

SCHOOL READINESS  
AND  
PRESCHOOLERS' ATTACHMENT REPRESENTATIONS:  
POSSIBLE CONNECTIONS

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All for the love of God

JMJ

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## ABSTRACT

The current study examined the possible relationship between preschooler's school readiness and their attachment representations. More specifically, the study examined preschooler's performances on standardized tests and their perceptions of close relationships. The possible connection between school readiness and attachment representations was through children's experiences of stress during standardized testing situations (Fleege, Charlesworth, Burts, & Hart, 1992) and children's stress invoking the use of their internal working models (Bowlby, 1969/1982). The children were administered the Brigance CIBS-R (Glascoe, 1999), a standardized test that was most often used in the local schools to assess school readiness. The children were also videotaped while participating in the Narrative Story Stem Technique (NSST, Bretherton, Ridgeway, & Cassidy, 1990) to observe the children's perceptions of close relationships through story completions. The results showed that the children who demonstrated a higher number of attachment representations in comparison to the other children also obtained the higher scores on the subscale of the Brigance CIBS-R. The children who demonstrated a lower number of attachment representations in comparison to the other children also obtained the lowest scores on the subscale of the Brigance CIBS-R.

Using a Spearman's rank correlation coefficient within a particular group of the children, it was discovered that an identifiable relationship existed between the rank order of the children's performances on a subscale of the Brigance CIBS-R and the rank order of the number of their attachment representations. The results indicate that children who seem to have impoverished attachment representations may also experience more stress in a standardized testing situation and may consequently perform lower on standardized tests that are used to assess school readiness.

## CHAPTER 1

### INTRODUCTION

School readiness, defined as a level of development at which a child is perceived to be prepared to attend formal schooling, is an important concern for children (Dockett & Perry, 2001; Fleege, Charlesworth, Burts, & Hart, 1992), parents (Dockett & Perry, 2001; Kennedy & Kennedy, 2004), teachers (Kennedy & Kennedy, 2004; NAEYC, 1990), and policy makers (Federal Register, 2007; Saluja, Scott-Little, & Clifford, 2000). A child's school readiness is usually determined by his performance on a designated test, one that is usually administered by the school to which the child is seeking admission. In eighteen states, including Louisiana, readiness testing is mandated for children seeking admission to the public pre-kindergarten (pre-K) or kindergarten (K) programs, and many parochial and private schools follow their state's practice (Saluja et al., 2000). Schools commonly use the test results either as a screening tool to determine a child's possible assignments to special educational instruction or as a "gatekeeper" to deny school entry until the child has experienced an additional year of development. The latter use is frequently referred to as "giving [the child] the gift of time." A child's performance on readiness tests is assumed by their users to provide a reliable measure of the child's level of cognitive or social maturity (Saluja et al., 2000). Many factors other than the child's developmental maturity, however, may affect his performance on the tests, including factors that have been described and explored in what is known as the attachment literature.

A child's earliest social experiences are the subject of attachment theory and research, a large domain in the study of human development that emphasizes the importance of young children's developing relationships with their caregivers (Ainsworth, 1978; Bowlby, 1969/1982; Kennedy & Kennedy, 2004; Neal, 2001; Solomon & George, 1999; Sroufe & Fleeson, 1986). Attachment theory describes several qualities of the parent-child relationship as well as the

implications of the relationship for the child's current and future cognitive and emotional functioning. Although prior research has demonstrated connections between young children's attachment relationships and their verbal abilities (Estrada, Arsenio, Hess, & Holloway, 1987; Srouffe, Egeland, Carlson, & Collins, 2005), as of spring 2007, there is no empirical research that examines the specific relationship between young children's attachment relationships and their performance on the types of tests that are used to determine children's school readiness. There is research that examines the relationship between attachment and school readiness when school readiness is conceptualized as social maturity, without the cognitive component (Acock, & Morrison, 2006; Kennedy & Kennedy, 2004; McClelland, Rydell, Bohlin, & Thorell, 2005), but not when school readiness is conceptualized as cognitive maturity as captured by the child's performance on the standardized tests, which are the type most frequently used. The purpose of the current study was to examine the possible connection between children's attachment relationships and their performance on assessments that are used to determine school readiness.

### Conceptual Framework

The present study can be seen as emerging from an intersection of two theories: maturational theory and attachment theory. The use of readiness testing in educational practice is a manifestation of concepts that are derived from maturational theory, a theory whose chief principle is the genetic blueprint's unfolding over time (Gesell, 1940). Attachment theory stems from the work of John Bowlby (1969/1982) and Mary Ainsworth (1973), whose work focused on the emotional relationship that young children form with a primary caregiver and is a relationship that tends to exert a strong influence on the way that children relate to others. The attachment literature is especially interested in the connections between children's attachment relationships and their behaviors and reactions in stressful situations. Stressful situations, in fact, are argued to activate what Bowlby referred to as a child's "attachment system," and once the

attachment system is activated children tend to respond to stressful situations in ways that are consistent with their different attachment histories.

