) Environmental characteristics were assembled, and in the other, the characteristics labeled b) Individual characteristics were assembled. These two categories of risk characteristics had several risk characteristics within them, as shown in the following figure:

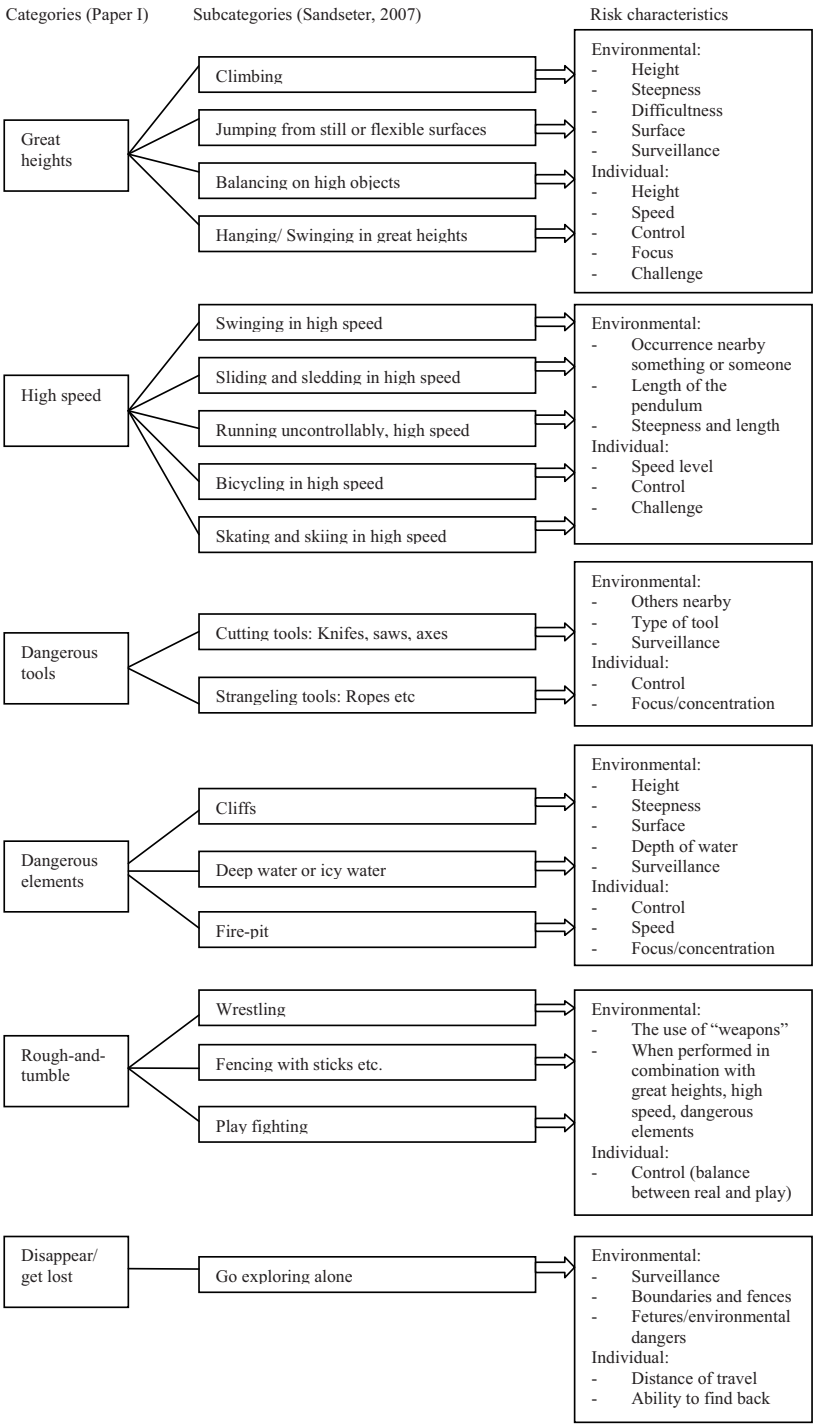

Figure 2: Categories, subcategories and risk characteristics of children's risky play.

In paper II, these risk characteristics were discussed in relation to the concepts of objective and subjective risk (Adams, 2001). According to Adams, the concept of objective risk as defined by the risk assessment and management literature exists. However, he emphasizes that this objective risk is unquantifiable and impossible to measure because of the uncertainty of how the individual involved in the risk situation will perceive and manage the risk present. As such, the objective risk will always be influenced by the subjective risk perceived by the individual. The results in paper II show that both the environmental risk characteristics and the individual risk characteristics have influences on the objective risk in the situation. If a child perceives a low subjective risk of climbing high up in a tree and decides to climb higher (individual characteristic), it influences the objective risk of getting hurt if the child falls down (a longer fall will probably result in a more serious injury). Similarly, the surface (environmental characteristic) on which the child will land if he/she falls from the tree will also influence the objective risk of getting injured. The environmental characteristics influence the objective risk directly, while both the child's own competence (motor control, spatial orientation, concentration on the task) and his/her subjective perception of the objective risk will influence some of the individual characteristics and then further influence the objective risk in the situation.

Although it is impossible to measure the objective risk present in the various situations in this study, prior research on playground accidents confirms that many injuries happen due to falls from swings, slides, climbing frames, bicycles or other equipment, and being hit, pinched or crushed in swing equipment (Ball, 2002; Bienefeld, et al., 1996; Chalmers, et al., 1996; Illingworth, et al., 1975; Mack, et al., 1997; Peterson, et al., 1994; Phelan, et al., 2001; Rosen & Peterson, 1990; Sawyers, 1994; Swartz, 1992). Still, the research also strongly supports the influence that the subjective risk perception and thus the individual characteristics have on the objective risk in the situation by revealing that most of children's accidents on playgrounds are results of children's normal actions, such as a certain rashness in movements and actions and creative and somewhat improper usage of the equipment; in other words, normal risk- and thrill-seeking activity during play (Ball, 2002; Coppens & Gentry, 1991; Illingworth, et al., 1975; Ordoñana, et al., 2008; Rosen & Peterson, 1990). The conclusion of this paper is thus that a combination of the identified environmental and individual risk characteristics, influenced by the individual's subjective risk perception and competencies, constitutes the objective risk in a play situation.

3.3 Paper III

The aim of paper III was to explore how children express their experiences of engaging in risky play. This called for a phenomenological approach to analyzing the data material. The data material used in this paper was similar to the data in paper II, although categories four and six were not analyzed on the grounds of category four not being perceived as particularly risky by the children (paper I) and category six because the video recordings were often taken at a distance, making expressions hard to identify. The video and field note transcripts were then analyzed to find codes and categories to describe all bodily, facial, or verbal expressions that the children made during their engagement in the chosen three categories of risky play. The analysis resulted in a phenomenological description of children's experiences of engaging in risky play that ranges from pure exhilaration, through exhilaration and fear at the same time (exhilaration bordering fear), to pure fear. These three emotional experiences were expressed in a series of different ways within each of the three categories of risky play, as shown in this summarizing table:

Table 4: Summary of children's emotional expressions while engaging in risky play

