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An Empirical Investigation of the Attachment Doll Play:
A Tool for Assessing the Internal Working Models of Young Children

by

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ABSTRACT

This study was an empirical investigation of the Attachment Doll Play, a projective tool used to assess the internal working models of attachment. Fifty 5- and 6-year-olds completed attachment-related story-stems using a set of dolls and props. Based on story completions, children were classified as either secure (confident), avoidant (casual), ambivalent (busy), or disorganized (frightened). Attachment classifications were compared to child care status and to behaviour problems, as assessed by the Child Behaviour Checklist. The main findings indicated that: 1) the classification distribution and inter-rater reliability of this study replicated the original (Solomon, George, & De Jong, 1995), 2) children classified as insecure (i.e., avoidant, ambivalent and disorganized) were more likely to have clinical range behaviour problem scores, and 3) current child care status was significantly related to attachment classification. In sum, this study provided empirical support for the Attachment Doll Play as a promising tool for assessing the internal working models of young children.

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CHAPTER I

Introduction

The quest to understand human attachment, or the bond which forms between a child and caregiver, has become one of the great challenges in developmental psychology. This search to understand the mother-child bond is evident in the wealth of research in the last 20 years. To date, much is known about a child's emotional and behavioural ties to the mother yet many questions still remain unanswered.

The origins of attachment theory can be traced to two of the most influential thinkers on mother-child relations, John Bowlby and Mary Ainsworth. Together they created modern attachment theory which has led to major advances in understanding the development of the child and personality.

Human attachment is believed to be regulated by a motivational system known as the attachment behavioural system. Bowlby (1958, 1969) outlined this system in his theory of attachment drawing from both psychoanalysis, ethology and control system theory. He proposed that an infant's attachment to the mother serves as a basic survival function. According to Bowlby's theory, behaviours which increase the proximity between an infant and caregiver, such as crying and following, are mediated by the attachment system and represent the primary mechanism for the regulation of infant safety, protection, and survival. This attachment behavioural system is activated in both threatening situations and nonstressful conditions whereby the infant seeks and maintains proximity with the primary attachment figure, which is usually but not necessarily the mother (Main, 1995). Attachment behaviour is activated and regulated by both internal and external influences

(i.e., threatened separation, actual separation, and reunion) (Bowlby, 1969). Although more easily activated in infants and children, attachment is believed to remain influential throughout the lifetime and account for pivotal aspects of an individual's mental state (Main, 1995).

Bowlby's theory of attachment was given empirical support and was expanded by Mary Ainsworth. She developed the first standardized procedure to examine the patterns of attachment in infants. Known as the Strange Situation (Ainsworth, Blehar, Waters, & Wall, 1978), it is a structured laboratory observational procedure in which 12-month-old infants are observed in a series of separations and reunions with the parent. Distinct individual differences in infant's responses in the reunion scenario were found. To categorize these responses, Ainsworth developed a coding system of attachment classifications consisting of three distinct attachment patterns. These three classifications are known as secure, insecure-avoidant, and insecure-ambivalent. The empirical success of the Strange Situation procedure promoted research examining the basic propositions of attachment theory and also led to the development of other measures for classifying attachment patterns beyond the infant years.

The early work of Bowlby and Ainsworth has led to the current focus in attachment theory, internal representational models. Bowlby (1969) referred to these representational models as internal working models of attachment. He suggested that early patterns of relating to the primary caregiver become internalized, to form the basis of relationship patterns with others. Internal working models are flexible and adaptable mental structures which are formed from early experiences with the attachment figure. Specifically, through

early interactions, infants construct an internal working model of self and of others. The main purpose of these models is to interpret and predict the behaviour of others and plan one's own behaviour.

Internal working models of attachment, by definition, cannot be directly assessed but rather can be inferred from behaviour (Solomon, George, & De Jong, 1995). In infancy, the Strange Situation is used to infer the internal representations of the mother-infant relationship. As children develop, both cognitively and socially, their internal representations can be inferred through symbolic representation (Bowlby, 1969). By the end of early childhood, representations of family relations through language and play should theoretically reflect the child's representation of attachment (Solomon et al., 1995).

There has been a recent surge of research examining the internal working model of young children. A variety of methods have been used to elicit children's representations of attachment relationships (Bretherton, Ridgeway & Cassidy, 1990; Cassidy, 1988; Main, Kaplan & Cassidy, 1985; Slough & Greenberg, 1990; Solomon et al., 1995; Oppenheim, 1997). The most common approach to assessing children's internal working models is through the use of narratives.

The Attachment Doll Play procedure is one of the more recent representational-based narrative approaches for assessing the internal working models of attachment (George & Solomon, 1990; Solomon et al., 1995). Children are introduced to five stories (a neutral story and four attachment-related stories) and are then encouraged to enact story completions using a set of dolls and a doll house. Doll play classifications are based on the child's narratives and actions on the final pair of attachment-related stories. Subsequently,

children are assigned to one of four classifications: secure, avoidant, ambivalent, or disorganized. To date, little empirical work has been done with the Attachment Doll Play.

The purpose of the present study was to investigate empirically the Attachment Doll Play. There were four objectives to meeting this goal. The first objective was to replicate the distribution of attachment patterns and the inter-rater reliability of the Attachment Doll Play reported in the original study. The second objective was to examine the relation between children's representation of attachment and behaviour problems. The third objective was to explore the link between children's internal working model of attachment and non-parental child care. Lastly, the fourth objective was to expand the Attachment Doll Play assessment tool by examining the relation between a child's representations in the doll family and attachment classifications. Therefore, the main purpose of this study was a further analysis as well as an exploratory investigation of the Attachment Doll Play tool.

Following this introduction, Chapter II provides an overview of attachment research. This chapter outlines the basic tenets of attachment theory, reviews the empirical support for attachment theory, and describes the current focus in research on the internal working models of attachment relationships. This chapter concludes with a description of the present study.

Chapter III includes a description of the participants, the procedure and the measure used in the present study. Chapter IV outlines the results from the data analysis. Lastly, Chapter V begins with a discussion of the main findings of the study and relates these findings to previous research, notes the limitations of the study, and suggests future directions for research on the Attachment Doll Play assessment tool.

CHAPTER II

Literature Review

This chapter begins with an overview of attachment research. Three distinct phases in the development of attachment theory are reviewed. In the first phase, Bowlby (1969) outlined the basic tenets of attachment theory integrating ideas from psychoanalysis, ethology, and control system theory. In the second phase, Ainsworth (Ainsworth et al., 1978) and early attachment research provided an empirical basis for the theoretical underpinning of attachment theory. In the third, and most recent phase, internal working models or representational processes of attachment have become the focus. This literature review provides a framework and sets the tone for the present study.

Phase 1: The Theory of Attachment

The first phase is marked by the development of attachment theory. Bowlby has been largely credited for outlining the basic tenets of attachment theory. Originally, attachment theory was developed as an alternative explanation to the psychoanalytic approach to understanding children. Although trained as a psychoanalyst, Bowlby had great reservations about certain aspects of the psychoanalytic approach. Specifically, he did not agree with the view that a child's love for the mother results from oral gratification (i.e., feeding) (Bretherton, 1995). As a result, Bowlby broke away from main stream psychoanalysis and launched his own exploration to better understand the complex nature of the mother-child relationship. Today, attachment theory is considered the most predominant theory of parent-child relations (Bretherton, 1985).

Theoretical Origins of Attachment Theory

In Bowlby's search for a more comprehensive theory he turned to several approaches. The basic tenets of attachment theory have been largely influenced by psychoanalysis, ethology and control system theory (Bretherton, 1985).

Psychoanalysis. Bowlby (1969) contradicted key elements of psychoanalysis. Attachment theory deviates from psychoanalytic theory on four critical propositions (Suomi, 1995). First, attachment theory is an interpersonal rather than an intrapersonal theory. While attachment theory focuses on how the environment influences the inner world, psychoanalytic theory is concerned with how the environment is perceived by and influences the inner world. Second, attachment theory outlines a more harmonious model of relationships rather than a conflict model (i.e., the Oedipus Complex). That is, attachment theory centres on relationships and interactions and not on inner conflicts. Third, attachment theory emphasises infant pleasure through proximity and sensitive caregiving rather than through sexual gratification. The theory of attachment opposes the view that interpersonal relationships are secondary drives resulting from the gratification of primary drives (Ainsworth, 1969). Finally, attachment theory attempts to understand abnormal behaviour from an examination of normal development rather than deriving normality from abnormality, as does psychoanalysis.

Although he opposed a few key elements, Bowlby (1969) agreed with some important ideas proposed by Freud's psychoanalytic theory regarding infant-parent relationships (Lay, Waters, Posada & Ridgeway, 1995). As such, attachment theory shares some of the same propositions outlined in psychoanalytic theory. These include the notion

that 1) early experiences can have long lasting effects on personality, 2) mental representations of these early experiences influence behaviour and development, 3) defensive processes protect the conscious, 4) loss of an attachment figure, at any age, produces great grief, and 5) separation or threat of separation from a loved one produces separation anxiety. Bowlby adopted these ideas and attempted to reformulate them into a more scientific model. Thus, he was attempting to update psychoanalytic theory by incorporating advances in other sciences. With attachment theory, he wanted to replace Freudian instinct theory with a new set of ideas which were testable and more in line with current thinking (Ainsworth, 1969).

Overall, the main difference between attachment theory and psychoanalytic theory is Bowlby's focus on real events that happen in ordinary life rather than intrapsychic occurrences or traumatic experiences. Hence, according to attachment theory, the focus of understanding human development should be on examining external relationships rather than internalized psychic conflicts.

Ethology. The influence of ethology in attachment theory is pervasive. Bowlby's quest for an explanation of mother-child ties led him to Lorenz's (1952) work on imprinting with birds (Bretherton, 1991). Of particular interest to Bowlby was the notion that a strong social bond can form without being linked to feeding. Bowlby was later introduced to Harlow's (1958) work with rhesus monkeys and other primate species. Harlow's work provided evidence for the secure-base concept, which later became a key feature of Bowlby's theory of attachment (Suomi, 1995). Essentially, the fundamental features of attachment theory can largely be traced to the works of both Harlow and Lorenz.

Bowlby (1958) used the model of imprinting to describe and explain human attachment. Imprinting is a type of learning that occurs between offspring and caregivers and is described by the following: 1) it involves learning species-specific characteristics; 2) it may occur before it can be behaviourally demonstrated; 3) it takes place during a select sensitive period of time; and 4) it is irreversible (Reed & Leiderman, 1983). The phenomena of imprinting occurs with newly hatched birds who follow their mother or a surrogate, and show signs of anxiety (i.e., searching behaviours) when separated (Lorenz, 1952). This occurs despite the fact that the mother does not feed her offspring but rather lets them fend for themselves. Therefore, a strong bond forms between mother and her offspring without being linked to feeding. Bowlby (1958) embraced these basic tenets of imprinting and suggested that they can be applied to the phenomenon of human attachment. He argued that humans possess species-specific behaviours or instinctual responses, which are activated and terminated by both internal and external factors and can be integrated into more complex behaviour patterns. Like birds, these instinctual responses function to ensure that the human infant receives adequate care for survival.

Harlow's (1958) work with rhesus monkeys further developed Bowlby's notions of mother-infant attachment. In Harlow's 'surrogate mother' experiment infant monkeys became more attached to the terry-cloth mother versus the wire-meshed mother regardless of which one provided food. Harlow argued that the warm contact and comfort provided by the terry-cloth mother motivated further affectional responses and provided the rhesus monkeys with a secure base from which to explore the environment. Again, these findings support the notion that mother-infant attachment is not related to feeding.

The basic tenets of attachment theory have been clearly influenced by ethological principles. They supported an alternative view to psychoanalytic notions and further laid the foundation for attachment theory.

Control system theory. The model used by Bowlby (1969) to explain attachment behaviours is further derived from control system theory. A control system is a device which activates purposeful behaviour. There are two features of control systems: purposefulness and feedback (Bowlby, 1969). The purpose of a behaviour is to achieve a set goal. The means by which to achieve this goal is through constant feedback from the environment. The purpose and feedback responses characterized by a control system guide goal-directed behaviours.

Bowlby (1969) used this control system model to describe human instinctive behaviour. He postulated that during their first year, infants have not yet developed the cognitive structures necessary for goal-directed and goal-corrected behaviours. However, by the end of their first year, infants become increasingly goal-directed in their actions (Ainsworth, 1969). An older infant can formulate simple plans to reach his or her goal (goal-directed) and respond to feedback from the environment in a purposeful manner (goal-corrected).

In summary, psychoanalytic theory, ethology and control system theory provided the theoretical framework for Bowlby's theory of attachment. It is with this basic understanding of the origins of attachment theory that the theory itself can now be outlined.

Attachment Theory

Attachment theory consists of three main elements, namely the attachment behavioural system, secure-base behaviour and internal working models. Each of these will be discussed in turn beginning first with key definitions in attachment theory.

Attachment defined. There are a few key concepts central to understanding attachment theory (Seifer & Shiller, 1995). First, attachment behaviour refers to behaviours that increase the infant's proximity and contact with the attachment figure. Second, exploration is evident by behaviours that decrease proximity and contact with the attachment figure but increase interaction with the environment. Third, the attachment system refers to the organizational structure, hypothesized to exist, that controls proximity and exploration behaviours (Bowlby, 1969). Finally, attachment itself is defined as the affectional bond formed with another individual which exists across time and situation (Ainsworth, 1978). Thus, attachment is discriminating and specific. Attachments occur at all ages with the first tie likely formed with the mother (Ainsworth, 1969).

Attachment behavioural system. As has been previously indicated, Bowlby (1969) argued that the attachment behavioural system was an instinctively guided but environmentally influenced control system. This system is believed to have an evolutionary purpose to protect and regulate an infant's safety and survival (Main, 1995). The set-goal of the system is to regulate behaviours that maintain proximity and contact with a selected individual known as the attachment figure and to seek this individual for safety. Essentially, the set-goal for the infant or attached person is security (Bretherton, 1985). While the attachment behavioural system is more easily activated in infancy and childhood,

Bowlby argued that attachment continues to be influential throughout one's lifetime, especially in stressful situations. In fact, the attachment relationship formed in infancy is believed to be the prototype for all future social relationships (Bowlby, 1969).

Bowlby (1958) argued that there are five behavioural responses that define attachment behaviour. These responses are sucking, clinging, following, crying, and smiling. Bowlby suggested that clinging and following were more important because they function to increase the survival value of the offspring. Bowlby refers to these behaviours as instinctual responses which function to increase proximity between the infant and mother.

These attachment behaviours are activated, regulated and terminated by changes in both the internal and external environment (Main, 1995). The attachment system relies on different kinds of information including information from the sensory system, such as clues to physical or psychological danger, and information on the availability, both physical and psychological, of the attachment figure. Bowlby (1969) argued that the attachment system becomes highly active in threatening situations including threatened separation, actual separation and reunion and is deactivated by perceived safety. However, it is also activated in more day to day interactions such as when an infant is frightened, tired or sick. The attachment behaviours decrease when the attachment figure provides comfort, protection and help. Therefore, if the attachment figure is responsive and available, the infant will develop a strong sense of security and an adaptive attachment pattern. However, an infant can become attached to an insensitive and maltreating parent but would develop a less adaptive attachment pattern (Bowlby, 1969).

Secure-base behaviour. The essence of attachment theory is the secure-base phenomena, a concept contributed to attachment theory by Ainsworth and further developed by Bowlby (Posada et al., 1995). The basic idea is that infants use the attachment figure as a secure base from which to explore and as a haven for safety. Thus, the child can explore the outside world with the confidence that when he or she returns he or she will be welcomed, comforted if distressed or frightened, and nourished both physically and emotionally (Bowlby, 1988). Essentially, the role of the secure base is to be available and to encourage and help when necessary. Therefore, the attachment figure encourages autonomy while still remaining available and responsive when needed. An attachment figure can only provide this secure base if he or she is sensitive, aware and respectful of the child's attachment behaviours (Bowlby, 1988).

A central purpose of the secure-base phenomena is to balance the competing systems of proximity seeking and exploration which is regulated by the attachment behavioural system (Seifer & Schiller, 1995). When there is no perceived danger and the attachment figure is available, the child feels secure to explore his or her surroundings (Bretherton, 1987). If there is perceived danger, the child seeks proximity. If the child is uncertain about how to evaluate a situation, the attachment system will activate information-seeking behaviour, such as referencing the mother's face for clues. In other words, in situations where attachment behaviour is highly active, the child is likely to seek proximity and contact rather than exploration; in situations where attachment behaviour is less active, a child is more likely to explore and learn about the environment (Ainsworth,

1979). The attachment system regulates the secure-base behaviour where the ultimate set-goal for the infant or attached person is felt security.

It is important to highlight the distinction between secure-base behaviour and felt security (Seifer & Schiller, 1995). Secure-base behaviour consists of an observable set of organised behaviour (i.e., Bowlby's five behavioural responses) while felt security is an unobservable inner state. This inner state is not directly accessible and cannot be measured. However, an examination of secure-base behaviour can be directly assessed and is the basis of many attachment measures currently used (e.g., the Strange Situation). From these observable behaviours the infant's underlying state of mind (i.e., felt security) with regard to attachment is inferred.

Secure-base behaviour is important for several reasons (Seifer & Schiller, 1995). First and most importantly, the secure-base attachment figure provides protection to the infant from potential physical or psychological threats. Second, the secure base provides the infant with opportunities for new learning experiences. Optimal learning and exploration of the environment is achieved within the protection of a secure-base. Finally, secure-base behaviour provides the child with the opportunity to differentiate the self from the mother. As the child develops, the secure-base behaviours evolves from proximity-seeking behaviours, to exploration and eventually to autonomy. Therefore, it is with this secure-base, that the child can develop a sense of self.

One of the most fundamental ideas of attachment theory is that all children, except those reared in severe neglect or isolation, will develop secure-base behaviours with one or more attachment figures during the child's first year (Bowlby, 1969). Bowlby argued that

all infants across cultures exhibit these behaviours. Although the patterns of secure-base behaviour may differ between cultures, for evolutionary reasons there is a tendency to organise an attachment system between mother and child.

Research supports the secure-base phenomenon across cultures (Posada et al., 1995) and with non-human primates (Kondo-Ikemura & Waters, 1995). Posada et al. (1995) examined the secure-base phenomenon with mothers and their toddlers from Israel, Japan, China, Colombia, Germany, Norway, and the United States. Findings suggested that children in all countries and contexts used their mothers as a secure base. However, there was great variety in the secure-base behaviours displayed across cultures, suggesting that children of various cultures do not necessarily organize their secure-base behaviour with their mother in the same way. Similarly, a study with Old World monkeys suggested that these infants also used their mothers as a secure base (Kondo-Ikemura & Waters, 1995). Therefore, using the mother as a secure-base exists both across cultures and with certain higher primate species. This provides support for the universality of the phenomena.

Internal working models of attachment. Internal working models are the mental representations of attachment constructed by individuals (Main, Kaplan & Cassidy, 1985). They involve both affect and cognition and are essential to the attachment behavioural system. Not only do they influence behaviour, but working models can also influence feelings, cognition, attention, and memory (Main et al., 1985). Individual differences in infants' attachment behavioural systems are related to different internal working models of self, others, and the world (Bretherton, 1985). Bowlby (1969) suggested that through interactions with others and the world, the child constructs representations that predict and

interpret others' behaviour as well as help plan the child's own responses. The more accurate the internal model, the more accurate the prediction and interpretations. Thus, models are similar to cognitive maps which the child uses to guide behaviour in new situations. According to Bowlby (1969), the foundation of these working models is in place during an infant's first year.

The notion of internal working models comes from the work of Craik (1943) who suggested that a working model was a small-scale representation of how things operate in reality. Bowlby (1980) took this idea and elaborated it arguing that internal working models of the self and caregiver are constructed from actual experiences. For any given attachment, a child forms two internal working models, one of the attachment figure and one of the self. The internal working model of the attachment figure is dependent upon his or her degree of supportiveness and accessibility. The internal working model of the self relates to the child's perceptions of how acceptable he or she is to the attachment figure. For example, if the caregiver provides the child with support and comfort and respects the child's exploration of the world, the child is likely to develop a working model of the parent as loving, supportive and responsive and a working model of the self as worthy, valued and self-reliant (Bretherton, 1987). Conversely, if the caregiver rejects or ridicules the child's request for comfort or exploration and is not responsive or supportive, the child will likely develop a working model of a rejecting parent and a working model of the self as unworthy and unloved. Once established, these internal working models work outside conscious awareness and become so deeply ingrained that they become somewhat automatic. Although these models can be revised, especially in childhood, they become increasingly

resistant to great changes. When a working model becomes inaccurate or outdated, due to great inconsistencies between actual experiences and the internal representation, it may be less useful and may guide the child to unhealthy, perhaps pathological, patterns (Cassidy, 1990).

Bowlby used the work of Tulving (1985) on memory systems to explain how internal working models function. Tulving (1985) hypothesised three main memory systems. The episodic memory system consists of autobiographical memories of specific events or experiences that are remembered sequentially and available to conscious processing. The semantic memory system stores impersonal general knowledge or world facts. There are two sources for semantic memories: information received by others and a child's own conclusions based on experiences. In relation to attachment theory, semantic memory, also consciously processed, would contain information on the nature of relationships (Bowlby, 1980). The third memory system, procedural memory, the first memory system to develop, consists of scripts or patterns of behaviours for specific situations (Tulving, 1985). These scripts, which can be used to guide decision making and predict future events, are enacted without conscious awareness. Attachment behaviours, especially those displayed in methods of assessing attachment (i.e., the Strange Situation), can be considered procedural scripts which develop over time and are constructed by processing autobiographical memories. Taken together, the internal working model of attachment develops from each of these memory systems combined.

During infancy, information is encoded, stored and retrieved through sensorimotor means, and therefore internal working models consist of simple patterns of behaviours

(Crittenden, 1992). Because infants are limited cognitively, assessing their internal working models of attachment patterns can be achieved by observing these behaviour patterns (e.g., as measured by the Strange Situation). Therefore, representational models in infancy tap into the child's procedural memory processes. However, preschool and early school aged children are more sophisticated due to cognitive and language advances and can thus begin to think in more abstract ways and form symbolic representations. These developments make observing internal working models more complicated (Crittenden, 1992). Because both episodic and semantic memory systems rely on language in order to represent information, internal representations of these children are based on these memory systems. Therefore, in infancy, procedural memory systems dominate, whereas episodic and semantic memory systems dominate in the years beyond infancy.

Each of the three memory systems are subject to distortions during the encoding or retrieval of information (Crittenden, 1990). This implies that the internal working models derived from these systems can also be distorted. Bowlby (1980) discussed distortions in terms of defensive exclusion, the idea of selective processing in response to emotional conflict. For example, if a caregiver continually ridicules a child's proximity-seeking or rejects the child's feelings, the child may exclude the idea of the unloving mother from conscious awareness and retain the idealized working model of a loving mother at the conscious level of processing. Thus, the individual excludes from consciousness any images that are too anxiety provoking. Bowlby argued that defensive exclusion may result from distorting episodically stored memories in order to protect the self. Although

defensive processes keep the child from having to deal with anxiety and pain, inadequate, distorted internal working models are maladaptive and may hinder effective coping.

