

**THE QUALITY AND STABILITY OF ATTACHMENT AND
ITS RELATION TO INDISCRIMINATE FRIENDLINESS IN CHILDREN
ADOPTED TO CANADA FROM
ROMANIAN ORPHANAGES – EIGHT YEARS LATER**

by

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THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS

in the Faculty of Education

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SIMON FRASER UNIVERSITY

July 2003

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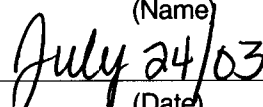
The Quality and Stability of Attachment and Its Relation to Indiscriminate Friendliness in Children Adopted to Canada from Romanian Orphanages - Eight Years Later

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ABSTRACT

This thesis is part of phase three of a longitudinal study and examines attachment and indiscriminate friendliness in a group of children ($n = 36$; 17 boys; mean age at assessment = 10.5 years) adopted to Canada in 1990/91 after living at least 8 months in a Romanian orphanage (RO group). Two matched comparison groups included non-adopted Canadian-born (CB) children and early-adopted (EA) Romanian children who were destined for orphanages had they not been adopted in infancy. Attachment was assessed with the Separation Anxiety Test (Resnick, 1993). Indiscriminate friendliness was examined using parents' responses to 5 questions about their children's behavior with new adults and 1 question asking if their children were "overly friendly." The RO group was found to display a higher rate of insecure attachment than either comparison group. Insecurity was found to be stable from 4.5 years to 10.5 years in the RO group. When change in attachment occurred it tended to be from secure to insecure. Within the EA group, security was stable and change in classification tended to be from insecure to secure. Secure and insecure attachment classifications were both stable in the CB group. Indiscriminate friendliness was highest in the RO group. The EA and CB groups did not differ on this measure. No differences were found between secure and insecure RO children on indiscriminate friendliness, however, no secure RO children were described by their parents as "overly friendly," and 39% of the insecure children were described as such. This description was stable from 4.5 to 10.5 years in the RO group. Neither length of time in an institution prior to adoption nor the stimulation in the adoptive home were found to differ between secure and insecure RO children.

DEDICATION

This thesis is dedicated to the children and families who have committed time and energy for so many years to this important research and whose enthusiasm and support has been inspiring.

ACKNOWLEDGEMENTS

I am deeply grateful to Dr. Lucy Le Mare for her unconditional support and guidance throughout the five years that I have worked with her on this project. Her clarity, thoroughness and academic integrity has provided me a solid foundation in research. I am also extremely grateful to Dr. Janny Thompson whose timely feedback and insight helped me prepare this thesis as well as Dr. Kim Bartholomew for her thoughtful advice.

A special thank-you to Linda Warford who helped me remain sane and organized during the years of data collection. I am also deeply indebted to Karyn Audet for the many hours of coding that she did and for her unwavering enthusiasm that helped me through the more challenging hours. I am also grateful for the coding and support given by Karen Kurytnik, particularly in the final hours, as well as the many volunteers and work study students without whom this thesis would not have been possible.

I appreciate the hours of training and support provided by Dr. Gary Resnick as well as his flexibility and availability in providing follow-up advice. I truly valued and enjoyed the months that I was able to share with Dr. Kim McLean (Chisholm) and appreciate the reliability coding she did as well as the guidance and friendship that she offered.

I would like to extend my gratitude to Walter, Sandy, Brad and Amber who have supported and encouraged me through all the years of my graduate studies. Finally, I thank the families who participated in this phase of the study and shared their stories in order to provide others with a better understanding of the long-term effects of adopting post-institutionalized children.

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INTRODUCTION

This thesis is based on data gathered from the third phase of a longitudinal study that was initiated in the early 1990s (see Ames, 1997) and has followed the development of a group of children who were adopted from Romanian orphanages by Canadian families. These children were assessed after they had been in their adoptive homes for an average of 11 months (Phase 1), again when most were 4.5 years old (Phase 2) and most recently at age 10.5 years (Phase 3). Children adopted to Canada from Romanian orphanages have offered attachment researchers a rare and important opportunity to examine the development of first attachments that are formed beyond infancy (Chisholm, Ames, & Morrison, 1995).

After visiting Romania, Ames (1990) reported that orphanage children suffered severe early deprivation. They spent the majority of their days in cribs and had very little interaction with each other or their caregivers. The caretaker to child ratio for infants and toddlers ranged from 1:10 to 1:20 and the children's feeding, toileting, and cleansing were rigidly scheduled in order to meet the needs of the caretakers, not the children. In addition, auditory and visual stimulation were virtually nonexistent (Ames & Carter, 1992). Chisholm et al. (1995) surmised that without consistent and sensitive caregiving, the orphanage children were unable to form attachment relationships while in the institutions. Researchers have suggested that not having formed an attachment relationship in infancy is unusual and may threaten later development of secure attachment relationships (Chisholm, 1998; Chisholm et al., 1995; Marcovitch, Goldberg, Gold, Washington, Wasson, Krekewich, & Handley-Derry, 1997).

Bowlby (1969) maintained that although infants are more sensitive and ready to develop first attachments from 3 to 6 months of age, attachments to parents typically

become stronger and more consolidated after 6 to 9 months. However, Bowlby also emphasized that children can form attachments beyond the first year, but as age increases, the risk of forming an insecure attachment relationship also increases. He added that by the second year, the risks are great and do not tend to diminish. As Bowlby would have predicted, Chisholm (1998) found that all of the Romanian adoptees had formed attachments to their adoptive parents by 4.5 years, but that their attachment organizations were more insecure and less adaptive than the attachment relationships of Canadian-born and Early-adopted comparison children. At the time of the most recent assessment, the Romanian children were 10.5 years old and had been in their adoptive homes for approximately 8 years.

The purpose of the present study was to examine the attachment relationships of the Romanian children to their adoptive parents. Specifically, I had six aims: (1) to compare differences in attachment security of children adopted to Canada after living at least their first 8 months of life in Romanian orphanages (RO group) to children in two comparison groups: nonadopted Canadian-born children (CB group) and children adopted to Canada from Romania before 4 months of age, with minimal or no orphanage experience (EA group); (2) to assess the continuity of attachment from 4.5 to 10.5 years within all groups; (3) to examine concurrent and predictive correlates of Phase 3 attachment status in an effort to shed light on factors that either support or threaten the development of a secure first attachment beyond the infancy period, and (4) to determine if post-institutionalized children displayed more indiscriminate friendliness than children in the comparison groups; (5) to assess the continuity of indiscriminately friendly behavior from 4.5 to 10.5 years in the orphanage group; and (6) to determine if indiscriminate friendliness varied with attachment security.

In order to comprehend how the development of secure attachments to primary caregivers can be threatened, the underlying theory and methods of measurement must be clearly understood.

Attachment Theory

Attachment refers to the strong affectional bond that a child forms to his/her caregiver (Bowlby, 1969). According to Bowlby, attachment to a caregiver increases a child's chance of survival. He believed that infants come into this world with a built-in set of behaviors that help keep their caregivers nearby. Infants seek attachment figures when they are stressed or frightened and the role of the attachment figure is to provide protection, comfort, and help (Bretherton, 1985). The "attachment behavioral system" is the psychological organization that regulates the set of behaviors (attachment behaviors) that infants have in their repertoire to maintain proximity to their attachment figures (Bretherton). For example, an infant may cry in response to a loud noise which encourages the attachment figure to pick up and soothe the child, thus instilling a sense of security within the child that results in the termination of the attachment behavior (crying). The attachment behavioral system is typically activated when the young child is distressed, for example, by separation from the attachment figure, fatigue, illness, or unfamiliar people and surroundings (Cassidy, 1999). The attachment system is considered to be a motivational system in that it impels individuals to seek and maintain feelings of security (Bowlby, 1973).

The exploratory system and the fear system are integrally related to the attachment behavioral system (Cassidy, 1999). Ainsworth, Blehar, Waters, and Wall (1978) found that children use their attachment figures as a "secure base" from which to explore when they feel safe and secure. After assessing the environment and their caregiver's

availability, children will determine if exploration is safe. When infants and toddlers do venture into the environment, they frequently check back with their caregivers for emotional and/or physical support (secure-base behavior). During exploration, the activation of the attachment behavioral system is reduced, but it is not inoperative. Conversely, when the attachment behavioral system is activated, exploration is unlikely. Because frightened infants increase their attachment behaviors, the fear system is also closely linked to the attachment behavioral system (Cassidy). For this reason, frightened and/or anxious infants and toddlers are unlikely to explore their environments. The physical availability of an attachment figure is believed to make young children less vulnerable to fear (Cassidy).

Bowlby (1969) believed that the attachment system becomes organized around a particular attachment figure during the second half of the first year of life. The attachment bond refers to the bond that a child feels towards his/her caregiver and has several unique characteristics (Cassidy, 1999): (1) it is persistent, not transitory; (2) it is directed towards a specific person; (3) the relationship has great emotional consequence; (4) the child wants to maintain close proximity with the attachment figure; (5) the child feels distress at separation from the attachment figure; and (6) the child seeks comfort and security from the attachment figure. Children can direct attachment behaviors towards other individuals depending on the immediate situation. However, an attachment bond is distinct in that it persists over time even when attachment behavior is not being displayed (Cassidy).

The way in which caregivers respond to children's attachment needs over time influences the development of their "internal working models." Bowlby (1969) maintained that children create internal working models of their worlds and their selves in

it in order to help them perceive events, anticipate the future, and create plans. In other words, children's working models represent their confidence in how accessible, responsive, and dependable their attachment figures will be if needed so that attachment behaviors can be planned accordingly (Bowlby, 1973; Lewis, Feiring, & Rosenthal, 2000). For example, children who are confident that their needs will be met by their attachment figures, and the world in general, tend to have attachment behavior systems that are minimally aroused and, thus, can explore the world freely. On the other hand, children who see the world as comfortless and unpredictable tend to have heightened attachment behavioral systems, thus inhibiting their ability to freely explore their environments (Bowlby, 1973).

Individual Differences in the Organization of Attachment Behavior

Although children come into the world with a natural propensity to develop attachment bonds with caregivers, the quality of these attachment relationships can vary. Individual differences in attachment organization are closely tied to a child's internal working model in that they reflect the different expectations that children have regarding how responsive they believe their attachment figures will be to their needs (Bretherton, 1985). Ainsworth et al. (1978) identified three specific patterns of attachment behavior organization displayed by infants that they believed were indicative of the quality of their attachment relationships. These patterns of attachment behavior organization have since been validated across many populations (Lewis, Feiring, & Rosenthal, 2000).

Ainsworth et al.'s (1978) patterns of attachment were based on observations of children's behavior during the "Strange Situation" procedure. The Strange Situation consists of eight episodes, which are presented with the least stressful event occurring first. After a brief introduction, the baby is observed with his/her mother in an unfamiliar,

but non-threatening, experimental playroom. This episode allows researchers to see how readily the child moves away from the mother in order to explore the room. With the mother still present, a stranger enters and slowly approaches the baby. The mother then leaves for the first separation episode. After a few minutes she returns and the stranger slips out. During this first reunion episode the mother greets and/or comforts the baby and then tries to settle him/her again in play in order to reestablish a baseline for exploratory behavior. The second separation situation follows, and the mother says “bye-bye” as she leaves. This time the baby is left alone in an unfamiliar environment. The stranger returns a few minutes before the mother finally returns in order to ascertain whether separation is more distressing than the presence of a stranger. When the mother enters she greets and picks up her child. Based on these observations, Ainsworth et al. described three patterns of attachment: (1) secure (B); (2) insecure-avoidant (A); and (3) insecure-ambivalent (C).

In addition to the Strange Situation observations, Ainsworth et al. (1978) also collected concurrent data describing the nature of the mother-child interactions. Twenty-three infants who were also observed in the Strange Situation were involved in an intensive naturalistic study of mother-infant interactions were observed in their homes during a 4 hour visit once every 3 weeks for the first year of their lives. This allowed the researchers to link the attachment classifications derived from the Strange Situation to specific parenting styles. For example, secure (B) infants were more likely to have experienced sensitive and consistent parenting at home and, hence, understood that their attachment figures were there for them if they were needed. As such, they were more likely to use their mothers as a secure base from which to explore the playroom during the Strange Situation procedure. The expectation that their mothers would be there if needed

may have carried over during the first separation episode in some instances, but their attachment systems were clearly triggered because exploration declined in this episode. Reunion following both separations indicated that the attachment system had been activated because secure children sought contact with their mothers. The secure children were readily comforted by physical contact and resumed exploration by the end of the episode. Waters, Hamilton, and Weinfield (2000) reported that 65-75% of home-reared 1 year-olds are classified as secure in middle-class US samples. This distribution is typical for other middle-class American samples (Lewis et al., 2000).

On the other hand, children classified as insecure-avoidant (A) had parents who were often neglectful, rejecting (rebuffed infant desire for close bodily contact), and/or unavailable. These mothers appeared to be more angry and irritated with their children. Ainsworth et al. (1978) concluded that these babies experienced unpleasant physical contact. As such, when their attachment behavioral systems were activated they experienced an approach/avoidance conflict. In the Strange Situation procedure avoidant infants tended not to cry during separation, and did not greet their mothers or ignored them during reunion. Ainsworth et al. speculated that the avoidant infants were highly anxious and lacked confidence in their mothers' accessibility and responsiveness. As a result, they attempted to modulate their arousal by avoiding situations where they needed their attachment figures but expected to be rebuffed.

Insecure-ambivalent (C) infants were the smallest group. Mothers of these children were also less responsive to crying, signals, and communication than were mothers of secure infants. These mothers were found to be inconsistent in their caregiving. At times they were excessively stimulating, intrusive and controlling, while at other times they were unresponsive and indifferent to their children's needs. Ambivalent babies were also

considered anxious, presumably because of their lack of confidence in their mothers' availability and responsiveness. In the Strange Situation procedure they did not use their mothers' as a secure base for exploration and were more likely than secure children to be distressed when the stranger entered the room. They responded to the separations with immediate and intense distress and often continued crying during the reunion episodes. Although they reached out to their mothers during reunion, they were not easily soothed by physical contact.

Main and Solomon (1990) have identified a fourth, disorganized/disoriented, pattern of attachment exhibited during Ainsworth's Strange Situation procedure. Children with this classification display conflicted behaviors uncharacteristic of an organized, coherent attachment strategy. Parents of these children have been described as "frightening to" and/or "frightened of" the child (Main & Hesse, 1990). Lyons-Ruth and Jacobvitz (1999) explained that because these parents offered comfort and triggered distress, their children had developed contradictory responses. Approximately 14% of middle-class, nonclinical samples in North America include infants classified as disorganized (Lyons-Ruth & Jacobvitz). Disorganized patterns are more typically found in maltreated samples of children (Crittenden, 1985; Chisholm, 1998).

Crittenden (1985) has also distinguished a fourth attachment classification to accommodate infants who had been abused and neglected and did not fit into the three categories defined by Ainsworth et al. (1978). She labeled this category as "avoidant-ambivalent." These were extremely anxious toddlers who demonstrated moderate to high proximity seeking, avoidance, and resistance. They also had unusual stress-related behaviors such as huddling on the floor, rocking, and wetting. For example, such a child might actively seek proximity to the mother on reunion and then suddenly turn away and

stand motionless in the centre of the room with a dazed expression. This interrupted behavior inevitably forfeited the goal indicative of secure attachment, such as gaining proximity to the mother or continuing with exploration and play (Main & Solomon, 1990).

Crittenden's (1992) work has focused largely on the attachment relationships of maltreated and neglected children. She developed the Preschool Assessment of Attachment (PAA) specifically for use with this population. The PAA is a modified Strange Situation procedure, which utilizes a coding system that is developmentally appropriate for preschool-aged children. The PAA takes into consideration Bowlby's (1969) argument that the developmental task of children in the preschool years is the goal-corrected partnership. During the preschool years, children have learned what to expect regarding their attachment figure's availability and are more able to anticipate caregiver responses. With increased communication skills and abilities to inhibit behavior so that goals and plans can be shared with attachment figures, a child's set goal of attachment behavior shifts from physical proximity to availability in case of need (Marvin & Britner, 1999). Preschoolers, then, can tolerate longer separations than they could as infants (Crittenden). As such, behaviors that were indicative of attachment security in the Strange Situation may be indicative insecurity in the preschool years. For example, secure infants are typically distressed during separations from their attachment figures, but a distressed preschooler in this situation may be considered insecure because of an inability to use self-comforting strategies (Chisholm, 1996). For this reason, Crittenden devised a modified Strange Situation procedure (the PAA) that accommodated the preschooler's developmental abilities.

The PAA is implemented by two researchers in the participants' homes. Upon arrival, the first researcher interacts with the parent and the child, while the second researcher sets up the video equipment. Given that the second researcher plays the role of the "stranger," she does not interact with the parent or the child at this point. When the equipment is ready, the first researcher invites the parent and child to play with a basket of toys and then leaves the house. The second researcher videotapes the mother-child interaction for eight minutes and then signals for the mother to leave the house. As the mother leaves she says to her child, "Stay here until I get back," in order to keep the child in the same room as the camera. The child's reaction to the departure as well as the child's behavior during the separation is videotaped. After three minutes the parent returns and joins the child in play for another three minutes. At the end of this reunion segment, the first researcher returns to the house.

Crittenden's (1992) coding system includes four main attachment classifications: (1) secure; (2) defended; (3) coercive; and (4) defended/coercive. Crittenden derived these classifications from personal communications with Ainsworth that resulted in a reconceptualization of the patterns of attachment behavior originally identified by Ainsworth et al. (1978). Insecure-avoidant patterns of attachment were renamed as "defended" to reflect the variety of defenses (inhibition, compulsive caregiving, and compulsive compliance) maltreated children develop to protect themselves from unpleasant affect. Crittenden also observed that insecure-ambivalent behavior in maltreated children tended to be organized around "coercive" behavior strategies (threatening, disarming, punitive, and helpless) and was, therefore, renamed as such. Accordingly, the avoidant-ambivalent pattern of attachment identified by Crittenden (1985) in her work with maltreated infants was renamed "defended/coercive" in the PAA.

The PAA also includes a secure/other and insecure/other classification to identify children who are clearly secure or insecure, but utilize strategies that do not fit with any of the four main classifications. Unlike the coding system devised by Ainsworth et al., this system allowed Crittenden to identify *atypical* insecure attachment patterns (i.e., Defended Compulsive Caregiving, Defended Compulsive Compliant, Coercive Punitive, Coercive Helpless, Defended-Coercive, and Insecure-Other).

Chisholm (1998) used the PAA to assess attachment in Phase 2 of the present study. It was deemed the most appropriate system for assessing attachment in the orphanage sample given their histories of neglect and the fact that Crittenden's work on attachment has focused on the attachment relationships of maltreated and neglected children.

Internal Working Models and the Continuity of Attachment Security

Bowlby (1973) believed that the expectations of caregiver availability and responsiveness that children develop during their early years remain relatively unchanged throughout the rest of life. Internal working models and their relationship to the attachment behavioral system can help explain the continuity of the organization of attachment behavior and, hence, individual differences in the quality of the attachment relationship, as a child ages. Although a child's attachment behavior changes with increasing cognitive ability, the way in which attachment behaviors are organized may not necessarily change (Cassidy, 1999). For example, an infant who explores little and crawls after and clings to her caregiver because she does not trust her to be there for her when needed might become extremely whiny and persuasive as her verbal abilities increase in order to achieve the same goal of keeping her caregiver close at hand. Clearly, at both stages of development the child's attachment behavior is organized

around her anxiety about her caregiver's availability, but her specific attachment behaviors have changed with her changing abilities.

Marvin and Britner (1999) contend that behavior systems have some inherent stability once they become organized. This means that they can persist in spite of the absence of the external and internal conditions in which they had developed. The implications, they suggest, are that there may be sensitive periods in development and that beyond a certain point it may be difficult for change to occur even if external conditions change. In other words, it is possible that once the attachment behavior system has been organized, adaptation to changes in circumstance may be somewhat difficult.

Bretherton and Munholland (1999) supported the idea that internal working models and their relation to attachment behaviors are relatively resistant to change. Borrowing Piaget's notion of assimilation, they suggested that children screen new information through their previous experiences and integrate, to a certain extent, only that which fits with their already existing schemas or beliefs. In addition, individuals tend to respond in ways that elicit expected responses. As a result, children who are distrustful, uncertain, and expect less support may behave in ways that interfere with actually receiving support, which, in turn, can impede their ability to revise their internal working models (Thompson, 1999). Sroufe (1983) affirmed this idea when he argued that a stable environment only partially explains continuity in attachment because individuals select, elicit, and interpret cues from the environment with respect to their prior experiences and, therefore, have an influence on their environments. As such, internal working models can be self-perpetuating in that they are confirmed by perceptual biases and elicit expected responses.

Kobak (1999) firmly supported Bowlby's notion that internal representations bias, but do not determine, children's perception of their attachment figure's availability. Bowlby (1973) emphasized that understanding of the attachment figure's availability depends on the past, which influences attention, interpretation and responses, as well as the present. In this way, change is always possible. However, Bowlby also suggested that the longer specific developmental pathways exist, the more difficult they are to change. Thompson (1999) also maintained that internal working models are updated and revised with new experiences, increased cognitive capacity, and shared communication with primary caregivers. Thompson suggested that internal working models remain flexible and amenable to change until beliefs are consolidated in adolescence.