	Fear	Both emotions	Exhilaration
Play with great heights	Scared and worried facial expression Calling on adults for attention Asking for help to escape Refusal to partake in play	Serious facial expression Smiling stiffly Keeping silent Moving calmly and cautiously Deeply concentrated Focused on the task Hesitating	Joyful and happy facial expression Smiling Laughing Jubilating Spoken expressions Jumping up and down Stretching their arms up Show off-moves
Play with high speed	Scared and worried facial expression Asking for help to stop Refusal to partake in play	Grave facial expression Quiet Concentrated Hesitating Screaming High pitched laughing Loud yelling	Fearful joy: - Joyful yelling - Shouting - Laughing - Smiling - Enthusiastic - Worked up - Ecstatic Spoken expressions Repeating the activity
Rough-and-tumble play	Frightened facial expression Whining Crying Fleeing and withdrawal	Threatening faces Scaring each other Roaring at each other Atmosphere of fight/hostility but still playful	Fearful joy: - Laughing - Shrieking - Worked up - Ecstatic - Smiling

On the positive side of the experience of engaging in risky play lies the experience of exhilaration. This highly aroused feeling was expressed quite similarly in all three categories of risky play and was represented by joyful, happy and enthusiastic facial expressions, children looking worked-up and ecstatic and verbal expressions, such as laughing, shrieking, and actual speech showing their exhilaration. These expressions were interpreted as expressions of fearful joy and are similar to how Stephenson (2003) describes some of the children's expressions in her study of risk-taking in play as well as Aldis' (1975) and DiPietro's (1981) descriptions of the exuberant arousal children express when engaging in rough-and-tumble play and other types of play related to fear. When mastering a certain difficult and risky activity, the children expressed exhilaration by bodily movements, such as show off moves and jumping up and down, etc. After succeeding in mastering the risk, they would also tend to repeat the activity over and over again, similar to what Sutton-Smith (1997) describes as the obsessive nature of play.

On the negative side of the experience of engaging in risky play lies the experience of fear. Experiencing fear in risky play situations was also expressed quite similarly in the three risky play categories. Worried and frightened facial expressions, protective behavior and classic flight reactions, such as withdrawal from the play situation and refusal to carry on with it, were observed (Buss, 2004; Cook, et al., 1999; Zuckerman, 1994). Whining and crying could also be the result of rough-and tumble play turning into a real fight, while cries for help would be a result of trying to get out of a situation where the risk had escalated too much or a child felt trapped too high up from the ground. Similar fear reactions are also described by other researchers (Cook, et al., 1999; Smith, 1998; Stephenson, 2003).

Even though both exhilaration and fear were likely outcomes of children's risky play and were identified in their expressions, the experience of both exhilaration and fear at the same time seemed to be the primary expression and the primary goal of the children's engagement in risky play. In these situations, the exhilaration balances on the edge of switching to fear. This is a dual or ambivalent kind of emotion, also described earlier as expressed by children in risky situations (Aldis, 1975; Cook, et al., 1999; Stephenson, 2003). When children balanced on the edge between being scared/afraid and excited/having fun, their expressions showed grave faces, quiet and deeply concentrating, and with cautious and calm movements, as also shown in Smith's (1998) study of children being aware of high risks in their play. Still, the mixed emotions of balancing between exhilaration and fear also resulted in screaming, high-pitched laughing and loud yelling as expressions of the pleasure of the intensely high arousal the children attained in these situations. Thus, one of the main aspects of engaging in risky play seems to be an intense experience of arousal that is attained when the child is able to keep the exhilaration on the border of the feeling of fear, but not switching over to pure fear and resulting in withdrawal or injury.

3.4 Paper IV

The aim of paper IV was to explore why children engage in risky play. The aim of this part of the study was thus to hear the children's own views of this matter by interviewing them. All of the four- and five-year-old children (N=23) from the two groups of children in papers II and III were interviewed on the matter of risky play in their outdoor time in preschool. The interview transcripts were handled with a combination of theory-driven and data-driven

thematic analysis (Boyatzis, 1998; Coffey & Atkinson, 1996; Grbich, 2007), following the four basic steps of the Descriptive Phenomenological Psychological Method (Giorgi & Giorgi, 2003) to find the phenomenological structure of children's motivation and experience of engaging in risky play. The data were analyzed theoretically in the light of Apter's Reversal Theory, particularly the telic versus paratelic states (Apter, 1989, 2001, 2007a, 2007b). The analysis revealed that children's motivation for and experiences of engaging in risky play formed a phenomenological structure where the contrast and ambiguity between the experiences of pleasant versus unpleasant emotions were key concepts. This further led to a contrast of arousal-increasing strategies versus arousal-reducing strategies and to the actions of approach/engagement versus refusal/withdrawal. The results are visually described in the following figure:

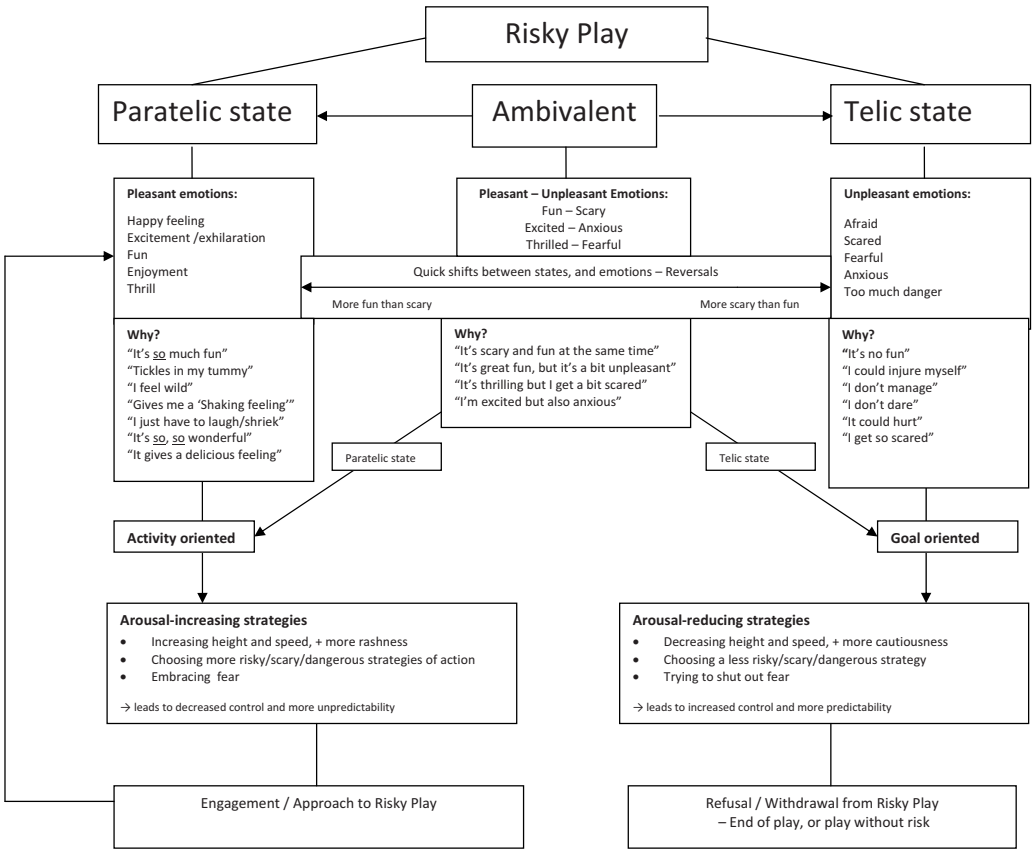

Figure 3: Figurative summary of the phenomenological structure of risky play

In paper IV, the results are discussed in relation to the concepts of telic versus paratelic states within Reversal Theory (Apter, 2007b). The analysis of the interviews showed that the