Summary

Bowlby has been largely credited for outlining the basic tenets of attachment theory. This theory integrates ideas from three major approaches: psychoanalysis, ethology and control system theory. Within his theory of attachment, Bowlby proposed the attachment behavioural system, the internal working model of attachment and the concept of a secure-base. The attachment behavioural system is the organizational structure hypothesized to exist that controls proximity and exploration behaviours. The internal working model is the mental representation constructed by the individual and consisting of both expectations about the self and the attachment relationship. The secure-base concept refers to the phenomenon that children use their attachment figure as a secure base from which to explore and as a haven for safety. Together, these three elements form the basis for attachment theory.

Phase 2: Empirical Support for Attachment Theory

The second phase in the development of attachment theory is characterized by an abundance of empirical research and growth in the field of attachment. Ainsworth was instrumental in promoting the early research on attachment theory. Her work not only provided empirical support but also refined and expanded the theory of attachment. As such, the contributions by Ainsworth marks a new and distinct phase in the development of attachment theory.

Assessing Attachment Patterns in Infancy

The empirical breakthrough in attachment theory resulted from Ainsworth's observational study conducted in the early 1960's in Baltimore (Ainsworth et al., 1978). Twenty-six infants were observed every three or four weeks from 0 to 12 months of age. Observational data revealed specific characteristics of mother-infant interactions related to feeding behaviour, face-to-face interactions, infant exploration, greeting, and following behaviours. Vast differences were found in mother's sensitivity and promptness in responding to her infant's signals. One of the most striking findings was that sensitive mothering, in the first three months of life, was related to more positive and pleasant interactions at age one.

The Strange Situation. The Baltimore project resulted in the Strange Situation procedure. The Ainsworth Strange Situations is a structured laboratory observation procedure in which 12 month-olds are observed in response to a series of low and high stress separations and reunions with the parent. It was developed to observe the balance between attachment and exploratory behaviours (i.e., secure-base behaviour). The idea was that these behaviours could best be observed in an unfamiliar environment with two conditions most likely to elicit attachment behaviours: separation from and reunion with the attachment figure.

The procedure consists of eight episodes, each lasting 3 minutes or less (Ainsworth et al., 1978). Initially, the mother and her infant are introduced to a toy-filled play room and then an unfamiliar woman (i.e., stranger) enters. The stranger plays with the infant and the mother leaves the room briefly (separation 1). The mother returns (reunion 1) and then

departs again (separation 2), this time leaving the infant alone. Finally, the stranger enters the room and then the mother returns (reunion 2). Separation episodes are terminated within 30 seconds if the infant is distressed.

Results from the Baltimore project (Ainsworth et al., 1978) suggested that infants did in fact explore the toys more in the mother's presence than in the stranger's presence or if the mother was absent. However, unexpectedly, the infants displayed differences in their pattern of attachment behaviours. Based on the findings, Ainsworth et al. developed a series of behavioural criteria to categorise these different patterns. They placed emphasis on the behavioural patterns displayed during the separation and reunion episodes. Three attachment classifications were identified: Group A, B, and C. Group B infants are considered to display secure attachment patterns while both A and C groups are anxiously attached and display insecure patterns of attachment.

Group B infants are identified as securely attached (Ainsworth et al., 1978; Ainsworth, 1979). During the pre-separation episodes the infant uses his or her mother as a secure base from which to explore. At separation, the infant's explorations diminishes, attachment behaviours increase, and distress is common. The infant shows signs of missing the mother by slowing in play or moving toward the door. Upon reunion, the infant actively greets his or her mother (e.g., with a smile or with raised arms) seeking proximity, contact and/or interaction with his or her mother. If the infant was distressed during separation, the infant is easily, almost immediately, soothed and comforted upon the mother's return. After brief contact with the mother, the infant returns to play and exploration.

Group A infants are insecure-avoidant (Ainsworth et al., 1978; Ainsworth, 1979). The infant plays and explores the environment during pre-separation but shows little affect. The infant displays no distress or response to the mother's departure and simply continues to explore the room. During reunion, the infant immediately looks away, moves away and avoids the mother while continuing to play. If the mother picks up the infant, he or she may stiffen and become affectless. There are no signs of distress or anger throughout the procedure, nor are there many signs of attachment behaviours. These insecure-avoidant infants appear to deactivate or repress attachment behaviours; thus allowing them to decrease their responses to fearful situations.

Group C infants are insecure-ambivalent (Ainsworth et al., 1978; Ainsworth, 1979). The infant is not able to explore his or her surroundings during pre-separation. He or she either sits passively near the mother or may engage in some play but frequently fusses or returns to the mother. Therefore, the infant shows signs of anxiety and is preoccupied even before the mother leaves. On departure, the child is very distressed. During reunion, the infant is ambivalent toward the mother. He or she may seek the mother, yet the infant resists contact or interaction and soon after shows angry rejection behaviours, such as pushing the mother away. Some infants are passive, barely greet the mother and are far too distressed to seek proximity. In fact, these infants never return to play. They often cannot be settled and continue to be distressed after the completion of the procedure. This insecure-ambivalent group is the least understood of the three attachment classifications (Cassidy & Berlin, 1994). The behaviour of these infants is puzzling because of the extreme response of both wanting and rejecting the mother.

These reunion patterns were validated against home observations in the Baltimore project (Ainsworth, 1979). Distinct patterns were found between the infant's strange situation behaviours and the mother's behaviour at home. The mothers of secure infants were more sensitive to their infant's signals during their first year (i.e., responded quickly to crying and held the baby in a tender manner). Furthermore, secure babies displayed little anxiety or anger in the home and were more compliant. In comparison, infants displaying avoidant attachments were often distressed in the home while their mothers were likely to reject infant attachment behaviours. Finally, mothers of the ambivalent group discouraged autonomy, were unpredictable and were insensitive to infant signals.

The ABC classification system has been shown to be a highly reliable and stable assessment measure of attachment patterns (e.g., Bretherton, 1985; Ainsworth et al., 1978; Main et al., 1985). It has been well standardized, and it is considered to be a valid descriptor of the quality of parent-child attachments (see Bretherton, 1995 for a review). The distributions of the three attachment patterns with an average, low-risk US sample suggests that a substantial majority (70%) are classified secure (B), a high minority (20%) are classified insecure-avoidant (A) and a small minority (10%) are classified insecure-ambivalent (C) (e.g., Ainsworth et al., 1978; Cicchetti, Toth & Linch, 1995; Main, 1995; van Ijendoorn & Kroonenberg, 1988).

Discovery of new attachment classification group. Early work with Ainsworth's classification system suggested that a small minority of children (approximately 13%) could not be classified using the ABC system (Cicchetti et al., 1995; Main & Solomon, 1990). Originally, researchers tried to fit these infants into the ABC system (i.e., the infant was

forced into the best fitting group) or labelled unclassifiable, but with extensive review of this sample, distinct patterns emerged. These unclassifiable infants lacked any clear goals or intentions. Further, they either had blended contradictory features of several strategies such as proximity seeking and strong avoidance, or they were dazed and disoriented during reunion. In essence, these infants did not have an organized coping mechanism or experienced a collapse of strategy (Main, 1995).

Many of the previously unclassifiable infants (90%) were subsequently classified with this new classification, disorganized-disoriented or D (Main & Solomon, 1990). Considering the new D classification together with the three traditional classifications (i.e., A, B, and C), approximately 15 to 25% of children in low risk samples receive the D classification, including many of those previously labelled unclassifiable as well as others erroneously assigned to one of the three types (Main, 1996; Main & Cassidy, 1988; Wartner, Grossmann, Fremmer-Bombik & Seuss, 1994).

Attachment Beyond Infancy: Preschool and Early Childhood

Bowlby (1969, 1973, 1980) posited that attachment spans the lifetime. However, much of the early work with attachment has been with infants. More recently, the focus has been examining attachment beyond infancy, particularly during the preschool and early childhood years (e.g., Main & Cassidy, 1988). The methods used vary, but they share the basic underlying assumption that early attachments relate to later child functioning (Teti, Nakagawa, Das, & Wirth, 1991). The following review, highlights many of the new assessment strategies used beyond the infancy years.

The Q-sort method. The Attachment Q-sort (Waters & Deane, 1985; Vaughn & Waters, 1990) is a home-based assessment strategy used to assess both infants and preschoolers in a non-stressful context. There are three main differences between the Attachment Q-sort and the Strange Situation: 1) the Q-sort does not rely on a procedure that activates the attachment system; 2) the observation period is two or three hours in the child's home rather than 20 minutes in a lab; and 3) a wider range of secure-base behaviours are examined (Seifer & Schiller, 1995). Because of these basic differences, the Attachment Q-sort has several advantages over the Strange Situation procedure, namely it is not limited to infancy, and it has greater ecological validity because it takes place in a natural setting (van Dam & van IZendoorn, 1988).

The Attachment Q-sort consists of 90 statements that describe the behaviour of infants and young children interacting with primary caregivers (Waters & Deane 1995). The items are intended to provide an extensive description of children's secure-base behaviours. The goal is for the observer to get a sense of a child's attachment-related behaviour patterns by sorting the set of behavioural descriptors into nine piles in the order of how characteristic they are of the child. The most characteristic items receive a score of nine and the least characteristic receive scores of one. The sorts are then assessed according to security, dependency, and sociability. Attachment security is obtained by correlating the infant's Q-sort with a Q-sort of a prototypic secure infant or child. Ideally, multiple observers trained in attachment theory would describe the child's behaviour in various settings. However in practice, researchers often use less well-trained observers, even the mother herself (Waters, 1995). A high correlation of .80 has been reported between the

sorts of a mother and an independent observer of the same child (Vaughn & Waters, 1990). In sum, the basic idea of the Q-sort strategy is that a child's organization of attachment and exploratory behaviours are revealed in the sort thus providing information about attachment security.

The finding that the Attachment Q-sort is a valid attachment measure and relates to Strange Situation classifications has not been consistently found in the literature. For example, in a study examining the concurrent validity of the Attachment Q-sort, van Dam and van Ijzendoorn (1988) had 39 mothers complete Q-sorts with regards to their children. Results indicated a lack of concurrent validity; that is no significant correlations were found between security as measured in the Attachment Q-sorts and Strange Situation. Furthermore, there was no relation between Q-sorts and maternal responsiveness. Although the Q-sort appears to be a promising tool, further research is needed to examine its psychometric properties.

Modified Strange Situation Procedures. Much of the focus on assessing the quality of attachment has been on expanding the Strange Situation method for older children. Main and Cassidy (1988) developed a system for classifying attachment organisations for six-year-olds. This system was later expanded to include 5 to 7 year old children. Classifications were based on a laboratory separation and reunion procedure similar to the Strange Situation. Essentially, the mother and child are together for the first 20 minutes. The mother then leaves while the child stays in the room with the experimenter (i.e., stranger) for one hour. When the mother returns, emphasis is not placed on the reunion and no instructions are given to the mother. The child's behaviour during the first five minutes

of the reunion is rated and classified. Attachment security versus insecurity is rated on a 9-point scale. Ratings at the higher end of the scale indicate security as demonstrated by a child initiating a warm, intimate relationship with the parent by physical proximity and/or affectionate contact or through eager, responsive conversation. Ratings of insecurity include avoidance or rejection of the parent, disorganized responses and excessively bright responses. In addition, each child's behaviour is rated on a 9-point scale of avoidance which reflects the intensity of physical or emotional interaction, proximity or contact. Reunion behaviour is also classified according to five attachment types (secure, insecure-avoidant, insecure-ambivalent, insecure-controlling and insecure-other).

Using this classification system, Main and Cassidy's (1988) longitudinal study of 33 families suggested that patterns of attachment in infancy, as measured with Ainsworth's Strange Situation, predicted patterns of attachment at 6 years of age. Although the specific behaviours differed at the two ages, the underlying pattern of attachment was stable. Overall, for 84% of the children, attachment classification patterns (i.e., A, B, C, and D) to the mother at age 1 was identical to classification at age 6. A lower predictability (61%) was found for attachment to father. However, test-re-test reliability of the attachment classification for 6-year-olds was only 62% over a one month period. When children with D classifications were reassigned to the best fitting alternative (i.e., A, B, or C), stability over a one month period was 86%. This finding again points to the unreliability of the D classification. Taken together, the findings suggest that attachment patterns during the early school years are relatively stable.

Recently two new systems for coding attachment during the toddler and preschool years have been developed (Cassidy & Marvin, 1992; Crittenden, 1992). Both these systems are based on the assumption that attachment behaviours will change as the child gets older and develops new strategies (Fagot & Pears, 1996). Cassidy and Marvin's (1992) system is used to classify attachment patterns in 3- to 5-year-olds in the Strange Situation procedure. It is adapted from both Ainsworth's original system for infants and Main and Cassidy's (1988) system for classifying six year olds. This system uses the same four classification types (i.e., secure, insecure- avoidant, insecure-ambivalent, and insecure-disorganized). Differences from the Strange Situation coding system are reflected in the behaviours displayed by preschoolers compared to infants. Classification are based on physical proximity, verbal exchanges and affective expression. In addition, a seven-point avoidance scale and a nine-point security scale are used to classify attachment. Many recent studies have used this method; however the validation of this system is still ongoing (Cicchetti et al., 1995; Moss, Parent, Gosselin, Rousseau & St-Laurent, 1996; Stevenson-Hinde & Shouldice, 1995). One such study has validated the Cassidy and Marvin coding system against maternal interactions (Stevenson-Hinde & Shouldice, 1995).

Crittenden (1992) argued that the quality of attachment in the preschool years changes as the child develops better coping strategies and more complex representational processes or internal working models. Taking these changes into account, Crittenden devised the Preschool Attachment Assessment (PAA) system to assess the laboratory Strange Situation separation-reunion procedure with preschoolers. The PAA system includes the traditional secure category, an avoidant type (referred to as defended), an

ambivalent type (referred to as coercive), as well as a disorganized classification and a new A/C category. Crittenden argued that children avoidant in infancy develop a defended strategy in the preschool years consisting of an inhibition of affect or compulsive caretaking or compliance and a superficial involvement with the caregiver. A child classified as ambivalent in infancy displays a coercive strategy in the preschool years whereby the child attempts to control his or her attachment figure through behaviour that is either coy or threatening and angry. The new A/C category describes the child that either combines the two insecure strategies (i.e., avoidant and ambivalent) or simply alternates between the two approaches during the separation-reunion procedure. Empirical support for this system continues suggesting that it is a promising tool (Fagot & Pears, 1996; Teti & Gelfand, 1997). For example, results from a study by Teti and Gelfand (1997) lend support to the PAA as a valid instrument for measuring and assessing the quality of attachment in the preschool years.

There are inherent difficulties, however, with using either of these modified Strange Situation classification systems. Main and Cassidy (1988) argued that it is more difficult to classify attachment patterns in the attachment system for 6-year-olds than with the Strange Situation. The system for 6-year-olds is much more difficult and time consuming to learn than the infant system. This is mainly due to the broader repertoire of behaviours, including language, available to the 6-year-old. As a result of these difficulties, Main and Cassidy argued that a child's attachment to a parent should not be based entirely on their attachment system for 6-year-olds. Ideally, they suggested using this behavioural method with

alternative measures which capture the child's representations of the attachment relationship to tap into the child's internal working model of relationships.

The Effects of Attachment Patterns on Later Behaviours

There is an abundance of empirical support for the notion that the quality of the early mother-child attachment relates to later child functioning. Much of the research links early attachment patterns with subsequent child outcomes, particularly within the domains of social, cognitive and behavioural problems.

Quality of attachment has been linked with behaviour problems in young children. More than 80% of clinically-referred preschoolers are classified insecure, most of which fall within the controlling or type D attachment pattern (Greenberg, Speltz, Derklyen & Endriga, 1991; Speltz, Greenberg & Derklyen, 1990). Children with a D classification are more likely to be perceived by teachers as having behaviour problems between 5 and 7 years of age (Moss, Parent, Gosselin, Rousseau & St-Laurent, 1996). In addition, findings suggest gender differences in relation to behaviour problems. For boys, attachment classifications at age 1 were significantly related to later psychopathology at age 6, as measured by higher scores on both internalizing and externalizing type of behaviour problems on the Child Behaviour Checklist (CBCL), with insecurely attached boys being more at risk (Lewis, Feiring, McGuffog & Jaskir, 1984). This study indicated that 40% of insecure children, compared to only 6% of the secure group scored above the 90th percentile on the CBCL total problem score. However, no relationship between early attachment patterns and later psychopathology was found for girls.

The idea that early parent-child relationships influence subsequent behaviour problems, however, has not been entirely supported by research. For example, security of attachment at infancy was not related to scores on parental or teacher-rated behaviour problem checklists at age four (Goldberg, Corter, Lojkasek, & Minde, 1990). In addition, infant attachment security was not related to parental reports of behaviour problems at age six (Bates & Bayles, 1988). However, if only children whose behaviour problems are in the clinical range are considered, the insecurely attached group is represented 2 ½ to 5 ½ times more often (Goldberg, 1993; Goldberg et al., 1990; Moss et al., 1996). Thus, although the direct association between early attachment patterns and later behaviour problems is not fully agreed upon, it appears that taking a more clinical approach by examining those children in the clinical range is suggestive of the influence of attachment on later functioning.

Several of these studies also suggested a significant relation between attachment and gender. Compared to secure boys, insecure boys displayed more attention-seeking, aggressive, disruptive, assertive and controlling behaviours (Turner, 1991). Insecure boys were less liked by peers and teachers, were perceived as less competent and rated as having more behaviour problems than securely attached boys (Cohn, 1990). Compared to their secure counterparts, they were also less compliant, elicited the most discipline and showed more negative behaviour (Turner, 1993). Conversely, insecure girls showed more dependent, compliant and positive expressive behaviours but less assertive and controlling behaviours than secure girls (Turner, 1991). Considering this interaction between gender

and attachment, Turner (1991) suggested that both attachment classification and gender together may predict different social behaviours.

Attachment quality has also been linked to peer relations (Turner, 1991), behaviour in preschool (Suess, Grossmann, & Sroufe, 1992; Turner, 1993; Wartner, Grossmann, Fremmer-Bombik & Suess, 1994), social competence at school (Cohn, 1990), and cognitive functioning (Jacobsen et al., 1994; van Ijendoorn & van Vliet-Visser, 1988). Overall, a summary of these studies suggests that children classified secure at infancy attained the highest IQ scores in kindergarten (van Ijendoorn & van Vliet-Visser, 1988), were more competent in their quality of play and conflict resolution (Wartner et al., 1994), displayed fewer behaviour problems at age 6 (Wartner et al., 1994), and had better skills to meet the challenges of preschool (Suess, Grossmann, & Sroufe, 1992). Furthermore, a secure attachment relationship was related to higher cognitive functioning at age 7 (Jacobsen et al., 1994) and greater independence and autonomy in preschool (Turner, 1993).

In sum, these studies indicate that there is better adaptation and functioning for children who are securely attached in infancy than those who are insecurely attached. This is consistent with attachment theory which suggests that secure relationships foster self-confidence, competency, and positive self-esteem.

The Effects of Non-parental Child Care on Attachment

Another important debate in the attachment literature is the effects of child care on attachment security. Attachment theory (Bowlby, 1969) has been interpreted to suggest that the repeated separations of mothers and children is disruptive to forming a secure attachment relationship (Roggerman, Langlois, Hubbs-Tait & Rieser-Danner, 1994). Thus,

the effects of non-parental care on attachment is an important theoretical question and has been the subjects of much research.

Several studies have found a significant difference in attachment patterns between day-care and non-day-care children (Barglow, Vaughn, & Molitor, 1987; Belsky, 1988; Egeland & Hiester, 1995). Belsky (1988) conducted one of the first large meta-analyses evaluating the link between attachment classifications and child care. Findings indicated that children in a variety of child care arrangements, including day-care, family day-care and nanny care, for more than 20 hours per week beginning in their first year tended to be classified insecure at 12 and 18 months of age, as assessed with the Strange Situation. Specifically, 43% of infants in early and extensive care were classified insecurely attached, most of these were classified insecure-avoidant. Similarly, Barglow et al. (1987) suggested maternal employment in the infant's first year is associated with increased rates of insecure attachment, again particularly for the insecure-avoidant attachment pattern. Barglow et al. suggested that the daily separations, as a result of child care, are experienced by infants as maternal rejection.

Despite the support that these studies have provided for the ill-effects of child care on attachment, there is a growing body of research suggesting that child care experiences do not have detrimental effects on attachment security (Egeland & Hiester, 1995; NICHD, 1997; Roggman et al., 1994). Egeland and Hiester (1995) reported mixed findings on the effects of child care on attachment security. They examined the long-term effects of day care and mother-infant attachment on the social and emotional adaptation in the early school years in a sample of high risk poverty families. They found that the effects of day

care at 42 months of age depended on the quality of early attachment. That is, day care had a negative effect on children classified as secure at infancy but had a positive influence for insecure children. However, the effects of child care did not persist beyond the first grade for either secure or insecurely attached infants. Overall, attachment was related to later adaptation for non-day care children but did not predict later adaptation for day-care children. Similarly, in an attempt to replicate the results of Belsky's meta-analysis, Roggman et al. (1994) found no significant relations between child care and attachment. Together, these findings suggest that the relations between child care and attachment security is not straight forward.

A recent national investigation of 1,153 infant and their mothers across 10 US sites provided further support for the lack of detrimental effects of child care experiences on attachment security (NICHD, 1997). The study revealed no significant effect of child care experiences (quality, amount, age of entry, stability and type of child care) on attachment security. Even in extensive, early, unstable or poor-quality child care, the likelihood of insecure attachments to mother did not increase. Therefore, child care itself did not constitute a risk factor nor a benefit for attachment security. However, attachment security was related to maternal sensitivity and responsiveness. A significant interaction effect emerged with infants being less likely to be securely attached when low maternal sensitivity was combined with poor quality child care, extensive care, or multiple child care arrangements. In sum, this study suggested that the effects of child care on attachment depend on the nature of the interaction rather than child care itself (NICHD, 1997).

Taken together these contradictory findings simply fuel the ongoing controversy over the effects of child care on attachment security. However, all that can be said for certain about the association between child care and attachment is that the relations is currently still unknown (Roggman et al., 1994).

Summary

Ainsworth's Strange Situation procedure was the first standardized tool developed to assess attachment patterns. Its introduction into the field has spawned the development of other tools for assessing attachment in children beyond the infant years. The Strange Situation and its derivatives has promoted an abundance of research examining the basic tenets of attachment theory. Among the most notable findings in the literature is that attachment patterns in early infancy relate to later behaviours. Compared to insecurely attached infants, securely attached infants have better adaptation and functioning in the early school years. However, the effects of child care on attachment security still remains unknown.