In sum, many researchers believe that internal working models become more stable and unconscious, and less amenable to change over the course of childhood (Bowlby, 1973; Hamilton, 2000). Given their early histories of unresponsive caregiving, Chisholm et al. (1995) hypothesized that children adopted from Romanian orphanages were at risk for developing internal working models that were distrustful of others. Results from Phase 2 of this longitudinal study indicated that orphanage children did display more insecure attachments than did their comparisons (Chisholm, 1998). Based on their early orphanage experience, it is not hard to imagine that these children may have viewed others as unloving and themselves as unlovable. Interacting with their adoptive parents from this framework may have negatively affected their ability to develop secure attachment relationships. Moreover, if these children responded in ways that elicited expected responses, then self-perpetuating patterns of interaction may have been established which could have impeded their ability to revise their internal working models. However, it is also possible that responsive caregiving by adoptive parents may

have altered, to some extent, the orphanage children's distrustful internal working models. Nevertheless, given Bowlby's argument that the longer a developmental pathway exists the harder it is to change, and the fact that many of the orphanage children were adopted well beyond infancy, it is possible that this group of children will remain at risk for having insecure attachment relationships.

Measuring attachment beyond early childhood

Measuring attachment beyond early childhood is difficult. Children in late childhood do not respond to separations in the same way that young children do. According to Ainsworth et al. (1978), attachment security means feeling confident about an attachment figure's availability. For older children who have the cognitive ability to anticipate parents' actions it is *perceived* availability rather than physical proximity that triggers attachment behaviors. Hence, separation and reunion procedures (such as the Strange Situation and the PAA) are no longer an effective method of assessment in late childhood and beyond because the attachment behavioral system is unlikely to be activated during the separation episodes. Moreover, given that attachment behaviors are expressed differently with development, and attachment theory does not yet provide a framework from which to fully understand these changes, few measures exist to assess attachment organization in late childhood and early adolescence.

Although the attachment behavioral system is not as easily triggered with age, children's emotional responses to perceived threat do not necessarily change (Kobak, 1999). In addition, older children have internal representations of their caregivers' availability and more sophisticated language and perspective taking abilities. Being able to discuss plans and options allows children to shift the goal of the attachment behavioral system from physical proximity to availability if needed. Children then can maintain

close ties with their parents, but spend more time with their peers (Marvin & Britner, 1999). Measuring attachment security in older children, then, must rely less on methods that focus on observable behaviors and more on methods that tap the internal representations that children have of their caregivers' availability. However, asking children and youth directly about how they think and feel about separation situations can be threatening and may lead to socially desirable, and inaccurate, responses. Hence, a projective measure may be more appropriate for children in late childhood and early adolescence. By using hypothetical attachment scenarios that do not explicitly involve the self and that draw on older children's increased capacity for expressive language and perspective taking, projective measures can tap emotional responses as well as internal representations of caregiver availability without the threat and defensiveness potentially involved in direct questioning. For these reasons, the present study utilized a projective technique, the Separation Anxiety Test (Hansburg, 1980), which was designed to measure the internal working models, or representations of caregiver availability, of young adolescents.

Separation Anxiety Test

The Separation Anxiety Test (SAT) is a projective measure that was initially developed by Hansburg (1980) in order to diagnose adolescent attitudes and feelings towards separation and placement in group homes in the 1960's. He assumed that a projective measure would be less threatening than directly asking youth how they think and feel, and therefore would elicit a more accurate pattern of responses to separations. Line drawings of separation situations experienced by most children (i.e., child goes to camp) were presented first. Less frequent, but more stressful separations (i.e., child moves to a new neighbourhood), were presented next. Finally, separation scenarios

commonly associated with trauma (i.e., the mother is taken to the hospital in an ambulance) were presented last. The pictures were titled so that there could be no doubt as to the central idea. In this way, avoidance of the task could not be attributed to misinterpretation. During administration, the interviewer asked the participants if the situation depicted had ever happened to them and if they could imagine how the child in the picture felt. For each picture the participants could choose as many statements from a predetermined list as they wished to describe how the child in the picture felt. Hansburg theorized that there exists a balance between adolescents' need to separate from their caregivers in order to develop a sense of self and their need for support from significant others. When the balance is disturbed patterned defenses (i.e., hostility, anxiety and phobias, avoidance, loss of self-confidence, identity crisis, and impaired intellect) are identifiable. Assumptions underlying the SAT include: (1) separation pictures can sufficiently stimulate children to project their reactions, (2) children react to the scenarios in ways that reflect how they genuinely feel, (3) the reactions are patterned in ways that help diagnose and treat separation problems, and (4) responses help identify defenses that interfere with psychological adjustment. Hansburg discovered that certain responses were consistently given by children with less serious psychiatric diagnoses, while responses such as avoidance were prevalent among more severely disturbed children. These findings were not specifically related to attachment theory.

Klagsburn and Bowlby (1976) modified the SAT so that it could be administered to younger children (4-7 year olds) in order to screen for possible psychopathology. Changes they made included shortening the series of pictures shown from 12 to 6 and using real photographs as opposed to line drawings. Like the Hansburg (1980) version, the first three pictures showed milder and more familiar situations, whereas the last three

illustrated more severe separation scenarios. Unlike the Hansburg version, Klagsburn and Bowlby asked an open-ended question about how the child in each picture felt. If the child had difficulty responding, a list of possible responses based on Hansburg's version was offered. Klagsburn and Bowlby also asked what the child in the picture would do next, which allowed them to evaluate the child's coping strategies. They found that the patterns of responses defined by Hansburg were closely linked with attachment theory. For example, responses were reduced to 6 main classes: (1) Attachment/loss of self-esteem, which included a balance between attachment-type responses (lonely, sad) and self-reliant responses; (2) Hostility, which included anger and blame; (3) Self-reliance, such as feeling "fine" or responses that indicated that the child in the picture would have a good time; (4) Avoidance (disbelief, withdrawal or evasion); (5) Anxiety (dread/fear); and (6) Responses that included attachment-type and anxious qualities. Children who responded favorably to the separation scenarios (more secure) showed more self-reliance to the mild situations, and attachment-type responses to the more severe separation scenarios. They also had few hostile and avoidant responses. In addition, although some anxiety was expected, in order to be considered a favorable response, the proportion of anxious responses did not exceed more than half of the total number of responses. Finally, favorable responses included constructive coping strategies (diversions such as reading, or engaging with other adults) and few unrealistic, pessimistic or avoidant coping strategies.

Kaplan (1987) made further revisions to Klagsburn and Bowlby's (1976) version of the SAT by modifying the scoring and administration procedure so that differences in the quality of attachment in a group of 6 year-old children could be determined based on their ability to regulate their thoughts and feelings when talking about the separation scenarios.

Emotional openness and the ability to offer constructive solutions were emphasized. Resnick (1993) maintained that Kaplan's version of the SAT was a valid indicator of attachment quality among younger school age children. Main, Kaplan and Cassidy (1985) compared differences in attachment security using the Strange Situation in a group of children who were between 12-18 months of age to representational measures of attachment security in the same group of children at 6 years of age. Attachment related behavior was assessed using a variety of methods at 6 years of age: (1) Current security was estimated from videotapes of the parent-child reunion after a one-hour separation; (2) Fluency of discourse in each of the parent-child dyads was assessed based on verbal transcriptions of their interactions; (3) Separation Anxiety Test; (4) The child's ability to deal constructively with a 2 week parent-child separation (responses were transcribed and coded from a question that asked what would a child do in the face of a 2 week separation from parents); and (5) Videotaped responses to the presentation of a photograph of the child's family (presented during the parents' absence). Main et al. found that the children's responses to the SAT were moderately, but significantly, correlated with concurrent attachment classifications and strongly related to security of attachment to the mother in infancy.

Resnick (1993) further revised the SAT coding so that it could be used with young adolescents (11-14 year olds). He modified Kaplan's (1985) coding system by drawing heavily on the Adult Attachment Interview (AAI) rating scales devised by Main and Goldwyn (1994, cited in Bretherton & Munholland, 1999). Given that the AAI was designed to be used with older adolescents and adults, it requires a high degree of emotional maturity and is inappropriate for individuals under 14 years of age (Resnick, 1993). However, the AAI concept that perceptions of experiences are more important

than actual experience guided Resnick's development of the coding system. In his version, the SAT is considered a "semi-projective" interview because it provides opportunities for both closed and open-ended responses. For example, upon presenting the six line drawings of children in increasingly stressful separation situations, the interviewer asks two open-ended questions, "What is the child in the picture feeling?" and "What will the child in the picture do next?" In addition, children are asked 15 feeling probes for which a "yes" or "no" answer is required (i.e., "Is the child in the picture sad?").

Secure individuals, who see their parents as responsive and accessible, tend to openly discuss thoughts and emotions during the SAT and will offer constructive solutions to the protagonist's situation that help regulate feelings (Main, Kaplan, & Cassidy, 1985). On the other hand, the responses of insecure children tend to be more over controlled and incoherent, and they will either present destructive or passive solutions to the protagonist's situation (Resnick, 1993). These children often have difficulties handling their emotions and either cut them off in order to cope or show heightened distress, directing the fear and anger towards attachment figures (Resnick). Resnick's revision of the SAT allows researchers to assess security of attachment as well as individual differences in attachment organization. For example, after determining if response patterns reflect secure or insecure attachments, researchers can identify one of three main classifications; (1) DS - Dismissing of Attachment/Avoidant; (2) F - Secure/Freely Valuing of Attachment Relationships; and (3) E - Enmeshed/Preoccupied/Ambivalent. Coherent, optimistic, and emotionally open responses delineate secure from insecure attachment relationships. When attachment security and main classifications have been determined, an appropriate sub-category can

be assigned (See Appendix K). Resnick (1997) maintains that the SAT is closely related to the Strange Situation, but is more developmentally appropriate since attachment is inferred from a child's thoughts and feelings and regulation of affect, during times of distress. Crittenden (1992) proposed that the measurement of attachment in older children should assess coping strategies, the regulation of affect and secure base behavior. Accordingly, the SAT requires children to verbally describe responses to hypothetical separation situations that activate the attachment system and allow for assessment of coping strategies, affect regulation, and secure base behavior.

Although few studies have employed Resnick's (1993) version of the SAT, those that have yield promising results. Resnick (1997) reported that the SAT identified significant differences between secure and insecure children in a sample of 11 to 14 year-olds. Martin and Austin (1995) used the SAT in order to help explain the integration of autonomy and relatedness issues in a group of 8 to 12 year olds. They found that the attachment classifications obtained from the SAT produced theoretically valid results and were associated with psycho-social developmental scores such as proximity seeking, trust, autonomy, and industry. On the other hand, Resnick analyzed the concordance of attachment classifications in a group of 62 eleven-year-old children who had been assessed using the Strange Situation at 12 months and the SAT at 11 years. The results indicated that attachment classifications at 12 months and 11 years did not match significantly.

Given that the children in the present study were in late childhood and early adolescence at the time of assessment, and consequently could be expected to have developed relatively sophisticated language and perspective taking abilities, the SAT was believed to be an appropriate measure to evaluate their internal representations of their

attachment relationships. However, it is important to acknowledge that projective measures have some inherent problems: interviewer skills, subjective data, and idealized responses (Resnick, 1993). Nevertheless, as Hansburg (1980) argued previously, I have assumed that using a projective measure would be less threatening to older children and young adolescents than directly asking them how they think and feel, and therefore would elicit a more accurate pattern of responses to the separation situations.

Research Findings Related to the Continuity of Attachment

Theory suggests that continuity of attachment can be expected in children from 4.5 years of age to 10.5 years of age because as they get older their internal working models become more resistant to change. Has research confirmed this assumption? In the following three sections I review research findings pertaining to the continuity of attachment in general, and then, more specifically, to findings relating to the continuity of attachment in maltreated and post-institutionalized children.

Continuity of Attachment Organization:

Because there exists a lack of attachment research pertaining to children in late childhood, such as those in the present sample, research findings assessing the continuity of attachment in early childhood as well as adolescence and adulthood are reviewed in this section. Findings show that the results are inconsistent. Age at assessment and measurement variables are factors that should be considered when assessing the stability of attachment organization.

Research findings concerning the continuity of attachment patterns in children who are 5 to 7 years old are inconsistent. For example, using a modified Strange Situation Procedure at 12 or 18 months, Main and Cassidy (1988) found 84% stability between infant and 6 year-old attachment patterns when families experiencing separation, divorce

or major illnesses were excluded. A second study that used the Separation Anxiety Test (SAT) obtained 68% correspondence between the SAT responses of a small sample of middle-class 6 year-olds and their infant Strange Situation classifications (Kaplan, 1987). On the other hand, Waters (1995, cited in Solomon and George, 1999) noted greater stability of attachment in children who were secure as infants than those who had been insecure as infants and, as expected, that changes in attachment classification were related to significant life events such as abuse or major illness. It seems, then, that a relatively high degree of stability in attachment organization can be expected from infancy to early childhood within families who have not experienced major life events such as divorce, abuse, or major illness. Alternatively, unstable attachment classifications can be expected in children who have families that have experienced major life events and/or those who were classified as insecure in infancy.

Attachment security in adolescence and adulthood is typically measured using the Berkeley Adult Attachment Interview (AAI). This semi-structured interview, designed by George, Kaplan, and Main (1986, 1996, cited in Waters et al., 2000) includes questions about attachment relationships and the meaning that individuals currently make of their past experiences. Waters, Merrick, Treboux, Crowell, and Albersheim (2000) examined the continuity of attachment patterns in 50 white middle-class infants using the Strange Situation at 12 months and the AAI at 21 years. The results showed 72% stability between attachment in infancy and early adulthood. This proportion rose to 78% when individuals who had experienced major life events (loss of a parent, parental divorce, life-threatening illness of parent or child, parent psychiatric disorder, physical or sexual abuse by a family member) were excluded. Almost half of the children who had experienced one or more of the negative life events had changed attachment

classifications, while only 22% of the infants whose mothers reported no negative events changed classification. These findings support Bowlby's expectation of stability across the life span.

Not all researchers have found the same degree of stability in middle-class samples. For example, Lewis, Feiring and Rosenthal (2000) assessed the continuity of attachment from infancy to late adolescence in a group of 84 white middle-class children. A modified Strange Situation was used to measure attachment at 12 months, and the AAI was used to measure attachment at 18 years. Results indicated no significant continuity between infant and adolescent attachment patterns. Nevertheless, parental divorce was related to insecure attachment at 18 years. Adolescents whose parents were divorced were more likely to be classified as insecure, whereas secure adolescents were more likely to be from intact families. This was true in spite of secure attachment in infancy. These findings support the suggestion that attachment stability may be affected by stressful events such as divorce, possibly because it means less parental sensitivity and availability. Security in infancy did not appear to buffer the negative effects of divorce.

Attachment security in high-risk poverty samples appears to be less stable than that found in middle-class samples. For example, Weinfield, Sroufe, and Egeland (2000) assessed attachment organization from infancy to adulthood in 57 low-income, at-risk families who had extremely stressful and unstable lives. Infant attachment was measured using the Strange Situation and attachment at 19 years was measured using the AAI. Results did not show significant continuity between infant and adult attachment with secure/insecure or main classifications. Moreover, changes in attachment classification tended to move towards insecurity. In other words, the predominant attachment classification in infancy was secure (60%), but the predominant classification in

adulthood was insecure-dismissing (60%). Changes in attachment classification from secure to insecure were related to stressful life events such as child maltreatment, maternal depression, and poor family functioning early in adolescence. Those who moved from insecure to secure attachments appeared to have more positive change within the family at 13 years.

Continuity of attachment organization may also be influenced by developmental changes and/or measurement variables. For example, Allen, Land, Liebman, Bell, and Jodl (1997, cited in Allen and Land, 1999) pointed out that the continuity of attachment organization from infancy to adolescence appeared to be greater in older adolescents, indicating that the stresses brought on by early adolescence may disrupt underlying attachment organizations or make it difficult to assess due to the young adolescent's increasing autonomy. In addition, Weinfield et al. (1999) acknowledged that some inconsistency in the continuity of attachment organization can be attributed to problems identifying attachment behaviors related to specific attachment classifications as children get older. Differences between samples may also account for variations in study findings (Weinfield et al.). At-risk samples tend to have negative life experiences which are highly related to attachment instability. Middle class samples, on the other hand, show more stable outcomes.

In sum, the research suggests that attachment classifications tend to remain stable when experiences with attachment figures are also stable (Grossmann, Grossmann & Zimmerman, 1999), but not necessarily when significant events occur in the attachment relationship. Of the factors identified that impact attachment stability, several appear to be relevant to the children and families studied in this thesis. First, attachment security was typically found to be unstable in families who had experienced high levels of stress

related to major life events (Main and Cassidy, 1988; Waters et al., 2000). Second, greater instability of attachment was noted among children who were insecure in early childhood (Waters, 1995, cited in Solomon & George, 1999). Third, changes in attachment classifications among high-risk populations tended to move towards insecurity (Weinfield et al., 2000). Because change in attachment security tends to move towards insecurity in high-risk populations, it is expected that changes in the attachment classifications of the RO group will also move towards insecurity. Although some inconsistency among all the children is expected as a result of measurement issues as well as the age at which the children were assessed (early adolescence; Allen and Land, 1999), I expected that the Canadian-born group and Early-adopted groups would have fewer insecure attachment patterns and more stability in their secure attachment patterns than would the orphanage group.

Attachment Relationships in Maltreated Children

Studies examining the impact that abuse and neglect has on attachment relationships may also be relevant to the quality of attachment in the Romanian adoptees as they enter late childhood, given that these children were severely neglected during infancy. Crittenden (1985) assessed behavior patterns and the attachment relationships that abused children had with their mothers. Two studies were conducted with the intent of identifying behavioral differences between maltreated and adequately raised children. Mothers were classified as abusive (hitting), neglectful (lack of supervision, medical care, feeding, insufficient protection), or problematic (inconsistent care, but not abusive). A sensitive caring control group was also included. Measures in the first study included a videotaped session in the laboratory of mothers playing with their infants as well as a full developmental assessment of all infants using the Bayley Scales of Infant Development

(Bayley, 1969). In addition, 63% of the mother-infant dyads were part of an intervention program that included feedback regarding their interactions with their children. Four months later the children were reassessed in order to determine the quality of interaction post-intervention. In the four month follow-up, mother-infant dyads were visited twice in their homes and once in the laboratory. On the first home visit the mother was videotaped playing with the baby. Immediately afterwards, a second familiar adult was videotaped playing with the baby. On the second home visit the infants were administered the Bayley Scales of Infant Development. Quality of attachment was assessed in the laboratory using Ainsworth's Strange Situation (Ainsworth et al., 1978).

Results revealed that maltreated infants in general displayed behavior patterns that were harder to manage and more disagreeable to mothers than did the adequately reared children. There was also a differential effect depending on the type of maltreatment. Although serious maltreatment consistently resulted in anxious attachments, neglect was specifically associated with an avoidant pattern of attachment and/or very passive distress. The intervention was designed to increase the sensitivity and appropriate responsiveness of the mothers to infant cues. In 10 of the 16 cases where the mother's level of sensitivity increased, there was a related increase in infant cooperative behavior. Alternatively, infants of mothers whose sensitivity did not increase did not show an increase in cooperative behavior. Since changes in the mother's behavior were followed by changes in the infant's behavior the results suggest that environmental changes can facilitate corresponding changes in attachment behavior. However, Crittenden (1985) also argued that abused and neglected infants behaved in ways that could potentially maintain their mother's maltreating behavior, such as displaying passive and helpless

behaviors under stress. In addition, although both abused and neglected children showed developmental delays, the delay was greater for the neglected group.

In sum, these results indicate that maltreated infants are at risk for developing behaviors that serve to maintain insecure attachment relationships. Of particular interest are the results pertaining to neglected children, given that children adopted from Romanian orphanages experienced extreme levels of prolonged neglect during infancy and early childhood. Although Crittenden (1985) assessed attachment to the child's perpetrator of the abuse or neglect, and this study assessed children's attachment to adoptive parents who were not perpetrators of abuse or neglect, I propose that the difficult and delayed behaviors of the Romanian adoptees may have made it more challenging for adoptive parents to respond sensitively to their children's needs. Furthermore, given that neglected children in Crittenden's sample displayed more insecure avoidant attachment classifications, it is possible that the orphanage group also will have a disproportionately high degree of insecure avoidant attachment classifications.

Attachment Relationships in Post-institutionalized Children

Few researchers have studied attachment relationships in post-institutionalized children. Three studies are included in this review. Tizard and Hodges (1978) presented a qualitative assessment of attachment that was derived from parent reports of children who had been institutionalized from birth for their first few years of life and then adopted at approximately 3 years of age. Marcovitch, Goldberg, Gold, Washington, Wasson, Krekewich, and Handley-Derry (1997) conducted a study similar to the present one in Ontario, Canada. They assessed attachment security and individual differences in attachment organization in children who were adopted from Romanian orphanages during

1990 and 1991. Finally, the findings from Phase 1 (Chisholm et al., 1995) and Phase 2 (Chisholm, 1998) of the present study are discussed.

Tizard and Hodges (1978) studied the effects of post-institutionalization in a group of children who had been institutionalized from birth for the first 2 to 4 years of their lives, at which time they were either adopted, returned to their birth parents or left in the institutions. In answer to an interview question, parents said that at 4.5 years of age, they felt their adopted children were “closely” attached to them. Tizard and Hodges described “closeness” as an affectional bond that the adoptive parents felt their children had formed with them, and deep feelings of love that parents, in turn, felt for their children. Because of their strong desire for children, the adoptive parents had invested a lot of energy into forming close relationships with their children. These close attachments were still very evident at 8 years in spite of the overly friendly behavior some of the children tended to demonstrate towards strangers and other adults. By the time the children were 16 years old, almost all of the adoptive parents felt that their children were deeply attached to them, which was very similar to parental responses of their comparison group. A few of the adoptive mothers felt that their child was not closely attached to them, and two of these adoptions had broken down and the child was in care. Hodges and Tizard (1989) reported that the family relations of the adopted 16 year olds were satisfactory for them and their families, and did not differ from their non-adopted comparisons. Children made close attachments to parents in spite of their early institutionalized care. The authors concluded that the post-institutional environment had an enormous impact on the child’s successful adjustment. They argued that since the adoptive parents clearly wanted a child and put a lot of time and effort into building a relationship with their children, they were able to accept and work with more difficult and dependent behavior. This study relied on

parental interview responses to assess attachment security. Therefore, it is difficult to ascertain how attachment relationships were actually represented by the children.