primary motivation for the children to engage in risky play was the pleasant emotions it would give them to gain a higher level of arousal and to master risks they did not think they would dare. To achieve these experiences, they had several arousal-increasing strategies of which they would make use in their play, such as intentionally increasing the height and speed of their play, acting more rashly, choosing more risky strategies of action and seeking to balance on the border of fear. These were strategies that they would pursue when in a paratelic state, the emotional state where one seeks and enjoys arousal and experiences a feeling of being in a protective frame (Apter, 2007a). This kind of protective frame is, according to Apter (1991), one of the characteristics of playful activity, and it resembles the description Bruner (1976) gave of play as a situation less risky than "real life" where children rehearse managing various skills. The present data reveal that if the children manage to keep themselves on the border between excitement and fear, experiencing the dominant emotion as pleasurable and not switching over to pure fear, they tend to continue approaching and engaging in risky play repeatedly in order to keep themselves in this pleasurable state for as long as possible. This is in accordance with Smith's (1998) observations of children taking risks on playgrounds and Sutton-Smith's (1997) description of arousing play as an obsessive activity that children tend to repeat ad infinitum.

On the other hand, if the child were in a telic state or switched over to a telic state during the play situation, he/she would experience the heightened arousal in risky play as unpleasant emotions and become scared, fearful and anxious. The telic state is the emotional state where the individual feels uncomfortable with too much arousal and tends to reduce or avoid arousal-increasing actions (Apter, 2001, 2007a). In the present study, this would further lead to the children performing arousal-reducing strategies in their play, such as decreasing height and speed, being more cautious, choosing less risky strategies and trying to shut out fear by, for instance, closing their eyes. These strategies would be adopted to try to reestablish the arousal at a comfortable and pleasurable level. If the children did not manage to reduce the arousal level and the negative feelings were too intense, this would ultimately lead to a withdrawal from the play situation and a refusal to further partake in the play. This would result in the end of the play, and it would not be repeated or further approached as it is when the child experiences the arousal as pleasurable.

The most interesting result discussed in this paper is the finding that the ambiguity of experiences in risky play was the central point in children's motivation for engaging in this

kind of play. As supported by prior findings for children's experiences of risks (Aldis, 1975; Cook, 1993; Cook, et al., 1999; Stephenson, 2003), this study shows that children describe their experience of engaging in risky play as both fear and excitement and that this ambiguous feeling is what they seek in their play. It is the feeling of being on the edge, balancing between the pleasant emotions and the unpleasant emotions, that rewards the child with the most intense pleasure (Apter, 2007a). The duality in the experiences children express is interpreted in this paper as quick reversals between the arousal-seeking and confident paratelic state and the arousal-reducing telic state, where the children will feel timid in the situation and get a glimpse of the feeling of fear or anxiety. As shown in figure 3, as long as the paratelic state is predominant, these glimpses of fear make the arousal rise even higher to still pleasurable levels, and the child will stay in the play situation. On the other hand, if the telic state suddenly becomes predominant, the child will try to reduce the arousal and ultimately withdraw from the play.

4.0 General discussion

The present study, its empirical material and the review of theory and prior research on the phenomena of risky play, risk-taking and related issues show that this is a complex phenomenon. Still, the present study has aimed at contributing to a better understanding of the phenomenon and the factors that influence it. The identification of six categories of risky play, which have been confirmed both by a professional preschool teacher and by further use in research, have given a better overview of the phenomenon and how one can identify this in children's play. The categories have also proven useful when utilized in further research and data collection in this study. By focusing on these six categories when observing children at play, risk characteristics of what makes risky play risky were identified. These were a) Environmental characteristics and b) Individual characteristics. The Individual characteristics were influenced by the child's subjective perception of risk and his/her competencies and skills, and both environmental and individual characteristics further influenced the objective risk in the situation (the chance of getting injured). As such, how the individual subjectively perceives the risk in a situation is a factor that can vary from individual to individual and between different situations and emotional states, thus making it impossible to measure or assess the objective risk in the situation (Adams, 2001).

4.1 The experience of engaging in risky play

The present study aimed at better understanding how children *experience* and *perceive* the risk in risky play and why they engage in this kind of play, and therefore their subjective perception of risk was further explored. The phenomenological analysis of the observational data showed that children express experiences of intense exhilaration, fear, and a dual experience of both exhilaration and fear at the same time. There were several types of expressions of the excitement and thrill they experienced while balancing between exhilaration and fear, and the one feeling that the children primarily seemed to seek was the intense feeling of fearful joy. This is an indication of what *motivates* children to engage in risky play. The analysis of the interviews with the children showed that their own perceptions of risk in the risky play situations and their motivation for engaging in such play were primarily driven by the search for the ambiguous feeling of being excited by arousal-increasing actions while simultaneously experiencing glimpses of fear and the notion of the harmful consequences that may be a result. This is the balance on the edge of danger, where one is rewarded by intense pleasurable arousal but faces the chance of negative experiences such as fear, anxiety or even injury (Apter, 2007a). The important thing for the children is to manage this *balance* so that they do not switch to pure fear. Several of the children in this study called this balance "scary-funny" – an expression that clearly describes the ambiguity they experience in these kinds of play.

4.2 Understanding risky play within Adams' risk "thermostat"

In anticipation of a conclusion of the present study, it is time to look at the results in relation to Adams' (2001) risk "thermostat" model and the further theoretical and prior empirical knowledge presented in the introduction. Adams' risk "thermostat" model was the starting point of the literature review in the introduction and thus formed a framework for what was presented and discussed in that section of the thesis. Although this model is a useful framework for further exploration of the phenomenon, it is a general model covering all kinds of risk-taking in all individuals. It is not specifically made to describe or understand children's risky play in particular. Therefore, the most important information gathered through the present empirical study, in addition to the knowledge reviewed from prior studies and literature, is included in a revised version of Adams' risk "thermostat" model that is adapted to better enable a description and understanding of children's risk-taking:

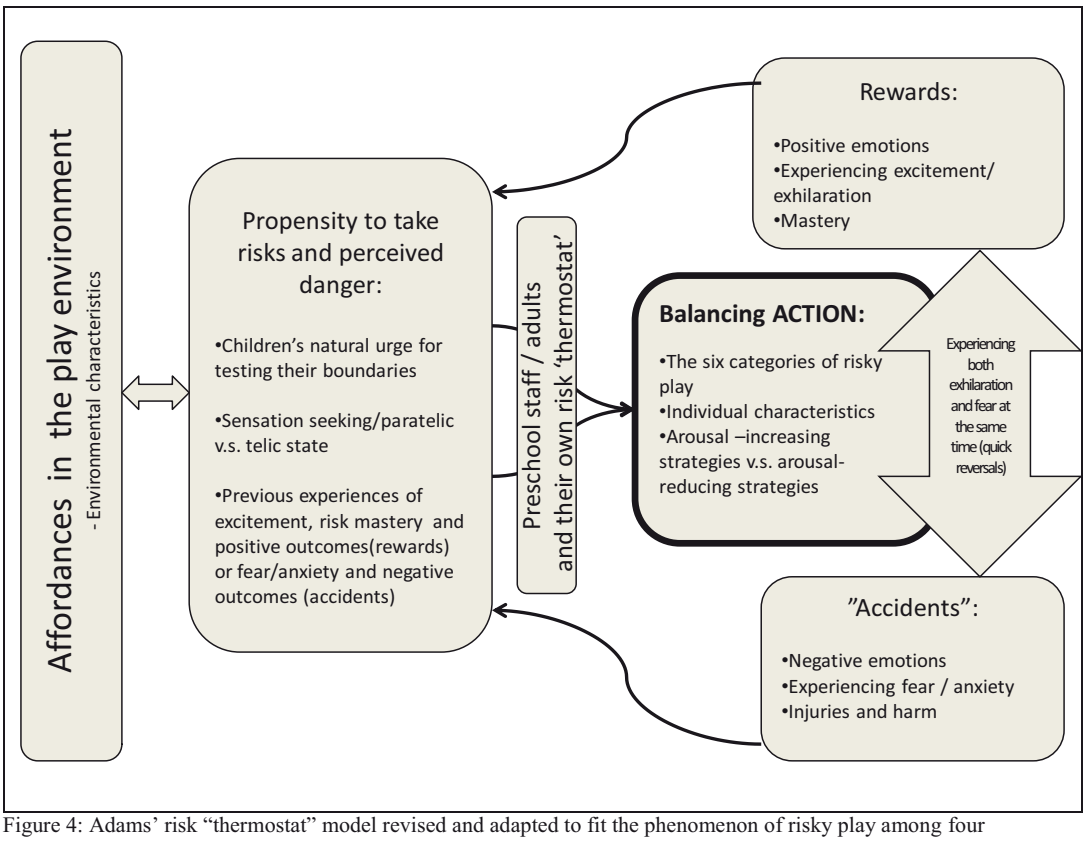

Figure 4: Adams' risk "thermostat" model revised and adapted to fit the phenomenon of risky play among four and five year-olds in preschool.

The revised risk "thermostat" model is placed within a cultural frame that visualizes the importance of the culture in which the child lives and acts. Although the present study was not a cross-cultural study aiming at exploring cultural differences in children's opportunities to engage in risky play, the literature review showed that this might be an important issue if risky play is to be discussed as a universal phenomenon across the world. There are both diverse legal rules and regulations from country to county; for instance, in Australia (Bundy, et al., 2009; Little, 2006), Britain (Ball, 2002), New Zealand (Chalmers, 2003), and Norway (DSB, 1996). Most of these are intended to avoid serious injuries of children playing on playgrounds, but how they are interpreted and enforced can also differ between the countries as a result of the local culture. As New et al. (2005) point out, the fear of child molesters and litigation suits is (still) rare in the Scandinavian countries, possibly explaining why these

countries have a more liberal attitude toward risky play. The results of this study must therefore be seen in light of the fact that it was conducted in Norway, a country where the population has a special love for outdoor life (Guldberg, 2009) and where risk-taking and challenging play so far have been acknowledged as an important part of children's growing up and learning. Placing the individual's risk "thermostat" model within a cultural frame is not a new thing. Actually, Adams (2001) revised his model to include cultural filters between the reward factor and propensity to take risks and between the accident factor and perceived danger as a means to describe how the culture in which we live influences how we perceive risks and the outcomes of risk. Still, in the case of children's risky play, there is a need to look at culture as a frame that encompasses and directs the whole risk-taking "thermostat" and its influencing factors.

4.3 Affordances for risky play in play environments

The revised risk "thermostat" also includes the affordances of the environment where children play, as described by several researchers as one of the principal factors influencing how children use their environment for play and activity purposes (Gibson, 1979; Heft, 1988; Kyttä, 2002, 2004). In the present study, which focuses on the preschool setting, these are represented by the environmental characteristics described in paper II (see also Sandseter, 2009a). In a cultural frame, this will be regulated by the legal rules and regulations that apply for playgrounds in the specific culture. These characteristics or features in the environment will constitute the potential affordances available in a child's play environment, and in that way influence what the child is able to actualize (make use of and play in/with) of those affordances. This means that they influence how a child will be able to actualize his/her propensity to take risks in play. On the other hand, the child's propensity to take risks will influence how the child 'reads' and interprets the possibilities of engaging in thrilling and risky kinds of play in their play environment (thus the two-way arrow).

4.4 The individual perception of risk in risky play

In Adams' (2001) original model, there was no connection between the propensity to take risks and the perceived danger in a situation. I believe this is a weakness of his model. The literature reviewed in this thesis clearly indicates that there are evolutionarily adapted individual differences in propensity to take risks due to a person's sensation seeking

personality/temperament, and that this in turn influences how different persons perceive similar situations involving risks both in adult populations (Apter, 1984, 2001, 2007a; Costa & McCrae, 1992; McCrae & Costa, 1997; Zuckerman, 1994) and in child populations (Cook, 1993; Cook, et al., 1999; Miller & Byrnes, 1997; Morrongiello & Lasenby-Lessard, 2006; Morrongiello & Matheis, 2004, 2007; Morrongiello & Sedore, 2005). This means that an individual's propensity to take risks is so closely bound to how this individual perceives danger that in the revised model these two factors are put together into one common factor. One other reason for this is that the assumption that rewards for risk-taking influence only the propensity to engage in risky behavior, while the accidents caused by risk-taking only influence the perception of danger does not seem logical. It is more likely that both rewards and accidents influence how one perceives danger the next time one encounters a similar situation.

Although aggregated into one factor, the propensity to take risks and the individual's perceived danger are crucial factors for the decision to engage in risky play in the revised model. The propensity to take risks and, based on that, how one perceives danger is a result of several conditions. For one thing, children in general seem to have a natural urge to test their boundaries, their courage, their physical skills and their possibilities within their environment (Adams, 2001; Aldis, 1975; Smith, 1998; Stephenson, 2003). Still, there are individual differences among children in the level and amount of risk they seem to approach, and research has shown that this sensation seeking/excitement seeking trait of temperament/personality (Putnam, et al., 2001; Rothbart, Ahadi, et al., 2001; Rothbart, et al., 2000) will influence how children perceive risk and how and to what extent they engage in risk-taking play (Cook, et al., 1999; Miller & Byrnes, 1997; Morrongiello & Lasenby-Lessard, 2006; Morrongiello & Matheis, 2004, 2007; Morrongiello & Sedore, 2005). In addition, the child's previous experiences of excitement, risk mastery and positive outcomes (rewards) on the one hand and negative emotions, such as the experience of fear and anxiety or injuries (accidents), on the other hand while engaging in risky play situations will influence how likely the child is to once again embrace a risky situation. This is also described in papers III and IV, where the children who managed to maintain the positive emotions and pleasurable experiences throughout the risky play situations would continue engaging in this kind of play repetitively, while the children who experienced pure fear would withdraw from the play and refuse to partake in it further.