Phase 3: The New Focus in Attachment Research

The current phase in the study of attachment is in exploring the internal representational processes of attachment (Bretherton, 1992, 1995; Main, 1996). To reiterate, the internal working model or representational model of self and attachment consists of both expectations about the self and others. This model is constructed through previous experiences and unconscious rules regarding how to process attachment-related information (Bowlby, 1969, 1973, 1980). A child with a secure working model of the attachment relationship is assumed to have positive expectations of the mother as

responsive and available. This in turn produces a working model of the self as valued and special. Conversely, a child with an insecure working model is assumed to have negative expectations of the mother and develop a negative image of the self as unworthy and unloved (Bretherton, 1992).

The distinguishing feature of this attachment research phase is not that new representational methods developed to tap into working models but rather that the internal representations have become the focus. This renewed interest in representations has been influenced by two main factors. The first, and perhaps greatest influence, was Bowlby's (1973, 1980) later volumes in his attachment trilogy which focused on internal working models. The second, is the demand for additional measures to assess attachment beyond infancy (Bretherton, 1995). Research in this area has focused on the relation between early attachment patterns and drawings, discourse, and narratives of both children and adults. However, the focus here will be to review the representational measures devised for and used with young children.

Representational-Based Measures of Attachment

Internal working models of attachment, by definition, cannot be assessed directly but rather are to be inferred from behaviour (Solomon et al., 1995). Until quite recently, most attachment measures relied on observational measures, such as the Strange Situation and its variations or the Attachment Q-sort, to infer the internal representations of the mother-infant relationship. These methods focus on secure-base behaviours and sensorimotor working models; both focuses may not fully capture the essence of Bowlby's notion of representational internal working models (Oppenheim & Waters, 1995).

Sensorimotor internal working models are based on actual temporally ordered sequences of events (Pipp, 1990). Representational working models are based on symbolic thought. With the onset of representational thought, toddlers can symbolically represent the attachment relationships independent of space and time (Pipp, 1990). Therefore, as children develop, both cognitively and socially, their internal representations can be inferred through symbolic representations. As such, attachment strategies are beginning to rely on children's language, narrative and cognitive skills in examining internal working models (Oppenheim & Waters, 1995). By the end of early childhood, representations of family relations through language and play should theoretically reflect the child's representation of attachment and predict the quality of mother-child attachment (Solomon et al., 1995).

Research examining the representations of attachment has relied on a variety of methods to elicit young children's working model of attachment (Bretherton, Ridgeway, & Cassidy, 1990; Cassidy, 1988; Main, Kaplan, & Cassidy, 1985; Oppenheim, 1997; Slough & Greenberg, 1990; Solomon et al., 1995; Verschueren, Morcoen, & Schoefs, 1996). Many of these studies have used the narrative approach. Prior to reviewing the literature, a brief overview of the role of narratives in assessing attachment security is outlined.

The most common narrative approach used to assess attachment is the use of a story completion task. In this task, the child is given story stems and asked to complete each story using a set of dolls and props. The overall purpose of projective techniques, such as story completions, in attachment research is to tap into the internal representation or working model of the child. When confronted with a story stem or an incomplete story of a

somewhat ambiguous situation, the child does not have time to ponder or reflect on the stories told (Mueller & Tingley, 1990). Because the stories are requested immediately, the child must say whatever comes to mind. Thus, the demands of the task require the child to rely on his or her imagination which is believed to reflect the essence or core schema of the self and others. This theoretical assumption between a child's imagination and internal representations underlies the logic of story completion tasks. The more the child's responses to story completions are derived from immediate imagination or fantasy, such as the task demands, the more likely the story reflects actual internal representations of self and others (Mueller & Tingley, 1990). Although, some children's stories may not be spontaneous and may reflect something they recently saw on television or heard in a story book, most stories are believed to reflect the self or personality. Grasping this conceptual link between internal representation and imagination is necessary to fully understand the role of narrative approaches in assessing attachment security.

The first and most extensive study designed to examine the internal working model of attachment using a narrative approach was by Main et al. (1985). In a longitudinal study, 40 children were tested at 6 years of age. These children were previously observed in the Strange Situation at 12 and 18 months of age to assess patterns of attachment. At age 6, the children participated in a variety of tasks designed to assess attachment. Children were given three semi-projective measures: the Separation Anxiety Test (SAT), the family portrait photograph, and a family drawing task. Children first drew a picture of their families. Then they completed the Klagsbrun and Bowlby's (1976) adapted version of the SAT. The SAT is comprised of six photographs depicting parent-child separation

consisting of three mild (e.g., a child going to bed) and three severe (e.g., parents leaving for two-week vacation) separations. For each picture, the child answered how the child in the picture was feeling and how that child would deal with the separation. Finally, the children were offered the photograph of their parents and themselves that was taken on the family's arrival to the lab. The experimenter administered each of these three tasks in the absence of parents. Following a separation of approximately an hour, the mother and father returned separately. The reunion episode lasted three minutes for each parent. Parent-child discourse patterns and reunion behaviours were observed.

Main et al. (1985) reported significant findings between attachment patterns and the three representational measures. Results suggested a significant relationship between attachment classifications in infancy (i.e., ABCD), reunion behaviours and discourse patterns at age 6 to the mother but not to father. The dialogue of children classified as secure was more fluent and included a wide range of topics whereas that of insecure children was restricted and emphasized impersonal topics and rhetorical questions. The SAT responses were analysed for emotional openness and ability to deal with separation issues. Results indicated a strong relationship between emotional openness and early attachment classifications. Children classified as secure provided elaborate, coherent and open responses to the pictures whereas insecure children gave avoidant or confused answers and were unable to give suggestions for what the pictured child could do to deal with the separation. In response to the family photograph, secure children showed interest in the picture, smiled or made a comment, then returned it to the experimenter. Insecure children, especially those classified as avoidant, tended to turn away from the picture, drop it or hand

it back to the experimenter. Finally, the family drawings of secure children depicted family members who were well-grounded, individuated, and not always smiling. Drawings of insecure children were of a different quality. Family members were not grounded and often floated in the air, were placed unusually close to one another and were often drawn unproportionally very large, armless and smiling.

Taken together, the results of this study by Main et al. (1995) suggest that children's representation of attachment at age 6 was highly predictable from infant attachment patterns with the mother. Several conclusions can be drawn from this findings. First, a child's working model is likely to be most influenced by the main attachment figure, the mother. Second, the working models of secure and insecure children differ greatly. Secure children remained organized even when faced with attachment-related themes that were emotionally loaded. These children openly discussed a range of emotions. Insecure children on the other hand appeared to have difficulty regulating their emotions and had more difficulty remaining organized when presented with attachment themes. As Main et al. (1985) concluded, secure 6-year-olds appear to be able to easily access their emotions concerning attachment as seen in their fluency in dialogue with parents and their ability to openly discuss imagined separations. In sum, the internal working models of children with secure versus insecure patterns of attachment vary considerably, and these models established by the end of the first year appear to be stable in early childhood.

Several other researchers have used the SAT to elicit narratives about attachment (Fonagy, Redfern & Charman, 1997; Jacobsen, Edelstein & Hofmann, 1994; Shouldice & Stevenson-Hinde, 1992; Slough & Greenberg, 1990; Wright, Binny & Smith, 1995). For

example, using a revised version of the SAT, Slough and Greenberg (1990) investigated the internal working model of 5-year-olds attachment relationships. Children viewed six pictures, which contained the same situational contexts as the originals but showed only the child's profile or back to maintain ambiguity of facial expressions. The pictures also showed both the mother and father in all but two pictures. The pictures were presented with a brief explanation and the children were asked how the pictured child might feel, why the pictured child feels that way and what the pictured child would do. In addition, Slough and Greenberg included a question asking the child how he or she would feel and behave if he or she were the child in the picture.

Children's responses to each of the three severe separation pictures were rated on an attachment scale while responses to the three mild pictures were rated on a self-reliance scale (Slough & Greenberg, 1990). All responses were rated on an avoidance scale. The children's ability to express feelings were also rated on a nine-point scale of emotional openness. The children and mothers also participated in a separation-reunion episode consisting of a short separation (3 minutes) and a long separation (90 minutes) to assess attachment security. Ratings of attachment were coded based on a security of attachment scale and an avoidance scale developed by Main and Cassidy (1988).

The findings suggested significant correlations between SAT responses and ratings of attachment (Slough & Greenberg, 1990). Children rated as secure, as assessed with the separation-reunion procedure, had higher attachment and self-reliance scores and lower avoidance scores on the SAT. These correlations were higher when the child was referring to the self rather than the hypothetical child in the picture. Furthermore, children rated

similarly on the self-reliance scale for both the self and the other (i.e., the hypothetical child) received the highest security rating. Similarly, concordance with the avoidance SAT scores between the self and the hypothetical child received higher security than avoidant ratings. Thus, the secure children were more emotionally open with attachment themes, irregardless of the perspective (i.e., self or other). These findings support Bowlby's (1980) notion of defensive exclusions where the more secure the child, the less likely he or she is to make a distinction between the self and others in relation to attachment issues (Slough & Greenberg, 1990).

Shouldice and Stevenson-Hinde (1992), however, reported that the agreement between attachment classification and SAT responses was far from perfect. For example, although 75% of avoidant children gave avoidant first responses, so did half of the secure and ambivalent children. Even if all SAT responses were considered together, it would have been impossible to predict attachment classification. Shouldice and Stevenson-Hinde suggested that the SAT does not reliably assess attachment patterns and thus should not be used as an alternative attachment measure. Similarly, Wright et al. (1995) reported discrepant results with the SAT in relation to its psychometric properties. They found acceptable inter-rater reliability but low reliability regarding test-retest scores and internal test construction.

Building further on the narrative approach used by Main et al. (1985), Cassidy (1988) used a story-stem technique and a puppet interview to examine 6-year-olds' representations of the self in the attachment relationship. The children were also observed in a separation-reunion procedure and coded according to the secure, insecure, ambivalent

and controlling classifications. In the story completion task, children were asked to use a doll family to complete six stories dealing with family relationship themes such as familial conflict, self-esteem and outside threat (e.g., The child says “I’m sorry, Mom”; the child is awoken by a loud noise in the middle of the night.). Each story was accompanied by a series of probes. These stories were intended to reflect the child’s mental representation of the attachment relationship. Stories were rated on a five point scale with scores on the high end reflecting a secure relationship. Stories were also classified as either secure/confident (e.g., The doll protagonist was described as someone valuable, and the relationship with mother was warm and special.), avoidant (e.g., The doll protagonist was isolated and/or rejected and the importance of relationship with mother was denied.), or hostile/negative (e.g., The doll protagonist was involved in hostile, violent or bizarre behaviour.). In the puppet interview, children were asked questions about themselves through a puppet. That is, the interviewer asked the hand puppet questions about the child and the child provided answers [e.g., Bix, (puppet’s name) do you like (child’s name)? Do you think (child’s name) is special?; Do you like (child’s name) they way he or she is or do you want to make him or her better?]]. Responses given through the hand puppet are assumed to reflect the child’s level of self-esteem and perceptions of the way others view himself or herself. The overall quality of the answers (i.e., ease, positive/negative tone) was rated on a five point scale

The results of Cassidy’s (1988) study indicated a significant relation between attachment classifications and the child’s representations of the self and doll story classifications. In the puppet interview children classified as secure, based on separation-

reunion, more likely presented a positive picture of the self and acknowledged the self as less than perfect. Insecure-avoidant children depicted the self as perfect and did not mention interpersonal relationships whereas insecure-controlling children depicted the self in a negative way. No clear pattern of responses emerged for the insecure-ambivalent group. In the story completion task, secure children were more likely to depict the child doll as someone worthy and having a warm supportive relationship with the mother. Insecure-avoidant children portrayed the doll protagonist as being rejected or isolated while insecure-ambivalent children displayed a variety of responses with no clear pattern emerging. Finally, insecure-controlling children involved the doll in violent hostile, bizarre or negative behaviours with a less supportive mother-child relationship. In sum, findings suggested a link between security as assessed through the separation-reunion procedure, the story completions task and the puppet interview. However, this association was not found for the ambivalent group.

Inspired by these previous studies, Bretherton, Ridgeway and Cassidy (1990) examined the internal working model of 3-year olds using the Attachment Story Completion Task (see also Bretherton, Prentiss, & Ridgeway, 1990). The stories were designed to elicit children's enactments of a variety of attachment-related issues using a set of family figures. Each of the five attachment related story stems involved a potential crisis [e.g., child hurts knee, child spills juice, a monster is in the bedroom, parents leave and return from a trip (separation and reunion)] were presented and then followed by an invitation for the child to enact what would happen next in the story. Children also participated in a separation-reunion procedure. All five story completions, including both

the verbal and enacted components, were considered in the attachment classifications. The predominant type of response across the stories determined classification, with the responses to the departure and reunion stories weighted more heavily in difficult-to-classify cases. Children were classified as secure if they dealt with the story issue with little hesitation and enacted a positive resolution. Children were classified as avoidant if they required many prompts or produced avoidant or irrelevant resolutions, and the children were classified as disorganized if they enacted bizarre story completions. Similar to Cassidy (1988), no consistent patterns were observed for ambivalent children.

Bretherton et al.'s (1990) study suggested a significant relation between attachment story ratings and classifications of secure versus insecure across a number of other attachment measures. Significant correlations were found between attachment stories and the following measures: Strange Situation classifications obtained at 18 months, security scores from the Attachment Q-sort at 25 months, and separation-reunion classification at age 3. However, the type of insecurity (i.e., avoidant, ambivalent, or disorganized) was not consistent across procedures and therefore was not predictable across measures. That is, children were not classified into the same insecure category within the different attachment procedures. This finding differed from Cassidy (1988) who was able to predict the subcategory of insecurity. In summary, this study has made two important contributions in the area of representations and attachment: 1) Children even as young as 3 can understand the major issue in each attachment-related story and give appropriate resolutions within a structured framework (i.e., a story beginning); 2) Narratives of secure and insecure children

differ in content and coherence with insecure children having difficulties with emotional regulations when confronted with attachment-related issues (Bretherton et al., 1990).

Summary

The research reviewed suggests that the content and processes of children's narrative about attachment taps into their internal working models of the self and the attachment relationship. Secure children generally depict narratives characterized by positive interactions where parents are supportive, loving and available. These children are emotionally open and express attachment themes with ease and coherence. Thus, the content of the narratives is key to the assessment of security. However, the classification of insecurity is largely based on the processes of the narrative, particularly organizational features, and not only the content of their stories. Overall, insecure children have difficulty communicating about attachment themes because these themes are emotionally laden. These children are less emotionally open and often find a way to distract themselves from confronting the emotions associated with attachment-related themes. As a result, these narratives are less coherent and less organised than those of secure children. Thus, the main factors that discriminate between the narratives of secure versus insecure children is their ease, organization, coherence and openness (Oppenheim & Waters, 1995).

Another tool that has been recently introduced to examine the internal working model of young children is the Attachment Doll Play (Solomon, et al., 1995). This procedure is a further variant of story-completions tasks. This new system for classifying representations builds on the successes of earlier measures. The Attachment Doll Play is a modified version of the Story Completion Task by Bretherton and colleagues (1990).

However, this new version focuses specifically on parent-child separations. Modifications were made to both the procedure and materials in order to enhance the depth and richness of the children's doll play providing a deeper reflection of children's mental representations of attachment.

The Attachment Doll Play (George and Solomon, 1990; Solomon et al., 1995) includes four of the original attachment-related stories and a new neutral warm-up. The four attachment stories are: 1) Hurt Knee (The child falls off a rock and hurts his or her knee.); 2) Monster in the Bedroom (The child is sent to bed and cries out that there is a monster in the room.); 3) Departure (The mother and father leave for an overnight trip and a babysitter stays with the children.); and 4) Reunion (The babysitter sees the parents return the next morning and announces their return to the children.). After each story stem is introduced, the child is encouraged to enact a story completion with a set of dolls and a doll house by the experimenter saying, "Show me what happens next." Doll-play classifications were based on the child's narratives and action on the combined Departure and Reunion stories. Children were assigned one of four classifications: secure (confident), avoidant (casual), ambivalent (busy), or disorganized (frightened). Solomon et al. argued that the strength of this Attachment Doll Play classification system is its emphasis on relatively unstructured and symbolic play rather than relying on verbal responses alone.

Most children classified as secure enact a 'danger and rescue' theme where the child experiences danger upon parent's absence, but the danger is followed by a resolution or a happy ending, often by a competent adult. The stories of avoidant children contain 'casual' themes whereby children do not display any attachment fears in the doll play but

rather continue with ordinary daily activities in the parents' absence. Stories of ambivalent children are characterized by a 'busy' theme whereby children engage in activities which keep them busy or distracted from the parents' absence. Finally, disorganized children are unable to construct an organized story and enact stories usually containing themes of unresolved chaos, punishment, and threat or abandonment by parents.

In the only published study using the Attachment Doll Play, Solomon et al. (1995) examined whether children classified as controlling (i.e., disorganized) differed from children classified into the traditional Ainsworth attachment patterns (i.e., secure, avoidant and ambivalent) in their symbolic representations of attachment (as measured with the Attachment Doll Play) and their degree of behaviour problems. Thus, doll play classifications were compared to a laboratory separation-reunion procedure (Main & Cassidy, 1988) and a mother's ratings of her child's behaviour on the CBCL. In this middle-class sample of kindergarten children, the distribution of attachment classifications according to the doll play was approximately equal across the four groups. Of the sample of 42, 19% fell in the secure group, 21% in both the avoidant and disorganized groups, and 38% in the ambivalent group. Inter-rater reliability of doll play classifications for the study sample was 71%. Solomon et al. (1995) reported a significant agreement (79%) between the attachment doll play classification and the Main and Cassidy (1988) separation-reunion classifications. In addition, the findings indicated that compared to the traditional attachment groups the disorganized children had significantly more behaviour problems as measured by the CBCL. The results suggested that children classified as controlling were more at risk for behaviour problems. Overall, this study validated the distinction between

disorganized and traditional attachment groups. Although this classification system was similar to those adopted by others using story-completions tasks, compared to previous classification systems, this new system resulted in greater agreement between reunion behaviour, as measured by the CBCL and symbolic representations, as measured by the Attachment Doll Play, particularly for the controlling and ambivalent groups (Solomon et al., 1995).

The Present Study

To date there has been little empirical work on the Attachment Doll Play tool (Solomon et al., 1995). The sole published study suggested that the Attachment Doll Play was usefulness in assessing the internal working models of young children. However, there has been little empirical work on the tool. The purpose of this study was to empirically investigate the Attachment Doll Play (Solomon et al., 1995) as a tool for assessing the internal working models of 5- and 6-year-olds. Primarily, this study attempted to provide empirical support for and further explore the Attachment Doll Play tool. The study focused on four specific objectives.

First, the study attempted to replicate the distribution of attachment patterns and the inter-rater reliability of the Attachment Doll Play reported by Solomon et al. (1995). Because the study by Solomon et al. (1995) is the only published study using this new assessment tool, it is imperative to examine the replicability of their findings. Being able to replicate similar patterns in different populations provides support for the soundness of the assessment tool.

Second, the study explored the relation between children's internal working models of attachment, as assessed with the doll play, and behaviour problems. Does the Attachment Doll Play classification differentiate children with more problem behaviours, as assessed with the CBCL (Achenbach, 1991)? In accordance with previous research, are children classified as insecure more at risk for behaviour problems? Conversely, are children in the clinical range more likely to be insecurely attached? Such data may provide evidence for the validity of the Attachment Doll Play as a tool for assessing attachment.

Third, the study explored the link between child care and representations of attachment. Previous child care research has focused mainly on the effects of child care on attachment security in infancy. No known research has examined the relation between representations of attachment in 5- and 6-year olds and child care. Do the same patterns in infancy between child care and attachment security emerge using the Attachment Doll Play? Is there a relations between a child's current child care status and attachment representations? There is an attempt in the present study to bridge child care research with representational processes.

Fourth, the present study expanded the Attachment Doll Play assessment tool. One of the innovative modifications made by George and Solomon (1990) with this tool was to have children select a doll to represent the 'self' in the stories and to select dolls to represent a pretend family. Previous story completion tasks did not give the child any choice in doll selection and simply used a basic family (i.e., a mother, father and child) chosen by the experimenter. George and Solomon argued that their modifications provided a deeper reflection of the internal working model of attachment and facilitated symbolic

play and identification with story characters. If the Attachment Doll Play is assessing the child's representations of attachment and if these modifications allow for a deeper reflection of such processes, it is important to examine the child's representation of the self and the family in the doll play. Do secure and insecurely classified children differ in doll selections of self and the family? The child's representations in the doll family in relations to attachment classifications was also examined in the present study.

In summary, the present study attempted to replicate previous work with the Attachment Doll Play, explore the links between representations of attachment and behaviour problems and child care status, and expand the Attachment Doll Play tool. The main purpose of the present study, therefore, was a further analysis as well as an exploratory investigations of the Attachment Doll Play tool.

CHAPTER III

Method

This chapter includes a description of the participants, the procedure, and the measures used in the study. The participants section describes the children and families participating in the study and the recruitment procedures. Subsequently, the study's procedures are outlined. This chapter concludes with a description of the measures used in the study including the Attachment Doll Play administration procedures, the classification system and the two questionnaires administered to mothers.

Participants

Fifty 5 and 6 year old children ($M = 71.2$ months, range 60.4 - 83.5 months) participated in the study. There was an equal number of 5-year-olds ($M = 65.7$ months) and 6-year-olds ($M = 76.6$ months) and an equal number of boys and girls. Specifically, there were 25 5-year-olds (13 boys and 12 girls) and 25 6-year-olds (12 boys and 13 girls). Included in the sample were three pairs of 5- and 6-year-old siblings. All children had begun school: 7 were attending junior kindergarten; 33 were attending senior kindergarten; and 10 were in grade one. Most children were white (96%), and all children spoke English as their first language. The majority of children were first-born (44%) and came from maritally intact families (98%).

Information was obtained on children's non-parental child care experiences both outside of school hours, and prior to entering school. Outside of school hours, 46% of children were in part-time child care (i.e., less than 20 hours per week); 30% were in full-time child care (i.e., 20 or more hours per week), and 24% received no non-parental child

care. Prior to entering school, 18% of children had been in part-time child care; 58% had been in full-time child care, and 24% had not been in any form of child care.

The families were middle to upper-middle class, residing in Metropolitan Toronto and the surrounding area. All the fathers were employed full-time ($M = 50$ hours per week) with 96% in professional, entrepreneurial or skilled work. Most of the fathers had attained a university degree or college diploma (80%). Most of the mothers were homemakers (40%). Thirty-four percent of the mothers worked part-time ($M = 16$ hours per week), and 26% worked full-time ($M = 43$ hours per week) in predominately professional, entrepreneurial or skilled work. In addition, most of the mothers were university or college graduates (83%).

Recruitment of Participants

A total of 64% of children were recruited by contacting mothers whose children had participated in previous developmental studies by the investigator two to three years prior to the present study. The remaining 36% were recruited through word-of-mouth. Initial contact with mothers was made by phone. The study was described to mothers as an investigation of children's perceptions of family interactions. Mothers were given a description of the procedures and time commitment and were informed that the testing session would be videotaped for the purposes of data scoring and analysis. In addition, mothers were informed that their children would be tested in a separate room while they completed questionnaires. Participation was completely voluntary and no payment was given for partaking in the study.