Marcovitch et al. (1997) reported findings on attachment security using the Strange Situation (Ainsworth et al., 1978) with a classification scheme by Cassidy and Marvin (1987, 1992) in a sample of 56 children adopted from Romanian orphanages to Ontario, Canada. They compared Romanian children who had been institutionalized for more than 6 months ($n = 19$) and Romanian children who were adopted early in infancy ($n = 37$) to a healthy sample of non-adopted Canadian children. Results indicated that attachment classifications at 3-5 years of age among the Romanian adoptees differed significantly from the Canadian 4 year-olds. Not only were secure attachments less frequent in the Romanian adoptees, but avoidant attachment patterns were the most common form of insecurity in the comparison group, and were notably absent in the adopted sample. Marcovitch et al. concluded that an avoidant strategy in the post-institutionalized children may be maladaptive. Moreover, they added that parents who were highly motivated to adopt would be very unlikely to demonstrate patterns of parenting (rejection) conducive to fostering an avoidant attachment classification in their children. On the other hand, the disorganized classification was over-represented among the Romanian adoptees.

During the first two phases of the present study (Chisholm, Carter, Ames, & Morison, 1995; Chisholm, 1998, respectively) attachment security was assessed using parent reports on an attachment security questionnaire derived from the Waters and Deane Attachment Q-sort (1985). The questions targeted characteristic and uncharacteristic behaviors of securely attached children. Results indicated whether children had formed an attachment relationship and if the attachment formed could be considered secure or insecure. A modified separation-reunion procedure that was coded

using the Preschool Assessment of Attachment (PAA) developed by Crittenden (1992) was also utilized during Phase 2 in order to specify the quality of attachment of the children to their parents. Results compared Romanian orphanage (RO) children to a Canadian-born (CB) non-adopted matched comparison group, as well as an Early-adopted (EA) matched comparison group who would have been reared in Romanian orphanages if they had not been adopted prior to 4 months of age.

At Phase 1 (median age 18 months), Chisholm et al. (1995) reported that the RO group scored significantly lower on attachment security than did their CB and EA matches. In addition, the EA children, who did not experience the long term deprivation that their RO matches had, did not differ in attachment security from the CB group. Chisholm et al. found no significant relationship between the children's attachment security scores and age at adoption or length of time they had been in their adoptive homes. They concluded that the severe early deprivation experienced by the RO children explained the difference between groups and added that forming a secure first attachment beyond infancy may have been difficult because caregivers may be less responsive to the children's overtures, expecting them to be more independent because they were older at adoption. The extreme neglect the children endured in infancy resulted in a lack of many preattachment behaviors such as smiling, making eye contact, and crying. For example, McMullan and Fisher (1992) reported that at 11 months post adoption (median age 25 months, range 17 to 43 months) fewer than half of the RO group reciprocated smiles and several parents said that their children were unable to let their needs be known (Chisholm and Savoie, 1992). Fisher, Ames, Chisholm, and Savoie (1997) also reported that at 11 months post adoption (median age 25 months, range 17 to 43 months) the RO children displayed far more behavior problems than did their comparisons. Given that attachment

behaviors facilitate the development of attachment relationships, and that behavior problems may have made it difficult for parents to respond sensitively, Chisholm et al. (1995) surmised that these children were at risk for developing insecure attachment relationships. Although individual differences in the quality of attachment were not measured at Phase 1, the descriptive characteristics reported suggested the prevalence of an ambivalent quality of attachment with the RO children. Limitations to this first assessment of these children included problems inherent in parent reports of their children's attachment behaviors, the unestablished reliability or validity of the Q-sort questionnaire, and that the RO children had been in their adoptive homes for only 11 months, which may not have been long enough to form a secure attachment relationship.

By Phase 2 (approximately 4.5 years of age) the RO children had been in their adoptive homes for at least 26 months and no longer differed from either CB or EA children on the parent report of attachment security. In other words, the RO children scored significantly higher on attachment security according to the Q-Sort Questionnaire in Phase 2 than they had in Phase 1. Children in the CB and EA groups did not score differently on attachment security over time. Nevertheless, the RO children did display significantly more insecure attachment patterns in the modified separation-reunion procedure than did the CB children. The RO children also displayed more insecure patterns of attachment than did the EA children. There was no difference between the EA and CB groups in terms of rates of security/insecurity. Results from the PAA indicated that the RO children displayed more atypical (less common and more extreme) insecure attachment patterns than did the CB and EA children. Additionally, even among the secure RO children there was more of a tendency towards atypical attachment patterns. Chisholm's research indicates that children who were unable to form attachments in

infancy can become attached to their caregivers beyond infancy, although the quality of attachment remains at risk. Chisholm (1998) offers a transactional argument in explaining this effect. The behavior problems the institutional group arrived to Canada with may have been very stressful for their adoptive parents and may have interfered with parents' ability to provide sensitive and responsive caregiving. This may have resulted in children feeling more insecure and led to more acting out behavior, thereby feeding into the cycle. According to Chisholm, however, the EA group displayed more secure attachment patterns because attachment relations were developing on time and they had not experienced long periods of neglect.

In sum, children adopted from Romanian orphanages tend to have more insecure and atypical attachment patterns than comparison children (Chisholm, 1998; Marcovitch et al., 1997). The orphanage children in Phase 2 of the present study had more behavior problems (jealousy, screaming, temper tantrums, stealing, lack of guilt after misbehavior, fear, crying, hyperactivity, distractibility, disobedience and defiance) than their Canadian-born comparisons (Fisher et al., 1997). It is possible, then, that many of the adoptive parents in the present study have struggled with feelings of inadequacy, which might have contributed to a style of interaction that was not supportive of the development of secure attachment relationships. For these reasons, I expected that the RO children would continue to display more insecure attachment patterns than their Canadian-born and Early-adopted comparisons, whom I expected would continue to resemble each other, given that the attachment relations of the early adopted group were able to develop on time (Chisholm, 1998). Additionally, Marcovitch et al. (1997) not only found that the post-institutionalized children had fewer secure attachments than their comparisons, but they also discovered that insecure-avoidant attachment patterns were notably absent

within this group of children. This contradicts Crittenden's (1985) finding that associated insecure-avoidant patterns of attachment with neglect in early childhood. Instead, Marcovitch et al. found a disproportionately high number of post-institutionalized children with disorganized attachment patterns. Given that the children in the present study had early experiences similar to the children in Marcovitch et al.'s study, I hypothesized that I would also find proportionately fewer insecure-avoidant children among the orphanage group.

Indiscriminately Friendly Behavior

A behavior that is conceptually related to attachment and that was prevalent among the RO children at age 4.5 years is indiscriminate friendliness. Indiscriminately friendly (IF) behavior is identified as behavior that is affectionate and friendly towards all adults (including strangers) without the fear or caution characteristic of normal children (Tizard, 1977). Bowlby (1969) theorized that the number of individuals who can trigger and alleviate attachment behaviors decreases as attachment bonds form, which is thought to occur during the second half of the first year. After the first year children typically become cautious around unfamiliar adults and use their parents as a secure base when anxious or upset (Zeanah, 2000). Children with IF behavior do not seem to discriminate between strangers and primary caregivers (Chisholm et al., 1995).

Indiscriminately friendly behavior is concerning because some researchers believe that it is indicative of an attachment disorder (Zeanah, 2000; O'Connor, Bredenkamp, Rutter, & the English and Romanian Adoptees Study Team, 1999; O'Connor & Rutter, 2000). "Indiscriminate friendliness," "indiscriminate sociability," "failure to show selective attachments," "nonattachment," "disordered attachment," "disruption of attachment," and "disinhibited/indiscriminate reactive attachment disorder" are some of

the terms that have been used to describe this behavior (Chisholm, 1998; O'Connor et al., 1999; Greenberg, 1999; Zeanah, 2000). According to the *DSM-IV*, a reactive attachment disorder can be identified by “disturbed and developmentally inappropriate social relatedness in most contexts that begins before 5 years and is associated with gross pathological care” (p.116). Two patterns of interaction are noted: (1) inhibited type; and (2) disinhibited type. The former is recognized by a “persistent failure to initiate and respond to most social interactions in a developmentally appropriate way,” while the latter is identified by “indiscriminate sociability or lack of selectivity in the choice of attachment figures” (p.116). Disinhibited children display indiscriminate or overly friendly behavior towards strange adults without caution or reticence. O'Connor et al. (1999) argue that “inappropriate social approach” is a more fitting term given that the behavior displayed by post-institutionalized children is not “friendly,” but superficial, impersonal, and rarely reciprocated. Nevertheless, this thesis uses the term “indiscriminately friendly behavior” to describe this behavior.

As early as 1945, Goldfarb recognized the presence of IF behavior in post-institutionalized children. He followed a group of 15 children who had been institutionalized for the first 3 years of their lives and were then placed in foster homes. These children were assessed a few months prior to their foster home placements, 7 months after they had been placed, and at 6 and 12 years of age. The adult-child ratio was very low in the institutions they had come from, but frequent staff changes did not allow the children much adult stimulation, nurturance or continuity. In addition, the children's activities were regulated by staff needs to fulfill their duties. The institution children were matched with a group of foster children who had continuous foster home experience and no institutional experience. Goldfarb (1945) reported that by the second

assessment the institution children had become more dependent and excessively demanding of affection. At 12 years Goldfarb (1955) noted the “absence of a normal capacity for inhibition...(difficult behavior with symptoms of hyperactivity, restlessness, inability to concentrate and unmanageability” (p.109). He added that they were “indiscriminatingly and insatiably demanding of affection,” but did not appear to have any genuine attachment relationships because they did not seem to reciprocate tender feelings and did not display tension in situations that threatened attachment relations.

Tizard and Hodges (1978) studied attachment relationships in a group of 2 to 4 year olds who had been institutionalized from birth and subsequently were adopted, returned to their biological families or left in the institutions. Unlike the Romanian orphanages, these institutions had a low staff-child ratio and many toys and books. Nevertheless, personal relationships between staff and children were discouraged and the children had an average of 24 caregivers over the course of a week. When the children were 4.5 years of age, Tizard (1977) found that all three groups had more attachment disturbances than their never institutionalized comparisons. However, the children who remained in the institution seemed to be the most damaged in that they exhibited no observable attachment relationships. Some were said to be superficially attached because they followed any adult who happened to be on duty. They also showed profound attention seeking, and clingy and overly-friendly behavior to strangers. Others were emotionally withdrawn, irritable and inconsolable. Although the adopted group were believed to have formed close attachments to their new parents, all three groups contained a number of children who displayed marked attention-seeking, over-friendly behavior, and indiscriminate affection.

At 8 years of age, Tizard and Hodges (1978) reported that almost all mothers of the adopted group said that their children were closely attached to them and that they also felt closely attached to their child. At this point, the only variable that distinguished the adopted group from the never institutionalized group was their IF behavior. Tizard and Hodges reported that 52% of the adopted children, 69% of the restored children and 43% of the institutionalized children were said to seek attention from teachers as well as strangers compared to only 7% of the never institutionalized group.

Finally, at 16 years of age Hodges and Tizard (1989) reported that early deprivation did not prevent the formation of close attachment relationships with adoptive parents. Nevertheless, although overly friendly behavior had waned, it was still present. Some continued to seek adult attention more often than their comparisons, had more difficulties with peers, and fewer close relationships. These adolescents were said to be “friendly with anyone who’s friendly towards him/her” (p.88). Although Hodges and Tizard concluded that there was no relationship between IF behavior at 8 years old and how friendly they were to strangers at 16 years old, they did find a relationship between IF behavior at 8 and parent reported peer friendliness at 16 (being friendly with any peer who was friendly towards them, rather than choosing their friends). In addition, teachers reported that the ex-institutional group continued to seek attention from adults more often than their non-institutionalized comparisons. Clearly, children who had institutional experience continued to be more oriented towards adult attention and approval in adolescence than did their comparisons.

More recently, attachment disorders were assessed in 111 children adopted to the U.K. from Romania before 2 years of age, and at 4 (O’Connor et al., 1999) and 6 years of age (O’Connor & Rutter, 2000). Most (84%) of these children had been institutionalized

since birth prior to adoption and had experienced severe global deprivation. The others were adopted from birth families or foster care homes. Another 52 Romanian adoptees were adopted between 24 and 42 months and were only assessed at 6 years of age. The comparison group consisted of 52 U.K. born children who were adopted before 6 months of age. Measures included parent responses to a semi-structured interview that focused on indicators of disinhibited behavior (lack of differentiation between adults, child would readily go with a stranger, lack of checking back with the caregiver in new situations). In the present thesis these behaviors are considered indicators of indiscriminately friendly behavior. O'Connor and colleagues (O'Connor and Rutter, 2000; O'Connor et al., 1999) reported more disinhibited behaviors in post-institutionalized children than the inhibited/withdrawn pattern. In addition, they found that the longer a child had been institutionalized prior to adoption, the more severe the disinhibited behaviors were likely to be. However, O'Connor et al. (1999) noted that children as young as 3 months displayed disinhibited behavior as did some control group participants, although the behaviors were milder, which they argued challenges the relationship between deprivation and disinhibited behavior. O'Connor and Rutter (2000) also reported that disinhibited behavior was related to attention, conduct problems, and cognitive difficulties.

O'Connor and Rutter (2000) found significant stability in disinhibited behavior between 4 and 6 years (62%). They did not find a mean decrease in disinhibited behavior at 6 years of age and suggested that if change occurs it may take place over a long period of time. However, some of the children who had exhibited mild signs of disinhibited behavior at 4 years did not show any signs at 6 years, but 11 who exhibited no signs at 4 years revealed mild signs at 6 years (Zeanah, 2000). O'Connor and Rutter also found no

relationship between time in the adoptive home and disinhibited behavior. In other words, children who had spent less time in their adoptive homes at 4 years did not show a greater decrease in disinhibited behavior at 6 years compared to children who had been living in their adoptive homes for a longer time. This indicates that time in the adoptive home was not a major contributing factor to the decrease in disinhibited behavior. Finally, approximately 38% of the children exposed to prolonged deprivation did not display any disinhibited behaviors at 4 years of age, nor did 70% of the 6 year old children who had lived for the first 2 or more years in an institution. This finding indicates that severe neglect and deprivation is not a sufficient cause of disinhibited behavior. O'Connor et al. (1999) concluded that disinhibited behavior is common in children who have experienced severe deprivation early in life, but that it does not persist in a substantial number of children. O'Connor and Rutter were not able to identify what child or environmental characteristics explained the decrease in disinhibited behavior in the later placed Romanian adoptees. However, O'Connor et al. (1999) suggested that subsequent sensitive caregiving as well as the absence of adverse environmental conditions have had an impact.

Marcovitch et al. (1997) also assessed indiscriminate friendliness towards adults in post-institutionalized children living in Ontario, Canada. They found that the Romanian adopted children displayed significantly more indiscriminate behavior than did a healthy group of Canadian controls matched in terms of attachment category.

During Phases 1 and 2 of the present study (Chisholm et al., 1995; Chisholm, 1998, respectively), IF behavior was assessed using parent responses to 5 questions about their children's behavior with new adults. A second measure of IF behavior was introduced at Phase 2 to determine whether group differences existed on the more extreme items. Two

items from the five item measure (child wanders without distress, and child would be willing to go home with a stranger) were considered to be more extreme examples of IF behavior since children demonstrating these behaviors would be willing to leave their attachment figures or would not use them as a secure base. Phase 1 results (11 months post-adoption) indicated that children in the RO group displayed significantly more IF behavior than did the Early-adopted children. However, only 3 of the 46 RO families mentioned that their child's IF behavior was concerning. No normative data were collected from the CB group during Phase 1.

During Phase 2, approximately 2.5 years later, parent reports of IF indicated that the RO children displayed significantly more of this behavior than did the CB and EA children, who did not differ in terms of IF behavior. RO children also scored significantly higher on the extreme IF items than did the CB and EA children. Moreover, although the RO group's mean attachment security scores had increased by Phase 2, their IF scores had not changed. The RO group demonstrated as much IF behavior at Phase 2 as at Phase 1. The EA group, on the other hand, revealed decreased levels of IF behavior. After examining several aspects of children's orphanage and family experiences, Chisholm found that RO children who scored higher on the 5-item and 2-item IF measures were more likely to have been favorites in the institution. She also found that externalizing behavior problems were associated with both IF measures. Children's internalizing scores were related only to extreme IF scores. Finally, parenting stress was also related to both IF measures. In order to provide corroborative evidence of the presence of IF behavior among the RO group, during the Phase 2 parent interview Chisholm (1998) asked whether parents would describe their children as overly friendly. Seventy-one percent of the RO parents described their children as "overly friendly" and

90% reported little or no improvement in this behavior over time. This shows a clear link between IF behavior and institutionalization, and indicates that IF behavior can persist over time.

The research described above indicates that post-institutionalized children tend to display more IF behavior than children who have never been institutionalized and that it can persist beyond early childhood. Since IF behavior did not decrease from Phase 1 to Phase 2 of the present study (Chisholm, 1998), I expected that the RO children would continue display more IF behavior than their comparisons in Phase 3 and that they would also continue to score higher on the more extreme indicators of IF behavior. Alternatively, Hodges and Tizard (1989) showed that IF behavior could disappear to some extent with time. Since the Romanian adoptees in this study had been in their adoptive homes approximately 8 years at the time of assessment, I also expected that IF behavior would have decreased somewhat since earlier assessments. Although Chisholm (1998) did not find a relationship between the severity of IF behavior and time spent in an institution, O'Connor and Rutter (2000) did. This issue was explored in the present thesis. Chisholm (1998) did find that being a favorite in an institution was positively related to IF behavior. Therefore, I speculated that this relationship would also be present in Phase 3. The question is, how persistent are IF behaviors? Chisholm (1998) argues that IF behavior may have been adaptive in the orphanages since it may have drawn the attention of the caregivers. This view is supported by the fact that during Phase 2, IF behavior was positively associated with being a favorite in the institution. Chisholm also suggested that IF behavior post-adoption might have been an attempt to fulfill a need for stimulation after surviving a horribly deprived environment and further speculated that its

persistence may have been reinforced after arriving to Canada, given that the behavior likely garnered the children much attention from strangers.

Despite the conceptual link between attachment security and indiscriminately friendly behavior, very few studies have assessed the link between the two. Chisholm et al. (1995) reported no significant correlation between the Romanian orphanage or Early-adopted children's IF scores and their attachment security at 11 months post-adoption. In addition, given that only 3 of the adoptive parents found this behavior alarming, they concluded that it may have been perceived as an endearing quality. However, Chisholm et al. predicted that IF behavior would become more alarming with age as concerns for safety increased and adoptive parents became disappointed with seeing their children's affection towards strangers, which might be interpreted as their children not feeling a special bond towards them. Moreover, they suggested that this disappointment might decrease parental responsiveness and foster an inverse relationship between IF behavior and attachment security (Chisholm et al., 1995). Results in Phase 2 confirmed this hypothesis by showing a significant negative association between RO children's IF scores and their scores on the attachment security interview measure that was derived from the Waters and Deane Attachment Q-sort (1985). Similar relationships were not found in the CB or EA groups. In addition, insecure RO children (as assessed by the Preschool Assessment of Attachment; Crittenden, 1992) scored significantly higher on the extreme measure of IF behavior than did secure RO children. Given that IF behavior is predicted to have a high degree of continuity, it is likely that its inverse relationship with attachment security has also persisted, albeit to a lesser degree than at Phase 2. Chisholm (1998) suggested that indiscriminate attachment is only one explanation for the children's high IF scores and corresponding low attachment security scores. Chisholm found that

the insecure RO children only scored higher than secure RO children on the more extreme IF items, which specifically targeted the lack of secure base behavior. The other items did not differentiate secure from insecure children. Given that secure RO children displayed IF behavior Chisholm argued that its presence should not be equated with an attachment disorder, although the more extreme behaviors do seem to be associated with insecure attachment. In light of Chisholm's findings, I speculated that orphanage children with insecure attachments would display more extreme IF behaviors than orphanage children with secure attachment relationships.

The Present Study

In summary, the first aim of the present study was to describe and compare the current attachment patterns of Romanian (RO) children who spent 8 months or more in institutions with those of a Canadian born (CB) non-adopted sample and a group of early-adopted (EA) Romanian children who were destined to go to similar institutions if they had not been adopted prior to 4 months of age. More specifically, I wanted to determine if the Romanian orphans continued to display more insecure attachment patterns than their comparison groups, and what the quality of their attachment relationships were after living in their adoptive homes for approximately 8 years. In addition, I wanted to determine if the orphanage children displayed more indiscriminately friendly behavior than their comparisons and to assess its persistence over time and to examine the relationship between attachment security and indiscriminately friendly behavior. Finally, I was interested in examining conceptually and empirically relevant variables from previous phases of the longitudinal study in relation to both current attachment status and indiscriminate friendliness.

METHOD

Participants

The results are based on 36 Romanian orphanage (RO) children (17 boys), each of whom had lived in an orphanage for a minimum of 8 months (range 8 to 53 months). The mean age at adoption was 24 months (median = 18.5 months, range 8 to 68 months) and most of these children had been institutionalized since birth (median length of institutionalization was 17.5 months), as indicated by the high correlation ($r(46) = .97, p < .01$) between time in an institution and age at adoption (Fisher, Ames, Chisholm & Savoie, 1997). Earlier parent reports revealed that the main reason these children had been institutionalized was because they had been abandoned by their birth parents (Chisholm et al., 1995). Their average age at assessment in the present study was 128 months (median = 122 months, range 114 to 166 months). At this point they had been in their adoptive homes an average of 103 months (median = 103 months, range 94 to 117 months), or approximately 8.5 years.