4.5 The preschool staff's influence on children's risky play

Another important factor that is added in the revised model is *preschool staff/adults and their own risk perceptions*. In a preschool setting as well as other situations where children play, the children's actions are constantly watched by staff/adults who will intervene in their play if they think it is necessary. This is particularly relevant in situations of risky play. The staff will not only be influenced by the aforementioned legal rules and regulations that their preschool must abide by. They will also be strongly influenced by their own propensity to take risks and their perception of danger; thus, their own risk "thermostats." This was also described by Adams (2001) in his extended model, where one individual's risk "thermostat" is influenced by the risk "thermostats" of other people involved in a situation, for instance, when two drivers are interacting in a traffic situation. How the staff members in a preschool respond and react to the children who engage in risk-taking play will thus function as a kind of filter for the actions that the children are able to actualize. In many incidents, the risk-taking decision will be made by the adult present in the situation (Adams, 2001; Bundy, et al., 2009). As shown in the literature review of this thesis, research has shown that injuries in child care centers are extremely few and mostly of minor severity (Briss, et al., 1994; Leland, et al., 1993; Schwebel, et al., 2006), probably due to the high amount of surveillance and regulated play environments that exist in most child care settings. Still, the present study shows (Paper I, II, III, IV and Sandseter, 2007; Sandseter, 2009a), in accordance with other literature (Guldberg, 2009; New, et al., 2005), that the children in this Norwegian setting usually have great opportunities for risky play and a great freedom to play and move around as they like. According to Kyttä (2004), this freedom is of great importance for the children to be able to actualize the affordances they potentially have in their play environment.

4.6 The balancing action

The "heart" of the revised model is the balancing *action*. As suggested in the introduction, the term "behavior" does not seem suitable for describing the complex phenomenon of risky play. Risky play, as shown, consists of an array of influencing factors, personal skills and characteristics, as well as individual considerations of each and every risky play situation that an individual engages in (or not). Action is a term that integrates the historical and cultural context, the setting of the situation, and the meanings and intentions of the individual involved, while behavior is a more mechanical term that only describes what an individual

does (Graue & Walsh, 1998). The concept of balancing behavior is therefore renamed *balancing action* in my revised model. Within this balancing action lie the six categories of risky play (paper I) identified in this study and further confirmed as a useful way of identifying this kind of play in subsequent studies. How these categories of play are performed and what level of risk the children achieve in their play are also influenced by the individual characteristics of how they perform it (paper II). The level of height or speed they pursue, the degree of rashness with which they move, and their motor skills and control are some of these individual characteristics. As already argued, these characteristics in turn are influenced by how the individual perceives risks and dangers, and thus also his/her propensity to take risk. When exploring the balancing action of risk-taking in play, the present study (papers III and IV) revealed that this action would, as long as it was perceived as pleasant and dominated by positive emotions such as excitement, joy, etc. (paratelic state), be continued and even performed in such a manner as to increase arousal even more. On the other hand, if the action was experienced as unpleasant and dominated by negative emotions such as fear and anxiety (telic state), the child would perform arousal-reducing strategies and ultimately withdraw from the play. This is a central point in children's risky play; the very important *ambiguity* of risky play that seems to be the primary goal of engaging in this kind of play (papers III and IV) is the balancing act between exhilaration and fear, between delight and disaster, where, according to Apter (2007a), one is buying the intense excitement of high arousal with the chance of being harmed or injured if something goes wrong. This is visualized in my revised model as an arrow attached to the balancing action, going in two directions; either to the outcome of "accidents" and negative emotions/injury, or the outcome of "rewards" and positive emotions/mastery. To enclose the model, these rewards or accidents will, as previously mentioned, further influence the child's perception of danger and risk and his/her propensity to take risks in the next play situation.

4.7 Limitations of the study

There are some obvious limitations of the present study. First of all, the generalizability of the study is limited, as discussed in the section "Transferability/fittingness" (page 88). This is due to the relatively small population under study as well as the fact that the four preschool groups were recruited within one city in Norway. The findings in the present study would at most be transferable to preschools and preschool-aged children in Norway, while generalization outside Norway is difficult. Another limitation is the chance of an observer effect on the

children being studied. Observations are interactive, and both the observer and the individuals being observed inevitably affect each other (Angrosino, 2008). I cannot assume that my presence near the children in play did not affect them at all, even though my impression was that it did not affect what and how they played. In addition, the observations were naturalistic. This gives the benefit of observing the children's authentic action and play, but it also involves a rather uncontrolled setting of research. There could have been factors influencing what I observed that I was not able to control or did not know about. Last but not least, one of the aims of the study was an exploratory interpretive perspective where I, as the researcher, held a central interpretive role. As mentioned, this means that my experiences and prior knowledge will color the results of this interpretation and that other interpretations made by other researchers with different backgrounds could be just as relevant.

4.8 Further research

Even though the phenomenon of risk-taking in play has come into the focus of both the public debate and research in the last few years, the issue involves many unanswered questions and interesting perspectives that can and should be explored in future research.

During the work on this study and the present thesis, some issues have emerged as particularly interesting for continued research on children's risky play.

One of the interesting issues suggested for further research is the role and the influence of the play *environment* and its features on children's risky play. This kind of research should be undertaken with the perspectives of both how formal legislation of rules and regulations influences playgrounds and play environments and how traditions and practices in playground design and construction enable or hinder children's challenging and risky play. Such research should take into consideration how features in play environments afford children to play and engage in certain activities (Gibson, 1979; Heft, 1988; Kyttä, 2002). As such, more systematic research on the relationship between children's play environment and risky play should be pursued.

Another interesting issue is the pedagogical role and *influence of the caretaker/supervisor* in a play situation, for instance, in a preschool setting. Play usually happens under adults' supervision and surveillance, with the adults regulating what children are allowed to do and

where they are allowed to go (Kyttä, 2004), and children's risk-taking is thus to a large extent influenced by adults' risk-taking decisions (Adams, 2001; Bundy, et al., 2009). In this sense, adults are contributing to enhancing children's safety when playing, and at the same time, they represent the most important constraints on children's ability to encounter risks and challenges that are ultimately beneficial for their development (see e.g. Ball, 2002; Furedi, 2001; Gill, 2007; Hughes & Sturrock, 2006). More thorough research should be conducted to gain insight into exactly how caretakers, such as preschool staff or parents, in practice handle and react to children's risk-taking in play, their attitudes toward this kind of play, and how their own risk-taking decisions (risk "thermostat") color how they intervene in or constrain children's risky play.

As shown in the literature review of this thesis, a child's *personality/temperament* plays a significant role in the child's risk-taking decisions. Still, most of the research conducted on the relationship between children's sensation seeking personality/temperament and their risk-taking in practical situations has been conducted in laboratory-like settings (see for instance Morrongiello, 2004; Morrongiello & Lasenby-Lessard, 2006; Morrongiello & Matheis, 2004, 2007; Morrongiello & Sedore, 2005). What is missing are studies looking at this relationship in settings outside the somewhat artificial "laboratory"; in other words, studying children's natural risky play. The present study has shown that risky play in a naturalistic setting can be studied more systematically with the use of the developed categories and characteristics. By linking sensation seeking measures, as described by Morrongiello and Lasenby-Lessard (2006), to observations of children's natural risky play in preschools, school yards or other play environments, it would be possible to explore the relationship of personality and risky play in a naturalistic setting.

Last but not least, the present study has revealed a need for *further theorizing of the phenomenon of risky play*. Deeper, more theoretical and holistic knowledge on risky play as a complex and important phenomenon in children's lives is needed in the contemporary international discussion on play safety on one hand and children's right to play and explore on the other hand. The present study has contributed to this by drawing a basis for this complex matter that could and should be further developed through future research. The models and figures developed in this study would benefit from being further challenged and modified by new findings across the range of children's ages, sex differences and cultural differences.