Procedure

All 50 children participated in a session lasting approximately 30 minutes. Testing occurred in one of two settings: in a laboratory or in the child's home. A total of 19 children were tested in the laboratory and the remaining 21 were tested in their homes. Ideally, all testing was to occur in the laboratory. However, although many mothers originally contacted agreed to participate, they were unable to come to the laboratory due to busy schedules or other commitments. Therefore, the testing location was changed to the children's homes in order to meet the needs of these families. Home testing with the Attachment Doll Play is consistent with previous procedures (Carol George, personal communication, April, 1998).

Other than location, all other testing procedures remained constant. Specifically, children were tested in a quiet location without parental presence or any other distractions. The session began by having each mother read a description of the study (see Appendix A) and give written, informed consent for her child's participation (see Appendix B). In the laboratory testing, the mother was then escorted into another room to complete the questionnaires. In the home testing, the mother was asked to go into another room in the house to complete the questionnaires. Immediately following the mother's departure, the experimenter began the Attachment Doll Play task. The entire doll play session was videotaped. A video camera, stationed on a tripod, was positioned with a wide angle facing the child and doll-house.

Following the completion of the Attachment Doll Play administration, the experimenter talked with the mother in a separate room while the child continued to play

with the doll-house and toys on his or her own. The experimenter spoke to the mother in general terms about the doll play and gave examples of how most children responded to the story completions without specifically referring to her child's responses. Careful attention was made to protect mothers from somewhat disturbing themes expressed by some children (e.g., The parents were buried alive. The family drove off a cliff. The child attacked the father with a hammer.).

Laboratory Testing

The laboratory testing occurred in downtown Toronto. The testing room contained two tables and two chairs. The doll-house was placed on the larger table positioned approximately 60 centimetres from the wall, and the child sat in front of it with his or her back against the wall. The experimenter sat to the side of the table. A second smaller table rested against the side wall. A box under the table contained any unused toys during testing. The room had no windows or decorations on the walls to distract the children. The mother waited in another room and completed the questionnaires while the child participated in the Attachment Doll Play task.

Home Testing

Testing occurred in a quiet, private room in the house, most often in the child's bedroom or in the basement. Efforts were made to ensure that siblings or other family members would not disturb the testing process. The doll-house was placed on the floor with the child seated directly in front of it, and the experimenter seated off to the side. The floor was used for administration to standardise and keep the testing situation constant in

the home testing. The mother was asked to complete the questionnaires in a separate room while the child completed the Attachment Doll Play task.

Measures

The Attachment Doll Play

The complete administration of the doll play, including material, procedures, and classification criteria, followed that used by Solomon, et al. (1995). These procedures were adapted from a semi-structured attachment story completion task developed by Bretherton, Ridgeway and Cassidy (1990) (i.e., the MacArthur stories). Story modifications included changes to the warm-up procedure, the deletion of a few MacArthur stories and the addition of a new warm-up story (George & Solomon, 1990). In addition, changes to Bretherton's procedure were made in order to enhance children's involvement in the doll play and to promote symbolic play and identification with the story's characters and themes (George & Solomon, 1996). These modifications consisted of 1) having the child select a doll to represent the 'self' and dolls to represent a pretend family and 2) providing the child with a doll-house play setting and more props. These modifications were made to allow children to tell richer stories providing a deeper reflection of their internal working model of attachment (George & Solomon, 1990).

Materials. The materials for the administration of the Attachment Doll Play followed those used by Solomon et al. (1995). A complete description of the materials appears in Appendix C and a photograph of the materials appears in Appendix D. Essentially, materials consisted of a doll-house, family dolls, furniture, and accessories. The doll-house is a flat painted board (18" X 36") containing a kitchen, dining room, living

room, bedroom and a small backyard. The dolls were an assortment of family figures from which the child chose. In addition, appropriate furniture and accessories were included to make the setting attractive for play.

Stories. There were five story completions (see Appendix E for complete story descriptions). The first story (i.e., Family Pet) was a neutral, warm-up story to ensure that the child understood the procedure. Following the warm-up, the child was presented with four attachment-related stories. Table 1 outlines the story stems and the attachment-related theme introduced by each.

Table 1

Attachment Doll Play Stories

Story	Story Stem	Attachment Issue
Family Pet	The mother opens the door and finds someone trying to find a home for puppy and kitten.	warm-up story
Hurt Knee	The child climbs a large rock, falls off, hurts his or her knee and cries.	<i>pain</i> as an elicitor of attachment and protective behaviour
Monster in Bedroom	The child is sent to bed, then cries out that there is a monster in the bedroom.	<i>fear</i> as an elicitor of attachment and protective behaviour
Departure	The mother and father leave for an overnight trip and a babysitter stays with the child(ren).	separation anxiety and coping ability
Reunion	The babysitter sees the parents as they return the following morning and announces their return to the child(ren).	welcoming versus avoidant, ambivalent or disorganized reunion behaviours

The Attachment Doll Play instructions appear in Appendix E. Each story stem was enacted by the experimenter. The experimenter then encouraged the child to enact the story completion by saying, "Show me what happens next." Prompts and open-ended questions were given to encourage the child to enact the story and play with the theme for 5 minutes, unless he or she indicated it was time to move on.

Attachment Doll Play Classifications

Attachment classifications were based on the Departure and Reunion story completions. Solomon et al. (1995) argued that these two stories would best discriminate between attachment groups because of the significance attachment research places on separation and reunion behaviours. Verbatim and detailed behavioural transcripts were made of the child's narrative and actions in these two stories. In accordance with the classification system, both the content and the process of the child's doll play were considered. Classifications depended on story themes and important process dimensions, such as distractions, intrusions in thought, irrelevant questions, and the child's willingness and ability to complete the stories (see George & Solomon, 1990). Particular attention was given to the presence or absence of danger, resolutions of danger and the events that immediately preceded and followed the parents' return. These particular themes were given the most consideration in classification.

Children's Departure and Reunion stories were considered together in making a classification decision. Each child's narrative was assigned one of four attachment classifications: Confident (Group B, Secure), Casual (Group A, Avoidant), Busy (Group C, Ambivalent/Resistant) or Frightened (Group D, Disorganized/Controlling). Group names

capture the most notable characteristic of the classification type (Solomon et al., 1995). An abbreviated version of the criteria for classifying the four attachment groups follows (see Appendix F for further details).

Confident (Secure). The stories of children classified as secure are characterized by confidence in either the caregiver or the self. There are two types of story themes expressed by this group. The first theme is one of “danger and rescue.” During Departure, these secure children often enact scenarios in which the children experience dangerous, frightening or spooky events while their parents are away (e.g., A thief enters the house. There are scary noises in the house.). The distinguishing feature of these stories is that the danger is resolved by either a competent adult or child. During Reunion, there is pleasure, re-integration of the family, and explicit knowledge that a separation has occurred. Thus, this type of story is a ‘fairy tale’ with a happy ending. The second type of story enacted by a minority of secure children is characterised by a theme of autonomy. In addition to ordinary story events (e.g., eating dinner, watching TV), the child or children are depicted as confident and autonomous (e.g., the child plays on his or her own), and the family is re-integrated immediately upon parents’ return. The narrative structure of the stories of secure children is described as flexible, integrated and organized. In sum, children classified as secure directly bring up separation fears and express confidence that either the dangers will be resolved by competent adults, or they themselves are autonomous and re-integrate the family immediately upon reunion.

Casual (Avoidant). Story themes by children classified as avoidant suggest that these children deactivate the attachment system. The themes and thought process of

children classified as avoidant suggest that they can only acknowledge separation fears indirectly. The child or children appear to deny separation anxiety by attempting to unconsciously cancel or undo the separation itself (e.g., The child tries to accompany the parents on the trip, or the children call the parents while they are away.). This ‘undoing’, which is the most diagnostic feature of the avoidant group, is meant to keep the parents and children together in some way. These events are casually inserted into the story line without explanation. Deactivation is also characterised by the story script’s lack of adventure whereby children enact a story of everyday activities. The Reunion stories of children in this group are characterise by non-integration whereby the child enacts themes that block child and parent integration (e.g., The child goes to bed upon parents reunion, and the parents watch TV.). The child enacts a reunion where the child or children appear to be casually uninterested in their parents’ return and the member of the family are depicted as psychologically unavailable to one another. Overall, these stories appear somewhat boring compared to those in the other three groups. The narrative content of these stories consists of everyday household activities which have an empty, affectless quality. In sum, these children acknowledge separation fears indirectly, and separation fears are excluded by deactivation whereby children casually continue with everyday activities.

Busy (Ambivalent). The story themes by this group of children suggest that ambivalent children attempt to disconnect cognitively from the issues that attachment stories raise. Similar to the children classified as avoidant, these children acknowledge separation fears indirectly. These fears or negative feeling are transformed or reversed onto

characters other than the self. For example, during Departure these children transform their fears into themes of caregiving, hurt and comfort (usually onto another family member) or fun and parties. This transformation is also depicted in themes that are characterized by obsessive distractions of seemingly irrelevant activities, such as continuous cleaning or preparing endlessly for a birthday party. These distracting activities keep the child or children, in the story, busy. The Reunion stories of these children are characterized by non-integration and delay or distraction. The children are either too busy to greet the parents immediately upon return (i.e., delay) or begin an affectionate greeting that is immediately interrupted by another task (i.e., distraction). The narrative structure of these stories is digressive. In other words, the story line is constantly interrupted by seemingly irrelevant activities. In sum, the overall quality of stories of ambivalent children is one of busy activity and a happy mood where separation fears are acknowledged indirectly.

Frightened (Disorganized). Children classified as frightened depict fears about the caregiver or self that are out of control. These children are unable to regulate attachment-related affect and experiences. There are two types of story themes enacted by these children. The first story type is characterized by unresolved danger, chaos, and disintegration of the family or self (e.g., The house explodes.). Adults are depicted as frightening, abusive, and physically and psychologically unavailable. Children are depicted as helpless and out of control. During Reunion, the families are left in a state of disintegration. The second group of children classified as disorganized is considerably different from the first. These children appear frightened, inhibited, constricted, and paralysed. They are extremely uncomfortable with the doll play and either do not want to

enact any part of the story or participate minimally. Both groups of frightened children are unable to construct an organized story. The narrative structure of these disorganized stories is described as chaotic and flooded by attachment-related affect and experiences. In sum, children classified as disorganized directly bring up separation fears but are overwhelmed by these fears as expressed by unresolved chaos or inhibited play.

Reliability of Classifications

Two types of reliability, inter-rater and intra-rater reliability, were assessed for the Attachment Doll Play classifications. For the intra-rater reliability, the experimenter classified a random sample of 20% of the transcripts at two time intervals, six to eight weeks apart. At time two, the experimenter was blind to the initial classifications. For the inter-rater reliability, a second coder was extensively trained by the experimenter. Training was based on an examination of the classification system and a review of 15 transcripts with the experimenter. Once trained reliability was established, the second coder, blind to all other information about the child, classified a random sample of 20% of the transcripts.

Questionnaires

Family questionnaire. The mother completed two questionnaires while her child was administered the Attachment Doll Play. The first, was the Family Questionnaire (Appendix G) which was designed for the purposes of this study. It consisted of family information such as family size and composition, parental education and occupation, and child's birth order and child care history. The main purpose of this questionnaire was to ascertain some general information about the families participating in this study.

Child Behaviour Checklist. The second self-report measure given to parents was the Child Behaviour Checklist/4-18 (CBCL; Achenbach, 1991). The CBCL is a widely used instrument which primarily measures a child's behavioural problems and competency in school, social activities, and peer interactions. For the purposes of this study, only the behaviour problem scales were used. These scales consist of 118 problem items which each mother rated on a scale of 0 to 2, with 0 representing not true and 2 indicating very true of the child's behaviour. Three main scores were calculated: a) a total problem score, b) total Internalising and Externalising problem scores, and c) problem behaviour scores on the 9 subscales. The Internalising factor, representing personality problems, consists of three subscales: withdrawal, somatic problems and anxious/depressed behaviours. The Externalising factor, representing acting out problems, consists of two subscales: aggressive and delinquent behaviours. The CBCL provides age and gender normalised scores as well as clinical cut-off scores. Extensive reliability and validity of the measure have been previously established (see Achenbach, 1991).

CHAPTER IV

Results

This chapter is divided into four sections, each addressing a specific objective of the study. In the first section, a descriptive analysis of the Attachment Doll Play classifications is presented and the classifications' relation to demographic characteristics is examined. In addition, the inter-rater and intra-rater reliability are reported for the classifications. The second section is a presentation of the relation between attachment classifications and behaviour problems as measured by the CBCL. In section three, attachment classifications and their association with child care are examined. Lastly, the fourth section explores children's doll family representations in relation to attachment classifications, demographic characteristics, and CBCL scores.

Contingency tables analyses were conducted for several nominal scale variables. The likelihood-ratio (LR) was used as the test statistic for these analyses. This statistic was selected because it corrects for smaller expected cell values (Norusis, 1993). The significance level was set at .05 for all analyses.

Attachment was tested as a two category measure, secure and insecure (avoidant, ambivalent, and disorganized) and a four category measure, secure, avoidant, ambivalent, and disorganized. Unless explicitly stated otherwise, attachment classification will always refer to the four-group classification.

Attachment Doll Play Classifications

The distribution of Attachment Doll Play classifications is presented in Table 2. Overall, the stories of 20% (N = 10) of the children were classified as confident (secure),

34% (N = 17) as casual (avoidant), 38% (N = 19) as busy (ambivalent), and 8% (N = 4) as frightened (disorganized). Examples of stories from each attachment classification group appear in Appendix H. As a two category measure, 80% of children were classified insecure while the remaining 20% were classified secure.

Table 2

The Distribution of Attachment Classifications

ATTACHMENT CLASSIFICATION	AGE GROUP				TOTAL	%
	5-year-olds		6-year-olds			
	Boys	Girls	Boys	Girls		
Confident (Secure)	1	0	4	5	10	20
Casual (Avoidant)	5	5	4	3	17	34
Busy (Ambivalent)	3	7	4	5	19	38
Frightened (Disorganized)	4	0	0	0	4	8
TOTAL	13	12	12	13	50	100

In the original study, Solomon et al. (1995) reported a distribution of 19% secure, 21% avoidant, 38% ambivalent and 21% disorganized. The chi-square goodness-of-fit test was used to determine whether the frequencies in each classification group in this study corresponded to the original distribution. When all four classifications were compared, a significant difference was found between this study's distribution and the original, (χ^2 (3) =

16.15, $p = .01$). This indicates that the distribution of the four attachment patterns differed between the present study and the original. However, when attachment was tested as a two category measure, no significant difference emerged between the present distribution and the original, ($\chi^2 (1) = .10$, n.s.) . Thus, the distribution of secure versus insecure classifications was replicated by this study. Approximately 20% of children were classified secure and 80% classified insecure across the two studies.

The inter-rater and intra-rater reliability of the doll play classifications were examined. For the inter-rater reliability, a random sample of 10 (20% of the sample) doll play transcripts were coded independently by the investigator and a second rater. Inter-rater agreement was 70%, ($k = .56$, $t = 2.55$, $p = .01$) when attachment was tested as a four category measure. Inter-rater agreement was substantially higher when attachment was tested as a two category measure 90%, ($k = .93$, $t = 7.85$, $p < .001$). For the intra-rater reliability, the investigator coding a random sample of 10 (20% of sample) doll play transcripts at two time intervals, six to eight weeks apart. Intra-rater agreement was 90%, ($k = .93$, $t = 7.85$, $p < .001$). Only one doll play classification differed at time two. The difference was resolved by coding the transcript a third time.

Gender differences in attachment classifications were examined with chi-square tests. No significant relation was found between gender and each of the four classifications, (LR (3) = 6.94, $p = .07$). Similarly, gender was not significantly associated with attachment when tested as a two category measure, (LR (1) = .00, $p = 1.0$). In fact, there was an equal number of boys and girls in both the secure group (N=5) and insecure group (N=20). These

findings indicate that gender was independent and not significantly associated with attachment classification.

Attachment Doll Play classifications were also compared to four demographic variables: maternal education, paternal education, maternal work status, and child's birth order. Neither maternal nor paternal education were significantly associated with the attachment classifications, (LR (15) = 20.13, $p = .17$ and LR (12) = 7.27, $p = .84$, respectively). Similarly, the child's birth order (i.e., only child, oldest, middle or youngest child) was not significantly related to attachment classifications, (LR (9) = 6.03, $p = .74$). This suggested that birth order groups were distributed across the four attachment classifications. Furthermore, there was no significant relation between attachment classifications and mothers' current work status (i.e., full-time = 20 or more hours per week, part-time = less than 20 hours per week, or not working), (LR (6) = 10.34, $p = .11$). However, when mothers' work status was compared to secure versus insecure attachment classifications a significant relation emerged, (LR (2) = 6.96, $p = .03$). To further examine this relation full-time work status was compared to non-full-time work status (i.e., homemakers or part-time working mothers). A significant association between secure versus insecure attachment classifications and mother's full-time work status emerged, (LR (1) = 6.78, $p = .01$). Specifically, none of the children classified as secure had full-time working mothers whereas 26% (N = 12) of the children classified as insecure had full-time working mothers.

Testing location (i.e., laboratory testing and home testing) was examined to assess if the Attachment Doll Play classifications differed across the two sites. A total of 19 children

(38%) were assessed in the lab while the remaining 31 (62%) were assessed in their homes. Attachment classifications were not associated with the testing locations, ($LR(3) = .71$, $p = .87$). Therefore, the children tested in the lab or home did not differ according to attachment classification.

Summary

In summary, according to the Attachment Doll Play, 20% of the children were classified as secure and 80% were classified as insecure. This distribution of secure versus insecure classifications was identical to the original study. However, when all four attachment classifications were compared to the original study, a significant difference was found. The inter-rater agreement of classifications was 70% and 90% for the four category and two category attachment measures, respectively. The intra-rater agreement was 90%. As expected children's attachment classification did not differ on any of the demographic variables (i.e., gender, birth order, or parental education) nor did they differ according to the testing location. However, a significant relation between securely classified children versus insecurely classified children and mother's full-time work status emerged.

Doll Play Classifications and the CBCL

The mean CBCL total scores appear in Table 3. The mean T scores for the Total ($M = 49.02$), Internalizing ($M = 50.22$) and Externalizing ($M = 47.36$) scales fell within the normal ranges provided by the CBCL scoring manual (Achenbach, 1991). This suggests that the sample conforms to the overall CBCL pattern reflecting a community sample.

One-way ANOVAs were used to examine differences in CBCL total, Internalizing and Externalizing T scores and attachment classifications. No significant differences were

found between attachment classifications and CBCL total T score, ($F(3,49) = .45, p = .72$), Externalizing T score, ($F(3, 49) = .66, p = .58$, or Internalizing T score, ($F(3,49) = .94, p = .43$). Similarly, when attachment classifications was divided into a two category measure and compared to CBCL total, Internalizing and Externalizing T scores, no significant group differences were found, ($F(1,49) = .43, p = .52$; $F(1,49) = .16, p = .70$; $F(1, 49) = .70, p = .41$, respectively). Furthermore, no significant differences emerged between the nine CBCL subscales and attachment classifications as either a four category measure or a two category measure.

Table 3

The Mean CBCL Total Scores According to Attachment Classifications

ATTACHMENT CLASSIFICATION	CHILD BEHAVIOUR CHECKLIST ^a		
	Total Problem T Score	Internalizing T Score	Externalizing T Score
Confident (Secure)	50.90 (9.92)	51.40 (11.05)	49.70 (8.37)
Casual (Avoidant)	47.47 (12.10)	49.41 (12.29)	44.71 (11.75)
Busy (Ambivalent)	48.58 (9.26)	48.68 (8.65)	48.21 (9.57)
Frightened (Disorganized)	53.00 (5.23)	58.00 (8.29)	48.75 (5.62)
Overall Mean	49.02 (10.10)	50.22 (10.48)	47.36 (9.88)

Note: Values are Mean (SD)

^a Higher T scores indicate more behaviour problems.

A series of two-way ANOVAs, with attachment classification and gender as the independent variables and CBCL scales as the dependent variables, were used to further examine the relation between the CBCL scores and doll play classifications. An examination of the CBCL total *T* score revealed no attachment classification effect, ($F(3, 49) = .38, p = .77$), no gender effect, ($F(1, 49) = .66, p = .42$), and no interaction, ($F(2, 49) = 1.07, p = .35$). The analysis of the Externalizing *T* score indicated similar results, no classification effect, ($F(3, 49) = .64, p = .59$), no gender effect, ($F(1, 49) = .908, p = .91$), and no interaction, ($F(2, 49) = .16, p = .85$). The Internalizing *T* score analysis indicated no significant main effect due to attachment classification, ($F(3, 49) = .840, p = .48$), or gender, ($F(1, 49) = 1.22, p = .28$). However, there was an interaction effect between attachment classification and gender, ($F(2, 49) = 3.42, p = .04$). Thus, the Internalizing score for each attachment classification differed according to the child's gender. This difference is illustrated in Table 4. Specifically, boys classified secure had higher Internalizing *T* scores ($M = 56.80$) than did girls ($M = 46.00$); boys classified avoidant had higher Internalizing *T* scores ($M = 52.67$) than did girls ($M = 45.75$) whereas girls classified ambivalent had higher Internalizing *T* scores ($M = 51.42$) than did boys ($M = 44.00$). Therefore, the Internalizing *T* score did not differ as a function of either attachment classification or gender alone but did when the two factors combined.

The interaction effect of the CBCL Internalizing score by attachment and gender was explored with a MANOVA with the nine CBCL scores as the dependent variables and attachment classification and gender as the independent variables. No significant difference was found between the nine CBCL scores and gender, (Wilks lambda = .71, $F = 1.57, p =$

.16) nor attachment classification, (Wilks lambda = .40, $F = 1.41$, $p = .11$). There was also no interaction effect, (Wilks lambda = .55, $F = 1.36$, $p = .18$).

Table 4

The Mean CBCL Internalizing Scores According to Gender and Attachment Classifications

ATTACHMENT CLASSIFICATION	MEAN CBCL INTERNALIZING <i>T</i> SCORES	
	Boys	Girls
Confident (Secure)	56.80	46.00
Casual (Avoidant)	52.67	45.75
Busy (Ambivalent)	44.00	51.42
Frightened (Disorganized)	58.00	---- ^a
Mean	51.92	48.52

^a There were no girls classified as disorganized.

Examination of the univariate analyses, revealed a main effect due to attachment classification for one of the CBCL subscales, the anxious/depressed subscale. The anxious/depressed subscale scores significantly differed between the four attachment groups, ($F(3,43) = 3.00$, $p = .04$). Children classified as disorganized had the highest anxious/depressed score ($M = 6.00$, $SD = 3.46$), followed by children classified as avoidant ($M = 3.59$, $SD = 4.93$), followed by children classified as secure ($M = 3.30$, $SD = 4.14$), and lastly, by children classified as ambivalent ($M = 2.68$, $SD = 2.56$).