Data were also collected from children in two comparison groups. The first, a Canadian born (CB), non-adopted, non-institutionalized group ($n = 42$; 19 boys), included children individually matched to the 36 ROs on sex and age (± 3 months) at the time of assessment. There are more CB than RO children because some RO families chose not to participate in this phase of the study, but their CB matches were still needed as matches for the Early-adopted group.

A second comparison group, matched to the younger RO and CB children, consisted of early-adopted (EA) children ($n = 25$; 11 boys) who would have been reared in Romanian orphanages if they had not been adopted prior to 4 months of age. They were adopted from hospitals, orphanages or from their biological parents. The mean length of

time spent in either orphanage or hospital was 2.3 months (range 1 to 4 months) and their mean age at adoption was 2.5 months (range 0 to 4 months). These children had also been abandoned by their birth parents and share similar birth family histories and pre- and peri-natal care with the RO children. Phase 1 data (Chisholm et al., 1995) revealed that this group did not differ from the RO group in birth weight or general health prior to adoption. However, since they were adopted early in life they do not share the extensive institutional experience of the RO children. At the time of this assessment they had been in their adoptive homes an average of 120 months (median = 120 months, range 112 to 123 months), or approximately 10 years. This means that they had been living in their adoptive homes approximately one year longer than the RO children.

Attrition from Phase 2 to 3 occurred for a number of reasons. At Phase 3, some families declined to take part because they no longer felt the research was of assistance to them, while others reported that they wanted to get on with their lives and put the adoption issue behind them. One family dropped out because a parent was gravely ill and another family chose not to participate because the parents had not told their child that she was adopted. Some families had moved to other cities or countries and were not accessible, while others could not be found. In all, 11 RO families, 5 CB families, and 5 EA families who participated at Phase 2 did not take part in Phase 3. Five new CB families were added in Phase 3 in order to provide matches for EA children who did not have RO matches.

Procedures

An introductory letter was sent to the parents of all previous participants at the beginning of Phase 3 in order to explain the current research and ask for continued participation (See Appendix B). In a follow up phone call a graduate student ensured that

the letters had been received, addressed any questions or concerns the parents had about the current study, obtained verbal confirmation of participation (written consent was obtained during the home visit - see Appendix C) and arranged home visit appointments, which began in February 1999 and concluded in July 2001. Researchers also asked parents for permission to contact their children's teachers and school administrators in order to collect data from teachers and peers. The purpose of the school visits was clearly explained so that the parents could make an informed decision about whether to give their consent. Principals and some district administrators were then contacted for permission to approach teachers and enter the classrooms of the study participants. The administrators, principals and teachers gave written consent to conduct research in the schools (See Appendices D and E). Home and classroom visits took place between January and June over the three years to ensure that teachers and classmates had sufficient time to become familiar with the participating children. Questionnaires were left with the teachers in stamped, self-addressed envelopes to be mailed to the research team upon completion.

Child assessments were conducted during a home visit and took approximately 4 hours. The sessions were scheduled over 2 days, typically at the end of the school day or on weekends, in order to minimize fatigue. The first visit lasted about 2 hours, while the second visit was approximately 1.5 hours. Parent schedules occasionally necessitated that the assessments be conducted in one day, but this was avoided whenever possible since 4 hours of assessment was believed to be too exhausting for a 10-year-old child. Two-hour sessions were thought to be short enough to ensure continued engagement and optimal performance. When assessments were done in one day, care was taken to provide as

many breaks as possible, including substantial time for nutrition and exercise in the middle of the allotted time.

Having extensive experience working with developmentally delayed and special needs children, I conducted all of the child assessments. In order to establish rapport, at the initial meeting I carefully explained the purpose of the research, my role and expectations of the children, and invited any questions that they might have had. If any children appeared tired, restless or bored, I encouraged them to take a break at the end of a task. Although I was aware of which group each child was in, I had no contact with the family prior to the assessment and standardized questionnaires were administered to all participants in an effort to minimize any bias based on knowledge of the previous results of the study I may have had.

During the first visit the child was presented with a series of questionnaires followed by the Stanford Binet Intelligence Scale, Fourth Edition (Thorndike, Hagen & Sattler, 1986). The examiner remained with the children during all measures, ensured that they understood how to complete the questionnaires and assisted with reading when necessary and appropriate. The second visit entailed administering a standardized achievement test and the Separation Anxiety Test (SAT). Presenting the SAT on the second day allowed the researcher to develop strong rapport before administering the pictures.

Resnick's (1993) procedure for administering the SAT is an integration of Kaplan's test revision (1985) and Hansburg's original version (1980). In a 20-minuted interview, the researcher presents a series of 6 pictures containing situations that show a child in increasing degrees of separation from his/her caregiver (See Appendix F). The pictures presented in this version of the SAT were chosen from the Hansburg sample and were

shown in the same order to each child. To begin, the researcher explained that 6 pictures will be presented and the child will be asked what the child in each picture is feeling, emphasizing that there are no right or wrong answers. The caption under each picture was read to the children as the pictures were presented and attention was directed to the details in the scenario (e.g., “here is the ambulance and the mother on a stretcher”) to evoke the imagined situation while, at the same time, ensuring complete understanding. The researcher then asked, “What is the child in the picture feeling?” If the child did not respond, the question was repeated. When the child identified a feeling and did not spontaneously offer a justification, the interviewer asked for an explanation (e.g., “Why does he feel sad?”). If responses lacked clarity, the researcher probed for elaboration while being careful not to lead the child in any way. All children were asked to give as many feelings as possible and were given a final probe for more information (“Is there anything else that he could be feeling?”) before moving on. After the child named all the feelings he/she could, the researcher then asked, “What will the child (in the picture) do next?” Participants were encouraged to give as many responses as they could. Probes for clarification and elaboration were used as needed. Following these two open-ended questions, the interviewer asked 15 forced-choice probes, which inquired about specific feelings that the child in the picture might have experienced (See Appendix G). The child was directed to give only “yes” or “no” responses. All SAT interviews were audiotaped with the permission of the parent and the child.

Parent interviews were also conducted during the home visits in order to obtain a clear understanding of how parents viewed their children’s progress and to determine whether any problems from Phase 1 or 2 (e.g., eating or sleeping problems, stereotyped behaviours) were still an issue. These interviews averaged about one hour in length

(ranging from .5 to 2 hours) and were audio taped with parent permission. Parent participants were also asked to complete a package of questionnaires addressing their children's social, emotional, intellectual, and physical development and return it by mail in a stamped, self-addressed envelope.

All participants in the study were told that their participation was voluntary and that they could withdraw at any time. They were also informed that if they had any questions or concerns about the research that they could contact the principal researcher or the Dean of the Faculty of Education at Simon Fraser University by telephone or email.

Measures

Demographic Information

Parents completed a 13-item questionnaire to report on their socio-economic, educational and marital status, of which 5 items were analyzed for this thesis: highest level of education of mothers and fathers, annual family income, ages of mothers and fathers, and employment information (See Appendix H). Items not included in this thesis related occupation, and information about siblings. Mothers and fathers were asked to indicate their highest level of education using a 6-point scale where 1 represented elementary school and 6 represented graduate or professional school. The ages of the parents were calculated by subtracting their birth dates from the dates their children were assessed. Annual family income was answered on a 10-point scale where 1 equaled less than \$20,000 and 10 was equal to greater than \$100,000.

Attachment Measures

Separation Anxiety Test:

The audiotapes of the SAT interviews were transcribed verbatim. Two trained coders independently scored the transcripts using Resnick's (1993) scoring system. Responses

to each picture were assessed on 9 different dimensions using a 9-point likert scale (See Appendix I). Each dimension represents a key aspect of security (see Appendix J).

Secure individuals, who see their parents as responsive and accessible, tend to openly discuss their thoughts and emotions during the SAT and will offer constructive solutions that help them regulate their feelings (Main, Kaplan, & Cassidy, 1985). On the other hand, the responses of insecure children tend to be more over controlled and incoherent, and they will either present destructive or passive solutions (Resnick, 1993). These children often cannot handle their emotions and either cut them off in order to cope or show heightened distress, directing the fear and anger towards their attachment figures (Kobak & Sceery, 1988, cited in Resnick, 1993).

The quality of a child's attachment is categorized, first, in terms of attachment security (secure or insecure) and then according to three main classifications; 1) Dismissing of Attachment/Avoidant (DS); 2) Secure/Freely Valuing of Attachment Relationships (F); 3) Enmeshed/Preoccupied/Ambivalent (E). Coherent, optimistic and emotionally open responses delineate secure from insecure attachment relationships. When attachment security and main classifications have been determined, an appropriate sub-category is assigned (See Appendix K).

Four coders were trained for 5 days, 8 hours a day, by Dr. Gary Resnick at Simon Fraser University in October, 2000. After the 5-day training, two coders continued to code training transcripts until they reached at least 80% agreement with Dr. Resnick. Once agreement had been established, the two coders, who were both graduate students in counselling psychology, each coded all of the transcripts independently. All transcripts were coded twice by each coder and the reliability estimates were based on 96 transcripts; 32 RO children, 42 CB children and 22 EA children. Agreement between coders on the

individual scales was greater than 90% across groups both times that the transcripts were coded. Since agreement pertaining to main classifications required the coders to interpret the meaning of the total scale scores, more variability was noted. For this reason, they coded the transcripts a second time. In addition to computing percent agreement, Cohen's Kappa was calculated. This is a more stringent test of agreement in that it deals with chance agreement. It is defined as the proportion of agreement after chance agreement is removed from consideration. Kappas, as expected were lower than percent agreement statistics.

Initial agreement on main classification for the RO group was 81% (Kappa = .54), the CB group was 76% (Kappa = .48), and the EA group was 64% (Kappa = .32). The two coders then met to discuss general themes and questions that arose in interpreting the meaning of the scales, without addressing any specific transcripts. Dr. Resnick was also consulted via a telephone conference call in order to help the coders obtain a clearer understanding of the theory behind the coding. Specific transcripts were not discussed so that coders could independently recode the transcripts without prejudice of the other's opinion. Before transcripts were coded a second time, upon the advice of Dr. Resnick, the coders agreed to include an alternate classification. Thus, a second choice for main classification was identified for each transcript (e.g., First choice - DS3, Second choice - F2). If the coders felt extremely sure of the first choice, then no alternate was provided. Percent agreement after all transcripts were coded a second time for first choice classifications was 66% (Kappa = .39) for the RO group, 81% (Kappa = .61) for the CB group, and 82% (Kappa = .65) for the EA group. When alternate classifications were included, percent agreement rose to 97% (Kappa = .95) for the RO group, 93% (Kappa = .86) for the CB group and 88% (Kappa = .78) for the EA group. This meant that the

coders saw similar patterns of attachment in spite of the differences in first and alternate choice. For example, most differences were such that coder one may have given a transcript a DS3 coding with an F2 alternate, while coder two gave the same transcript an F2 coding with a DS3 alternate. Clearly, in this situation the two coders recognized a similar pattern of attachment. All disagreements at this point were then discussed and resolved.

Responses to the 15 forced-choice probes were also transcribed and scored separately from the SAT. These scores were used to evaluate the internal validity of the SAT. Scoring entailed counting all the “yes” responses and summing them across pictures, which provided a set of 15 scores ranging from 0 to 6 (Resnick, 1991). Total sums of the first 3 pictures across all 9 scales should be predictably lower than total sums of the last 3 pictures across all 9 scales, indicating that the attachment system had been triggered as a result of the high stressed pictures. In other words, there should be a clear difference between the low stress pictures (camp, school and moving) and the high stress pictures (grandparent, running away and ambulance).

Phase 2 Assessment of Attachment: The Preschool Assessment of Attachment

This modified separation-reunion procedure assessed preschool children’s attachment organization (Crittenden, 1992) and was used in Phase 2 because Crittenden’s work on attachment largely centred around maltreated or neglected children (Chisholm, 1998). Attachment categories derived from this measure include secure, insecure-defended, insecure-coercive and insecure –defended/coercive classifications. Secure Other and Insecure Other were added for children whose strategies did not fit into the main classifications. Phase 2 classifications were reduced to secure, insecure typical, and insecure atypical patterns of attachment (Chisholm, 1998). Children who were securely

attached to caregivers maintained close proximity when stressed but were free to explore when they felt safe. On the other hand, children with defended/insecure patterns of attachment stayed in close proximity to caregivers when stressed but they failed to alert their attachment figures. This classification is analogous to the avoidant attachment described by Ainsworth, Blehar, Waters, and Wall (1978). Children demonstrating a coercive insecure strategy (similar to Ainsworth et al.'s ambivalent classification) tried to force unwilling attachment figures to meet their needs for constant availability. Children who were categorized as defended/coercive displayed both strategies. Typical Insecure children included the traditional forms of insecure patterns, such as less extreme forms of defended or coercive patterns, while Atypical Insecure children displayed defended or coercive strategies that were more extreme and less common. Children coded as Insecure Other did not clearly match the criteria for the coercive or defended strategies and were placed in the Atypical Insecure category. In Phase 2, 33% of the RO children were found to display Atypical Insecure attachments as compared to 7% of the CBs and 4% of the EAs, whereas 44% of the RO children, 51% of the CB children and 41% of the EA children reportedly displayed Typical Insecure attachments (Chisholm, 1998). This means that 37% of the RO children, 58% of the CB children and 66% of the EA children were found to display Secure attachment patterns. Data from this measure were used to assess the continuity of attachment security at Phase 3.

Measures of Indiscriminately Friendly Behavior

Five Item Indiscriminately Friendly Behavior Measure (5IF)

Data obtained from the parent interview included 5 questions pertaining to indiscriminately friendly behavior (See Appendix L). The 5IF questions addressed (a) how friendly the child was with strangers, (b) whether the child was ever shy, (c) what the

child typically did when meeting a new adult, (d) whether the child wandered away from the parents, and (e) whether the child would go home with a stranger. Parent responses were coded as a “1” if they indicated indiscriminately friendly behavior and a “0” if they did not. As such, IF responses indicate that the children were (a) very friendly with all new adults, (b) never shy, (c) typically approached strange new adults, talking and asking questions, (d) wandered without reporting to parents, and (e) would be willing to go home with an adult they had just met. Each IF response was given a score of 1, with a possible maximum total score of 5 (range 0-5).

Transcriptions were coded by an individual who was blind to the identity of the children, but not to their main groups or the purpose of the study. Reliability was checked by an experienced coder on 25% of the transcripts. Percent agreement between the two coders across all of the items was 92%. Disagreements were resolved by discussion.

Two Item Indiscriminately Friendly Behavior Measure (2IF)

As Chisholm (1998) did in Phase 2, I included an assessment of group differences on the more extreme items measuring indiscriminate friendliness; (1) child wanders without distress, and (2) child would be willing to go home with a stranger. Since these items require the child to leave their attachment figure or not use the attachment figure as a secure base, they were considered to be more extreme. Each IF response was given a score of 1. Scores of this measure ranged from 0-2.

Parent Report of Children’s Overly Friendly Behavior

An additional measure of indiscriminately friendly behavior was included in the parent interview. All parents were asked “Would you describe (your child) as being

overly friendly?” For clarification, the parents were informed that overly friendly behavior means “being affectionate and friendly to all new people, especially adults, including strangers, without being cautious or reticent at all.” From the interview transcriptions, “no” responses to this question were coded as a “0”, while “yes” responses were coded as a “1.” Percent agreement between coders on 25% of the transcripts for each of the three groups (RO, CB, EA) was 100%.

Phase 2 Assessments of Indiscriminate Friendliness

The five-item indiscriminately friendly behavior measure (5IF) and the two-item indiscriminately friendly behavior measure (2IF) that were used in the present study were also used in Phase 2 (Chisholm, 1998). During the parent interview in Phase 2, parents were asked the same 5 questions pertaining to their children’s display of indiscriminately friendly behavior that were asked in the Phase 3 parent interview. As in Phase 3, a composite score was computed by summing the answers to these five questions (5IF) and an extreme measure of indiscriminate friendliness was derived from the two most severe indicators of indiscriminately friendly behavior (2IF). These data were used to assess the persistence of indiscriminately friendly behavior at Phase 3.

The Child Behaviour Checklist/4-18 (CBCL)

The CBCL (Achenbach, 1991) was self-administered by both Phase 2 and 3 parents and teachers and uses a standardized format to record behavioural problems and competencies of children aged 4 through 18. The questionnaire consists of 118 behaviour problem scores (answered using a 3-point Likert scale) from which the following subscales are derived; social problems, withdrawn behavior, externalizing behaviours, internalizing behaviours, somatic complaints, thought problems, anxious/depressed behavior, attention problems, delinquent behavior, aggressive behavior and a total

behaviour problem score. Problem behaviors were found to be related to attachment security in earlier phases of the current study and were thought to be worthwhile to examine again.

The CBCL was standardized upon both clinical and non-clinical populations. The initial principal components analysis was performed on a sample of children drawn from mental health service providers in the Eastern United States. Several different types of service providers were chosen to increase the variability in the sample with respect to race and socioeconomic status. Norms for the factor-based scales were derived from the non-clinical population. The combination of these two sample types allowed for clinical cut-offs to be devised (Achenbach & Edelbrock, 1981).

The CBCL has high validity and reliability. Achenbach and Edelbrock (1981) have carefully documented the finding that clinically-referred children obtain higher scores on the Problem Scales than non-referred children. In fact, with the exception of allergy and asthma, each item has been shown to distinguish referred from non-referred children. The inter-rater and test-retest reliabilities of the CBCL item scores are supported by correlations in the .90s (Achenbach, 1991). Inter-parent agreement is also high, and over 1-and 2-year periods, the mean score changes are not significant (Achenbach, Phares, Howell, Rauh, & Nurcombe, 1990).

Stanford-Binet Intelligence Scale: Fourth Edition

The Stanford-Binet, Fourth Edition (Thorndike, Hagen & Sattler, 1986) consists of 15 subtests that can be administered across an age range from 2 to 23 years. Only eight of the subtests were administered in Phase 3 as they were identified in the manual as a reliable short version. The reliability and validity of the scale has been thoroughly documented (Sattler, 1992). The Stanford-Binet yields an overall Composite score, as

well as scores for Verbal Reasoning, Abstract/Visual Reasoning, Quantitative Reasoning, and Short-term Memory. Given that the Separation Anxiety Test (Resnick, 1993) requires children to verbally articulate their responses to the separation scenarios, it was important to ensure that verbal ability was not the determining factor for Phase 3 attachment security. As such, Verbal Reasoning scores obtained in both Phase 2 and Phase 3 were used in the present study.

The Home Observation for Measurement of the Environment Inventory (HOME)

The HOME (Caldwell & Bradley, 1984) was administered to each participating family during Phase 2. The HOME inventory is designed to assess the quality of stimulation and support available to a child in the home environment. Information needed to score the Inventory was obtained through observation and an interview done in the home with the child and the child's primary caregiver. The Preschool version of the Inventory was used with children up to 54 months of age and the Elementary school version was used with the older children. To compare differences between the home environments of secure and insecure children, only data collected with the Preschool version were used as none of the Elementary aged children were classified as secure. However, a Total HOME score was computed for all RO children and included in this thesis.

The Preschool version contains 55 items clustered into nine subscales: (1) learning stimulation (toys and learning materials), (2) language stimulation, (3) physical environment, (4) pride and affection, (5) stimulation of academic behavior, (6) modeling and encouragement of responsibility, (7) variety of stimulation, (8) warmth and acceptance; and (9) physical punishment. The subscale scores were summed to yield a Preschool Total HOME score.

The Elementary school version contains 59 items clustered into eight subscales: (1) emotional and verbal responsibility, (2) encouragement of maturity, (3) emotional climate, (4) growth-fostering materials and experiences, (5) provision for active stimulation, (6) family participation in developmentally stimulating experiences, (7) paternal involvement, and (8) aspects of the physical environment. An Elementary Total HOME score was also calculated by summing the subscale scores.

Scores obtained from Phase 2 were transformed into rates so that scales which may have had items missing could be included. Internal consistency and inter-observer agreement have been shown to be high (Caldwell & Bradley, 1984).

Institutional Variables

Time Spent in Institutions

During the Phase 1 parent interview, parents of orphanage children were asked how much time their child had spent in institutions prior to adoption. Although time in institution did not differentiate insecure from secure RO children, nor the presence of indiscriminately friendly behavior in Phase 2 of this study (Chisholm, 1996), O'Connor et al (1999) argued that attachment disorder behaviors were positively associated with duration of severe deprivation. As such, this variable was examined in the present study to see whether it predicted how the Romanian children were doing in terms of their attachment relationships and indiscriminately friendly behavior.

Being a Favorite in the Institutions

During Phase 1, parents of orphanage children were also asked if their child had been a favorite of workers in the institution (0 = yes, 1 = no). Chisholm (1998) found that indiscriminately friendly behavior was significantly associated with the child having been a favorite in the institution. Children scoring higher on measures of indiscriminately

friendly behavior were more likely to have been favorites in the institution. Whether having been a favorite in the institution continues to predict current levels of indiscriminately friendly behavior will be examined.

Parent Interview Measures

At the end of the interview, parents were asked to respond to the question, "Given what you now know about being a parent to (your child), if you could do the whole thing over again, how likely would you be to repeat the experience?". Responses were coded on a 5-point scale where 0 represented "extremely unlikely," 1 = "very unlikely," 2 = "somewhat unlikely," 3 = "somewhat likely," 4 = "very likely," and 5 = "extremely likely." Although this question in itself is not an indicator of attachment security, it may provide an indicator of how parents feel about their relationship with their children.