4.9 Implications of the study

The implication of a study is closely related to the quality criterion that Miles and Huberman (1994, p. 280) call "utilization/application/action orientation." By this, Miles and Huberman mean that it is not enough just to establish valid and reliable findings, but rather that any researcher needs to know what the study does for the participants and the readers of the research. How can the people that this research concerns utilize the findings? This resembles what Kvale (1995, 1996) calls pragmatic validity and what Patton writes about as a criterion of utility by which the quality of qualitative research should be judged (Patton, 2002). This means that one has to consider the relevance and potential usability of the research to the readers.

4.9.1 Toward a theory of risky play

The aim of this study was to gain a better understanding of the phenomenon of children's risky play. With this goal, empirical and theoretical knowledge was sought about what children's risky play is, how to identify this kind of play and characteristics that risky play can be judged by, as well as how children experience engaging in it and why they approach and partake in this kind of play. Theory and prior research were reviewed to gain insight into how this phenomenon can be understood in a wider perspective: why do people in general, and particularly children, seek risks?; what are the possible costs or benefits of engaging in risk-taking?; what factors influence a child's engagement in risk-taking in play? The knowledge gained through reviewing both the literature and the present empirical work has been used to begin theorizing on children's risky play. The emerging theorizing on risky play in this thesis, with the figures and models presented and finally the revised model of Adams' risk "thermostat," has aimed at including a range of the possible influencing factors and perspectives. In addition, the use of Apter's Reversal Theory offers analysis that gives insight into how children perceive risk in their play and how and why they decide to act on the risk. This is both a contribution to what we know about children's risky play at the moment and a basis of theory that could be useful for future research and theorizing on risky play. The present study also offers some methodological gains by introducing a focus on a naturalistic and phenomenological approach as well as a holistic perspective on the understanding of this phenomenon. The prior studies on the issue have often focused on one small part of this complex issue, such as either describing the play activity by ethnographic methods or measuring sensation seeking and risk-taking decisions in a rather quantitatively focused,

laboratory-like way. A further triangulation of several methodological approaches and theoretical perspectives will be useful for future research and could gain from the experiences reported in this study.

4.9.2 Pragmatic gains for practical applications

The knowledge emerging from this study may be useful for practitioners and staff in any early childhood education setting, such as the Norwegian preschools ("barnehage"). This includes both current preschool staff and future preschool teachers (and their lecturers in preschool teacher education). Risky play is a kind of play that people who work in child care may be unsure about how to handle and react to because it may, in the worst case, end in a child getting injured. Knowing more about what it is, how children engage in this kind of play, why they do it, and how they manage it may help preschool staff members to reach a better understanding of how to make play and play environments challenging and thrilling, but simultaneously relatively safe for the children involved. By gaining knowledge of the benefits and importance of letting children engage in risky play, preschool staff will also be able to give parents good arguments for why they would allow the children to encounter risks and challenges in their play. As such, the knowledge produced in this thesis may also be useful and informative for parents of children of preschool age, both in their relations to the preschool and its staff and in their own practice and handling of their children's play.

In a wider sense, the hope is that the knowledge presented in this thesis will counteract and decelerate the rapidly growing overprotective safety focus on children's play and playgrounds that has washed through western societies in recent decades. The aforementioned discussion on the balance between a reasonable level of safety and securing children's normal development is a most important issue, highly appreciated by practitioners and researchers who think the safety focus has gone too far in constraining children from taking risks and encountering challenges in their play. This study aims at contributing to this important debate and adding more knowledge and understanding of the phenomenon, including what risky play is and why it is important for the children. As mentioned, the situation in Norway is so far not as overprotective and safety-focused as in several other countries, but the trend seems to be to move toward integrating safety standards and practices imported from other, more risk-averse societies. The hope is that this thesis particularly will contribute to the domestic Norwegian discussion on play safety and how preschool staff, parents, and other adults responsible for

children at play can acknowledge and handle children's risky play, as well as how politicians and lawmakers handle play safety issues and regulations. A 100% risk-free play environment for children is neither possible nor desirable.

> *There is no convincing evidence that anyone wants zero-risk life – it would be unutterably boring – and certainly no evidence that such life is possible.(Adams, 2001, p. 15)*

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Papers I - IV

Are not included due to copyright

Appendix

Appendix 1

Norsk samfunnsvitenskapelig datatjeneste AS
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Ellen Beate Hansen Sandseter
Seksjon for fysisk fostring
Dronning Mauds Minne
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Vår dato: 28.09.2005 Vår ref: 200501356 GT /RH Deres dato: Deres ref:

TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 23.08.2005. Meldingen gjelder prosjektet:

13198	*Risikofylt lek blant femåringer i barnehagen - en pilotstudie for å observere hva barns risikofylte lek er, og hvordan den kommer til uttrykk*
Behandlingsansvarlig	*Dronning Mauds Minne, ved institusjonens øverste leder*
Daglig ansvarlig	*Ellen Beate Hansen Sandseter*

Etter gjennomgang av opplysninger gitt i meldeskjemaet og øvrig dokumentasjon, finner vi at prosjektet ikke medfører meldeplikt eller konsesjonsplikt etter personopplysningslovens §§ 31 og 33.

Dersom prosjektopplegget endres i forhold til de opplysninger som ligger til grunn for vår vurdering, skal prosjektet meldes på nytt.

Vedlagt følger vår vurdering. Prosjektet kan settes i gang.

Vennlig hilsen

Bjørn Henrichsen

Geir Teigland

Kontaktperson: Geir Teigland tlf: 55 58 33 48

Vedlegg: Prosjektbeskrivelse

Appendix 2

Ellen Beate Hansen Sandseter
Seksjon for fysisk fostring
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Thoning Owesens gt. 18
7044 Trondheim

Trondheim 24.08.2005

[redacted] Barnehage
v. Styrer [redacted]
[redacted] Trondheim

Forespørsel om deltakelse i forskningsprosjektet "Risikofylt lek blant femåringer i barnehagen – en pilotstudie for å observere hva barns risikofylte lek er, og hvordan den kommer til uttrykk"

I forbindelse med min doktorgrad gjennomfører jeg et pilotprosjekt (forprosjekt) om risikofylt lek blant femåringer. Hensikten med prosjektet er gjennom en deltakende og åpen observasjon av barnas lek og uformelle samtaler med barna å få en bedre forståelse av hva slags lek barna driver med som innebærer en viss risiko og et visst spenningsmoment. Hvordan oppsøker barna denne typen lek, liker de å holde på med det, og hvordan gir de uttrykk for sitt behov for å utforske denne typen lek og aktivitet? Pilotprosjektet er en forberedelse til en større datainnsamling for prosjektet: "Risikofylt lek blant femåringer i barnehagen: *En studie om barns behov og voksnes toleranse for risikofylt lek med fokus på kjønnsforskjeller og ulike barnehagetyper"*, hvor det vil foretaes både omfattende observasjonsstudier, intervjuer og skriftlige tester av ansatte i et større utvalg av både ordinære barnehager og natur- og friluftsbarnehager.

I dette pilotprosjektet vil målet være å komme frem til kategorier og kjennetegn ved denne typen lek, slik at det kan utarbeides mer systematiske observasjonsskjemaer som kan brukes i den store datainnsamlingen.

I gjennomføringen av pilotstudien henveder jeg meg til to barnehager, henholdsvis en ordinær barnehage og en natur- og friluftsbarnehage, med forespørsel om tillatelse til å gjøre observasjoner av deres femåringer. Observasjonene vil foretaes i løpet av en periode på ca. en måned, fra 01.10.05 – 01.11.05. I denne perioden ber jeg om tillatelse til å delta i barnehagens aktiviteter og "hverdag" en hel dag pr. uke. Hvilken dag som passer best kan avtales nærmere med meg etter at tillatelse er gitt. I observasjonsperioden vil jeg delta på barnehagens vanlige aktiviteter, men vil ha behov for å trekke meg unna for å gjøre notater av og til, samt at jeg vil henvende meg til de aktuelle barna for uformelle samtaler underveis.