Furthermore, a univariate analysis revealed a significant attachment by gender interaction effect for the anxious/depressed subscale, ($F(2,43) = 4.22, p = .02$). This suggests that the anxious/depressed score for each attachment classification differed according to the child's gender. Boys had higher anxious/depressed scores if they were classified as avoidant ($M = 5.60$) or as secure ($M = 5.40$) than did the girls ($M = 1.40, M = 1.20$, respectively). However, within the ambivalent classification, girls had higher anxious/depressed scores ($M = 3.50$) than did the boys ($M = 1.30$). Overall, the disorganized classification group, all of which were boys, had the highest anxious/depressed score ($M=6.00$). Therefore, a similar pattern, where the boys scored higher than girls on all classification groups except the ambivalent classification, emerged within this interaction effect and the interaction effect of the Internalizing T score by attachment and gender. This result is not surprising considering the anxious/depressed subscale is one of the three scales comprising the Internalizing scale.

Analyses were conducted with the attachment classifications of children whose CBCL scores fell in the clinical range. The CBCL scoring manual indicated a clinical cut-off T score of 60 (Achenback, 1991). Therefore, children whose CBCL total score, Internalizing T score or Externalizing T score was 60 or above fell in the clinical range. The frequency of attachment classifications according to clinical CBCL scores appears in Table 5. A total of 11 (22%) children had at least one of either the total, Internalizing T or Externalizing T scores fall in the clinical range. According to these clinical scores, 5 children had total scores in the clinical range, 4 of whom were classified as insecure; 8 children had clinical scores in the Internalizing scale, 7 of whom were classified as insecure

and 5 children had clinical scores in the Externalizing subscale, 4 of whom were classified as insecure. Overall, 91% of the children whose CBCL scores fell in the clinical range were insecure according to doll play classifications. Five of these children fell in the ambivalent group, 3 in avoidant group, and 2 in the disorganized group.

Table 5

The Frequency of Attachment Classifications According to Clinical CBCL *T* Scores

ATTACHMENT CLASSIFICATION	CBCL (CLINICAL RANGE)		
	Total Problem <i>T</i> Score	Internalizing <i>T</i> Score	Externalizing <i>T</i> Score
Confident (Secure) (N=1) ^a	1	1	1
Casual (Avoidant) (N=3)	2	3	2
Busy (Ambivalent) (N=5)	2	2	2
Frightened (Disorganized) (N=2)	0	2	0
Total (N=11)	5	8	5

Note: Values represent frequency of children. Children can fall into more than one of the three clinical *T* CBCL scores

^a N refers to the total number of children falling in the clinical CBCL range according to attachment classification.

Summary

The results exploring the relation between children's attachment classifications and behaviour problems indicated no significant differences between attachment classifications

and CBCL total *T* score, Externalizing *T* score, or Internalizing *T*. However, a significant interaction effect between the Internalizing *T* score and attachment classification by gender emerged. The results indicated a main effect due to attachment classification on the CBCL anxious/depressed subscale and an interaction effect between the anxious/depressed subscale and attachment classification by gender. Specifically, the disorganized classification group had the highest anxious/depressed scores, and overall, boys, had higher anxious/depressed scores in all attachment classification groups, except the ambivalent group. Furthermore, 91% of the children whose CBCL scores fell in the clinical range were insecure according to doll play classifications.

Doll Play Classifications and Child Care

The relation between doll play classifications and child care was examined. Child care was defined as any kind of regular non-parental care the child received (i.e., day-care, nanny, sitter, etc.). Both current child care status (i.e., any regular non-parental care received outside school hours) and previous child care status (i.e., any regular non-parental care the child received prior to entering school) were examined in relation to attachment classifications. Full-time child care was defined as 20 or more hours per week, and part-time child care was defined as less than 20 hours per week. Overall, 24% of children were not receiving any non-parental child care at the time of the study; 46% were in part-time child care and 30% were in full-time child care. In relation to previous child care, 24% of children had not received any non-parental child care; 18% had been in part-time child care and 58% had been in full-time child care prior to entering school. Child care status according to doll-play classification appears in Table 6.

Table 6

Current and Previous Child Care Status According to Attachment Classifications

ATTACHMENT CLASSIFICATION	CHILD CARE STATUS					
	None	Current Part-time	Full-time	None	Previous Part-time	Full-time
Confident (Secure)	4	6	0	4	1	5
Casual (Avoidant)	2	10	5	5	4	8
Busy (Ambivalent)	5	5	9	2	4	13
Frightened (Disorganized)	1	2	1	1	0	3
Total	12	23	15	12	9	29

Note: Values represent frequencies of children

A significant relation were found between current child care status and attachment classifications, (LR (6) = 12.75, $p = .05$). Overall, children classified as secure had either no non-parental child care (40%) or were in part-time child care (60%); none were in full-time child care. However, 80% of children classified in one of the insecure groups were in either part-time or full-time child care. Specifically, 59% of children classified as avoidant were in part-time, and 29% were in full-time child care. Twenty-six percent of children classified as ambivalent were in part-time, and 47% were in full-time child care. Fifty percent of children classified as disorganized were in part-time, and 25% were in full-time child care.

To further examine the relation between attachment classification and current child care status, attachment was tested as a two category measure. A significant difference emerged between secure versus insecure attachment categories and current child care status, ($LR (2) = 8.36, p = .02$). Furthermore, child care status categories were collapsed to form two groups, full-time and non-full-time child care. A significant relation was found between attachment as a four category measures and full-time versus non-full-time child care, ($LR (3) = 9.70, p = .02$). Also, a significant relation emerged between attachment as a two category measure and full-time versus non-full time child care, ($LR (1) = 8.15, p = .004$). Overall, 30% of children were in full-time child care at the time of the study, and all of these children were classified into one of the insecure attachment groups, particularly in the ambivalent and avoidant classifications. In sum, the results suggest that current child care status is related to children's attachment classifications.

One-way ANOVAs were used to examine the total number of hours spent in child care per week and attachment classifications. No significant difference emerged between number of hours in current child care and the four attachment classifications, ($F (3, 37) = 1.30, p = .29$). Similarly, no significant relation was found between the total number of hours in current child care and attachment classification as a two category measured, ($F (1,37) = 3.30, p = .08$).

A comparison of previous child care status and attachment classification indicated no significant relationship, ($LR (6) = 6.14, p = .41$). This effect did not differ when attachment was tested as a two category measure, ($LR (2) = 1.82, p = .40$). In addition, there was no significant association between full-time versus non-full child care and attachment

classification as a four category measure, (LR (3) = 2.46, $p = .48$), or a two category measure, (LR (1) = .33, $p = .57$). Furthermore, a one-way ANOVA indicated that attachment classifications did not differ as a function of the total number of hours per week the child spent in previous child care, ($F(3,37) = .93$, $p = .44$). Similarly, a one-way ANOVA, with attachment as a two category measure, indicated that the total number of hours in previous child care did not significantly differ for the secure versus insecure groups, ($F(1,37) = .01$, $p = .94$). Furthermore, no significant relation was found between previous child care status and gender, (LR (2) = .15, $p = .93$) nor did a significant relation emerge between attachment classifications and previous child care status for boys, (LR (1) = .65, $p = .42$) or for girls, (LR (1) = 1.58, $p = .21$). Thus, taken together these results indicate that previous child care status and Attachment Doll Play classifications were not associated.

The relation between current and previous child care and CBCL scores was examined in a series of one-way ANOVAs. Current child care status was not significantly related to CBCL total T scores, ($F(2,49) = 1.57$, $p = .22$), Internalizing T score, ($F(2,49) = .52$, $p = .60$), Externalizing T scores, ($F(2,49) = 1.90$, $p = .16$), or any of the nine subscales, ($F(2,49) = .18$ to 2.32 , $p = .84$ to $.11$). Similarly, no significant relations were found between previous child care status and CBCL total T score, ($F(2,49) = .51$, $p = .61$), Internalizing T score, $F(2,49) = .03$, $p = .972$, Externalizing T score, ($F(2,49) = 1.09$, $p = .35$), or any of the nine subscales, ($F(2,49) = .02$ to 3.01 , $p = .98$ to $.06$). Overall, these results suggest that child care status was not associated with CBCL scores.

Summary

The examination of child care status and attachment indicated a significant relation between current child care status and attachment classifications. Specifically, 80% of children classified into one of the insecure attachment groups were in either part-time or full-time child care at the time of the study whereas none of the children classified secure were in full-time child care. No significant relations were found between previous child care status and Attachment Doll Play classifications. In addition, no significant associations emerged between child care status and any of the CBCL scores.

Children's Doll Family Representations

Children's representations of the self and the family in the doll play were compared to attachment classifications. In the beginning of the doll play task, children choose a doll to represent the self in the stories from a selection of family members (see Appendix D). That is, children could choose either a child, adult or baby doll. They were then asked to choose a pretend family from the remaining dolls. Table 7 presents the frequency of doll representations of self and the family according to attachment classifications.

Doll representation of self was not significantly associated with the attachment classifications, (LR (6) = 3.50, $p = .74$). Overall, 98% of children chose a doll of the same gender to represent the self in the doll family. A majority of children, 64% chose a child doll to represent the self in the doll play, 32% of children depicted themselves as an adult and the remaining 4% chose a baby to represent the self. No distinct pattern emerged, and children across classification groups chose between the three doll types. These results suggested that

the child's representation of self in the doll family was not related to attachment classification.

Table 7

Doll Play Representations According to Attachment Classifications

ATTACHMENT CLASSIFICATION	CHILD'S DOLL REPRESENTATION						
	Self in Doll Family			Doll Family			
	Child	Adult	Baby	2-parent Family	Mother-only Family	Father-only Family	No Parents
Secure (N=10)	6	4	0	8	2	0	0
Avoidant (N=17)	9	7	1	13	2	2	0
Ambivalent (N=19)	14	4	1	11	1	3	4
Disorganized (N=4)	3	1	0	1	2	1	0
TOTAL	32	16	2	33	7	6	4
%	64	32	4	66	14	12	8

Note: Values represent frequency of children.

Children's doll family composition varied with 66% of children depicting a two-parent family, 14% a mother-only family, 12% a father-only family and 8% did not include any parents at all. Although approximately a third of the children portrayed doll families with either one or no parents, only 1 child (2%) came from a one-parent family. A significant association between children's doll family composition and attachment classification emerged, (LR (9) = 16.72, $p = .05$). As illustrated in Table 7, overall, more

children classified secure had two-parent doll families (80%) compared to the three insecure groups combined (63%). Children classified as disorganized or as ambivalent were the least likely to chose two-parent doll families (25% and 58%, respectively). Furthermore, all no-parent doll families were depicted by children classified as ambivalent. In sum, children's doll family representation was significantly related to attachment classification.

Contingency table analyses were conducted to examine the association between doll play representations and child demographic variables. There was no significant relation between doll family representation and gender, (LR (3) = .17, $p = .98$) or birth order, (LR (9) = 10.94, $p = .28$). Furthermore, there was no significant association between representation of self in the doll family and gender, (LR (2) = 3.91, $p = .14$) or birth order, (LR (6) = 2.36, $p = .88$). These findings indicate that children's doll play representations were not associated with child demographic variables.

One-way ANOVAs were used to investigate if there was a relation between doll selection and behaviour problems, with the CBCL scores as the dependent variables and doll selection as the independent. The results indicated that there were no significant difference between CBCL total T score, Externalizing T score, Internalizing T score, or the nine CBCL subscales and representation of self in the doll family; values ranged from ($F(3, 49) = .31$ to 1.68 , $p = .82$ to $.18$). Similarly, no significant differences emerged between all the CBCL scores and representation of the family in the doll play; values ranged from ($F(2, 49) = .02$ to 1.59 , $p = .98$ to $.22$). These results indicate that a child's doll-play representations were not related to behaviour problems as measured by the CBCL.

Summary

The exploratory examination of doll play representations and attachment classifications indicated a significant relation between children's doll family composition and attachment classifications. Overall, more children classified as secure had two-parent doll families. Children classified as disorganized or as ambivalent were the least likely to chose two-parent doll families, and all no-parent doll families were depicted by children classified as ambivalent. No significant association emerged between children's representation of self in the doll family of self and attachment classifications. Furthermore, children's doll play representations were not associated with child demographic variables nor were they associated with behaviour problems as measured by the CBCL.

CHAPTER V

Discussion

Chapter V begins with a discussion of the main findings of this study and their relation to previous research. The four objectives of the study and the relevant findings for each are discussed. Subsequently, the limitations of the study are addressed in order to put these findings into context. This chapter closes with future research directions and with an overall summary of the study.

Findings

There were four main objectives to this study. The first objective was to attempt to replicate the distribution of attachment patterns found in the original study using the Attachment Doll Play (Solomon et al., 1995). The second objective was to explore the relation between children's representations of attachment and behaviour problems and to address the question "Are insecurely classified children more at risk for behaviour problems?" The third objective was to explore the link between representations of attachment and child care. The fourth objective was to examine children's representations of self and the family in the doll play in relation to attachment classifications. Taken together these objectives were an attempt to further explore the Attachment Doll Play assessment tool.

The main findings of the study are as follows: 1) The distribution of secure versus insecure classifications and the inter-rater reliability of classifications were replicated by this study; 2) There was a significant interaction between CBCL Internalizing *T* scores, attachment classification, and gender and a significant interaction between the

anxious/depressed subscale, attachment classification and gender; 3) No differences difference emerged between classification groups and the CBCL Total *T* score, Internalizing *T* score, Externalizing *T* score or any of the nine subscales; 4) Children classified as insecure were more likely to have scores in the clinical range on the CBCL; 5) Current child care status was significantly related to attachment classifications; and 6) Children's representation of the family in the doll play was significantly related to attachment classifications.

Attachment Doll Play Classifications

In comparison to Solomon et al. (1995), when attachment was tested as a four category measure, the frequency of children classified as disorganized was higher in the original study while the frequency of children classified as avoidant was higher in the present study. The frequencies of children classified as secure and ambivalent were identical in the two studies. It is likely that the high frequency of children classified as disorganized in the original study compared to the low frequency found in this study accounted for the lack of agreement across the four classification groups in the two studies. A possible explanation for the high proportion of children classified as disorganized in the original study was suggested by Solomon et al. (1995). They indicated that mothers of insecure children may have been more likely to volunteer to participate in a study examining child development. Many of the mothers agreed to participate in the original study because they had concerns regarding their children and hoped to get feedback about their child (Carol George, personal communication, April, 1998). Previous research has suggested that, of the four classification groups, the children with disorganized attachment patterns are more likely to

have behaviour problems in the clinical range (Moss et al., 1996; Solomon et al., 1995). It is possible that the mothers of children with high rates of behaviour problems (i.e., disorganized) were more likely to volunteer in the original study because they had concerns about their children. This may have led to the higher proportion of children classified as disorganized in the study sample.

When attachment was tested as a two category measure (i.e., secure versus insecure), the distribution of secure versus insecure classifications was identical in the two studies. Approximately 20% of children were classified secure, and 80% of children were classified insecure in both studies. At first glance, the distribution of secure versus insecure attachment classifications appears to contradict the literature. Research suggests that approximately 70% of low-risk infants display secure attachment patterns, as measured by the Strange Situation (Ainsworth et al., 1978; Main, 1995). However, attachment research with children and adults suggests that the proportion of secure attachment classifications does not correspond to the original distribution outlined by Ainsworth (Cassidy, 1988; Cohn, 1990; George & Solomon, 1996; Solomon et al., 1995). Specifically, studies using narratives approaches to assess young children's internal working models of attachment have suggested a similarly low incidence of secure children, and a high incidence of insecure children (Fonagy et al., 1997; George & Solomon, 1996; Slough & Greenberg, 1990; Solomon et al., 1995). Overall, these studies indicate that the secure classification group does not represent the majority of children beyond the infancy and toddler years. Therefore, in relation to the present study, the distribution of securely attached children conforms to the Solomon et al. (1995) results as well as other research.

The degree of inter-rater reliability of the Attachment Doll Play classification also supports the original study. The inter-rater reliability of the four attachment groups for the present study was 70% which is comparable to the 71% reported by Solomon et al. (1995). When attachment was tested as a two category measure (i.e., secure and insecure), inter-rater agreement was substantially higher at 90%. Attachment was not tested as a two category measure in the original study. Interestingly, the somewhat modest inter-rater reliability in the original study was between the originators of the assessment tool. Solomon et al. (1995) did not give any possible reasons for this moderate reliability; however, the relatively low inter-rater reliability of this tool is a concern considering that there are only four classification to choose from, and 25% agreement is expected due to chance alone.

It is possible that the modest inter-rater reliability resulted from the fact that the themes, which characterize each classification group, are not mutually exclusive. The themes depicted in some stories can fall into more than one classification category. This is particularly concerning for the avoidant and ambivalent groups. Solomon et al. (1995), for example, noted that almost half of the stories of children classified as avoidant often met the criteria for both the avoidant and ambivalent classifications. The classification manual indicates that:

“... the doll play of many avoidant children appears to meet the criteria described for ambivalent children. That is children or family members are distracted, separation fears are transformed into fun or parties, and the family reunion feels delayed or suspended in time. These avoidant children, however, also enacted some form of ‘undoing’ during the Departure story.” (George & Solomon, 1990, p.11).

An 'undoing' can be very subtle in a story and therefore, can be easily missed. In the present study, the stories of more than half of the children classified as avoidant also met the criteria for the ambivalent group. Therefore, the possibility of erroneous classifications due to the lack of complete exclusiveness can result in lower inter-rater reliability.

Another possible explanation for the low inter-rater reliability, is that some story themes in the present study were not captured by the classification system. The most common such theme found in this study is going on an outing immediately upon the parents' return (i.e., the Reunion story). Overall, a total of 26% of children enacted this scenario of an outing (e.g., going on a family vacation, going to the movies) right after the parents returned. This scenario of putting the family in the car is very typical with preschool-aged children using other similar story-completion tasks but was not enacted by any kindergarten-age children in the original study and is not a theme in the classification system (Carol George, personal communication, April, 1998). Based on other process and content components of the stories, almost all (92%) the children who enacted this scenario were classified insecure with a majority of these insecure children (67%) being classified as avoidant. That this scenario was more often enacted by children classified as avoidant suggests that it may be a theme which is compatible with the avoidant classification. Perhaps, the 'family outing' represented another avoidant theme in which the child is deactivating the attachment system by enacting a scenario which protects the child from dealing with the anxiety of the parental separation. It is possible that outlining more themes in the classification system would increase inter-rater reliability.

One possible explanation for this theme of a ‘family outing’ being enacted in the present study but not in the original may be due to differences in the toy car used in the studies. The family car used in this study (see Appendix D) was a realistic toy car in which many family dolls could comfortably fit. The toy car used in Solomon et al. (1995) was a small wooden car which was not proportionate to the size of the dolls. That is, the car was too small, only two adults could fit, and family figures had to stand in order to fit. Therefore, it is possible that the more realistic car used in the present study promoted its use in the Reunion story.

A final issues about reliability which needs to be addressed concerns the narrative approach on which it is based. It is possible to argue that children’s narratives did not differ as a function of attachment security, but instead the differences in classification can be explained by an intrinsic child factor. Oppenheim (1997) suggested that a cognitive, verbal factor rather than attachment security may account for the variability in children’s narratives. This argument, however, was rejected in an earlier study using an attachment story completion task with 5-year-olds (Verschueren et al., 1996). In their study, Verschueren et al., indicated that attachment security scores based on the Attachment Story Completion Task was found to be associated with security scores based on the Separation Anxiety Test even when the influence of vocabulary was partialled out. Furthermore, Solomon et al. (1995) reported a significant relation between the Attachment Doll Play and a laboratory separation-reunion procedure, which is based solely on behaviour patterns. Thus, verbal abilities cannot account for this association. These present findings suggest that differences in attachment relate to differences in actual relationship patterns. Although children’s verbal

ability was not assessed in this study, previous research does not support the interpretation that verbal ability accounts for the differences in classification.

Overall, the present study replicated the secure versus insecure distribution reported in the original study. It also replicated the inter-rater reliability of the Attachment Doll Play although there are concerns regarding the classification system and the low incidence of secure classifications.

Doll Play Classifications and the CBCL

In the present study there was a significant relation between attachment classification, gender and CBCL Internalizing *T* scores. Boys scored higher than girls on Internalizing behaviour problems in all attachment classification groups except the ambivalent group. This finding that boys, particularly those insecurely attached, were at greater risk for internalizing behaviour problems supports previous research (e.g., Cohn, 1990; Lewis et al., 1984). No association between internalizing behaviour problems and attachment emerged for girls. This again is consistent with previous findings (e.g., Cohn, 1990; Lewis et al., 1984).

Gender differences in measures of behaviour problems is common (Cohn, 1990; Lewis et al., 1984; Turner, 1991). It has been suggested that many complex and diverse factors may contribute to these gender differences and as such, are still not fully understood (Lewis et al. 1984). Some of these factors include socialization pressures, biological predispositions and cognitive processes. It is possible that these factors are involved in explaining the gender differences in Internalizing behaviours in the present study.

The anxious/depressed internalizing subscale was significantly different between attachment classifications with the children classified as disorganized having the highest scores and those classified as ambivalent having the lowest. Considering that the children classified as disorganized were all boys, it is not surprising that there was also a significant interaction effect with gender, attachment classification and the anxious/depressed subscale. Both the main effect of attachment and the interaction effect of gender and attachment is likely attributable to the disorganized group who scored approximately double that of either of the other three attachment groups on the anxious/depressed subscale. Generally, there have been contradictory findings about the link between behaviour problems and the disorganized classification. Some studies have reported that children classified as disorganized were more likely to have higher total behaviour problems on the CBCL, particularly in the externalizing behaviour problems (e.g., Aggressiveness subscale) (Solomon et al., 1995; Speltz et al., 1990). Others, however, have reported no clear pattern of either externalizing or internalizing behaviour problems and children classified as disorganized (Moss et al, 1996). Still, other researchers have acknowledged a link between the representational patterns of children classified as disorganized with problems which are more internalizing in nature (Cassidy, 1988; Jacobsen et al., 1994). The higher scores on the anxious/depressed subscale, in this study, supports the link between representational patterns and internalizing problems. The internalizing score on the CBCL includes the anxious/depressed subscale.

The results from this study indicated there were no differences between secure, avoidant and ambivalent classifications and CBCL total score, Internalizing *T* score,

Externalizing *T* score or either of the 9 subscales. Similarly, Solomon et al. (1995) reported that there were no differences between the three organized attachment groups (i.e., secure, avoidant and ambivalent). Other studies examining attachment and behaviour problems (Bates & Bayles, 1988; Lewis et al., 1984) also found that avoidant and ambivalent children did not differ from securely attached children in relation to overall behaviour problems. Solomon et al. (1995) argued that these results suggest that it is the lack of a coherent organized attachment strategy (i.e., the *disorganized* attachment pattern) rather than the security or insecurity of the strategy that is associated with behaviour problems. In this study, in order to examine this, the organized categories had to be collapsed ($n = 46$) and compared to the disorganized group ($n = 4$). This finding could not be thoroughly investigated in the present study due to the small number of children classified disorganized. In examining the CBCL scores, however, there was a trend for the disorganized children to have higher total and Internalizing *T* scores. This trend requires further investigation with a larger sample of children classified as disorganized.