RESULTS

Statistical analyses were conducted using data from child assessments and parent and teacher reports. Findings are presented in six main sections: (1) Preliminary analyses that include a comparison of demographic variables across groups, an assessment of the internal validity of the Separation Anxiety Test, and analyses to investigate gender differences in the measures used in the present study; (2) Attachment security analyses that includes an assessment of group differences in Phase 3 attachment security and the relationship between Phase 2 and Phase 3 attachment security; (3) Variables related to orphanage children's attachment patterns including children's verbal ability, time spent in institution, home environment qualities, child behavior problems, and the likelihood that parents would repeat the experience; (4) Analyses of indiscriminate friendly behavior including an examination of Phase 3 group differences and the stability of indiscriminate friendliness across Phase 1, 2 and 3; and (5) Predictors

of indiscriminately friendly behavior; and (6) Analyses that assess the relationship between Phase 2 and 3 attachment security and the Phase 3 measures of indiscriminately friendly behavior.

Preliminary Analyses

Demographic Information

Means and standard deviations and the results of one-way analyses of variance (ANOVA) comparing demographic characteristics across the RO, CB and EA groups can be found in Table 1.

There were significant differences among the three groups on age at assessment ($F\{2, 98\} = 4.08, p < .05$), mother's age ($F\{2, 100\} = 3.87, p < .05$) and father's age ($F\{2, 96\} = 3.67, p < .05$). Tukey B post hoc comparison tests revealed that the EA children were, on average, younger than the RO and CB children when they were assessed. This is explained by the fact that the EA children were matched to the youngest RO children while the CB group contained matches for all the RO children. Hence these latter two groups included children in a broader range of age. The parents of the Early-adopted children were the oldest, the RO parents were the next oldest and the CB parents were the youngest. The groups did not differ on other demographic characteristics such as parents' education, marital status, and annual family income and generally speaking, despite factors such as time and attrition, the three groups remain comparable.

Separation Anxiety Test Validity and Gender Differences

In order to ensure that the stimulus pictures for the Separation Anxiety Test (SAT) had triggered children's attachment behavioral systems, means of the low stress SAT pictures were compared to the means of the high stress pictures. Means for low stress SAT pictures represent the average number of "Yes" responses to the camp, school, and

moving pictures, and means for the high stress pictures represent the average number of “Yes” responses to the grandparents, running away and ambulance pictures. A “Yes” response to the feeling probes (see Appendix F) indicates emotional arousal. Given that emotional arousal is believed to trigger the attachment behavioral system, there should be a clear difference between the low stress and the high stress pictures.

Total mean scores demonstrating the difference between high and low stress SAT pictures are presented in Table 2 for the orphanage children and their comparisons. As expected, a multivariate analysis of variance (stress level {2} x group {3} x gender {2}) revealed a significant main effect for stress level ($F(1,96) = 226.75, p < .001$). Means for the low stress pictures were significantly lower than the means for the high stress pictures across all groups and both genders. In addition, given that the group x level of stress and gender x level of stress analyses were non-significant (see Table 2), the data suggest that a mean difference in level of stress was aroused in response to the SAT pictures across all groups and both genders.

The attachment patterns obtained from the Separation Anxiety Test include two main classifications for insecurity (dismissing and ambivalent), and one main classification for security. Given that only 2 RO children, 1 CB child and 2 EA children displayed insecure-ambivalent classifications, all subsequent analyses pertaining to attachment status will be collapsed across the two insecure categories.

A gender by attachment security (secure/insecure) chi-square was significant ($\chi^2(1, 98) = 5.94, p = .01$). Of the boys in the sample, 36% were classified as secure and 64% were classified as insecure (see Table 3). The opposite pattern was observed with the girls. Whereas 61% of the girls were classified as secure, only 39% were classified as insecure.

As a result of this difference, gender by attachment security chi-square analyses were calculated individually for the RO, CB, and EA groups to determine if gender differences in attachment security were evident within each of the groups (see Table 3). Results were significant in the CB group ($\chi^2 \{1, 42\} = 4.50, p < .05$), with fewer CB boys (37%) classified as secure than girls (70%). Results were not significant in the RO ($\chi^2 \{1, 32\} = .27, p = .45$) or EA ($\chi^2 \{1, 24\} = 2.14, p = .15$) groups. However, given the apparent gender bias when all three groups were combined, all subsequent analyses pertaining to attachment security in the entire sample are conducted separately for boys and girls. For analyses within groups, data are collapsed across gender.

Gender Differences in Measures of Indiscriminate Friendliness and Parent Interview

Responses

In this section, gender differences in measures of indiscriminately friendly behavior were examined as were gender of child effects in parent responses to the interview questions asking “Would you describe (your child) as being overly friendly?” and “Given what you now know about being a parent to your child, if you could do the whole thing over again, how likely would you be to repeat the experience?”

One-way ANOVAs were used to compare mean scores of boys and girls on the five-item indiscriminately friendly measure (5IF) and the two-item indiscriminately friendly measure (2IF). No significant differences were found (See Table 4).

Only one child in each of the CB and EA groups was said to be overly friendly. As such, gender differences in parent responses to the question asking if their children were overly friendly were examined only within the RO group. A gender by overly friendly (overly friendly/not overly friendly) chi-square analysis approached significance

($\chi^2 \{1, 33\} = 3.70, p = .06$). Although more boys (56%) and girls (24%) than expected were described by their parents as overly friendly, fewer boys (44%) and more girls (77%) than expected were not. This finding suggests that RO boys are more likely than RO girls to display overly friendly behavior.

Gender of child effects in response to the interview question asking RO parents if they would repeat the experience of adopting their children was calculated using a “repeat experience” (2) by gender (2) chi-square. Eight of 31 RO parents indicated that they would be less than “extremely likely” to repeat the experience of adopting their children. To capture this distinction the “repeat experience” variable was reduced into two dimensions: (1) a “1” represented all responses that indicated parents were less than “extremely likely” to repeat the experience; and (2) a “5” indicated that parents were “extremely likely” to repeat the experience. Results from this analysis were not significant, suggesting that parents of RO boys and girls were equally likely to repeat the experience of adopting their children given what they now know about parenting a post-institutionalized child

In sum, no gender differences were found in the 5IF and 2IF measures of indiscriminate friendliness. Nor was there a gender of child effect in response to the two parent interview questions (“Would you describe your child as overly friendly?” and “How likely would you be to repeat the experience?”). As such, all subsequent analyses pertaining to these measures were collapsed across gender.

Attachment Security

Group Differences in Phase 3 Attachment Security

A central aim of the current study was to determine if and how the RO children differed from the CB and EA children in terms of their attachment status. To address the

hypothesis that the RO children would have more insecure attachment relationships than their comparison groups, a group by attachment security (secure/insecure) Chi-square analysis was computed. In addition, given the obtained gender differences group x attachment security (secure/insecure) chi-square analyses were also computed separately for boys and girls. Results from these analyses are also presented in Table 3.

The group x attachment security chi-square analysis was found to be significant ($\chi^2 \{2, 98\} = 7.55, p < .05$). Within the RO group, the number of children who were classified as insecure was greater than the expected frequency. The opposite was true in the CB and EA groups. Indeed, approximately one-third of the RO children (31%), over half of the CB children (55%) and two-thirds of the EA children (67%) were classified with secure attachment relationships. Alternatively, two-thirds of the RO children (69%), less than half of the CB children (45%) and one-third of the EA children (33%) were classified with insecure attachment relationships.

Given the obtained gender differences in attachment security, group x attachment security chi-square analyses were computed separately for boys and girls. This analysis was non-significant for boys ($\chi^2 \{2, 44\} = 1.42, p = .49$). On the other hand, a significant group x attachment security chi-square ($\chi^2 \{2, 54\} = 7.26, p < .05$) was found for girls. Girls in the RO group were more likely than expected to be insecure (65%), whereas girls in the CB and EA groups were less likely than expected to be insecure. Of the girls in the CB group, 30% were classified as insecure, while 21% of the EA girls were classified as insecure.

In sum, the orphanage children were more likely to be insecure than secure, while the opposite was true for the Canadian-born and Early-adopted children. When gender

was considered, collapsing across all groups, boys displayed a higher rate of insecure attachments than girls, while the girls across all groups had a higher rate of secure attachments than boys.

Stability from Phase 2 to Phase 3

To examine the continuity of attachment security from 4.5 to 10.5 years across groups, a series of Phase 2 attachment security (secure/insecure) x Phase 3 attachment security (secure/insecure) chi-square analyses (one analysis for each group) was computed using only the children who were in both Phase 2 and 3 (see Table 5). Within the RO group, the chi-square was not significant ($\chi^2 \{1, 29\} = 2.52, p = .12$), indicating that overall attachment category was not stable from Phase 2 to Phase 3. However, a closer examination of these data suggested that attachment security was stable from Phase 2 to Phase 3 if the child was insecure at Phase 2 (81%), but not if s/he was secure at Phase 2. This is in contrast to only 46% of the secure RO children at Phase 2 continuing to display secure attachments at Phase 3. Hence, when there was change in attachment security among the RO children it tended to be from secure to insecure rather than the other way around. For example, of the RO children identified as insecure at Phase 2 only 19% were classified as secure at Phase 3, compared to 54% of the RO children who were classified as secure in Phase 2, but insecure in Phase 3.

In the EA group, a Phase 2 attachment security x Phase 3 attachment security chi-square analysis was also non-significant ($\chi^2 \{1, 21\} = .01, p = .74$). However, a pattern of stability opposite to that seen in the RO group was found. The EA group showed greater stability in secure relationships (63%) than in insecure relationships (40%). Moreover, if an EA child's attachment classification did change, it was more likely to

move from an insecure to a secure classification (60%) than from secure to insecure (38%).

Finally, a Phase 2 attachment security x Phase 3 attachment security chi-square analysis was also non-significant in the CB group ($\chi^2 \{1, 31\} = 1.31, p = .22$). As would be expected, approximately two-thirds of the insecure (60%) and secure (62%) CB children remained stable in attachment security over time, while the direction of change seemed to be random.

In sum, insecure children in the orphanage group showed the highest stability in attachment classification. Within the EA group attachment classification was more stable among the secure children. However, within the CB group both secure and insecure children displayed similar levels of stability in attachment classification over time. It is very important to remember that these findings were not found to be statistically significant, possibly due to the low numbers of children in each analysis. Nevertheless, these findings suggest that over time attachment insecurity is becoming more prevalent in the post-institutionalized children.

Potential Explanations of the Orphanage Children's Attachment Status

In this section variables that may explain the present attachment status of the orphanage children are examined. Analyses are conducted to determine if verbal ability is related to differences in attachment security. Environmental variables such as time spent in an institution prior to adoption and the quality of stimulation and support available to the child in the post-adoptive home are also examined as potential predictors of attachment status given the importance of caregiver sensitivity and responsivity to the development of secure attachment relationships. Child behavior problems at Phase 2 and

Phase 3 are also examined given the conceptual position that difficult children are harder for caregivers to be responsive to. Finally, the parent interview question asking parents how likely they would be to repeat the experience of adopting their children was examined as it may indicate how parents feel towards their children, which may, in turn, be related to the quality of the parent-child attachment.

Verbal Ability

To determine if differences in attachment security were a function of RO children's verbal ability, I used a series of one-way analyses of variance (ANOVAs) to examine how Phase 2 and 3 cognitive assessments related to Phase 3 attachment security. Within the RO group (See Table 6), secure children achieved significantly higher mean verbal reasoning scores on the Stanford Binet than did insecure children ($F\{1, 32\} = 5.63$, $p < .05$). As such, it was important to determine if children were classified as insecure because security on the SAT requires a certain level of verbal ability. Two additional analyses were needed to address this question.

First, a one-way ANOVA was used to establish if the current difference between secure and insecure RO children's verbal ability was also present at 4.5 years of age. Results of this analysis are also found in Table 6. Although no significant difference was found between secure and insecure RO children's verbal reasoning ability at 4.5 years of age, the difference was approaching significance ($F\{1, 29\} = 3.47$, $p = .07$). This finding suggests that the difference in Phase 3 verbal ability among secure and insecure RO children was also present in Phase 2.

A one-way ANOVA examining the relationship between Phase 2 verbal reasoning and Phase 2 attachment security determined if the difference in RO children's attachment security at Phase 3 was related specifically to the way in which attachment was assessed.

Attachment security in Phase 2 was measured using an observational method and, therefore, was independent of the verbal ability of the children. On the other hand, Phase 3 assessments of attachment security relied on children's verbal responses to pictures depicting several separation scenarios. If a significant difference in verbal ability existed between secure and insecure RO children in Phase 2, then the differences in attachment security at Phase 3 could be attributed to factors other than verbal ability. Results of this analysis are found in Table 7. Results indicate that RO children who were insecure at 4.5 years of age had significantly lower verbal reasoning scores ($F(1, 33) = 10.68, p < .01$) than their secure counterparts. These findings suggest that although security at 10.5 years was derived from children's verbal responses, and insecure RO children displayed lower verbal scores than their secure counterparts, factors other than verbal ability have influenced the classification of attachment security in the RO children at 10.5 years.

Environmental Variables

The duration of severe deprivation experienced by the orphanage children prior to adoption may have had a profound negative impact on the development of their internal working models. On the other hand, the quality of stimulation and support available to the children in their post-adoptive homes may have ameliorated to some extent the negative impact of the early deprivation they had experienced. In this section, time in institution and the quality of the home environment are examined in order to ascertain what factors related to the present attachment status of the orphanage children.

Time in Institution

The severe deprivation that orphanage children experienced prior to adoption may have had a negative influence on their ability to form secure attachments with their adoptive parents. Thus, a one-way ANOVA was used to examine whether insecure and

secure orphanage children differed in the amount of time that they had spent in Romanian orphanages. Results showed that the length of time insecure ($n = 22$) RO children ($M = 23.22$ months, $SD = 12.41$ months) spent in an institution was not statistically different from the length of time secure ($n = 10$) RO children ($M = 17.10$ months, $SD = 8.89$ months) were institutionalized prior to adoption ($F\{1, 32\} = 1.96, p = .17$). Although these results are not significant, the pattern suggests that the longer children spend in institutions prior to adoption, the more at risk they are for developing insecure attachment relationships.

Home Environment

Given that the formation of a secure attachment is dependent on parental responsiveness and sensitivity, differences in several dimensions of secure and insecure RO children's post-adoptive home environments were assessed using results computed in Phase 2 from the Preschool Home Observation of the Measurement of the Environment (HOME) measure.

A HOME scale by Phase 3 security (secure/insecure) multivariate analysis of variance was computed in order to compare the mean scores of secure and insecure preschool RO children on all composite scales (Total HOME, physical punishment, variety of stimulation, encouragement of responsibility, academic stimulation, warmth and acceptance, physical environment, language stimulation, and learning stimulation). No significant differences were found. However, it is noteworthy that secure RO children showed higher mean scores on the physical punishment scale (less physical punishment) than insecure RO children ($F\{1,21\} = 2.51, p = .13$).

A one-way ANOVA was also used to compare the Total HOME scores of all secure ($n = 9$) and insecure ($n = 20$) RO children. Although the results were not

significant ($F\{1, 29\} = 2.34, p = .14$), they did indicate that secure RO children ($M = .88, SD = .06$) received somewhat more support and stimulation in their home environments than insecure RO children ($M = .82, SD = .11$).

Child Behavior Problems

CBCL parent and teacher responses were each examined using a MANOVA in order to determine if insecure RO children obtained higher scores (more behavior problems) than secure RO children. Results from the Phase 3 parent analysis are presented in Table 9. Although these findings were not significant, the difference between secure and insecure RO children on the Social Problems scale was approaching significance ($F\{1, 30\} = 3.88, p = .06$). In other words, insecure RO children displayed more social problems than their secure counterparts. In addition, when Total Behavior problems were calculated, results showed that insecure RO children had more difficulty than secure RO children ($F\{1,30\} = 1.90, p = .18$).

Results from the MANOVA that assessed Phase 3 teacher responses to the CBCL showed significant results on several dimensions (see Table 10). Insecure RO children displayed significantly more attention problems ($F\{1, 24\} = 4.35, p = .05$) and total behavior problems ($F\{1, 24\} = 4.21, p = .05$) than insecure RO children. In addition, insecure RO children were reported to have more externalizing behavior ($F\{1, 24\} = 4.10, p = .06$), somatic complaints ($F\{1, 24\} = 3.28, p = .08$), delinquent behavior ($F\{1, 24\} = 3.62, p = .07$), and aggressive behavior ($F\{1, 24\} = 3.74, p = .07$) than their secure counterparts. These findings approached significance and suggest that insecure RO children display more behavior problems at school than do secure RO children.

To determine if child behavior problems were predictive of Phase 3 attachment security a MANOVA was used to compare secure RO children's Phase 2 parent and

teacher CBCL scores those of insecure RO children. Results from these analyses were not significant (see Table 11 and 12).

Parent's Likelihood of Repeating the Experience of Having Their Children

The interview question that asked RO parents how likely they would be to repeat the experience of adopting their children was examined in order to shed light on how parents feel towards their children. Attachment theory suggests that parents who are warm and attentive to their children tend to have children who are securely attached, while parents who are rejecting tend to foster insecure attachments in their children.

A security (2) by "repeat experience" (extremely likely/less than extremely likely) (2) chi-square analysis was used to determine if parents of insecure children would be less likely than parents of secure children to repeat the experience. Given that only 6 of the 28 participants in this analysis reported that they would be less than "extremely likely" to repeat the experience of adopting their children, the "repeat experience" variable that reduced parent responses into two dimensions ("extremely likely" and less than "extremely likely") was used. Although not significant, results from this analysis were approaching significance ($\chi^2 \{1, 28\} = 3.62, p = .07$). Whereas no parent of a secure RO child said that they would be less than "extremely likely" to repeat the experience, more parents of insecure RO children (32%) than expected responded in the same way. This finding suggests that parents of insecure RO children are less likely than those of secure RO children to repeat the adoption experience. However, in spite of the difficulties, it is important to note that more than two-thirds (68%) of the insecure RO children said that they would be "extremely likely" to repeat the experience.

Indiscriminately Friendly Behavior

~~Group Differences on Measures of Indiscriminate Friendliness in Phase 3~~

Three measures of indiscriminately friendly behavior were included in the present analyses: (1) the five item indiscriminately friendly behavior (5IF) measure, which looks at the total IF score for each child; (2) the two item indiscriminately friendly (2IF) measure, which assesses more extreme indiscriminate behavior; (3) and parent responses to the interview question that directly asked “Is your child overly friendly?” Univariate analyses of variances were computed to examine differences between the RO, CB, and EA groups in their 5IF and 2IF scores, while chi-square analyses were used to examine group differences on each of the 5IF items as well as the interview question asking parents if they thought their children were overly friendly.

Five-Item (5IF) and Two-Item (2IF) Indiscriminately Friendly Behavior Measures

Using a one-way ANOVA to compare means, significant differences were found between groups with the children’s 5IF scores ($F(2, 100) = 4.95, p < .01$). Tukey B post hoc tests showed that the RO children displayed significantly more indiscriminately friendly behavior than their CB and EA comparisons, who did not differ from each other (see Table 13).

A one-way ANOVA examining 2IF scores across the three groups was also significant ($F(2, 100) = 4.30, p < .01$). Tukey B post hoc tests indicated that the RO children obtained higher 2IF scores than did children in the CB and EA groups, who did not differ from each other. In other words, the RO children displayed more extreme indiscriminately friendly behavior than children in the CB and EA groups.

Given that the 5IF and 2IF measures were developed to use with children in early childhood, a series of Group (3) by IF item (5) chi-square analyses were computed to

determine the developmental appropriateness of the items for use with 10.5 year-old children. Table 14 provides the percentages of children within each group who were described by their parents as indiscriminately friendly on each of the 5IF items, which incorporates the 2IF items. On all items, except the question asking parents if their children were “shy” or “uncomfortable” when meeting new adults (which showed no differences among the groups), more orphanage children than expected were classified as indiscriminately friendly compared to fewer CB and EA children than expected or the same as expected. RO children (55%) were more likely to be indiscriminately friendly in how friendly they were when meeting new adults than CB (26%) and EA (24%) children ($\chi^2 \{2, 100\} = 6.36, p < .05$). Similarly, almost half (45%) of the RO children were said to approach new adults when they first meet them, compared to 17% of the CB children and 28% of the EA children ($\chi^2 \{2,100\} = 7.45, p < .05$). The two extreme IF questions showed the most striking differences between the groups. Whereas parents of the RO children said that 30% of their children would be willing to go home with a stranger, only 2% of the CB parents and 8% of the EA parents said that their children would do the same ($\chi^2 \{2,100\} = 13.48, p < .001$). A similar pattern was found in the question that asked parents if they thought their children wandered away without apparent distress. Twenty-four percent of the RO children were said to wander without distress, compared to only 7% of the CB children and 4% of the EA children ($\chi^2 \{2,100\} = 7.14, p < .05$).

Parents' Report of Children's Overly Friendly Behavior

A group by “overly friendly” chi-square analysis was used to examine differences in parent responses to the question, “Is your child overly friendly?” (See Table 15).

Results showed that significantly more (39%) RO children and fewer CB children (2%)

and EA children (4%) than expected were described by their parents as overly friendly (χ^2 {2, 100} = 23.02, $p < .001$). From another perspective, these results indicated that the RO children comprised a disproportionate number (87%) of the children who displayed indiscriminately friendly behavior. The CB and EA children only constituted 13% of the children who displayed indiscriminately friendly behavior in this sample.