Det er helt frivillig å delta i prosjektet. Hvis du som styrer av barnehagen samtykker i at jeg gjør mine observasjoner i din barnehage, vil det allikevel være nødvendig å samle inn samtykke fra foreldre/foresatte av de femåringene som vil bli observert. Jeg har derfor lagt

ved en egen samtykkeerklæring som må innhentes fra foreldrene før prosjektet kan settes i gang.
Det vil ikke bli samlet inn personopplysninger om barna, og alle mine observasjonsnotater og samtalenotater vil merkes med koder som **ikke** kan tilbakeføres til det enkelte barn. Som nevnt tidligere vil resultatene brukes til å utvikle kategorier og skjemaer som er av generell art, og som skal brukes videre i en større datainnsamling som vil påstartes våren 2006. Hele doktorgradsprosjektet forventes å være avsluttet våren 2009.

Prosjektet er meldt til Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste A/S.

Dersom du samtykker at jeg bruker din barnehage som observasjonsbarnehage i mitt pilotprosjekt, er det fint om du signerer samtykkeerklæringen under, samt innhenter samtykke fra de aktuelle foreldre/foresatte gjennom å sende ut det vedlagte samtykkeskjemaet så snart som mulig.

Når foreldres/foresattes samtykke er innhentet ber jeg deg kontakte meg på adressen under for nærmere avtale av hvordan prosjektet gjennomføres rent praktisk.

Med vennlig hilsen

Ellen Beate Hansen Sandseter
Seksjon for fysisk fostring
Dronning Mauds Minne
Høgskole for førskolelærerutdanning
Thoning Owesens gt. 18
7044 Trondheim

tlf jobb: 73 80 52 59
tlf mobil: 936 58 663
e-post: ebs@dmmh.no

Samtykkeerklæring fra styrer:

Jeg har mottatt informasjon om pilotprosjektet om risikofylt lek blant femåringer i barnehagen og godkjenner at [redacted] barnehage brukes som observasjonsbarnehage.

Signatur:…….

Appendix 3

Dronning Mauds Minne
Høgskole for førskolelærerutdanning
Thoning Owesens gt. 18
7044 Trondheim

Trondheim 24.08.2005

Foreldre/Foresatte til ……..

Forespørsel om deltakelse i forskningsprosjektet ”Risikofylt lek blant femåringer i barnehagen – en pilotstudie for å observere hva barns risikofylte lek er, og hvordan den kommer til uttrykk”

I forbindelse med min doktorgrad gjennomfører jeg et pilotprosjekt (forprosjekt) om risikofylt lek blant femåringer. Hensikten med prosjektet er gjennom en deltakende og åpen observasjon av barnas lek og uformelle samtaler med barna å få en bedre forståelse av hva slags lek barna driver med som innebærer en viss risiko og et visst spenningsmoment. Hvordan oppsøker barna denne typen lek, liker de å holde på med det, og hvordan gir de uttrykk for sitt behov for å utforske denne typen lek og aktivitet? Pilotprosjektet er en forberedelse til en større datainnsamling for prosjektet: ”Risikofylt lek blant femåringer i barnehagen: *En studie om barns behov og voksnes toleranse for risikofylt lek med fokus på kjønnsforskjeller og ulike barnehagetyper”*, hvor det vil foretaes både omfattende observasjonsstudier, intervjuer og skriftlige tester av ansatte i et større utvalg av både ordinære barnehager og natur- og friluftsbarnehager.

I dette pilotprosjektet vil målet være å komme frem til kategorier og kjennetegn ved denne typen lek, slik at det kan utarbeides mer systematiske observasjonsskjemaer som kan brukes i den store datainnsamlingen.

I gjennomføringen av pilotstudien henveder jeg meg til to barnehager, henholdsvis en ordinær barnehage og en natur- og friluftsbarnehage, med forespørsel om tillatelse til å gjøre observasjoner av deres femåringer. Observasjonene vil foretaes i løpet av en periode på ca. en måned, fra 01.10.05 – 01.11.05. I denne perioden ber jeg om tillatelse til å delta i barnehagens aktiviteter og ”hverdag” en hel dag pr. uke, og observere Deres barn ……..i lek med andre barn.

Det er helt frivillig å delta i prosjektet. Det vil ikke bli samlet inn personopplysninger om barna, og alle mine observasjonsnotater og samtalenotater vil merkes med koder som **ikke** kan tilbakeføres til det enkelte barn. Som nevnt tidligere vil resultatene brukes til å utvikle kategorier og skjemaer som er av generell art, og som skal brukes videre i en større datainnsamling som vil påstartes våren 2006. Hele doktorgradsprosjektet forventes å være avsluttet våren 2009.

Prosjektet er meldt til Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste A/S.

Hvis du/dere som foreldre/foresatte av ……. samtykker i at Deres barn deltar i pilotprosjektet, er det fint om du/dere signerer samtykkeerklæringen under.

Har du/dere spørsmål i forbindelse med denne henvendelsen kan det gjøres henvendelser til meg på adressen under.

Med vennlig hilsen

Ellen Beate Hansen Sandseter
Seksjon for fysisk fostring
Dronning Mauds Minne
Høgskole for førskolelærerutdanning
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klipp

Samtykkeerklæring fra foreldre/foresatte:

Jeg har mottatt informasjon om pilotprosjektet om risikofylt lek blant femåringer i barnehagen og godkjenner at mitt barn: ……deltar i prosjektet.

Signatur:……

Appendix 4

Norsk samfunnsvitenskapelig datatjeneste AS
NORWEGIAN SOCIAL SCIENCE DATA SERVICES

Harald Hårfagres gate 29
N-5007 Bergen
Norway
Tel: +47-55 58 21 17
Fax: +47-55 58 96 50
nsd@nsd.uib.no
www.nsd.uib.no
Org.nr: 985 321 884

Ellen Beate Hansen Sandseter
Seksjon for fysisk fostring
Dronning Mauds Minne
Thoning Owesensgate 18
7044 TRONDHEIM

Vår dato: 27.01.2006 Vår ref: 13999/GT Deres dato: Deres ref:

TILRÅDING AV BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 29.12.2005. Meldingen gjelder prosjektet:

13999	*Fysisk lek blant fire- og femåringer i barnehagen*
Behandlingsansvarlig	*Dronning Mauds Minne, ved institusjonens øverste leder*
Daglig ansvarlig	*Ellen Beate Hansen Sandseter*

Personvernombudet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernombudet tilrår at prosjektet gjennomføres.