The examination of CBCL *T* scores falling within the clinical range of behaviour problems suggests that children classified as insecurely attached were more likely to have scores in the clinical range. This is consistent with other studies (Bates & Bayles, 1988; Goldberg et al., 1990; Lewis et al., 1984; Moss et al., 1996; Solomon et al., 1995). In the present study, children classified as insecure represented 91% of the clinical scores with the majority (50%) of this group consisting of children classified as ambivalent. However, previous research has suggested that it is the disorganized group which represented the majority (Moss et al., 1996; Solomon et al., 1995; Speltz et al., 1990). As previously

indicated, there were only four children classified as disorganized in the present study. However, if the proportion of children with clinical range scores is considered according to their specific attachment classifications, there appears to be a trend which is consistent with previous studies. That is, 50% of the children classified as disorganized had scores in the CBCL clinical range. Furthermore, 26% of the children classified as ambivalent had scores in the CBCL clinical range, 17% of the children classified as avoidant, and only 10% of the children classified as secure had clinical range scores. Therefore, children classified as disorganized were the most likely to have clinical range scores and securely classified children the least likely. To explore this trend and empirically test if disorganization is more often associated with clinical scores, further investigations are needed with a larger sample of children classified as disorganized. The finding that children with clinical range scores are much more likely to be insecurely attached supports empirical research and suggests that the Attachment Doll Play can discriminate between children with substantial behaviour problems and those without.

In general, the results of this study supports previous research linking attachment patterns with problem behaviours. Boys, particularly those insecurely attached, were at the greater risk for internalizing behaviour problems. Higher scores on the anxious/depressed CBCL subscale supports the link between representational patterns and internalizing problems. There was a trend for the disorganized attachment group to have greater behaviour problems. Finally, insecurely attached children are more likely than securely attached children to have scores in the clinical range score on the CBCL problems scales.

Doll Play Classifications and Child Care

In the present study, current child care status was significantly related to attachment classifications whereas previous child care was not. Specifically, 80% of children classified insecurely attached were in child care at the time of the study with 38% of these children in full-time child care. Sixty percent of children classified as secure were in child care at the time of the study but none of these children were in full-time care. The results also suggested that the children most likely to be in child care at the time of the study were those in the insecure-avoidant group (88%) followed by the disorganized group (75%), the ambivalent group (73%), and finally the secure group (60%).

Research suggests that full-time child care is more likely to increase the rate of insecure attachments, especially insecure-avoidant attachments (Barglow et al., 1987; Belsky & Rovine, 1988). A child is believed to interpret the routine separations associated with child care as maternal rejection which in turn fosters insecure-avoidant relationships (Barglow et al., 1987). In this present study, the children currently in child care were more likely to be classified as avoidant and those in less child care were more likely to be classified secure. Furthermore, the association between child care and insecure attachment classification is supported by the significant relation found between secure versus insecure attachment classifications and mother's current full time work status. None of the children classified as secure had full-time working mothers whereas 26% of the children classified insecure had full-time working mothers.

Researchers have debated the effects of child care on attachment relationships. Some suggest that early and extensive (i.e., full-time) child care increases the risk of insecure

classification at 12 and 18 months of age (Barglow et al., 1987; Belsky, 1988). Others researchers indicate that child care experiences do not have detrimental effects on attachment security (Egeland & Hiester, 1995; NICHD, 1997; Roggman et al., 1994). According to one side of the debate, if early full-time child care affects later attachment classifications, then there should have been a significant relation between previous child care status and attachment classification in this study. The findings in this study indicated no such relation. However, a closer examination of the results suggests another possible interpretation. It is conceivable that current child care status, which appears to interact with attachment classification, is indicative of more extensive long-term child care experiences. In other words, perhaps those children in child care at 5 or 6 years of age are in fact the children who have been in child care for an extensive period of time and it is these children who are affected the most and at a greater risk for insecure attachment classifications. There was a total of 29 children who were in previous full-time child care and 15 who were in full-time child care at the time of the study. Of these 15 children, 13 were also in previous child care. The effect due to previous child care could be washed out by those 16 children who did not continue in child care. Thus, the current child care status may discriminate between the long-term child care children and the those in less extensive child care. As a result, the relation between attachment and previous child care status emerges with current child care.

In summary, there is no simple interpretation for the significant relation found between current child care status and attachment classifications. It is possible that current child care status can be interpreted as more extensive long-term care which may increase the

risk for insecure attachments. Therefore, the results from the study appear to fuel the contradictory findings found in the literature and seem to have provided more questions than answers. All that can be said for certain is that there appears to be a relation between child care and attachment classifications. However, this relation needs to be further explored to fully understand its nature.

Children's Doll Family Representations

The results from the examination of doll family representations and attachment classifications indicated that children's representation of the family in the doll play was significantly related to attachment classifications but children's representation of the self was not. Solomon et al. (1995) argued that allowing children to select the self and family in the doll play facilitates symbolic play and identification with story characters and allows for a deeper reflection of the internal working model of attachment. According to Bowlby (1980), a child forms two such internal working models for any given attachment, one of the attachment figure and one of the self. The child's doll stories are assumed to reflect these internal working models. Doll selection of self in the doll play may give some indication of how the child perceived the self in the attachment relationship, and doll selection of the family may provide clues as to how the child perceives the attachment relationship. Since children were asked to choose a doll to represent themselves in the stories, which facilitated identification with the protagonist, it is possible that children were more likely to choose a doll family that is reflective of their perceptions or representations of attachment relationships. Therefore, it is possible that the child's doll selections contribute to these symbolic representations of the different internal working models.

There was no indication from the study results to suggest that representation of the self was related to children's internal working models of attachment, as measured by the attachment classifications. However, a significant association emerged between children's representation of the family and their internal working model of attachment. Specifically, secure children were more likely to choose two-parent doll families than were children classified as insecure, particularly those classified as disorganized or ambivalent. These findings may relate to differences in how secure versus insecure children perceive their families. It is possible that secure children view their families as stable, specifically they perceive their parental unit as intact. Thus, secure children perhaps project this perception by choosing two-parent families. Conversely, insecure children, may view their families as unstable and their parental unit as less intact. Thus, insecure children perhaps are less likely to choose likely to choose two-parent families.

Attachment anxiety was particularly striking in the ambivalent group. Children in this group had the highest representation of father-only doll families and all the no-parent doll family representations. The noticeable absence of mothers in the doll families by 37% of children classified ambivalent is perhaps suggestive of their perceptions or representations of attachment relationships. Ambivalently classified children, by definition, are more likely to show anger towards the mother and display extreme responses of both seeking the mother and at the same time, resisting and rejecting her contact. The doll family representations with motherless families appears to support this possible anger and rejection of mother by ambivalent children. Furthermore, George and Solomon's (1990) argument that ambivalent children attempt to cognitively disconnect from the interpersonal situation in the stories

appears to be consistent with the finding that ambivalent children portray more motherless doll families. It is possible that by not including a mother in the doll family, these children are in fact detaching or separating themselves, both physically and emotionally, from the mother.

In summary, children's representation of the family in the doll play was related to attachment classification with children classified as secure more likely to have two-parent families than children classified as insecure. It was suggested that this findings may relate to how secure and insecure children perceive the parental unit. That is, children's anxieties concerning attachment-related issues may be reflected in their projections of the family unit. However, this exploration of doll selection in attachment representational measures is new and no known research has examined its link to attachment classification. As such interpretations of this study's findings should be taken as exploratory in nature.

Limitations

The following is a discussion of the limitations of the present study. The limitations of the study focus on the use of projective techniques, the lack of standardized training, the representativeness of the sample, and the use of only one measure to assess attachment. Each of these will be discussed in turn.

Projective Techniques

The use of projective techniques with children has prevailed in the assessment of children's internal working models of attachment (e.g., Bretherton et al., 1990; Main et al. 1985; Slough & Greenberg, 1990; Solomon et al., 1995). The Attachment Doll Play is believed to tap into the child's unconscious mental constructs of attachment (i.e., the internal

working model). Play gives the child a vehicle for self-expression through which his or her feelings, anxieties, and perceptions regarding attachment are revealed. The advantage of using the projective technique is that children are unaware of what the researcher is examining and is thus less likely to censor responses and less likely give socially desirable answers (Cassidy, 1990).

There are, however, disadvantages of projective measures as a whole, and the Attachment Doll Play, specifically, which may point to possible limitations in the study. The underlying assumption of the Attachment Doll Play is that children's stories reflect their internal working model of attachment. However, it is possible that children's stories do not reflect their unconscious mental representations but rather reflect a recent story they heard, a movie they saw or an interaction they had witnessed between a parent and child. Therefore, it is difficult to know if the child's story describes his or her internal working model of the attachment relationship or if the story simply represents a fantasy about the way he or she would like the attachment relationship to be. Another possible disadvantage with the Attachment Doll Play, and other such projective tests, is the fact that interpretation is subjective. Although, there are guidelines for scoring within the classification system, decisions are based on the raters interpretation of the story. Because of this subjectivity, it is not surprising that high inter-rater reliability was difficult to achieve in both this study and the original (Solomon et al., 1995). In fact, the lack of psychometric properties of projective techniques has often been a noted concern (Anastasi, 1988).

Although there may be problems and limitation with projective techniques such as the Attachment Doll Play, this does not discredit the use of this or other such methods.

Projective assessment approaches can provide useful information which may not be elicited by any other type of assessment.

Training

The lack of a standardized training procedure for the Attachment Doll Play classification system for researchers is a limitation in the present study. Training was a limitation for two reasons. First, training on the classification system was conducted by only one individual, one of the two originators of the assessment tool. There are no other researchers who could reliably train others on the classification system. Second, training was not available to this researcher because of the trainer's scheduling problems. An attempt was made to be trained by the researcher in Oakland, California; however, the trainer was not available for over a year due to previous commitments and obligations. Therefore the current training procedure was not conducive of being trained on the classification system. The unavailability of training diminishes the accessibility of the Attachment Doll Play to other researchers.

Although, the researcher was not formally trained, attachment classifications were made based on a careful review and study of the Attachment Doll Play classification system. In addition, a sample of previously classified doll play transcripts from the original study were reviewed.

Sample

Two aspects of the sample provide limitations. The first concerns sample size. A sample of 50 children was chosen based on previous research studies in the narrative assessment of young children's internal working models of attachment. For example,

Solomon et al. (1995) had a sample of 42 young children, Oppenheim (1997), 29 children, Bretherton et al., (1990), 35 children, and Main et al. (1985), 40 children. Although the present study sample was adequate, there was a low incidence of the disorganized classification (8%). A larger sample size may have resulted in more children classified disorganized which would have allowed for analysis between the organized and disorganized classification groups.

The second limitation is the composition. The demographic composition of the study sample may limit the generalizability of the results. Demographic variables, including parental education and employment and other family characteristics, suggest a middle to upper middle class, educated, white, English-speaking, sample of maritally intact families. Based on these variables, this was a low-risk sample and may not adequately represent the average child population.

This sample, however, was not unusual compared to other studies using narrative approaches to assess young children's internal working models. For example, Solomon et al. reported a sample of families comprised of maritally intact (80%) white (80%), university or college graduates; Cassidy's (1988) study sample was white (100%), university or college graduates (80%) and maritally intact (96%). Similarly, Verschueren's et al. (1996) study was comprised of white children from middle to upper-class married parents (85%). Therefore, the present sample of white (96%), maritally intact families (98%), with university degrees or college diplomas (83% mothers, 80% fathers) may not represent a typical sample of children, but it is representative of similar samples reported in other studies. Overall, findings from the present study and other research may be limited to a

select group of families and caution should be used in generalizing these results to the broader population.

Single Measure of Attachment

Attachment classification was based on only one measure, the Attachment Doll Play procedure, given at only one time interval. Furthermore, in accordance with the current classification system, attachment classifications were based on only one of the attachment stories (i.e., the Departure-Reunion story). This single measure of attachment is a limitation of the study. Although the purpose of the study was to empirically investigate the Attachment Doll Play tool, and not to fully examine the attachment relations of young children, multiple measures to assess attachment would have provided stronger support for children's classifications and the possibility to investigate criterion-related validity. Potential concurrent measures include other representational measures which tap into a child's internal working model of attachment (i.e., family drawings, Puppet interview) and/or behaviourally based reunion procedures (i.e., Main & Cassidy (1988) sixth-year classification system). Thus, multiple measures could have provided evidence of the criterion-related validity of children's classifications.

Future Direction

Current research in the internal representational processes of attachment is presently in its infant stages. There is still much room to grow and expand in both representational-based assessment tools and the Attachment Doll Play. Possible future research directions for the Attachment Doll Play measure are discussed.

Future research is needed to further explore the Attachment Doll Play classification system. As evident in the present study, there were some themes enacted by children which were not captured by the classification system. The doll play needs to be administered to a larger sample of children and the classification system revised to include the broad spectrum of possible story themes. The Attachment Doll Play classification system was developed based on the doll play transcript of 27 children and then later tested on a sample of 42 children's transcripts (Solomon et al., 1995). This small sample of children in the original study appears to have provided a good foundation for the classification system but further work is needed to fully develop the system into a comprehensive attachment tool.

The classification system also needs to be expanded to include the other attachment-related story completions in the doll play (i.e., the Hurt Knee and Monster stories). Work in this area has begun with a qualitative analysis on a small sample of the narratives on these two attachment stories (George & Solomon, 1996). However, the links between all three attachment stories (i.e., the Hurt Knee, Monster, Departure-Reunion stories) have not yet been empirically examined. Attachment classification accuracy is likely to be improved if children's patterns of response to all attachment stories are considered in classification decisions.

The original study validated the Attachment Doll Play with a concurrent laboratory separation-reunion procedure for six-year-olds. Future research might explore the relation between attachment patterns in infancy, as measured by the Strange Situation, and the doll play in the early school years. Specifically, a longitudinal study of attachment following children from infancy to early childhood and comparing the early behaviour patterns with

later representational patterns is suggested. Longitudinal data would further strengthen the Attachment Doll Play as a valid method for classifying attachment.

The future research potential of the Attachment Doll Play is promising. There are many areas which are open to further expansion or exploration to develop the Attachment Doll Play as a comprehensive attachment tool for measuring the internal working models of young children.

Summary and Conclusion

The overall purpose of the present study was to empirically investigate the Attachment Doll Play. There was an attempt to replicate previous work with the tool, explore the links between representations of attachment and behaviour problems, examine the relation between representations and child care, and expand the Attachment Doll Play tool by investigating children's representations in the doll play. The study replicated the secure versus insecure distribution and the inter-rater reliability reported by Solomon et al. (1995). Generally, the results provide empirical support for the Attachment Doll Play as a tool for assessing attachment in 5- and 6-year-olds. In line with previous research, the investigation of the Attachment Doll Play indicated that: 1) boys, particularly those classified as insecure, were more at risk for internalizing behaviour problems than were girls; 2) children classified as insecure were at greater risk than children classified as secure to have behaviour problems in the clinical range; and 3) child care status was related to attachment classifications. Furthermore, an exploratory investigation indicated that children's representation of the doll family in the stories were related to their internal working model of attachment relationships. In sum, this study provides empirical support

for the Attachment Doll Play as a promising tool for assessing the internal working models of young children.

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APPENDIX A

Cover Letter

Dear Parent/Guardian:

My name is Mirella Pugliese, and I am a graduate student at the University of Calgary in the Department of Educational Psychology. As part of the requirement for a M.Sc. degree, I am conducting a research project under the supervision of Dr. Claudio Violato. I am writing to provide information regarding my research project entitled 'Children's Perceptions of Family Interactions' so that you can make an informed decision regarding your child's participation.

The purpose of this study is to examine how young children perceive family interactions. As part of the study, your child will be asked to use a set of dolls to complete stories involving typical family interactions. Your child's story completions will be video-taped. In addition, you will be asked to complete two questionnaires, one on your child's developmental history and a second on your child's behaviour. These procedures will take approximately 30 minutes. You should be aware that even if you give your permission, your child is free to withdraw at any time for any reason without penalty. Participation in this study will involve no greater risks than those ordinarily experienced in daily life.

Data collected will be labelled with identification numbers rather than names to ensure anonymity. Once collected, responses will be kept in strictest confidence, only group results will be reported in any published studies. At the completion of the study, the raw data will be kept in a locked filing cabinet at the University of Calgary only accessible to the researcher. All files will be destroyed two years after completion of the study.

Two copies of the consent form are provided. Please return one signed copy to me and retain the other for your records. If you have any questions, please feel free to contact me at (905) 568-3989, my supervisor Dr. C. Violato at (403) 220-7296, the Office of the Chair, Faculty of Education Joint Ethics Review Committee at (403) 220-5626, or the Office of the Vice-President (Research) at (403) 220-3381.

Thank you for your cooperation.

Sincerely,

Mirella Pugliese

APPENDIX B

Consent for Research Participation

I, the undersigned, hereby give my consent for _____ (your child's full name) to participate in a research project entitled Children's Perceptions of Family Interactions.

I understand that such consent means that _____ (your child's name) will be asked to use a set of dolls to complete stories involving typical family interactions. I am aware that my child's story completions will be video-taped. I also understand that I will be asked to complete two questionnaires, one on my child's developmental history and a second on my child's behaviour. These procedure will take approximately 30 minutes.

I understand that participation in this study may be terminated at any time by my request, my child's request or at the request of the investigator. I understand that this study will not involve any greater risks than those ordinarily occurring in daily life.

I understand that the responses will be obtained anonymously and kept in strictest confidence. I am aware that all raw data will be locked in file cabinets and destroyed two years after publication of study results. I understand that only group data will be reported in any published reports.

I have been given a copy of this consent form for my own records. I understand that if at any time I have questions, I can contact the researcher, Mirella Pugliese, at (905) 568-3989, her supervisor at (403) 220-7296, the Office of the Chair, Faculty of Education Joint Ethics Review Committee, at (403) 220-5626, or the Office of the Vice-President at (403) 220-3381.

Parent/Guardian's Printed Name

Signature of Parent/Guardian

Date

APPENDIX C

Attachment Doll Play Materials ¹

Children are provided with the following toys to enact the story completions. Some of the furniture in the doll house is glued to the base so that the child does not spend a lot of time setting up fallen items. The following items are glued down: dining room table (not chairs), couch/sofa, coffee table, television (on coffee table), stove, sink, refrigerator, beds, pillows on beds, night stand, and rock.

1) Doll House:

The doll house is a flat surface (e.g., painted board), approximately 18" X 36". Rooms of furniture are organised in the following order: kitchen, dining room, living room, bedroom, and a small outdoors/backyard. The backyard is designated with a green piece of felt glued to the board. The doll house is not cluttered but contained enough furniture to make the setting attractive for play.

2) Furniture:

The doll house contains the following pieces of furniture:

- dining room set: table and 6 chairs
- kitchen set: refrigerator, sink, stove
- bedroom set: 1 double bed, 2 single beds, night stand, baby crib
- living room set: couch/chair and coffee table (for TV set)
- baby high chair

3) Accessories:

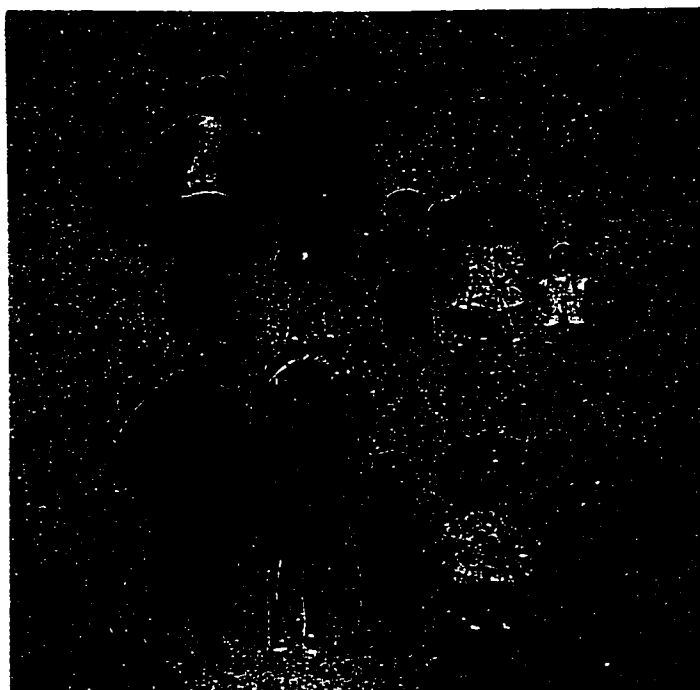
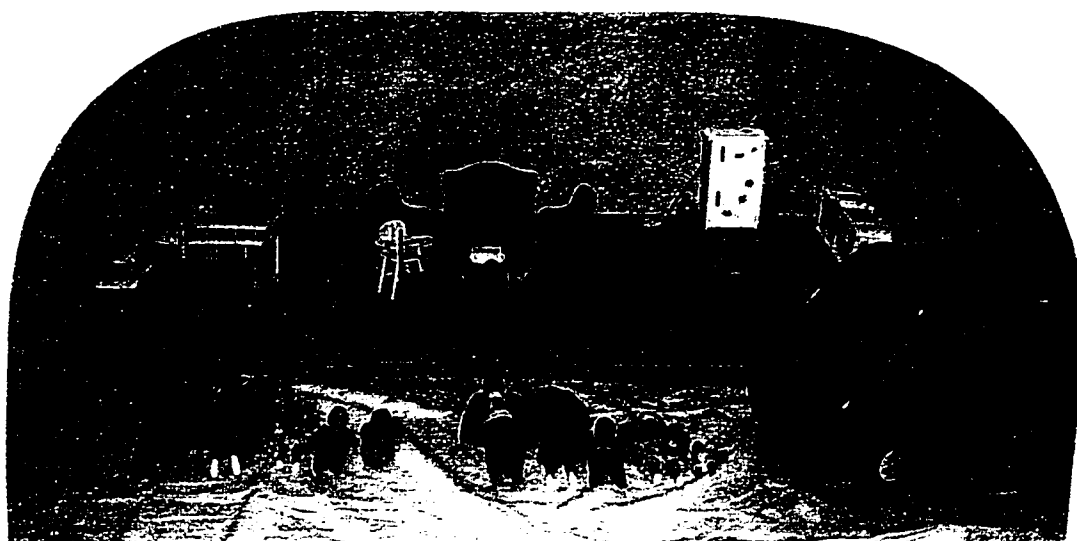
The following accessories are provide for play:

- doll family (11 dolls: 2 of each: father, mother, brother, sister, baby and 1 extra female adult doll to represent a baby-sitter in the Departure and Reunion stories)
- pets: puppy, kitten
- broom or mop
- dishes (6 plates & bowls, baby bottle)
- birthday cake
- food items (e.g., cereal boxes, ketchup bottles)
- kitchen items (e.g., pots and pans)
- television, pillows for beds
- a few miniature children's toys (including a truck and/or airplane)
- rock (for the backyard), miniature tool set
- family car

¹ George, C. & Solomon, J. (1990). Six-year Attachment Doll Play. Unpublished manuscript. Mills College, Oakland, CA.