Time 2-Time 3 Stability of Indiscriminately Friendly Behavior

To assess the stability of indiscriminately friendly behavior within each group, two correlations were computed: (1) the five-item indiscriminately friendly behavior measure (5IF) at Phase 2 with the same measure at Phase 3; and (2) the two-item indiscriminately friendly behavior measure (2IF) at Phase 2 with the same measure at Phase 3. Results are shown in Table 16.

Results indicated that indiscriminate friendliness was relatively stable from 4.5 years to 10.5 years of age. For example, 5IF scores at Phase 2 were significantly correlated with 5 IF scores at Phase 3 in the RO $r(33) = .47$, $p < .01$ and CB groups $r(34) = .68$, $p < .001$. The stability correlation for the 5IF scores in the EA group approached statistical significance $r(23) = .40$, $p = .06$.

Within group changes in 5IF scores from Phase 2 to Phase 3 were assessed using paired sample t -tests. Although the RO group ($n = 33$) had slightly lower total indiscriminate friendly scores ($M = 2.00$, $SD = 2.00$) at 10.5 years than they did at 4.5 years ($M = 2.52$, $SD = 1.72$), these differences were not significant. In addition, no significant differences were found in the CB group ($n = 34$), who also had higher 5IF scores at 4.5 years ($M = .83$, $SD = .1.17$) than at 10.5 years ($M = .71$, $SD = 1.00$). Differences in Phase 2 and 3 5IF scores were also non-significant in the EA group ($n =$

23), who appeared to display a bit more indiscriminate friendliness at 10.5 years ($M = 1.17$, $SD = 1.53$) than at 4.5 years ($M = .48$, $SD = .90$).

Phase 2 2IF scores were also significantly correlated with Phase 3 2IF scores, within the RO group $r(33) = .48$, $p < .01$, but not within the CB or EA groups. Within group changes for the 2IF scores were also assessed using a paired samples t-test. RO children's Phase 2 ($M = .61$, $SD = .79$) and Phase 3 ($M = .55$, $SD = .83$) mean 2IF scores were not found to be significantly different, suggesting that the indiscriminately friendly behavior of the orphanage children has not changed significantly in the last 6 years. Moreover, no significant differences were found in the CB group, whose 2IF scores at 4.5 years ($M = .06$, $SD = .24$) were the same at 10.5 years ($M = .06$, $SD = .24$). Non-significant differences between Phase 2 ($M = .00$, $SD = .00$) and Phase 3 ($M = .13$, $SD = .46$) 2IF scores in the EA group were also noted.

Predictors of Indiscriminately Friendly Behavior

Time spent in an institution prior to adoption and if children were favored by caregivers in the institutions that they came from have been discussed as potential predictors of indiscriminately friendly behavior. Thus, Pearson product moment correlations were used to examine whether the RO children's total time spent in the institutions was correlated to their total (5IF) and extreme (2IF) indiscriminately friendly scores. Results from these analyses were not significant. A one-way ANOVA was also computed to determine if children who were described as overly friendly by their parents had spent a longer time in the orphanages that they came from prior to adoption than children who were not described as overly friendly by their parents. These results were also insignificant.

One-way ANOVAs were also computed to compare 5IF and 2IF mean scores of RO children who had been identified as favorites in the institutions and those who had not. These results were not significant. In addition, an overly friendly (2) by favorite (2) chi-square analysis was computed to determine the relationship between children who had been identified in the parent interview as overly friendly and whether they had been a favored in the institutions that they came from. No significant results were found.

Indiscriminate Friendliness and Attachment Security

In this section analyses that examine the relationship between the orphanage children's attachment security and indiscriminately friendly behavior are examined. One-way ANOVAs were computed to assess the difference between secure and insecure RO children's total indiscriminately friendly behavior (5IF) mean scores and extreme indiscriminately friendly (2IF) mean scores. In addition, a security (secure/insecure) by overly friendly (overly friendly/not overly friendly) chi-square analysis examined the relationship between Phase 3 attachment security and parent responses to the question, "Is your child overly friendly?"

Five-Item (5IF) and Two-Item (2IF) Indiscriminately Friendly Behavior Measure

Total 5IF and 2IF means scores demonstrating the difference between secure and insecure RO children are shown in Table 17. No significant results were found on the 5IF measure ($F\{1,29\} = .67, p = .42$) or the 2IF measure ($F\{1,29\} = 2.55, p = .12$). However, on both assessments of indiscriminate friendliness, insecure RO children obtained higher mean scores (more indiscriminately friendly behavior) than secure RO children.

Parent Reports of Children's Overly Friendly Behavior

To examine how parent reports of overly friendly behavior relate to attachment security a security by overly friendly (OF / Not OF) chi-square analysis was computed.

These results were significant ($\chi^2 \{1, 30\} = 6.43, p = .01$). More insecure RO children than expected were classified as overly friendly. Whereas no secure ($n = 9$) RO children were described as overly friendly by their parents, almost half (48%) of the insecure ($n = 21$) RO children were described as such.

Phase 2 Attachment in Relation to Phase 3 Indiscriminate Friendliness

Total (5IF) and Extreme (2IF) Indiscriminate Friendliness Scores

Given the prevalence of indiscriminately friendly behavior among the orphanage children, one-way ANOVA analyses were computed to determine if attachment security at 4.5 years was predictive of indiscriminately friendly behavior at 10.5 years within the RO group. Attachment security in Phase 2 was reduced to three main classifications: (1) secure, (2) insecure typical, and (3) insecure atypical. Total Phase 3 5IF and 2IF mean scores of the RO children who were classified as secure, insecure typical and insecure atypical are shown in Table 18. Results indicate that Phase 2 attachment security is significantly related to RO children's total indiscriminately friendly scores (5IF) at Phase 3 ($F\{2, 30\} = 3.31, p = .05$). Although Tukey B post hoc tests revealed no significant differences between groups, the orphanage children who were classified as insecure atypical had significantly higher 5IF scores than secure and insecure typical orphanage children, who did not differ significantly from each other. Results from analyses of the extreme IF scores (2IF) showed a similar pattern, with insecure atypical orphanage children displaying higher scores, but the differences were not significant ($F\{2, 30\} = 1.9, p = .17$).

Parent Reports of RO Children's Overly Friendly Behavior

A Phase 2 security (3) by Phase 3 overly friendly (2) chi-square analysis were significant ($\chi^2 \{2, 30\} = 11.16, p < .01$). Children who were classified as insecure in Phase 2 reportedly displayed more overly friendly behavior than expected, with the atypical insecure children demonstrating the most overly friendly behavior (see Table 19). Indeed, 89% of the children identified with insecure atypical attachments in Phase 2 were described by their parents as overly friendly in Phase 3, compared to 30% of the insecure typical children and 18% of the secure children. These findings suggest that overly friendly behavior is a risk factor for post-institutionalized children, particularly among those identified as atypically insecure in early childhood.

DISCUSSION

In this thesis I examined individual differences in attachment organization as well as continuity of attachment security in a group of post-institutionalized children who had been adopted to Canada from Romania approximately 8 years prior to the time of assessment. Two comparison groups were included in these analyses – a Canadian-born, non-adopted sample and a group of children who were adopted from Romania before 4 months of age and who did not have any institutional experience. Previous research indicates that post-institutionalized children often display indiscriminately friendly behavior and that it can persist beyond early childhood (Chisholm, 1998; Chisholm et al., 1995; Goldfarb, 1945; Hodges & Tizard, 1989; Marcovitch et al., 1997; O'Connor & Rutter, 2000; O'Connor et al., 2000; Tizard, 1977; and Tizard & Hodges, 1978). Given the conceptual link between indiscriminately friendly behavior and attachment security, I also investigated to see if post-institutionalized children displayed more indiscriminate

friendliness than children in the comparison groups and to determine if indiscriminate friendliness varied with attachment security.

Preliminary Analyses

Demographics

Comparisons between the RO, CB and EA groups are central to this thesis. As such, it was important to first ensure that socio-demographic variables were consistent across all three groups. In addition to age and sex, children in the three groups were initially matched in terms of parents' age and education, and family income. This was important given that environmental conditions can differentially affect developmental outcomes. The nature of longitudinal studies is such that changes in family circumstances are not uncommon over time. Thus, a reevaluation of the comparability among groups was considered essential given that initial matches were established approximately 8 years prior to the time of assessment in the present study. Findings showed that all three groups continued to be similar in terms of parent education, income and marital status, which decreased the likelihood that group differences could be attributed to demographic variables.

SAT Validity and Gender Differences

The Separation Anxiety Test (Resnick, 1993) was used in the present study to assess attachment. Although not a primary focus of this thesis, analyses examining the validity of the SAT are an important contribution to the growing body of knowledge pertaining to its use as a valid measure of attachment. Furthermore, given that the SAT has not previously been administered to 10.5 year-old children and that there exists a lack of research assessing the organization of attachment in children of this age, examination of its validity with this particular population is potentially useful to attachment

researchers. An assumption underlying Hansburg's (1980) original version of the SAT is that the separation scenarios can sufficiently stimulate children to project their reactions. The difference found across groups between the high and low stress pictures indicate that the separation scenarios did arouse separation anxiety and triggered children's attachment behavioral systems. That no differences were found across groups in the level of stress experienced by boys and girls suggests that the separation pictures are equally effective for children of both sexes.

Although three main attachment classifications (secure, insecure-dismissing, insecure-ambivalent) can be derived from the SAT, assessments of the organization of attachment in this thesis only included analyses of secure and insecure classifications. It was difficult to draw meaningful conclusions from the distribution of insecure-ambivalent classifications given that so few children in the study were identified as such. Consequently, the two main insecure classifications were collapsed for all analyses. Nevertheless, it is interesting to note that number of children classified as insecure-ambivalent in this study is consistent with Ainsworth et al.'s (1978) finding that insecure-ambivalent children represent the smallest group in the general population.

Gender differences were found in the insecure/secure attachment classifications of the SAT with boys being more likely to be classified as insecure than girls. Attachment researchers have not typically found gender differences in attachment security. Nor did Chisholm (1998) report a gender difference in the attachment organization of this population of children when they were 4.5 years old. As such, the gender difference here may be a consequence of a measurement issue. The results suggest that it may be more difficult for boys to talk about feelings than girls at 10.5 years old, which is consistent with the gender stereotypes found in Canadian culture that purport girls are more verbal

and more in tune with feeling states than boys. By early adolescence, girls may be more socialized than boys to share their emotional responses. This means that insecure attachments may be overestimated when the SAT is used with preadolescent boys. On the other hand, Greenberg (1999) acknowledged that the role gender has in the organization of attachment behavior is unclear. Gender differences in attachment security may exist in preadolescent populations. Further assessments with larger samples of children will be necessary to determine if these findings are a result of chance, measurement issues, preadolescent behavior, or specific group characteristics. Nevertheless, when the SAT is used with preadolescent boys results should be interpreted with caution. However, the fact that more boys than girls were classified as insecure raises the possibility that attachment security, as assessed by the SAT, is dependent on verbal ability. Analyses of the verbal IQ of secure and insecure RO children ruled out this likelihood as the two groups did not differ. Furthermore, within the RO group, boys actually had significantly higher Verbal IQ scores than girls indicating that differences between boys' and girls' attachment status in this group cannot be a consequence of verbal skill.

Gender Differences in Indiscriminate Friendliness and Parent Interview Questions

The measures of indiscriminate friendliness were also examined for gender differences as was the question that asked parents how likely they would be to repeat the experience of adopting their children. Previous studies of indiscriminately friendly behavior have not provided evidence that a gender difference exists in the expression of this behavior. However, in this study RO parents reported that boys displayed more indiscriminate and overly friendly behavior than girls. This difference was not evident in any of the Phase 2 measures of indiscriminate friendliness (Chisholm, 1998). A

sociocultural explanation might shed light on why more post-institutionalized boys than girls appear to be indiscriminately friendly at 10.5 years of age. Chisholm proposed that after experiencing such extreme neglect, recently adopted orphanage children learned that adults would care for them and, thus, began to solicit their attention. Chisholm also maintained that the behavior was likely reinforced when these children approached adults, particularly strangers whose awareness of the children's early deprivation had increased dramatically as a result of the media coverage at the time. I speculate that over the past 8 years the behavior may have been reinforced differentially for boys and girls, given that we live in a culture that values more aggressive behavior in males, and more passive behavior in females.

The interview question asking parents how likely they would be to repeat the experience of adopting their children given what they now know was also assessed for gender differences. Despite the greater prevalence of indiscriminate friendliness among boys, parents of orphanage boys and girls stated that they would be equally likely to repeat the experience of adopting their children. This suggests that gender is not related to the degree of satisfaction that parents have derived from the experience of parenting post-institutionalized children.

Group Differences in Attachment Organization

The present study extends the body of research that has examined the quality of attachment in post-institutionalized children. Previous studies have tracked the development of attachment in post-institutionalized children up to early childhood and found that these children have more insecure and atypical attachment patterns of attachment than their comparisons (Chisholm, 1998; Marcovitch et al., 1997). This study

is unique in that it examined the organization of attachment in older post-institutionalized children.

Present findings showing that the RO children displayed more insecure attachment patterns than their comparisons are consistent with research that has assessed attachment in post-institutionalized children (Chisholm, 1998; Chisholm et al., 1995; Marcovitch et al., 1997). In addition, Strange Situation analyses have indicated that 65-75% of young children in the general population are classified as secure (Waters et al., 2000) and 30-50% are classified as insecure (Campos, Barrett, Lamb, Goldsmith, & Stenberg, 1983). This means that, regardless of gender, the RO children predictably displayed more insecure and fewer secure attachments than is typical in the general population. Surprisingly, I also found that EA children were more likely to have secure attachments than their CB comparisons. In the hopes of compensating for their children's early deprivation, it is possible that EA parents have been extremely sensitive and responsive to their children's needs. Although parents of RO children probably had the same desire, those who adopted older, unresponsive, and behaviorally difficult children likely faced more challenges in achieving this goal. For example, at approximately one year post-adoption many RO children were still unable to reciprocate parent initiatives for engagement (McMullan & Fisher, 1992), and in early childhood the RO children displayed far more behavior problems than their comparisons (Fisher, Ames, Chisholm, & Savoie, 1997; Chisholm, 1998), thereby possibly making it difficult for parents to meet their children's needs sensitively. Moreover, the EA group likely displayed more secure attachment patterns than the orphanage children because their attachment relations had developed on time and they had not experienced long periods of neglect prior to adoption (Chisholm, 1998). These findings indicate that post-institutionalized children are at risk

for having insecure attachments into late childhood, and that early adoption of high-risk children increases the chance that the adoptive children will have secure attachments later in life.

Interesting observations can be made regarding the quality of attachment in the RO group despite the fact that statistical analyses were not conducted using the three main classifications (secure, insecure-dismissing, and insecure-ambivalent) derived from the SAT. Almost all of the insecure RO children displayed insecure-dismissing attachments classifications (analogous to avoidant classifications), thereby supporting Crittenden's (1985) conclusion that neglected children tend to display avoidant patterns of attachment. However, these results contradict Marcovitch et al.'s (1997) finding that avoidant strategies were absent in their sample of children adopted from Romanian orphanages. Although Marcovitch et al. argued that adoptive parents would be very unlikely to demonstrate patterns of parenting that would foster avoidant classifications in their children, Crittenden noted that neglected children displayed more passive and helpless behavior under stress, which fits with the apathetic behavior Ames (1990) observed in the RO children during their infancy. Therefore, it appears that many of the RO children have maintained aspects of the internal working models developed while institutionalized that help them manage their attachment related stress by avoiding or passively withdrawing from the situation.

It is important to acknowledge a problem that is inherent in attachment classification systems such as the SAT. Children who display prototypical attachment behavioral patterns can be identified as secure or insecure with relative ease. On the other hand, there are many children who display characteristics of both secure and insecure patterns of attachment. For example, a secure child who provides some open feelings, but

also demonstrates some resistance or withholding of information may not be easily distinguished from an insecure-dismissing child who initially offers some open feelings but then restricts further openness of feelings. It is for these reasons that I believe the categorization of children in this study required such a lengthy process and that indices of agreement (Kappa) were relatively low. It is interesting to note that within the literature on both adult and infant attachment some researchers are moving away from categorical coding and are instead arguing that variation in attachment patterns is largely continuous, not categorical (Fraley & Spieker, 2003a and 2003b). This shift is based on the recognition that humans are not easily categorized on qualities or characteristics as complex as attachment status. In terms of the present study, it might be informative to examine the data from the 9 scales of the SAT as they describe specific ways in which respondents regulate affect, attempt to seek comfort from primary caregivers and generally cope with anticipated separations.

Continuity of Attachment Organization

This study also contributes to the collective knowledge gathered from longitudinal studies that have assessed the continuity of attachment organization. Notably absent among this body of work is research that has monitored the organization of attachment from infancy and/or early childhood to late childhood and early adolescence. The present study offers insight into the patterns of attachment stability that can be expected from 4.5 to 10.5 years old in both normative and atypical samples of children. Although statistical significance was not obtained in these analyses, the observed patterns of attachment continuity suggest that important differences may exist between RO children and their comparisons.

Insecurity within the RO group was found to be highly stable. This finding validates Bowlby's (1973) belief that expectations of caregiver availability developed in infancy tend to remain relatively unchanged over the lifespan. Given the severe early deprivation they experienced, orphanage children conceivably formed the belief that they were not worthy of sensitive caregiving and the expectation that they would not receive it. Bowlby (1973) also proposed that internal working models become less amenable to change over the course of childhood. The high proportion of RO children with insecure attachments at 4.5 years of age (Chisholm, 1998) may have continued to screen new information through the negative expectations they had of others that were developed in early childhood. Given that no differences were found in the home environments of secure and insecure RO children, these beliefs were possibly maintained in spite of the stimulating and caring homes into which they were adopted.

That insecure orphanage children displayed more behavior problems than secure RO children at 4.5 (Chisholm, 1998) and 10.5 years of age, further suggests that they may have behaved in ways that elicited responses consistent with their expectations for caregiving. Such behaviour may have made it difficult for parents to respond sensitively. Not surprisingly, there was a tendency for parents of insecure RO children to use more physical punishment than parents of secure RO children. Although the direction of effect is impossible to determine, the difficult behavior displayed by insecure RO children (stemming from their earlier internal working models), may have overwhelmed adoptive parents and led to the use of more punitive responses in an attempt to control their children's behavior. In turn, this may have confirmed their child's existing internal working model and interfered with their developing a sense of security thus supporting

more acting out behavior. Consequently, a negative pattern of interaction might have been established that has been difficult to overcome.

It is interesting to note that when attachment reorganization occurred between age 4.5 and 10.5 in the RO children, classifications tended to change from secure to insecure, which is consistent with Weinfield et al.'s (2000) argument pertaining to the continuity of attachment in high-risk populations. Hence, RO children who were secure in early childhood were also at risk for becoming insecure in late childhood. We can only speculate about why the change was in this direction. A significant event that has taken place between 4.5 and 10.5 years is that the children have gone to school. Typically, the RO children have not performed well academically (Le Mare, Vaughan, Warford, & Fernyhough, 2001), which may have placed additional stress on families. In addition, their academic challenges may have led to less than positive relations with their teachers, who play a pivotal role in fostering a sense of security in young children during their time away from their primary attachment figures. Thus, strained teacher-child relations may also have had a negative impact on the internal working models of the secure, yet fragile orphanage children.

An opposite pattern was observed within the EA group, with children demonstrating stable secure attachments and change in attachment classification tending to move from insecure to secure. As mentioned earlier, parents of the EA children may have invested a great deal of energy into ameliorating the negative effects of their children's early experience, and as a result, may have spent more time communicating expectations, needs and feelings to them. These skills may have been learned through modeling, and would have had a positive effect on SAT classifications. Moreover, as

concerns the transition to school, the EA children have typically adjusted and performed well.

Predictably, security and insecurity in the CB group remained stable and changes in attachment classifications appeared to be random. By the time they were 4.5 years old most of the CB children had formed secure attachments to their caregivers (Chisholm, 1998). Given that their attachment relationships had developed on time (Chisholm 1998), and they did not experience the severe neglect that the RO children had, it is likely that the CB and EA children had developed internal working models that were trusting of others and behaved in ways that elicited supportive responses. Consequently, as expected, children in both comparison groups displayed more stability in secure attachments than did children in the RO group. However, Allen and Land (1999) noted that some discontinuity of attachment can be attributed to the stresses brought on by early adolescence. In other words, internal struggles related to increasing autonomy may disrupt underlying attachment organizations. This may account for some of the insecure attachments observed in all groups. Finally, although theoretically assessing the same construct, methodological differences between the Preschool Assessment of Attachment used at Phase 2 and the Separation Anxiety Test used in this study may account for some of the discontinuity in attachment classifications seen here.

In sum, it seems that insecure attachments are becoming more prevalent in the orphanage group over time. This appears to be true among the RO children regardless of how much time they had spent in institutions prior to adoption. Although approaching significance, the time spent in an institution prior to adoption did not differentiate secure from insecure RO children. Given that the RO children had spent the first year(s) of their lives in orphanages, and had experienced extreme deprivation, it is possible that they have

integrated a profound sense of the world as unloving and themselves as unlovable into their internal working models. Although more time spent in the orphanages would certainly have continued to reinforce these beliefs, the damage may have been done within or shortly after the first year of life. The data indicate that the severe deprivation they experienced in their first year and not the total time spent in the institutions, has resulted in the higher proportion of insecure attachments in the RO group. This argument is in accordance with Marvin and Britner's (1999) contention that there may be a sensitive period in the development of attachment and that beyond a certain point internal working models may be difficult to change despite changing environmental conditions. The RO children were adopted between 8 and 68 months of age, while the EA children, who were predominately secure at age 10.5, were adopted before 4 months of age. As such, it is possible that the "sensitive period" that Marvin and Britner allude to occurs after 4 months of age, and following Bowlby's (1969) conception, before approximately 12 months of age. These findings suggest that parents who intend to adopt post-institutionalized children beyond the second half of the first year of life must be concerned about early interventions that can help their children develop secure attachment relationships.