Personvernombudets tilråding forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, eventuelle kommentarer samt personopplysningsloven/-helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, http://www.nsd.uib.no/personvern/endringsskjema. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, http://www.nsd.uib.no/personvern/register/

Personvernombudet vil ved prosjektets avslutning, 31.12.2009 rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Bjørn Henrichsen Geir Teigland

Kontaktperson: Geir Teigland tlf: 55 58 33 48

Vedlegg: Prosjektvurdering

Appendix 5

Ellen Beate Hansen Sandseter
Seksjon for fysisk fostring
Dronning Mauds Minne
Høgskole for førskolelærerutdanning
Thoning Owesens gt. 18
7044 Trondheim

Trondheim 03/01 2006

[redacted] Barnehage
v. Styrer [redacted]
[redacted]

Forespørsel om deltakelse i forskningsprosjektet "Fysisk lek blant fire- og femåringer i barnehagen"

I forbindelse med mitt doktorgradsarbeid gjennomfører jeg en datainnsamling om fysisk lek blant fire- og femåringer i barnehagen. Hensikten med datainnsamlingen er å få inntrykk av hvordan barna oppsøker denne typen lek, og hvilke typer lek av denne art de foretrekker.

Datainnsamlingen vil bestå av observasjoner, både med og uten videoopptak av barnas lek (fire- og femåringene i barnehagen), samt intervjuer med disse barna og med de ansatte i barnehagen. Jeg ønsker å foreta datainnsamlingen i løpet av en rekke utvalgte dager i perioden fra medio februar og ut mai i 2006. De utvalgte dagene avtales med barnehagen slik at det passer inn i barnehagens planer.

I gjennomføringen av datainnsamlingen henvender jeg meg til to barnehager med forespørsel om tillatelse til å gjøre datainnsamling. Denne barnehagen er en av dem.

Det er helt frivillig å delta i prosjektet. Hvis du som styrer av barnehagen samtykker i at jeg gjør min datainnsamling i din barnehage, vil det allikevel være nødvendig å samle inn samtykke fra foreldre/foresatte av de fire- og femåringene som vil bli observert og intervjuet, samt samtykke fra de ansatte. Jeg har derfor lagt ved en egen samtykkeerklæring som må innhentes fra foreldrene og ansatte før prosjektet evt. kan settes i gang.

Det vil ikke bli samlet inn personopplysninger om barna, og alle mine observasjonsnotater, videoopptak og intervjunotater vil merkes med koder som **ikke** kan tilbakeføres til det enkelte barn. Videoopptakene vil imidlertid kunne identifisere barna ved utseende, og jeg ber derfor om foreldre/foresattes samtykke til å kunne bruke opptakene i formidling av resultater fra prosjektet ved for eksempel foredrag og lignende (se vedlagt informasjon og samtykkeerklæring til foreldre). Hvis samtykke til dette ikke gis vil jeg forsikre om at opptakene bare vil bli brukt av meg og mine veiledere og medhjelpere (under taushetsplikt).

I skriftlig formidling av resultatene (doktorgradsavhandling og artikler) vil data bli behandlet slik at den enkelte ikke kan gjenkjennes.

Prosjektet er meldt til Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste A/S.

Dersom du samtykker at jeg utfører min datainnsamling i din barnehage er det fint om du signerer samtykkeerklæringen under, samt innhenter samtykke fra de aktuelle foreldre/foresatte og ansatte gjennom å sende ut det vedlagte samtykkeskjemaet så snart som mulig.

Når foreldres/foresattes og ansattes samtykke er innhentet ber jeg deg kontakte meg på adressen under for nærmere avtale av hvordan prosjektet gjennomføres rent praktisk.

Hvis nærmere informasjon om prosjektet er aktuelt vil jeg kunne gi mer informasjon om dette både til ansatte og foreldre, for eksempel på foreldremøte/personalmøte eller lignende. Jeg vil også tilby meg å komme til barnehagen i etterkant av prosjektet for å presentere resultater fra prosjektet.

Med vennlig hilsen

Ellen Beate Hansen Sandseter
Seksjon for fysisk fostring
Dronning Mauds Minne
Høgskole for førskolelærerutdanning
Thoning Owesens gt. 18
7044 Trondheim

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tlf mobil: 936 58 663
e-post: ebs@dmmh.no

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klipp

Samtykkeerklæring fra styrer:

Jeg har mottatt informasjon om prosjektet om fysisk lek blant fire- og femåringer i barnehagen og godkjenner at [redacted] Barnehage brukes som prosjektbarnehage.

Signatur:…….

Appendix 6

Ellen Beate Hansen Sandseter
Seksjon for fysisk fostring
Dronning Mauds Minne
Høgskole for førskolelærerutdanning

Trondheim 03/01 2006

Foreldre/Foresatte til ……..

Forespørsel om deltakelse i forskningsprosjektet "Fysisk lek blant fire- og femåringer i barnehagen"
I forbindelse med mitt doktorgradsarbeid gjennomfører jeg en datainnsamling om fysisk lek blant fire- og femåringer i barnehagen. Hensikten med datainnsamlingen er å få inntrykk av hvordan barna oppsøker denne typen lek, og hvilke typer lek av denne art de foretrekker.

Datainnsamlingen vil bestå av observasjoner, både med og uten videoopptak av barnas lek (fire- og femåringene i barnehagen), samt intervjuer med disse barna og med de ansatte i barnehagen. Jeg ønsker å foreta datainnsamlingen i løpet av en rekke utvalgte dager i perioden fra medio februar og ut mai i 2006.

Det er helt frivillig å delta i prosjektet. Det vil ikke bli samlet inn personopplysninger om barna, og alle mine observasjonsnotater, videoopptak og intervjunotater vil merkes med koder som **ikke** kan tilbakeføres til det enkelte barn. Videoopptakene vil imidlertid kunne identifisere barna ved utseende, og jeg ber derfor om foreldre/foresattes samtykke til å kunne bruke opptakene i formidling av resultater fra prosjektet ved for eksempel foredrag og lignende (se samtykkeerklæring). Hvis samtykke til dette ikke gis vil jeg forsikre om at opptakene bare vil bli brukt av meg og mine veiledere og medhjelpere (under taushetsplikt).

Det kan også bli aktuelt å be foreldre/foresatte om å fylle ut et spørreskjema om temaet, og jeg ber derfor også om deres samtykke på å delta på dette dersom det blir aktuelt i løpet av datainnsamlingsperioden (se samtykkeerklæring). Full anonymitet i presentasjon av resultater vil også gjelde i dette tilfellet.

I skriftlig formidling av resultatene (doktorgradsavhandling og artikler) vil data bli behandlet slik at den enkelte ikke kan gjenkjennes.
Prosjektet er meldt til Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste A/S.

Hvis du/dere som foreldre/foresatte samtykker i at Deres barn deltar i prosjektet, er det fint om du/dere signerer samtykkeerklæringen under.
Har du/dere spørsmål i forbindelse med denne henvendelsen kan det gjøres henvendelser til meg på adressen under.

Med vennlig hilsen

Ellen Beate Hansen Sandseter
Seksjon for fysisk fostring
Dronning Mauds Minne, Høgskole for førskolelærerutdanning
Thoning Owesens gt. 18
7044 Trondheim
tlf jobb: 73 80 52 59, tlf mobil: 936 58 663, e-post: ebs@dmmh.no

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klipp

Samtykkeerklæring fra foreldre/foresatte for (navn)……:
Sett kryss:
Jeg har mottatt informasjon om prosjektet om fysisk lek blant fire- og femåringer i barnehagen og godkjenner at mitt barn deltar i prosjektet

☐ JA ☐ NEI

Jeg/vi samtykker at videoopptak av mitt barn kan brukes i formidling av resultatene ved for eksempel foredrag og lignende

☐ JA ☐ NEI

Jeg/vi samtykker å delta i prosjektet hvis spørreskjema til foreldre/foresatte blir aktuelt

☐ JA ☐ NEI

Signatur:…….