APPENDIX D

Doll House Materials



APPENDIX E

Instructions for Doll Play ¹

SELECTING THE FAMILY AND WARM-UP PLAY:

Administrator lays out the family dolls, arranging the dolls in the following order: father, mother, brother, sister, and baby.

Administrator: **“Now you are going to select a pretend family. You can pick whomever you want to be in this family. First I’d like you to choose the doll that you would like to be *you*.”**

(After the child has selected a doll to represent the *self*.)

“Now pick the rest of the ones you want to be in this family”

(When the child has finished selecting a pretend family.)

“Would you tell me again who is in this family”

(Hand the dolls one by one to the child, asking for the doll’s name or role, e.g., mother)

“Who is this?”

“Now put the family in the house.”

(Allow the child several minutes to arrange the family. Then say:)

“Show me what’s happening in this family”

Let the child play freely with the family for a maximum of 3 minutes.

The important features to remember about family selection are as follows:

- a) The goal is for the child to select a *pretend* family. There should be no pressure for the child to select his/her real family, although he/she may do so if desired.
- b) The child selects and identifies with a doll that represents the *self*. The doll should be named the child’s name during the stories.
- c) After the dolls have been selected, it is sometimes difficult to remember their designated identities (for example, adult dolls may be chosen to play extended family members or child roles). Because of this the dolls are give one by one to the child, and the child is asked to say who the doll is. This procedure is essential for clarification to the administrator and later doll play analysis.

In a few cases, the child cannot choose or refuses to choose a self doll. Selection of dolls is very important to the story procedure, repeat the instructions (or a gentle variation) and see what happens. If the child cannot choose a self after 5 minutes or so, a child doll of the

same gender as the child is chosen and the child is asked to choose the rest of the family. If the child still cannot pick a family, a family for the child (mother, father, self/child, sibling) is selected.

STORIES:

The doll play is designed to last approximately 30 minutes, 5 minutes per story. After the brief warm-up, the child enacts the following stories: The Family Pet, The Hurt Knee, Monster in the Bedroom, Departure (Separation), and Reunion.

It is important for the doll play administer to encourage the child to enact the stories and not just narrate what is going on. In addition, the administrator is responsible for determining if what the child says or does will be understandable later for coding. If movements are ambiguous or speech is not clear, the administrator must ask for clarification. The administrator should not be satisfied with a quick story unless the child's resolution of the attachment issue is very clear.

In some cases, the child may indicate strongly that he/she does not want to engage in one or more of the stories. This is very important information for coding, and the administrator should refrain from telling any part of the story for the child. There is no assumption that the child is inhibited or shy about playing with dolls. Thus the administrator should encourage play using gentle prompts but communicating clearly that she is not going to tell the stories for the child.

1) The Family Pet (5 minutes)

Administrator: "I have an idea for a story. Let's pretend the mom hears a knock at the door. She opens the door and finds someone who is trying to find a home for a puppy and a kitten."

(If the child has not chosen a mother, use another adult doll or if no adults were chosen, use the oldest child doll. The administrator moves the mother doll up and down slightly as if she is talking and moves her to 'open' the front door. The mother says:)

"Someone is looking for a home for this puppy and kitten. Show me what happens next."

Prompts:

If the child does not spontaneously mention, then say, "Show me what they do about the puppy and kitten."

If the child only gives one response: “Did anything else happen?” “What else?” or “Show me?”

If the child performs ambiguous actions with figures ask, “What are they doing?”

The administrator can also repeat the child’s statement in question form to verify what the child said (“The child chose the kitten? Show me what happens next?”)

The child plays with this theme for 5 minutes, unless the child indicates it is time to go on.

The child is encouraged to play with this theme for at least 3 minutes by using the above prompts. Move on by saying:

“Let’s get ready for the next story.”

2) The Hurt Knee (5 minutes)

Ensure that all the dolls are in the house and in the positions that are ‘awake’ (i.e., no story should start with dolls in bed. Get them up by saying, **“It’s the next day and ...”**)

Administrator: **“Okay, I have an idea for another story. Here you are. You are playing in the backyard. You call to your mom and dad and you say:**
(The experimenter raises voice like a child and move the child doll as you speak)

“Look mom and dad. Watch me climb this high, high rock.”
(The experimenter makes the self climb the rock and then fall off and makes the doll cry out)

“Ow! I’ve hurt my knee.”

“Show me what happens next.”

Prompts:

If the child does not spontaneously mention, “Show me what they did about the hurt knee.”

If the child only gives one response: “Did anything else happen?” “What else?”

If the child performs ambiguous actions with figures, ask “What are they doing?”

If the child uses ambiguous pronouns when talking about the figures, ask “Who was doing it?”

The administrator can also repeat the child’s statement in question form to verify what the child said (“The mom runs out into the backyard? Show me what happens next.”)

Let the child play with this theme for 5 minutes, unless the child indicates it is time to go on.

Encourage the child to play with this theme for at least 3 minutes by using the above prompts. Move on by saying:

“Let’s get ready for the next story.”

3) Monster in the Bedroom (5 minutes)

Administrator: **“Let’s get the family ready for the next story.”**

(If the family has been asleep, wake them up. Set the mother, father and other family members on the couch watching TV. Stand the doll the child selected to represent the self near the parents. If the child selected as adult to represent the self, use a child doll the same gender as the child as possible.)

“Look what happens now. Listen carefully.”

(In the voice of the mother doll, face the mother doll towards the child doll, moving her slightly as she speaks)

“It’s time to go to bed now.”

(Child doll, moving slightly as he/she speaks:)

“Okay, I’ll go get ready.”

(Make the child walk to the bedroom)

Administrator: **“(child doll’s name) goes to his/her room and he/she says, Mommy, Daddy! There’s a monster in my room! There’s a monster in my room!”**

(move the child up and down and use an alarmed voice.)

“Show me what happens next.”

Prompts:

If the child does not spontaneously mention, then say “Show me what they did about the monster in the room.”

If the child only gives one response: “Did anything else happen?” “What else?”

If the child performs ambiguous actions with figures, ask “What are they doing?”

If the child uses ambiguous pronouns when talking about the figures, ask “Who was doing it?”

The administrator can also repeat the child’s statement in question form to verify what the child said (“The mom runs out into (child’s name) bedroom? Show me what happens next.”)

Let the child play with this theme for 5 minutes, unless the child indicates it is time to go on. Encourage the child to play with this theme for at least 3 minutes by using the above prompts. Move on by saying:

“Let’s get ready for the next story.”

4) Departure (5 minutes)

In this story, introduce a female adult baby-sitter doll. Awaken the family (if necessary) and set the family outside on the left side of the house. Line the baby-sitter and children on one side and the mother and father facing them, all near the car as a family would do to say good-bye to departing family members.

Administrator: **"The family is outside of their house. Here is the family car. This is their baby-sitter. You know what it looks like to me (child's name)? It looks like the mommy and daddy are going on a trip."**

(In the voice of the mother doll, moving her slightly as she speaks)
"Okay kids. Your daddy and I are leaving on our trip now."

(In the voice of the father doll, moving him slightly as he speaks)
"See you tomorrow. The baby-sitter will stay with you."

"Show me what happens next."

Important:

The administrator should let the child put the figures in the car and drive the car off. Only drive the car away yourself in the child seems unable to make the car drive off. (Say, "And away they go" as you drive the car away.) If the child puts the children dolls in the car say, "No, only the mommy and daddy are going." Place the child dolls back in position. After the child (or if necessary, the administrator) makes the car drive off, the administrator puts the car under the table, out of sight. If the child wants to retrieve the car, the administrator replies, "No, they're not coming back yet."

Prompts:

If the child does not spontaneously mention, then say "What did the child/children do while mom and dad were gone."

If the child only gives one response: "Did anything else happen?" "What else?"

If the child performs ambiguous actions with figures, ask "What are they doing?"

If the child uses ambiguous pronouns when talking about the figures, ask "Who was doing it?"

The administrator can also repeat the child's statement in question form to verify what the child said ("The children go into the house? Show me what happens next.")

Let the child play with this theme for 5 minutes, unless the child indicates it is time to go on. Encourage the child to play with this theme for at least 3 minutes by using the above prompts. Important: Be sure not to let the child end this story prematurely. Keep the parents away on their trip until the child fully enacts a story about the departure. Move on by saying:

“Let’s get ready for the next story.”

5. Reunion (5 minutes)

Bring the car with the parents back out from under the table. Set it on the table at a **DISTANCE** from the family. (i.e., keep it near the administrator so the child has to reach for it can make it drive ‘home’. This ensures that there is some distance between the parents and the child figures so the child can enact a ‘reunion’.

Administrator: **“Okay. It is the next day and the baby-sitter sees the parents coming home.”**

(Move baby-sitter towards a pretend window in the house as she speaks)

“Look, here comes your mom and dad. They’re home from their trip.”

“Show me what happens next.”

(Let the child drive the car toward ‘home’. Drive the car home only if the child does not do so.)

Prompts:

If the child does not spontaneously mention, then say “What happens now that the mom and dad are home.”

If the child only gives one response: “Did anything else happen?” “What else?”

If the child performs ambiguous actions with figures, ask “What are they doing?”

If the child uses ambiguous pronouns when talking about the figures, ask “Who was doing it?”

The administrator can also repeat the child’s statement in question form to verify what the child said (“The children go into the house? Show me what happens next.”)

Let the child play with this theme for 5 minutes, unless the child indicates it is time to go on.

Encourage the child to play with this theme for at least 3 minutes by using the above prompts. At the end of 5 minutes say,

“ It’s time to put the family away now.”

¹ George, C., & Solomon, J. (1990). Six-year Attachment Doll Play. Unpublished manuscript. Mills College, Oakland, CA.

APPENDIX F

Doll Play Classification System ¹

The criteria for classifying the attachment groups are described below. There are 4 attachment groups: Confident (Group B, Secure), Frightened (Group D, Disorganized/Controlling), Busy (Group C, Ambivalent/Resistant) and Casual (Group A, Avoidant).²

Secure (Confident, Group B)

In the majority of cases, secure children enact themes of “danger and rescue.” For example during *Departure* children enact dangerous and/or frightening or spooky events originating outside the home. That is the perpetrators of the danger or fright are not family member. They may be intruders, an evil baby-sitter, or even ghosts, or mysterious noises. Characteristic themes during *Reunion* include resolution and reintegration of the family, although a resolution may occur during *Departure* prior to the parents’ return. Dangerous events are resolved by competent and trustworthy adults who provide protection, safety, assistance, or strategies for resolution. These adults most commonly include parents, baby-sitter, or an outside authority (e.g., policeman). Some secure children depict themselves as competent to take the initiative to call upon adults for help, and/or to successfully keep the danger or the problem under control until adults/protectors can arrive to solve the problem (e.g., child gives the perpetrator a few good karate chops to keep it at bay). In a few cases the danger appears to resolve itself.

Frequently during *Reunion* secure children re-integrate the family immediately upon the parents’ return. Family members hug sincerely, converse about the events that occurred during the parents’ absence, and/or parents admonish or punish the outside perpetrator or person responsible for the danger. Family re-integration may involve affection, however, affection may be comfortably casual or may be absent entirely (i.e., affection is not the hallmark of re-integration). Finally, if the danger has been resolved, family re-integration is not mandatory for a secure classification. In these instances *Reunion* themes simply may provide closure for the child’s story.

In a few cases, the stories of secure children depict themes of autonomy. In addition to ordinary story event (e.g., eat dinner, watch TV) the child or children are depicted in autonomous activity, most often portrayed as playing on his/her own or engaged in some other industrious activity (e.g., making his/her lunch).

In sum, key features of the stories of secure children include resolved danger, competence and/or autonomy. In most “danger and rescue” stories secure children express separation fears and also confides in the competent support of adult caregivers. In autonomy stories, the child expresses confidence in his/her own competence through independent play or acting in a ‘mature’ manner.

Ambivalent (Busy, Group C)

The story themes and thought processes revealed by this group of children suggest that ambivalent children are attempting to disconnect cognitively from the attachment stories. The hallmark of these stories is transformation. During both *Departure* and *Reunion* separation fears are transformed by uncoupling the affective implications of the story from the themes actually enacted. Fears often appear as themes of caregiving, hurt and comforting, fun, and parties. The target of the transformation is frequently displaced from the self, for example, onto the baby of the family, other sibling, or to pets.

Transformation is also apparent in the child's thought processes during the story. Ambivalent children are obsessively distracted with seemingly irrelevant activities or objects, especially during *Departure*. Often this distraction gives their stories an empty quality. For example, the children or baby-sitter may be engaged in time-consuming activities such as arranging dishes and food on the dinner table, sweeping, humming or singing, or preparing the details for a birthday party.

Reunion themes of ambivalent children are characterized by non-integration through cognitive disconnection from the reunion event. On the surface, the reunion may appear to be similar to the secure re-integration. Especially deceiving is the action by the child dolls or the child him/herself that portrays affection or excitement in response to the parents' return. Careful attention to process variables, however reveals a reunion scenario that is delayed or suspended in time. During the delay the child again appears to be using a transformation mechanism to defuse the affectively loaded reunion. In some cases the delay is immediate (e.g., the child or the baby-sitter find things to do before the parents get out of the car). This type of delay may follow a brief expression of excitement or anticipation as the administrator drives the parents' car back home (e.g., child dolls running toward the car; the child smiling or reaching toward the parents' car). In other cases the child may enact a fleeting affectionate greeting between parent and child dolls that is immediately interrupted as the dolls or the child becomes distracted and engage in other activities.

Avoidant (Casual, Group A)

The story themes and thought processes revealed by this group suggest that avoidant children deactivate the attachment behavioural system. The most diagnostic form of deactivation appears in *Departure* as 'undoing'. During *Departure* most of the avoidant children try unconsciously to cancel or undo the separation through actions that keep the parents and children together in some way. Some of these actions are very subtle and careful attention must be paid to the child's movements and who has been chosen to be self and parent dolls in order to detect some of these 'undoings'. Children for example, put the child doll in the car as the parents initially depart, the child or baby-sitter calls the parents (not in response to danger), or the child joins the parents on their vacation. An 'undoing' may be expressed through story narrative or action. Note that the child asking the administrator to bring the parents back home is a direct, conscious effort to end the separation and is not considered an 'undoing'.

Interestingly, the doll play of many avoidant children appears to meet the criteria described for ambivalent children. That is, children or family characters are distracted, separation fears are transformed into fun or parties, and the family reunion feels delayed or suspected in time. These avoidant children, however, also enact some form of 'undoing' during *Departure*.

During *Reunion* most avoidant children deactivate the parents' return by enacting themes that thoroughly block child and parent re-integration. This reunion block usually is depicted by the child or parents immediately watching TV or going to be upon reunion.

Deactivation is also frequently depicted in the stories by the script's lack of adventure and danger. Avoidant children frequently enact a story whose script is a string of common everyday activities (e.g., eating, sleeping, watching TV) lacking the competence or autonomy seen in the scripts of secure children. With the exception of parties (affect reversal), the stories of avoidant children often appear boring as compared with other children.

Disorganized (Frightened, Group D)

Most characteristic of controlling children are stories depicting unresolved danger, chaos, and disintegration of the self and/or the family. The parents' behaviour is often frightening and the children themselves are helpless. During *Departure* the children are faced with themes of intense personal threat or chaos. For example, the house is destroyed by a severe earthquake or toys are flying around the house, wildly out of control. Adults who might potentially be of assistance are depicted as physically or psychologically unavailable or punitive and abusive. For example, in the midst of disaster the baby-sitter gets sick and leaves the children alone in the house, or the sitter punishes the child by sending him to jail. The children are frequently depicted as helpless to get assistance from others and helpless to control their own behaviour or the events around them. In some instances, their only recourse is to hide or keep secrets. In other instances the children are depicted as attacking the baby-sitter or family members. Attacks are hostile and not in the context of keeping perpetrators at bay until they can be rescued.

Disintegration themes are a diagnostic feature of the stories of controlling children. These themes may appear during either of both *Departure* or *Reunion*. For example, the house and the child may be destroyed, the parents may be abusive or punitive, or the parents may turn around and leave the home upon return from their vacation (abandonment).

Stories that end in a state of disorganization or disintegration are classified controlling regardless of the themes and process that occur earlier in the stories. For example, a child who depicts an otherwise ordinary scenario, but who dismembers the baby-sitter or has a family member fall off a cliff at the end of the story is classified as controlling.

In sum, the stories of secure and controlling children bring up separation fears and attachment needs directly. Secure children express confidence that dangers can be resolved by responsible and competent adults and the family will be re-integrated. Controlling children are overwhelmed by their separation fears as expressed in themes of irresolvable chaos or punishment. Adults and children are helpless, frightened, or abusive. Families are left in a state of disintegration.

¹ George, C., & Solomon, J. (1990, 1996). Six-year Attachment Doll Play Classification System. Unpublished manuscript. Mills College, Oakland, CA.

² Refer to classification system for further details and examples of scoring

APPENDIX G

Family Questionnaire

Please complete the following questions with regards to your child participating in the study. Answer all questions. Your cooperation and participation is greatly appreciated.

A Child/Family Information:

Child's Age: _____ Gender: _____ Date of Birth: _____

Birth Order: _____ # of Siblings: _____ Age(s) of Sib(s) _____
(e.g., only, first, youngest etc.)

Does your child have any significant health problems? ☐ yes ☐ no
If YES, please specify: _____

What is the total number of family members living in your household? _____

Please list your household composition :

_____ (e.g., mother, father, brother, sister, grandfather, nanny)

How many times has your family changed residences since your child's birth? _____

How many of such changes involved moves to different municipalities? _____

B Parental Education/Employment:

YOU:

Please indicate your highest level of education completed. _____

Do you currently work outside the home? ☐ yes ☐ no

If YES, do you work: ☐ part-time or ☐ full-time

If YES, how many total number of hours/week do you work?
 _____ hrs/week

If YES, please indicate occupation: _____

YOUR SPOUSE/PARTNER:

Please indicate your spouse/partner's highest level of education completed. _____

Does your spouse/partner work outside the home? ☐ yes ☐ no

If YES, does your spouse/partner work: ☐ part-time or ☐ full-time

If YES, how many total number of hours/week does your spouse/partner work?
 _____ hrs/week

If YES, please indicate occupation: _____

C School / Day Care History:
--

Child's current school grade: _____

At what age did your child begin school? _____

When your child is not in school, do you use any of the following child care arrangements?
 (check all that apply and indicate the number of hours per week and at what age your child began)

<input type="checkbox"/> day care	_____ hrs/week	_____ age
<input type="checkbox"/> nanny	_____ hrs/week	_____ age
<input type="checkbox"/> baby sitter - relative	_____ hrs/week	_____ age
<input type="checkbox"/> baby sitter - family friend	_____ hrs/week	_____ age
<input type="checkbox"/> baby sitter - other	_____ hrs/week	_____ age
<input type="checkbox"/> other (please specify): _____		
<input type="checkbox"/> none		

Prior to your child entering school, did you use any of the following child care arrangements?

(check all that apply and indicate the number of hours per week and at what age your child began)

- | | | | | |
|--|-------|----------|-------|-----|
| <input type="checkbox"/> day care | _____ | hrs/week | _____ | age |
| <input type="checkbox"/> nanny | _____ | hrs/week | _____ | age |
| <input type="checkbox"/> baby sitter - relative | _____ | hrs/week | _____ | age |
| <input type="checkbox"/> baby sitter - family friend | _____ | hrs/week | _____ | age |
| <input type="checkbox"/> baby sitter - other | _____ | hrs/week | _____ | age |
| <input type="checkbox"/> other (please specify): | _____ | | | |
| <input type="checkbox"/> none | | | | |

Please list any separations from parents that your child has experienced.
(e.g., vacations, hospitalizations, business trips etc.)

<i>Child's Age</i>	<i>Length of Time</i>	<i>Reason</i>	<i>Child in Whose Care</i>
--------------------	-----------------------	---------------	----------------------------

From Both Parents

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

From Mother Only

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

From Father Only

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

If more space is required, please use the back of this page.

APPENDIX H

Examples of Doll Play Stories

Secure Classification

SYNOPSIS

Child: 6-year-old girl

Classification: Secure (Confident)

Story Themes:

Departure: Children play and read books to the baby and pets (autonomy). The baby-sitter cooks, plays with the children, and looks after the baby (ordinary story events).

Reunion: Children run to greet parents. Children hug parents. Mother says she's glad to be home (greeting and immediate re-integration).

DOLL FAMILY:

girl - self

adult female - mom

adult male - dad

girl - sister

baby - baby brother

DEPARTURE

Experimenter: The family is outside of their house. Here is the family car and here is the baby-sitter. You know what it looks like to me [child's name]? **What?** It looks like the mommy and daddy are going on a trip. Okay kids your daddy and I are leaving on a trip now. See you tomorrow. The baby-sitter will stay with you. Okay [child's name], show me what happens next.

Child: And then they get into their car. (Puts mother in passenger seat and father in drivers seat). And then they drive ... are they taking the baby? No, just the mommy and daddy are going? And then they drive off and they see ... they just imagine that they see a teddy bear ... there was a teddy bear flying on a broom (puts teddy bear on broom) And daddy ... stops the car and shakes ... went goes like that (C shakes head) ... shaked their heads and then ... and they both said at the same time, "Did

you see what I see ?” (says parents). And they both said, ‘Yes’ at the same time again and ... and the teddy bear ... landed on the window ... on the glass that’s in front of the car, and they both screamed and then they went all the way home. *Wow.* And then when they saw the teddy on the broom like this, that the kids put on like that ... they went, ‘Ha, ha.’

E: Okay, and away the parents go (drives car away and puts under table). Away the parents go. Okay, so what do the children do while mom and dad were gone?

C: Um ... they ... they were playing with the baby and the kitty and the doggy (picks up baby, dog and cat and puts in front of girls), and they were reading them books. And they ... and um ... and they were trying ... pretending they’re fixing this up. And they were going like this (picks up tool and hammers on rock) with daddy’s tool ... hammer, whatever it’s called. *Who’s doing that?* The kid. The kids. *The kids.* And they’re ... with daddy’s hammer they’re ... they went ... um, hammering on the carpet (hammers floor). *What are they doing?* They’re just playing. *Oh, they’re just playing.* And ... then ... the baby sitter was watching the ... cooking and reading and watching the kids and playing with the kids and watching the baby (picks up sitter and brings in kitchen). And um ... and um, what’s it called, and washing the bottles and stuff. *Washing the bottles and stuff.* Ya. And feeding the kitty and doggy and blah, blah, blah.

E: Oh. Did anything else happen while the mom and dad were gone?

C: Um ... um ... the breakfast part of the baby chair fell apart. I mean one of these (points to railing in crib) were missing to hold the crib up and the baby so and the baby ... the baby could kind of crawl out or something. *Oh.* So they had to put a piece of um... so they had to put cardboard there or something so the baby wouldn’t fall out.

E: Did anything else happen while the mom and dad were gone?

C: No.

E: No. Okay, do you want to get ready for the next story? Ya. Let’s get ready for the next story.