Despite the challenges that parents of orphanage children have faced, most have said that they would be extremely likely to do it all over again, knowing what they do now. Clearly, the majority of the RO parents have found the experience rewarding and satisfying. On the other hand, of the few who responded otherwise, all were parents of insecure children and have likely been overwhelmed by the experience. This finding suggests that the challenges confronting some parents of insecure orphanage children continue to be arduous. For this reason, it is imperative that prospective adoptive parents

be aware of the potential challenges of adopting children from orphanages prior to adoption. In addition, strategies that can help adoptive parents maximize positive developmental outcomes of the children they adopt must be disseminated.

Indiscriminately Friendly Behavior

This thesis also supports and extends the research that has assessed indiscriminately friendly behavior in post-institutionalized children. Although the early research identified indiscriminate friendliness in post-institutionalized children (Goldfarb, 1955; Hodges & Tizard, 1989), only the most recent studies (Chisholm, 1998; O'Connor & Rutter, 2000) have attempted to describe the nature of this behavior. However, in these recent studies children beyond 6 years of age have not been assessed. As such, the present study contributes to this research by systematically assessing the nature of indiscriminate friendliness in a group of preadolescent post-institutionalized children.

Group Differences in Phase 3 Measure of Indiscriminate Friendliness

Comparisons between the RO, CB and EA children support the argument that indiscriminately friendly behavior is more common among children who have had institutional experience as well as physical and emotional deprivation early in life (Chisholm, 1998; Chisholm et al., 1995; Goldfarb, 1945, 1955; Hodges & Tizard, 1989; Marcovitch et al., 1997; O'Connor & Rutter, 2000; O'Connor et al., 1999; Tizard, 1977; Tizard & Hodges, 1978). The RO children clearly displayed more indiscriminately friendly behavior than their comparisons. However, the fact that some RO children did not display this behavior at either age 4.5 or 10.5 years suggests that indiscriminate friendliness is not a necessary outcome of early institutionalization.

Stability of Indiscriminately Friendly Behavior

The present results indicate that when indiscriminately friendly behavior is present in post-institutionalized children it is relatively stable over time. When the RO children in the present study were 4.5 years old, approximately three-quarters of their parents described them as “overly friendly” (Chisholm, 1998). Although, at 10.5 years of age the behavior had diminished, it had persisted in a significant proportion of children. Examination of the items used in the 5-item (and 2-item) indiscriminately friendly measure provides specific information about the way in which it has persisted into late childhood.

Lack of discomfort or shyness with new adults did not distinguish the RO children from the CB or EA children at 10.5 years of age, although it did when the children were 4.5 years old (Chisholm, 1996). This is because parameters for developmentally appropriate behavior change as children mature. Discomfort or shyness around new adults is typical and appropriate in early childhood. However, older children have entered the school system and had more experience interacting with new adults. Shyness at this age may be considered maladaptive. Accordingly, the differences in indiscriminate friendliness between groups may have been somewhat obscured in the present study, given that this question constituted part of the 5IF measure.

Asking parents how friendly their children were with new adults did differentiate the RO group from the other two, however, a significant proportion of the CB and EA children were also described as such. Although the RO children displayed significantly more of this behavior than their comparisons in Phase 3, its expression has clearly declined since Phase 2 (Chisholm, 1996). These findings suggest that this may be one way in which indiscriminate friendliness diminishes over time.

An open-ended question asking parents to describe what their children typically do when they meet new adults also differentiated the RO children at 10.5 years of age. Although some RO and CB children have become more cautious over time (stand back and evaluate the situation before engaging in an interaction), the RO children continued to approach new adults at a greater rate than their comparisons. Increasing caution with strange adults is another way in which indiscriminate friendliness appears to decline over time. Nonetheless, present results also show that post-institutionalized children continue to display less caution and more indiscriminately friendly behavior than their comparisons.

The “extreme” questions that specifically target secure base behavior continue to effectively differentiate the three groups. The most striking group differences were seen in responses to the question asking parents if they thought their children would be willing to go home with a stranger. More parents of RO children thought that their children would go with a stranger if the chance arose compared to very few parents of the comparison children. Moreover, parents’ response to this possibility had not changed at all in the last 6 years. Similarly, asking parents if their children wandered without distress was also a clear indicator of indiscriminately friendly behavior in the RO children. While this behavior has diminished somewhat over time in the RO group, the CB and EA children continued to show very little of this behavior. These two questions effectively identified indiscriminate friendliness in preadolescent children. However, as the children move into adolescence the questions that constitute a measure of indiscriminate friendliness must be reconsidered in light of behavior that is developmentally appropriate. For example, although a willingness to go home with

strangers may continue to effectively identify indiscriminately friendly teens, wandering without distress may not.

In sum, although previous research has shown that indiscriminately friendly behavior in post-institutionalized children diminishes over time (O'Connor & Rutter, 2000; Hodges & Tizard, 1989), a significant number of RO children continued to display this behavior. These findings support the argument that indiscriminate friendliness is associated with early institutionalization and deprivation (Chisholm, 1998; O'Connor & Rutter, 2000). Why it has persisted in some and not others, and why some post-institutionalized children have not manifested the behavior at all remains unclear. O'Connor and Rutter (2000) found a relationship between length of institutionalization in early childhood and indiscriminately friendly behavior. In addition, Chisholm (1998) discovered that children who were indiscriminately friendly at 4.5 years tended to be favored by the caregivers in the institutions that they had come from. Given that these two variables were not found to be related to indiscriminate friendliness in the present study, it remains unclear as to why indiscriminately friendly behavior is exhibited in only some of the post-institutionalized children.

Indiscriminate Friendliness and Attachment Security

Dissension exists among attachment researchers as to whether indiscriminately friendly behavior is indicative of an attachment disorder. Chisholm (1998) reported that behavior associated with a lack of secure base behavior (2IF items) was associated with insecure attachments. However, she also observed that some RO children who displayed this behavior were classified as secure, signifying that indiscriminately friendly behavior was not directly linked to attachment. O'Connor and Rutter (2000) and O'Connor et al., (1999), on the other hand, have placed indiscriminately friendly behavior within the realm

of reactive attachment disorders. Present findings connecting indiscriminately friendly behavior to attachment security showed mixed results.

No significant differences were found between secure and insecure RO children on the total (5IF) and more extreme (2IF) indiscriminately friendly measures despite the fact that insecure RO children obtained higher scores on both. It is also interesting to note that not one secure RO child in Phase 3 was described by their parents as overly friendly. Moreover, almost all of the RO children who had insecure atypical attachment classifications at 4.5 years of age were said to be indiscriminately friendly at 10.5. It seems that post-institutionalized children having more severe attachment disturbances in early childhood are most at risk for displaying overly friendly behavior in late childhood and early adolescence. These results suggest that a relationship does exist between indiscriminate friendliness at 10.5 years of age and concurrent and early attachment security. However, given that some children who had insecure atypical attachments were not indiscriminately friendly at 10.5 years of age, and not all insecure children in Phase 3 displayed indiscriminately friendly behavior, the link between post-institutionalization, insecure attachment and indiscriminate friendliness is not direct. Further exploration is needed to ascertain what variables mediate this link. In addition, although beyond the scope of this study, it will be important to identify the factors related to the decrease in indiscriminate friendliness so that early interventions can be introduced and the risk for psychopathology minimized.

CONCLUSION

In conclusion, children who have experienced extreme and prolonged early deprivation are at risk for developing insecure attachment relationships that continue into early adolescence. While insecurity in itself does not imply psychopathology (Rutter &

O'Connor, 1999), families experiencing multiple risk factors have children who are at risk for negative developmental outcomes. Post-institutionalized children who were insecure at 10.5 years of age had more behavioral and cognitive problems, and were more likely to display indiscriminately friendly behavior than children in the comparison groups. Although the direction of effect is difficult to ascertain, it is clear that the orphanage children arrived in their adoptive homes with extreme developmental delays and maladaptive behavior strategies. Parents have had to deal with problems in all aspects of their children's development. Researchers and policy makers can help minimize the risk for psychopathology by ensuring that parents of post-institutionalized children are informed about the risks and equipped with strategies that will help maximize positive developmental outcomes. Nevertheless, in spite of the challenges, one-third of the children were able to form secure attachment relationships with their parents. In addition, most of the parents of post-institutionalized children reported that the experience has been deeply rewarding. These findings are encouraging and offer hope to prospective adoptive parents.

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APPENDICES

APPENDIX A*

SIMON FRASER UNIVERSITY

OFFICE OF RESEARCH ETHICS

BURNABY, BRITISH COLUMBIA
CANADA V5A 1S6
Telephone: 604-291-3447
FAX: 604-268-6785

July 14, 2003

Ms . Lynda Fernyhough
Graduate Student
Faculty of Education
Simon Fraser University

Dear Ms. Fernyhough:

**Re: The quality and stability of attachment and its relation to
indiscriminate friendliness in children adopted to Canada from
Romanian orphanages - eight years later**

The above-titled ethics application has been granted approval by the
Simon Fraser Research Ethics Board, accordance with Policy R 20.01,
"Ethics Review of Research Involving Human Subjects".

Sincerely,

Dr. Hal Weinberg, Director
Office of Research Ethics

Appendix B:

Introductory Letter to Parents

December 1, 1998

Dear parents of children in the Romanian Adoption Study:

In September you received a letter from Dr. Elinor Ames letting you know that she has retired and that I, Dr. Lucy Le Mare, will now be directing the Romanian Adoption Study. I am honored to be part of such an important project and to have the opportunity to work with you and your children. I have recently been granted funding from the Hospital for Sick Children Foundation to conduct a "Time 3" visit with you and I am writing to request your continued participation in the Study.

We plan to begin the Time 3 visits in February 1999 starting with the oldest children first. We will be assessing your child's development in many of the areas that were assessed in previous visits. These areas include attachment, behaviour problems, intellectual development, physical development and health, and parenting stress. In addition, as your child is now of school age, we are very interested in how he/she is doing at school, both academically and socially.

For the Time 3 visits we would ask if we can make a visit to your home and a visit to your child's school. During the home visit we would like to interview you, do a number of tasks with your child, and leave a package of questionnaires for you to complete and mail back to us. On either the day before or after the home visit, we would like to visit your child's classroom and leave questionnaires for his or her teacher to complete and send back to us. During the classroom visit we also hope to collect information from the entire class about the social dynamics in the classroom. The children in the class will be told that we are interested in how children of their age get along with one another and your child will not be singled out in any way.

At present, our research team consists of myself and graduate students Linda Warford and Lynda Fernyhough. Both Linda and Lynda are in the counselling psychology Masters program. They both have a strong commitment to the well-being of children and share a great deal of experience working with families and youngsters of various backgrounds and abilities.

One of us will be telephoning you within the next couple of weeks to discuss your participation, any questions you may have, and to schedule a visit. In that phone call we will ask for the name of your child's teacher and school and permission to contact them.

With your help, the Romanian Adoption Study will become the most comprehensive research ever done on the lives of children adopted from orphanages. What we learn from this study will have important implications for policies related to infant, child, and youth services in the fields of education, health, and adoption. We are truly appreciative of your involvement and we look forward to speaking with you later this month.

With warm regards,
Lucy Le Mare, Ph.D.
Assistant Professor

Appendix C:

Consent form for Parents

Dear Parents:

Enclosed are a number of questionnaires concerning the health, social development, behaviour, academic achievement, and physical development of your child. Each of these questionnaires should be self-explanatory. Please note that there are two (2) copies of the Parenting Practices Questionnaire in the package. One is for the mother to complete and one is for the father. All other questionnaires can be completed by either or both parents. You may notice that there is some repetition of questions in this package. This is a function of there being some overlap in the measures we have selected. Please bear with us.

Of course your responses to these questionnaires are completely confidential and will only be used for research purposes. Your participation in this research is entirely voluntary and you can withdraw from the study at any time without penalty. When you have completed the questionnaires please put them and the signed consent form (attached) into the self-addressed stamp envelop provided and return it to us by mail.

I cannot stress enough how much I appreciate your help with this research. I am more than happy to share the results of this research with you and will send copies of any resulting written reports to all participating families.

If you have any questions or concerns about completing the questionnaires or any other aspect of the research, please do not hesitate to call me at 291-3272 or the research office at 291-5687. Again, thank you so much for your help.

Sincerely,

Dr. Lucy Le Mare

I, (your name) _____ have agreed to participate in the research project being conducted by Dr. Lucy Le Mare of the Faculty of Education, Simon Fraser University. I understand that my involvement entails the completion of questionnaires concerning the health, social development, behaviour, academic achievement, and physical development of my child and that I can withdraw from the project at any time. Any complaint about the project may be brought to the chief researcher named above or to Dr. Robin Barrow, Dean, Faculty of Education, Simon Fraser University.

NAME (please print): _____

ADDRESS: _____

SIGNATURE: _____

DATE: _____

Appendix D:

Consent form for School Principals

Dear Principal:

Further to our recent phone conversation, I would like to thank you for your interest in our research on children's social and intellectual development. Attached is a consent form that we would ask you to sign to confirm your willingness to allow us to conduct this research in your school. As we have discussed, this will entail the teacher of _____ completing questionnaires on that student's social and academic progress and the administration of a peer sociometric rating scale in his/her classroom. This study is funded by the Hospital for Sick Children Foundation and has received approval from the University Ethics Board.

I cannot stress enough how much we appreciate your help with this research. If you have any questions or concerns about the research, please do not hesitate to contact me at 604 291-3272 or email at lemare@sfu.ca. Again, thank you so much for your help.

Sincerely,

Lucy Le Mare, Ph.D.
Assistant Professor

I (your name) _____ have agreed to allow the research on intellectual and social development being conducted by Dr. Lucy Le Mare of the Faculty of Education at Simon Fraser University to take place at my school. I understand that involvement entails the completion of questionnaires by the teacher of the child named above and the administration of a peer sociometric rating scale in the child's class. Further I understand that we may withdraw from the project at any time. Any complaint about the project may be brought to the chief researcher named above or to Dr. Robin Barrow, Dean, Faculty of Education, Simon Fraser University.

Name (please print): _____ Date: _____

School: _____

Signature: _____

Appendix E:

Consent form for Teachers

Dear Teachers:

Further to our recent phone conversation, I would like to thank you for your interest in our research on children's social and intellectual development. Attached is a consent form that we would ask you to sign to confirm your willingness to participate in this study. Participation will involve completing 3 questionnaires concerning the academic, behavioural, and social adjustment of _____.

Your participation in this research is entirely voluntary and you may withdraw from the study at any time without penalty. Your responses to these questionnaires are completely confidential and will be used only for research purposes. Please read the directions carefully before beginning each questionnaire.

This study is funded by the Hospital for Sick Children Foundation and has received approval from the University Ethics Board.

I cannot stress enough how much we appreciate your help with this research. Dr. Lucy Le Mare, the project director, is more than happy to share the results of the research with you and will send copies of any resulting written reports to all participating teachers upon request.

If you have any questions or concerns about completing the questionnaires or any other aspect of the research, please do not hesitate to call us at 29103272 or send email to lemare@sfu.ca. Again, thank you so much for your help.

Sincerely,

Linda Warford
Research Assistant

I, (your name): _____ have agreed to participate in the research on intellectual and social development to be conducted by Dr. Lucy Le Mare of the Faculty of Education, Simon Fraser University. I understand that my involvement entails completion of questionnaires and that I can withdraw from the project at any time. Any complaint about the project may be brought to the chief researcher named above or to Dr. Robin Barrow, Dean, Faculty of Education, Simon Fraser University.

Name (please print): _____ Date: _____

School: _____

Signature: _____

Appendix F:

Separation Anxiety Test Items

Resnick's (1993) procedure for administering the SAT integrates Kaplan's test revision (1985) as well as Hansburg's original version (1980). In a 20-minuted interview, the researcher presents a series of 6 pictures containing situations that show a child in increasing degrees of separation from his/her caregiver. The pictures presented in this version of the SAT were chosen from the Hansburg sample and were shown in the same order to each child:

1. The child is leaving his parents to go to camp for two weeks.
2. The child has been transferred to a new school.
3. The family is moving to a new neighbourhood.
4. The boy will live permanently with his grandparents and without his parents.
5. The child is running away from home.
6. The child's mother is being taken to the hospital.

Appendix G:

Separation Anxiety Test: Affective (Hansburg) Probes

Coding: 0 = No; 1 = Yes; Maximum score per item = 6 (eg. Maximum score for “lonely” is six because the Hansburg questions are asked for each of the six SAT pictures).

1. Does the child in the picture feel lonely?
2. Does the child in the picture feel sad?
3. Does the child in the picture feel that his mother is mad at him?
4. Does the child in the picture feel that his father is mad at him?
5. Does the child in the picture feel that if he had behaved better this would not have happened?
6. Does the child in the picture feel angry?
7. Does the child in the picture feel that what is happening is not his fault, that somebody else caused the trouble?
8. Does the child in the picture feel O.K?
9. Does the child in the picture feel that it (the situation) is not really happening – that it’s only a dream?
10. Does the child in the picture feel like hiding away?
11. Does the child in the picture feel that he just does not care what is happening?
12. Does the child in the picture feel like something bad is going to happen now?
13. Does the child in the picture feel afraid?
14. Does the child in the picture feel like throwing up?
15. Does the child in the picture feel like he is going to have a good time?

Appendix H:
Demographic Questionnaire

5. Age at Adoption _____
9. Mother's highest level of education
 ___ elementary school
 ___ some high school
 ___ high school completion
 ___ vocational or some college/university
 ___ college or university graduate
 ___ graduate or professional school
13. Father's highest level of education
 ___ elementary school
 ___ some high school
 ___ high school completion
 ___ vocational or some college/university
 ___ college or university graduate
 ___ graduate or professional school
17. Please estimate your gross annual family income
- | | | |
|------------------------|---------------|-------------------|
| ___ Less than \$20,000 | ___ 50-60,000 | ___ 80-90,000 |
| ___ 20-30,000 | ___ 60-70,000 | ___ 90-100,000 |
| ___ 30-40,000 | ___ 70-80,000 | ___ Above 100,000 |
| ___ 40-50,000 | | |

Appendix I:
Attachment Rating Scales

Attachment Rating Scales (9 pt) Scales	Direction of Scales
Emotional Openness and Vulnerability	1 = not open; 9 = most open
Dismissing and Devaluing	1 = no dismissing; 9 = most dismissing
Self-Blame	1 = no blame; 9 = most self-blame
Resistance / Withholding	1 = most resistant; 9 = not resistant
Preoccupied Anger	1 = most angry; 9 = no anger
Displacement of Feelings	1 = most displacement; 9 = no displacement
Optimism / Pessimism	1 = most pessimistic; 9 = most optimistic
Coherence of Transcript	1 = most incoherent; 9 = most coherent
Solutions	1 = destructive; 9 = constructive
Overall Attachment Classification	Secure (F); Dismissing (DS); Preoccupied (E)

Appendix J:

Separation Anxiety Test: Rating Scales

Emotional Openness and Vulnerability. This scale assesses the extent to which the child is able to express feelings such as loneliness, sadness, fear or anger, which would indicate that he/she is emotionally affected by the SAT pictured scenarios. Being emotionally open and able to verbalize feelings of vulnerability means that these children can imagine feelings of sadness, loneliness, anger and fear without experiencing overwhelming tension and conflict. Children who score high on this scale can access the feeling of needing and missing those who are close to them. For example, a child who says that she is “sad because she misses her parents” and says this in a straightforward and coherent manner without the need for additional probing is giving an emotionally open feeling with an appropriate justification. On the other hand, vague feelings, such as “not good”, “bad”, or “strange” or the failure to provide appropriate justifications are indicative of a lack of providing open feelings, particularly if the child cannot elaborate with interviewer probing.

Dismissing/Devaluing of Attachment. This scale deals with the extent to which the children value the importance of relationships and accept the vulnerability that comes with missing attachment or substitute attachment figures as a result of a separation. Some children will show a dismissing attitude by emphasizing their own personal strength and/or they may suggest that the separation is of no real importance, that it doesn't matter. Some may not connect the feeling with the separation or, in other words, the affective reason for the feeling (missing or needing someone). Children scoring high on this scale tend not to discuss the emotional content of the pictures or the relationships inherent in the pictured separations and, for extremely high scores, may also actively derogate attachment or substitute attachment figures in general by, for example, considering the separation to be a minor matter or making fun of relationships and separations.

Self-Blame. This scale assesses the child's perception of responsibility for the separation. In other words, is unwarranted blame directed towards the child (self) or other relevant people, such as attachment figures? An example of unfair blame in the ambulance picture might be if the child could have prevented the situation through an activity or action. It would be expected that securely attached children would be able to imagine a separation in which little or no unfair blame is placed on the self or the attachment figures directly and the child is able to consider that the separation occurred due to other factors in the environment. Essentially, a securely attached child will be able to “forgive” the attachment figure of any wrongdoings with respect to the reason for the separation, so that if blame is initially given, it is rationalized by saying that the attachment figure could not help doing what they did, given the circumstances.

Resistance/Withholding. This scale deals with the extent to which the child resists, opposes, or makes attempts to avoid responding to the SAT open-ended feeling questions by withholding information. Resistance may be either overt or active, such as refusing to

answer, distracting by discussing irrelevant topics, or saying “that’s all” in the middle of a thought or sentence. Resistance can also be more subtle, which is more indicative of withholding, as for example, when a child states “I don’t know” frequently, or says “it depends” without elaborating. The child must be apparently using this strategy consciously to avoid discussing the SAT pictures, which is not the same as a teenager who is unable to provide an answer in spite of trying to do so.