REUNION

E: Okay let's get ready for the next story. And the baby sitter sees the parents coming home. Look here comes your mom and dad, they're home from their trip. Yeah. Show me what happens next.

C: Then the mommy and daddy get out of their car (drives car home, takes mother out of car, takes father out of car). And they open the door and ... they ... the kids are at the front door, and they run and hug their mommy and daddy (brings girls to front door, and kids and parents hug). And ... um, um .. and ... then they ... they um, they ... the baby starts crying because now he notices ... now he sees his mommy and ... and daddy, so he starts crying, so the mommy picks the baby up (mother picks up baby) and sits down (sits mother on couch with baby), and daddy goes and sits down too ... on the couch with the two kids, with these two other kids (picks up girls, sits father on couch). And the mommy says that ... that she's glad to be home. *The mommy says she's glad to be home. With the two kids. With the two kids. I mean with the three kids (sits girls on couch between mother and father). With the three kids.* And ... the puppy 'barks' (puts dog in front of couch), and the kitty 'meows' (puts cat in front of couch) ... and ... and while they were gone actually um the baby sitter made a cake. *Wow.* And at dinner time, they all got to eat it. And ... um, then the baby sitter ... they paid the baby sitter, and the baby sitter goes home (picks up sitter and puts on side of house). *They pay the baby sitter and baby sitter goes home. Okay. Ya. That's what mommy and daddy does when they go out, and the baby sitter comes. Right.* And then they look around, and there's a big mess that the baby and puppy did. And then the mommy picks up and sweeps up (sweeps with broom) and puts the two hammers ... and daddy puts the two hammers back (puts hammer back) and all the dishes (puts back dishes). And ... and ... they ... and the two books (puts away 'books' back in cupboard then sits girl at table head). *Anything else?* And now they're having dinner (takes food out of fridge and puts on table). And they all sit down and they have their dinner (sits mother at table). *They all sit down and have their dinner. Ya. (puts baby in high chair, sits father beside mother).* And they feed the puppy and kitty. *They feed the puppy and kitty.* And they feed the baby (picks up fallen chairs). And then they all go to bed (puts baby in crib). They (kids) have a little play and then they (parents) say it's time to go to bed. *They have a little play? Ya. Just before bed.* And ... and that's it (puts father and mother in adult bed, puts girl in child bed, puts other girl in other bed and puts pets to sleep on couch).

E: Okay. Are you all done. Ya. Okay, we're all done our stories now.

Avoidant Classification

SYNOPSIS

Child: 5-year-old boy

Classification: Avoidant (Casual)

Story Themes:

Departure: The children are put in the car as the parents initially depart (undoing).

Children play, go to bed, wake up, have breakfast, and watch TV (string of common activities = deactivation).

Reunion: Family goes on a trip. When they return, they all go to sleep (deactivation).

DOLL FAMILY:

boy - self

adult male - mommy

adult male - daddy

boy - brother

baby - baby sister

DEPARTURE

E: The family is outside of their house. Okay, they're outside of the house. Here is the family car. And this is the baby sitter. You know what it looks like to me [child's name]? It looks like the mom and dad are going on a trip. And the mom says, 'Okay kids your daddy and I are leaving on a trip now'. Okay And the dad says, 'See you tomorrow. The baby-sitter will stay with you'. Show me what happens next.

C: The dad gets in the car (puts father in driver's seat). That's the dad? Oh (moves adult to passenger seat). And the daddy's driving. The daddy's driving. And then the kids come in too (picks up kids). Oh, only the mommy and daddy are going. And this one (puts baby in car). Oh, only the mommy and daddy are going. I want them to come to. Hm? I want them to come to (puts self in car). You know what sweetie, only the mommy and daddy are going on this trip. (child takes self and baby out of car). 'Bye, see you later' (says kids and drives car a little).

E: Okay, and away they go (E hides car behind back). Now, what did the children do while mom and dad were gone?

C: They played (sits boys and baby near toys in front of beds). They're all playing. *They're all playing.* And then the baby sitter comes along (picks up sitter). *The baby sitter what?* Comes along. *Comes along, oh.* 'It's bedtime' (says sitter); (puts self in child size bed, puts other boy in other child size bed and puts baby in crib) There. Then ... the ... um, that's it. *That's it.* Then the baby sitter watched TV (puts sitter on couch). *The baby sitter watched TV.* Then the baby sitter goes to bed (puts sitter in adult bed). There. It's all done.

E: It's all done? What else did the kids do while the mom and dad were gone?

C: Um they ... um, I don't know. *You don't know. They could do anything you want.* They waked up. *They waked up* (takes self and boy out of bed and sits on couch). They watch TV. And the cake goes back (puts cake back near sink and knocks over dishes from top of fridge). *Oops. That's okay.* And the baby's still asleep. And then she (sitter) wakes up (takes sitter out of bed) and says, "It's breakfast time" and ... cereal (takes box out from cupboard and pours into bowl on stove and sits sitter at head of table). And ... that's it. *That's it? So what are they doing now?* They're watching TV. *What was the baby sitter just doing?* Just watching TV. *Did anything else happen while mom and dad were gone?* (child shakes head 'no'). No. Okay, let's get ready for the next story. (child nods head 'yes').

REUNION

E: It's the next day and the baby sitter sees your parents coming home. Look, here comes your mom and dad, they're home from their trip. Show me what happens next.

C: (picks up kids) They go on another trip with these kids. *Oh.* (puts baby in car seat, puts boys in middle seat). There. That's all.

E: Show me what happens.

C: And then they go away. *Show me.* And then the baby sitter goes home (picks up sitter) The baby sitter goes home (hands sitter to E). *Do you want me to take her?* (takes sitter). Okay. *So what are they doing?* They are going for a ride. *Can you show me?* (drives car around, drives it back, takes baby out of car and puts in crib, takes out self and boy and puts in adult bed, takes out father and mother and puts each in child size beds). *Now what are they doing?* Now they are home and asleep. There. *What's happening now?* Now the kids are waking up (wakes boys and sits them on couch). They're sitting watching TV. And the dad and mom wakes up (wakes mother and father). *The dad and mom wake up.* (sits mother and father on living room chairs) Then they both watch TV. And the baby wakes up (wakes baby and puts on couch). And then the baby watches TV. That's all.

E: That's all. Did anything else happen now that the mom and dad are home?

C: No. No. So what are they doing now? Watching TV.

E: Okay. Does anything else happen? (child shakes head 'no'). Okay, it's time to put the family away now.

Ambivalent Classification

SYNOPSIS

Child: 5-year-old girl

Classification: Ambivalent (Busy)

Story Themes:

Departure: Baby-sitter sweeps floor (distraction). Child watches TV. Baby-sitter fixes broken bed (distraction). Baby falls and is comforted by boy (transformation, distress and comfort displayed from the self). Baby-sitter cleans (lengthy distraction).

Reunion: Children briefly greet parents (fleeting reunion). The baby-sitter goes home. Girl (self) goes to a birthday party and sister goes to school (distraction). Brothers fall, and baby falls (transformation, distress and comfort displayed from self).

DOLL FAMILY:

girl - self

adult female - mom

adult male - dad

adult female - big sister

adult male - uncle

girl - sister

boy - brother

boy - brother

baby - baby

DEPARTURE

Experimenter: The family is outside of the house. This is the baby sitter and here is the family car. You know what it looks like to me [child's name]? **What?** It looks like the mommy and the daddy are going on a trip. **And she is too (picks up big sister).** Just a minute, just a minute. Okay kids your daddy and I are leaving on a trip now. See you tomorrow. Your baby-sitter will stay with you. Show me what happens next.

Child: These two have to go (points to uncle and big sister). These two have to go. You know what sweetie, only the mommy and daddy are going. Show me what happens. Um ... the baby sitter has to sweep (picks up sitter). The baby sitter has a sleep? No she has to sweep (picks up mop). Sweep. (sitter mops floor).

E: Do the mommy and daddy go yet?

C: Ya. *Can you show me?* Okay (puts down sitter and mop, puts mother in passenger seat and father in driver's seat and drives car away).

E: Okay, and away they go (E hides car behind back). Now what do the children do while mom and dad are gone?

C: They ... I (picks up self) played with my ... train (sits self on floor near toys). I was ... standing on it ... (self stands on train and rides it) ... and pretending I was in a choo-choo train. *You were pretending that you were in a cho-cho train?* Uhuh. Then she (self) wanted to watch TV (lies self on couch), and the baby sitter had to fix something (picks up tool and sitter) *What is she doing?* She ... needed to fix the bed (brings sitter with tool to child bed). *She needed to fix the bed?* Ya, because the ... these parts were falling off (puts away tool). Now she's going to ... (pick up other tools and sitter continues fixing bed frame and then puts tools back)

E: What else do the children do while the mom and dad are gone?

C: (picks up other girl) She wanted to watch TV (sit girl on living room chair and picks up big sister) She wanted ... she had to clean the dishes (leans her against sink) because she was one of the oldest sisters. And he got to make the lunch (puts uncle in kitchen leaning against stove). *He got to make the lunch.* And ... he watched TV (sits boy on living room chair). And these two (baby and other boy) played in the backyard (puts baby and boy in backyard. Baby fell down the rock (makes baby fall off rock). And ... he (boy picks up baby) holded him and tickled. *He holded him and ticked.* Ya. And then he's (baby) feeling better (puts baby and boy back in backyard). And ... the baby sitter was cleaning ... the floor (picks up sitter and mops) because there was still ... um, footprints of the cat and dog. *There was still footprints.* And they couldn't wash it off and she (sitter) brought the cleaning stuff ... um, with the sweeping to go ... to wash it off (sitter continues mopping and then puts mop back). Then she (girl) shouted, "Can you be quiet back there?". *Who does she say that to?* Um, (point to boy playing in backyard). *The brother?* Ya. The baby had to go for a nap (puts baby in crib). Then she (self) went to go somewhere ... to put her teddy bear in her bed because she took it out (puts teddy bear in child bed). She ... now she (self) went back to watch TV (lies self on couch). And ... and now it's time to go back to bed (puts self in child bed). *So, who's going to bed?* Everybody except the baby sitter and the oldest people. All the kids are going to bed (puts other girl in other child bed). So since mom and dad were gone, all the children got to sleep in mom and dad's bed (puts boys in adult bed). She (girl) always played with the train (puts train in girl's bed). *What are they doing?* This is the soft train (puts car in bed with boys). They're going to bed. The baby sitter got to sleep at their house too (lies sitter on couch and lies older sister an uncle on living room chairs) They're all sleeping.

E: They're all sleeping. Okay, let's get ready for the next story, okay. When are the mom and dad going to come home? You'll see.

REUNION

E: Okay, it's the next day and the baby sitter sees the parents coming home. Look, here comes your mom and dad they're home from their trip. Show me what happens next.

C: Okay (picks up all kids and takes them outside to car). "Mommy, daddy" (says kids and takes mother and father out of car) (pause). They were all home. *They were all home.* (picks up older sister, holds all family members in hands). Then the baby sitter went home (picks up sitter and walks her outside house). And when she was walking she found the dog and cat. *She found the dog and cat?* Ya. (pause)

E: What happens now that the mom and dad are home?

C: Um ... (pause) ... they ... the mom and dad said it was all clean because the baby sitter ... um ... was sweeping a lot. *The baby sitter was sweeping a lot?* Uhuh. And she (self) was going out for a birthday party. *Who was?* She was (holds up self and puts self outside house) And she (girl) had to go to school (puts girl outside house). And the brothers ... um ... standed on the fridge and cried because he fell down (stands boy on fridge and makes him fall). *The brother standed on the fridge and cried when he fell down?* Ya (puts other boy on fridge and makes him fall off). And baby tried to climb up it too (baby climbs up fridge and falls off). "Whea, whea" (cries baby). And the mom (picks up mother) goes, "Guys, don't stand on the fridge. Go to your room" (says mother). "Okay" (says brothers and puts both boys in adult bed and mother picks up baby) 'Are you okay, baby' (says mother to baby). "I think you should go to bed to. I'm not mad at you." (says mother and puts baby in crib) There (picks up pets). She had to babysit the cat and dog. *Who did?* The mom and dad. *They had to baby sit the cat and dog?* Ya. (puts pets in backyard and pick up girl). "Mommy" (says girl). "Hi sweet-heart" (says mother) (mother and girl embrace). *What are they doing?* She (girl) came back from her school. And she (girl) wanted to watch TV (lies girl on couch and picks up self) And she (mother) had to pick her (self) up from the birthday party. "Hi mommy" (says self and mother and self embrace). "Hello. Do you want to watch TV with your sister. She's already home" (says mother). "She is? Okay" (says self, lies self on couch with sister and picks up big sister and uncle). And these two had to clean again (puts uncle and big sister in kitchen). *Who had to clean?* And she (big sister) had to sweep ... he (uncle) had to clean the dishes and she had to sweep (big sister pick up mop) ... again because some people came with their shoes on in the house. *Oh.*

E: Did anything else happen now that the mom and dad are home?

C: Um ... no.

E: No. Okay, it's time to put the family away now.

Disorganized Classification

SYNOPSIS

Child: 5-year-old boy

Classification: Disorganized (Frightened)

Story Themes:

Departure: Everybody gets into mischief (chaos). Children and baby-sitter pretend to lift rock and smash it (chaos). A giant ant-eater lifts the house and stomps on it (intense danger, chaos). Children run away (disintegration). House is electrified (intense danger). Parents crash their car (intense danger).

Reunion: (Note that the experimenter enacts this next story despite the house has been destroyed). Parents faint because the house is destroyed and the community buries them alive (intense danger). Children return. Parents awaken and are dizzy. Then they "lived happily ever after!"

DOLL FAMILY:

boy - self

adult female - mom

adult male - dad

girl - sister

DEPARTURE

Experimenter: The family is outside. Here is the family car and here, this is the baby-sitter. You know what it looks like to me [child's name] ? **What?** It looks like the mom and dad are going on a trip. 'Okay kids your dad and I are leaving on a trip'. 'See you tomorrow. The baby-sitter will stay with you'. Okay, show me what happens.

Child: Did we pick a baby sitter? There's one right here (points to sitter). I put it there. Oh ... I thought that was the girl. No this one (points to sitter). No, I thought that was the girl. Oh, I see. So what happens? Show me. Everybody gets into mischief, even the baby sitter (picks up sitter and kids and brings to backyard). Do the mom and dad leave? They make a big mess (C tries to lift rug). That's glued, sweetie. (kids and sitter pretend to knock over things in the house). What are they doing? Putting everything into mischief. Oh. Then they push the table and everything. Do the mom and dad leave yet? And then the dog goes, 'Ohhh' and escapes (from under chairs put together to 'cage' it in).

E: Do the mom and dad leave yet? Ya. Can you show me?

C: (lies father and mother in back seats of car and drives car away) ‘Vroom, vroom’.

E: Okay, and away they go (E puts car behind back). Now, what do the children do while mom and dad are gone?

C: (C makes sound effects, sitter and kids are jumping up in air.) What are they doing? They eat everything that’s dinner. Even the plates on top. And then ... lift up the rock and smash it (sitter and kids ‘pretend’ to lift rock). And it’s a big clutter. And they run out of the house and make a ... a giant comes. And make a what? A giant comes. A giant? A giant ... ant-eater comes. A giant ant-eater comes. And then they ate all of the stuff in the house, and they flips the house over and stomps on it. The ant-eaters ate everything in the house? Yup. Is that what you said? And then he flips the house? Uhuh, ... and then the house crashes, and he stomps on it. The house crashes and he stomps on it? Ya. And then the ant-eaters stomp on it. And the ant-eaters stomp on it. What happens to them? What happens to the children while the mom and dad are gone? Um, they’re okay except they ran away. They ran away. That’s very funny. So, I think that’s the end of the story.

E: They ran away? Uhuh. Okay, and did anything else happen?

C: Did anything else happen ... nothing except the TV got electric and everything went ... (C makes buzzing sounds).

E: The TV went electric? And it went electric and went ... (C makes buzzing sounds). What happened to the house?

C: The house got electric. The house got electric. It got zapped. How about ... what happened with the ant-eaters? The ant-eaters ... oh, they fell dead. They fell dead. I wonder what happened to the mom and dad? Oh, ya ... they got crashed in the car. Pardon? They got what? And then they crashed. They crashed. Uhuh. So, what happened to them? (E point to sitter and kids) These (holds up kids and sitter)? Ya. They ran away. They ran away to where? Um ... to Florida. They ran away to Florida. I went to Florida one time.

E: Anything else happen?

C: Um ... nothing else. That’s the end of the story.

E: That’s the end of the story. Okay, let’s get ready for the next story, okay.

REUNION

E: It's the next day, let's pretend, and the baby sitter sees the parents coming home. Look, here comes your mom and dad, they're home from their trip. Okay, show me what happens now.

C: I said the car crashed. Okay, show me. Okay, they got a new car and then these got out (takes mother and father out of car). And said, 'We got a new car since we crashed' (says parents). They got a new car since they crashed? Uhuh. Good thing ... um ... they didn't get dead. Good thing they didn't get dead.

E: So what happens now that the mom and dad are home?

C: Oh ya. They see their broken house. They see their broken house. And they see the dead ant-eater is just a block away. They see the dead ant-eater is just a block away. What do they do? They go like this, 'Oh, la, la, la, li, what happened to this?' (says parents). And then they didn't see their people (C hides kids and sitter behind his back) because they got to Florida. They didn't see the people because they went .. they got to Florida? Uhuh. They went to Florida. And then they pretended that they fainted ... and then everybody thought they were dead. Everyone thought ... who thought they were dead? The police, the government, everybody in the world. Thought who was dead? These (pick up parents). Oh. Then they put them in a throne. They put them in a what? In a king throne and lied them out like that (lies mother and father outside house). A king throne and they lied them out? Ya, very funny. Nobody would put them in a king throne.

E: So what happened now?

C: Um .. they walk out from like the faint and then, 'Where are we' (says parents). They woke up from their what? From their big fall. They woke up from their fall. And then went, 'Where are we' (says parents). And then they walked around and said, 'Wow, where are we' (says parents). And then ... I don't know what else would happen.

E: What do you think?

C: (C shrugs shoulders).

E: What happens to the kids now the mom and dad are home?

C: The kids ... now they come back to their home (C takes kids out from behind his back) and then they don't know ... 'Mom and dad, mom and dad are you home yet' (says kids). And they made a big throne over there. They made a big what? Near the

house... they made a big throne near their house. And they went ... (C makes kids and sitter fall down). And seen them walking around, 'Oh, where are we' (says sitter) ... like that. *Who did that?* Um ... like everybody was like they were like (C flies parents) ... *What are they doing?* They're walking around, and they're still dizzy. *Oh, they're dizzy. Who's dizzy.* Those (E point to parents). *The mom and dad.* I don't know what should happened. *Why are they dizzy?* From the big ... (C makes crashing sound effects). *From the big what?* Fall. *From the big fall.* *What fall?* The big fall that they fainted because their house went ... (C makes crashing sound effects). *Oh, their house ... went ... they had a fall.* Like, this whole house flipped over and then they're like ... they're like scared, and then they fell. *Oh, they were scared.* And they were still dizzy from the big fall.

E: What else happens now that the mom and dad are home?

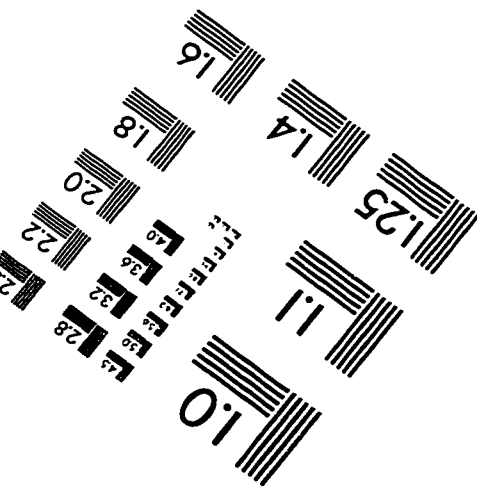
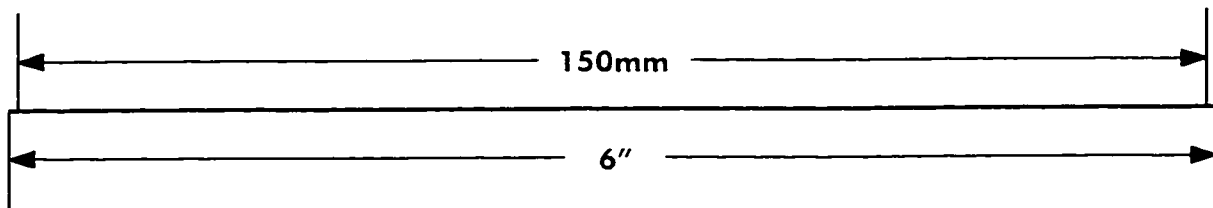
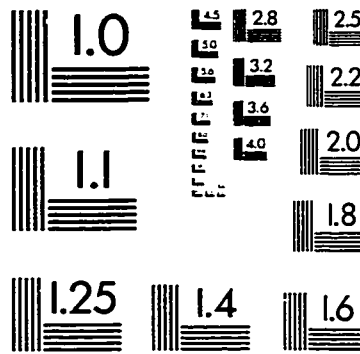
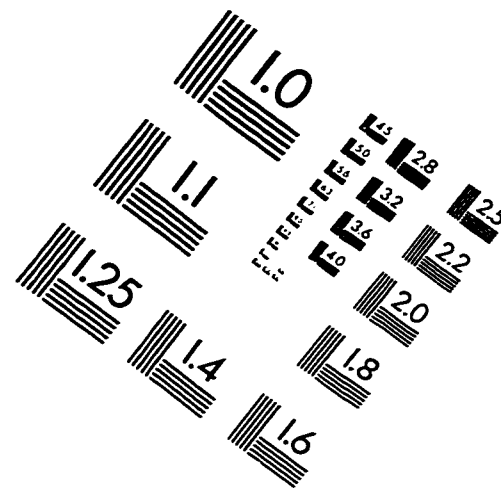
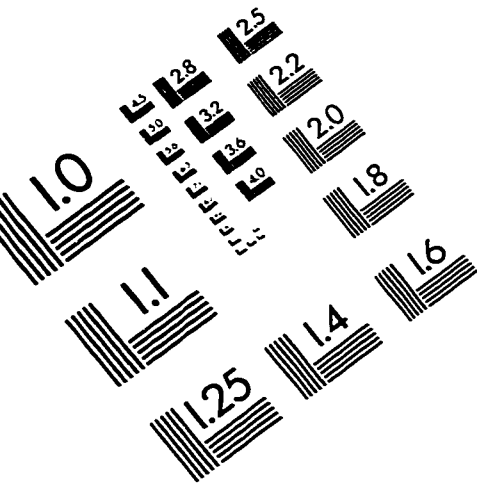
C: I don't know.

E: What do you think? What happens so them (E point to kids).

C: What happens to these (points to kids). They lived ... *You can show me.* ... happily ever after. The end.

E: Happily every after? These guys ... and then what should the next story be about? Did anything else happen? No, nothing. Nothing. That's the end of the story. Okay, you know what, it's time to put the family away.

IMAGE EVALUATION TEST TARGET (QA-3)



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