Preoccupied Anger. This scale addresses the intensity of anger expressed by the child and the degree to which the child is able to contain the anger to the separation situation; that is, directing the anger only at individuals in the separation picture and giving a justification for the anger that is related to the separation (eg. “angry that the parents are leaving him alone”). A child who is preoccupied with anger tends to generalize it beyond the scope of the separation situation, usually by saying that the pictured child is angry at “everybody” or the “whole world”. This uncontained anger involves people outside the separation situation or justifications for the feelings that are unrelated to the separation (“eg. “angry because she doesn’t like the sitter”).

Displacement of Feelings. This scale assesses the child’s justification for the feelings given and is theoretically linked to a dismissing attachment pattern. Rather than dealing with the content or quality of feelings, this scale reflects the association between a feeling and to whom the feelings are directed. Securely attached children will always, or almost always, refer to the parent when justifying imagined feelings to the separation (eg. “sad because his parents are leaving”). However, insecurely attached children will not be able to refer to the actual source of the feelings (the relationship with the attachment figure) but rather, will displace the feelings towards alternate caregivers (eg. grandparent or sitter), people not connected with the separation situation, or, in extreme cases, objects such as a house or clothing.

Optimism/Pessimism. This scale deals with the child’s fear for the imagined outcome of the separation. Since there is an intentional vagueness regarding the circumstances and outcomes of the pictured separations, each child will determine his/her own story about why the situation occurred. The imagined scenarios will differ depending on whether they are mainly optimistic or pessimistic. This scale assesses the degree to which the child views the separation with optimism or pessimism.

Coherence of Transcript. This scale deals with the overall organization and internal consistency of the child’s responses to the SAT open-ended feelings question. Four rules of coherence have been identified. The more rules broken, and the frequency with which these rules are broken, lowers the score. The first rule is that of “quantity”, which looks at how succinct and complete the child’s response is. Coherent responses identify a feeling that is accurate and appropriate to the situation and a justification that adequately captures the reason behind the feeling. The second rule is that of “relevance”, which looks at how well the child stays on topic. The third rule is that of “manner”, which deals with clarity. Children who violate this rule will show repeated bits of speech, such as “you know” or “this and that” to finish their thoughts. Another indicator is run-on sentences that are hard to understand and may include false starts or extended stammering. The final rule is that of “quality”, which looks at the truthfulness of what

has been said. Children who violate this rule will show contradictions in what they say for a given picture.

Solutions. This scale is organized into three major response categories: constructive solutions, no solutions and destructive solutions. Constructive solutions show attachment behaviors that try to regain or maintain contact with the attachment figure, seek comfort and support from other attachment figures, or indicate that the child is able to tolerate the separation with confidence and a continuing capacity for enjoyment. When children provide no solutions they may appear overtly passive. In other words, they may not take the initiative to do anything, respond with “I don’t know” or show difficulty putting together a coherent answer that answers the “do next” question. Destructive solutions show initiative to do something, but the activity is negative or destructive towards people or property, cuts off further contact with the parent by decreasing the proximity or access to the parent, or the child imagines the death of a parent.

Appendix K:

SAT Main and Sub Attachment Classifications

DS – Dismissing of Attachment. Transcripts assigned a dismissing classification must first have fit an insecure attachment pattern. Children with DS classifications are generally unable to identify feelings, especially in the more stressful pictures. They often give justifications for feelings that suggest an activity or reiterates the content of the picture (eg. “parents are leaving”), but they are unable to connect these justifications with specific open and vulnerable feelings. There is a sense of “shutting-off” of attachment among these children.

- DS1: Dismissing of Attachment – these children are highly resistant towards the task and some will refuse to complete the task altogether. They may avoid talking about feelings by focusing on an activity rather than a feeling.
- DS2: Devaluing / Derogation – this sub-category is rare in non-clinical samples. These children are similar to the DS1s, but they demonstrate more extreme dismissing and displacement scores. They actively devalue the importance of relationships with parents and friends and emphasize materialism and “people as objects”.
- DS3: Restricted in Feeling – these children are distinguished from the DS1s and DS2s because they tend to initially give somewhat open feelings, but then discount or devalue the said feelings. Not only do they minimize feelings, but they may displace feelings to others in the situation or objects in the environment.

F – Secure / Freely Valuing Attachment Relationships. Children in this group are diverse, but they are very open with their vulnerable feelings and highly coherent. They also tend to be optimistic about the outcome of the separation. The ability to be open with regard to their feelings, even if they are negative, is the characteristic that sets them apart as secure. There is little self-deception with regard to the child in the picture’s feelings about the separation. They will also provide well-elaborated justifications for these feelings and compassion towards their parents.

- F1: Some Setting Aside of Attachment – these children demonstrate some resistance or withholding of information, but are not dismissing of the attachment relationship or displacing their feelings. Typically, they provide open feelings, but just not many of them. Their answers are brief and not fully elaborated.
- F2: Secure but Restricted – these children do provide emotionally open feelings, but usually only after they are initially dismissing or devaluing, or after they have first given some vague and not fully elaborated justifications. However, these children do not show resistance, such as the F1 children would, but they may demonstrate a hint of dismissing or displacement of feelings. To distinguish them from insecure children, it is clear that these children are vulnerable about needing their parents.
- F3: Secure / Freely Valuing Attachment – this is the “prototypical” secure child and children in this group are highly open with their vulnerable feelings and coherent in their responses. They provide thoughtful answers that show they miss

and need their parents. They have access to their feelings without becoming disorganized.

- F4: Some Preoccupation with Attachment Figures – these children will provide emotionally open feelings with good justifications, but they may have some problems organizing or modulating their responses. They may become somewhat disorganized, especially in response to the high stress pictures. Unlike insecure children, they can provide affective content with well-justified responses in spite of their problems staying organized.
- F5: Somewhat Resentful / Preoccupied – these children are secure, so they also are able to provide emotionally open responses with justifications and have some sense of optimism about the outcome. However, they do have a tendency to show some disorganization and/or preoccupied anger, especially during the high stress pictures. Unlike children who are in the F4 category, there is less self-blame and more preoccupied anger. Nevertheless, the anger does not completely overwhelm the child and the child is usually able to provide other vulnerable feelings with justification.

E – Preoccupied with Attachment Relationships / Ambivalent / Enmeshed. Children in this category are typically highly anxious and show a “heightening” of their attachment system and a preoccupation with relationships. Fears and insecurities will be enlarged and will entail distressing situations that go well beyond the information presented in the pictured separations. Unlike DS children who are resistant to talking about their feelings, these children cannot talk about feelings because of the stress and disorganization that they produce. These children tend to be highly incoherent.

- E1: Passive - Children in this category are highly disorganized and show much unmarked speech and a great deal of anxiety. They are distinguished from the E2 children because they tend to assign much unwarranted blame on the self or the parents and do not display as much preoccupying anger.
- E2: Angry / Conflicted – these children are identified by their high preoccupied anger scores. They are unable to provide feelings other than anger and when they do discuss any feelings, the feelings are uncontained. In other words, the anger is generalized to situations and individuals beyond the specifics of the pictured separation.

Appendix L:

Indiscriminately Friendly Questions

1) How friendly is your child with new adults?

0 = generally not friendly (eg. Wary, does not approach new adults, clings to parents).

0 = mixed reaction (eg. Usually friendly but sometimes cries, friendly to some strangers but not others, wary at first, but then warms up).

1 = very friendly, interacts freely with all new adults.

2) Does your child act shy or seem uncomfortable with new adults?

0 = child has always been shy.

0 = child did not act shy, but now does

1 = has never been shy or was initially shy; is no longer

3) What does your child do when he/she meets new adults?

0 = child is upset by new adults (eg. Cries, clings to parents, covers eyes).

0 = stands back, observes, evaluates

1 = approaches adult (shows toys, speaks, asks questions)

4) Would your child be willing to go home with an adult he/she had just met?

0 = never has been willing.

0 = yes initially, currently no

1 = always has been willing; or no initially, currently yes

5) Does your child have a tendency to wander off?

0 = no, does not wander

0 = wanders, but is distressed at separation

1 = wanders and is not distressed at separation

TABLES

Table 1: Mean Scores and Standard Deviations for Demographic Characteristics of All Groups

	RO ^a			CB ^b			EA ^c		
	<u>M</u>	<u>SD</u>	<u>N</u>	<u>M</u>	<u>SD</u>	<u>N</u>	<u>M</u>	<u>SD</u>	<u>N</u>
Time in Institution	22.67	13.40	35	-	-	-	2.25	1.15	4
Age at Adoption	23.97	14.86	35	-	-	-	2.50	1.42	17
Age at Assessment	127.58	12.84	35	127.00	12.63	42	119.65 ^{ab}	2.40	23
Mother's educ	4.26	1.04	35	4.30	.91	40	4.63	.82	24
Father's educ	4.28	1.42	32	4.51	1.07	39	4.67	1.09	24
Mother's age	44.2 ^c	6.13	35	43.1 ^{a,c}	4.54	42	47.0	6.44	25
Father's age	46.3 ^c	6.23	33	44.8 ^{a,c}	4.89	41	48.6	6.06	25
Income	6.03	2.46	35	6.88	2.24	40	6.67	2.62	24
Mother's employment									
No. home full-time	13			11			8		
Employed part-time	9			16			9		
Employed full-time	15			13			7		

Note:

Time in institution = time children spent in institutions in months; Age at adoption = age in months; Age at assessment = age in months; Mother's educ = mother's education level with 1 = elementary school, 2 = some high school, 3 = high school completion, 4 =

vocational or some college/university, 5 = college or university graduate, 6 = graduate or professional school.

Father's educ = father's education level with 1 = elementary school, 2 = some high school, 3 = high school completion, 4 = vocational or some college/university, 5 = college or university graduate, 6 = graduate or professional school.

Mother's age in years at time target child was assessed; Father's age in years at time target child was assessed. Income = gross annual income with 1 = less than \$20,000, 2 = \$21-30,000, 3 = \$31-40,000, 4 = 41,000-50,000, 5 = 51-60,000, 6 = 61,000-70,000, 7 = \$71,000-80,000, 8 = 81,000-90,000, 9 = 91,000, 10 = above \$100,000.

a, b, c, indicate means that differ significantly ($p < .05$) from one another.

Table 2: Phase 3 Mean Scores and Standard Deviations for High and Low Stress SAT Pictures by Group and Gender

GROUP	LEVEL OF STRESS			
	Low Stress Pictures		High Stress Pictures	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
RO Group (n = 32)	12.75	6.92	23.18	3.81
CB Group (n = 42)	15.60	6.66	25.55	5.28
EA Group (n = 23)	13.96	5.25	23.70	6.05
Males (n = 43)	14.49	6.64	24.67	5.06
Females (n = 54)	14.09	6.45	24.06	5.19

Table 3: Phase 3 Percent RO, CB and EA Boys and Girls Classified as Secure or Insecure

	<u>Security</u>	<u>Boys</u>	<u>Girls</u>	<u>Total</u>
RO Group (n = 32)	Secure	26.7% (n = 4)	35.3% (n = 6)	31.3% (n = 10)
	Insecure	73.3% (n = 11)	64.7% (n = 11)	68.7% (n = 22)
CB Group (n = 42)	Secure	36.8% (n = 7)	69.6% (n = 16)	54.8% (n = 23)
	Insecure	63.2% (n = 12)	30.4% (n = 7)	45.2% (n = 19)
EA Group (n = 24)	Secure	50% (n = 5)	78.6% (n = 11)	66.7% (n = 16)
	Insecure	50% (n = 5)	21.4% (n = 3)	33.3% (n = 8)
Total Sample (n = 96)	Secure	36.4% (n = 16)	61.1% (n = 33)	50% (n = 49)
	Insecure	63.6% (n = 28)	38.9% (n = 21)	50% (n = 49)

Table 4: Mean Scores and Standard Deviations of the Indiscriminately Friendly Measures for Boys and Girls

<u>INDISCRIMINATE FRIENDLINESS MEASURES</u>				
	Boys (n = 46)		Girls (n = 54)	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
5IF (Total IF)	1.61	1.65	1.07	1.50
2IF (Extreme IF)	.33	.63	.19	.55

Table 5: Continuity of Attachment Security from Phase 2 to Phase 3 by Group

		Phase 2 Secure	Phase 2 Insecure
RO Group	Phase 3 Secure	46% (n = 6)	19% (n = 3)
	Phase 3 Insecure	54% (n = 7)	81% (n = 13)
CB Group	Phase 3 Secure	62% (n = 13)	40% (n = 4)
	Phase 3 Insecure	38% (n = 8)	60% (n = 6)
EA Group	Phase 3 Secure	63% (n = 10)	60% (n = 3)
	Phase 3 Insecure	38% (n = 6)	40% (n = 2)

Table 6: Phase 3 and Phase 2 Mean Cognitive Scores and Standard Deviations for Phase 3 Secure and Insecure RO Children

STANFORD BINET	SECURE (n = 10)	INSECURE (n = 22)	TOTAL (n = 32)
Phase 3 Assessment			
Verbal Reasoning	104.60 (14.07) *	92.50 (13.06) *	96.28 (14.34)
Phase 2 Assessment			
Verbal Reasoning	104.33 (12.04) ⁺	92.80 (16.64) ⁺	96.38 (16.09)

Means are shown followed by standard deviations in brackets.

* $p < .05$

⁺ $p < .10$

Table 7: Phase 2 Mean Cognitive Scores for Phase 2 Secure and Insecure RO Children

STANFORD BINET	SECURE (n = 13)		INSECURE (n = 20)		TOTAL (n = 33)	
	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>
Verbal Reasoning Scale	104.77**	13.27	87.40**	15.87	94.24	17.03

** $p < .01$

Table 8: Phase 3 Secure and Insecure RO Children's Mean Scores and Standard Deviations on the Preschool HOME Measure

HOME DIMENSIONS	SECURE (n = 9)		INSECURE (n = 12)	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Total	.88	.06	.82	.04
HOME				
Physical	.97	.08	.88	.17
Punishment				
Variety of	.90	.12	.92	.07
Stimulation				
Encourage	.67	.23	.75	.14
Responsibility				
Academic	.84	.24	.83	.17
Stimulation				
Warmth/	.90	.11	.84	.17
Acceptance				
Physical	1.0	.00	.98	.05
Environment				
Language	.95	.10	.97	.06
Stimulation				
Learning	.82	.13	.85	.09
Stimulation				

Table 9: Phase 3 Mean Scales Scores and Standard Deviations Assessed by the Parent Version of the Child Behavior Checklist for Phase 3 Secure and Insecure RO Children

CBCL SCALES	SECURE (n = 10)		INSECURE (n = 21)	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Social Problem	2.60 ⁺	2.12	5.19 ⁺	4.11
Withdrawn	1.50	1.35	2.19	2.50
Internalizing Behavior	5.70	3.33	7.19	6.28
Externalizing Behavior	13.00	10.12	16.62	14.32
Somatic Complaints	1.20	1.32	.90	1.04
Anxious Depressed	3.30	2.49	4.48	4.69
Thought Problems	1.40	2.01	2.29	2.92
Attention Difficulties	6.20	3.82	7.90	5.60
Delinquent Behavior	2.40	2.41	3.67	4.18
Aggressive Behavior	10.60	7.89	12.95	10.57
Total Behavior Problems	29.11	14.79	45.90	35.01

⁺ p<.10

Table 10: Phase 3 Mean Scales Scores and Standard Deviations Assessed by the Teacher Version of the Child Behavior Checklist for Phase 3 Secure and Insecure RO Children

CBCL SCALES	SECURE (n = 8)		INSECURE (n = 16)	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Social Problem	1.75	2.66	3.19	2.90
Withdrawn	.63	.74	1.56	2.48
Internalizing Behavior	2.88	1.89	5.25	4.74
Externalizing Behavior	4.50 ⁺	4.47	11.50 ⁺	9.17
Somatic Complaints	.75 ⁺	1.39	2.19 ⁺	2.01
Anxious Depressed	2.13	2.10	3.63	3.22
Thought Problems	.75	1.04	1.06	1.98
Attention Difficulties	3.25 *	2.19	7.00 *	4.80
Delinquent Behavior	1.63 ⁺	1.30	3.63 ⁺	2.80
Aggressive Behavior	2.87 ⁺	3.60	7.88 ⁺	6.80
Total Behavior Problems	16.13 *	8.49	36.00 *	26.45

* $p \leq .05$

⁺ $p < .10$

Table 11: Phase 2 Mean Scales Scores and Standard Deviations Assessed by the Parent Version of the Child Behavior Checklist for Phase 3 Secure and Insecure RO Children

CBCL SCALES	SECURE (n = 9)		INSECURE (n = 18)	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Social Problem	2.22	2.39	4.00	3.82
Withdrawn	1.67	1.32	1.83	2.12
Internalizing Behavior	3.56	4.22	5.56	6.55
Externalizing Behavior	11.11	10.56	15.00	9.37
Somatic Complaints	.67	.87	.89	1.71
Anxious Depressed	1.44	2.24	2.89	4.01
Thought Problems	1.67	2.50	2.06	3.02
Attention Difficulties	5.56	5.48	6.61	5.40
Delinquent Behavior	1.77	2.04	2.39	2.33
Aggressive Behavior	9.33	9.30	12.61	7.72
Total Behavior Problems	30.00	25.53	42.00	25.89

Table 12: Phase 2 Mean Scales Scores and Standard Deviations Assessed by the Teacher Version of the Child Behavior Checklist for Phase 3 Secure and Insecure RO Children

CBCL SCALES	SECURE (n = 6)		INSECURE (n = 14)	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Social Problem	3.00	1.41	3.50	2.90
Withdrawn	.83	.41	1.79	2.51
Internalizing Behavior	4.00	2.53	4.29	4.56
Externalizing Behavior	11.50	7.42	9.00	8.62
Somatic Complaints	.33	.52	.50	.94
Anxious Depressed	2.83	2.31	2.21	3.17
Thought Problems	.67	.82	1.07	1.73
Attention Difficulties	4.83	1.17	5.50	5.13
Delinquent Behavior	2.33	2.16	1.21	1.71
Aggressive Behavior	9.17	5.64	7.79	7.09
Total Behavior Problems	26.17	13.01	25.50	23.14

Table 13: Phase 3 Mean Total Indiscriminate Friendliness (5IF) and Extreme Indiscriminate Friendliness (2IF) Scores & Standard Deviations by Group

GROUP	5IF		2IF	
	M	SD	M	SD
RO (n = 33)^a	2.00 ^{bc**}	1.95	.55 ^{bc**}	.83
CB (n = 42)^b	.93 ^{a**}	1.11	.10 ^{a**}	.30
EA (n = 25)^c	1.08 ^{a**}	1.59	.12 ^{a**}	.44

^{a, b, c} indicate means that differ significantly from one another

** $p < .01$

Table 14: Percentage of Children Displaying Indiscriminate Friendliness on Each of the 5IF Items by Group

ITEM	RO GROUP n = 33	CB GROUP n = 42	EA GROUP n = 25
How Friendly is Child with New Adults	55% *	26% *	24% *
Child is Uncomfortable/Shy with New Adults	45%	40%	32%
Child Approaches New Adults on First Meeting	45% *	17% *	28% *
Child is Willing to go Home with Strangers	30% ***	2% ***	8% ***
Child Wanders without Distress	24% *	7% *	4% *

*** $p < .001$

** $p < .01$

* $p < .05$

Table 15: Phase 3 Percentage of RO, CB and EA Children Described by their Parents as Overly Friendly

PARENT REPORT OF OVERLY FRIENDLINESS		
GROUP	OF	Not OF
RO Group	39.4% (n = 10)	60.6% (n = 23)
CB Group	2.4% (n = 1)	97.6% (n = 41)
EA Group	4% (n = 1)	96% (n = 24)

Table 16: Continuity of Indiscriminately Friendly Behavior from Phase 2 to Phase 3

	Phase 2 5IF With Phase 3 5IF	Phase 2 2IF With Phase 3 2IF
RO (n=33)	.47**	.48**
CB (n=34)	.68***	-.06
EA (n=25)	.40 ⁺	--

***.Correlation is significant at the 0.001 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

⁺.Correlation is significant at the 0.05 level (2-tailed)

Ph2 5IF = Phase 2 Total IF scores

Ph2 2IF = Phase 2 Extreme IF scores

Ph3 5IF = Phase 3 Total IF scores

Ph3 2IF = Phase 3 Extreme IF scores

Table 17: Phase 3 Mean Total (5IF) and Extreme (2IF) Indiscriminately Friendly Scores and Standard Deviations for Secure and Insecure RO Children

SECURITY	5IF		2IF	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
SECURE (n = 9)	1.33	1.12	.11	.33
INSECURE (n = 21)	1.95	2.13	.62	.92

Table 18: RO Children's Phase 3 Mean Total (5IF) and Extreme (2IF) Indiscriminately Friendly Scores and Standard Deviations by Phase 2 Attachment Security

Phase 2 Attachment Security	5IF			2IF	
	<u>n</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Secure	11	1.45	1.63	.27	.65
Insecure Typical	10	1.60	2.17	.60	.97
Insecure Atypical	9	3.44	1.81	1.00	.87

Table 19: Percent of Phase 2 RO Secure and Insecure Children Described by Parents as Overly Friendly in Phase 3

Phase 2 Attachment Security	<u>n</u>	Child Is Overly Friendly	Child Is Not Overly Friendly
Secure	11	18.2%	81.8%
Insecure Typical	10	30%	70%
Insecure Atypical	9	88.9%	11.1%