### Objectives

The primary purpose of this study was to examine if children's performance on school readiness tests is related to their attachment representations.

### Limitations

1. Although most of the existing research on school readiness has focused on kindergarteners, the reported study focused on pre-K students.
2. The limited number of participants does not allow for inferential statistical analyses of the results.
3. The findings are not generalizable to all pre-K students, because the students in the study attend a university laboratory preschool that is of exceptionally high quality.
4. Although the Brigance Comprehensive Inventory Basic Skills-Revised (Glascoe, 1999) was developed for use with children slightly older than the participants, it was used in the present study for ecological validity because it was found to be the assessment most frequently used by the schools in the area.

### Assumptions

1. The *Brigance Comprehensive Inventory of Basic Skills-Revised* (Glascoe, 1999) reliably measures the skills and abilities that a school perceives as necessary for formal schooling.
2. The *Narrative Story-Stem Technique* (Page, 2001) reliably measures a child's perceptions of attachment representations.

## CHAPTER 2

### REVIEW OF LITERATURE

In order to examine the potential relationship between school readiness and attachment relationships, the research and current beliefs about school readiness, as well as attachment theory and research, will be reviewed.

#### School Readiness

Before 1990 “school readiness” was widely accepted as an appropriate term to identify the state of children who were or were not considered sufficiently mature to enter school (Shepard, 1997). The practice of readiness testing, which attempts to assign such labels as ready or not ready, grew out of maturational theory. The theory argues that certain biological, emotional, and cognitive behaviors are demonstrated by all typically-developing children, and that the species-typical, genetically-driven changes are demonstrated in observable and measurable milestones (Gesell, 1940; Saluja, et al., 2000). The use of the term “milestone” implies an observable level of development or maturity that must be achieved before subsequent milestones can be approached. Maturational theory has been made manifest in such educational practices as school readiness testing, and in particular, the use of standardized tests to assess readiness. There is much debate in the literature about the appropriateness of the concept of readiness. Given, however, that 18 states apparently do accept the concept of school readiness, as evidenced by their mandating of readiness testing for entry into school (Saluja, et al., 2000), it might be useful to look at what the tests really capture, or if the tests really capture what is necessary in order to claim that a child is ready to enter a school setting. It may be that there is a lurking variable that standardized tests do not capture, a variable that could be crucial in understanding a child’s adjustment to school.

## **Background of School Readiness Testing**

Maturational theory argues that emotional and cognitive milestones can be assessed with standardized tests because they have been normed on children of the same age. A thorough discussion of the rationale and research underlying the use of age-normed standardized testing is beyond the scope of this paper, but the basic rationale is that by administering the same tests with the same protocol, most of the explanations for the resulting scores, other than maturity or ability, are eliminated. The results represent the child's cognitive performance relative to other children of the same age; that is, the results represent the child's achievement (or lack thereof) of the cognitive or emotional milestones for his age.

Parents may experience pressure for their children to perform well on readiness tests because it seems that it is up to parents to somehow prepare their children. A study by Saluja, et al. (2000) found that not only has parental awareness about the importance of preschool increased, but also parental expectations of preschool programs have increased; the quality of the programs are understood to be reflected by the cognitive and social competence of the students who are already enrolled in the programs. Some parents seem to expect the preschool experience to completely equip their children with the cognitive skills that are required in formal schooling. Therefore parents may in turn place added pressures on their children to prepare and to perform optimally when the time comes for readiness testing.

In addition to parents, the Federal Government has shown some concern about the preparation of young children for formal schooling, demonstrated by their increased expectations of preschool programs (Federal Register, 2007). The Department of Education (DOE) has allocated funds to identify curricula that specifically promote school readiness, and in particular, the preparation for formal reading instruction in elementary grades as measured by standardized

tests. The request for such proposals illustrates the ubiquitousness of an emphasis on the concept of a measurable level of readiness and the use of standardized tests.

### **Criticism of the Use of Testing to Determine Readiness**

In 1990 the appropriateness of the school readiness concept and its assessment practices was challenged when the National Association for the Education of Young Children (NAEYC) released a position statement arguing that all children are ready to learn, regardless of their current performance or behavior relative to other children in their age group. Several researchers affirm the NAEYC's (1990) statement that argues that all children are ready to learn at every age, and that there are no age-dependent barriers to school readiness (Carlton, 1999; Shepard, 1997; Zuckerman & Halfon, 2003).

Although the assessment of school readiness is considered by some researchers to be a part of good teaching practices, in that it can assess what children already know and what they can learn in the future (Saluja, et al., 2000), research has shown that the readiness tests can lack predictive validity for children's later success in school (Graue, 1993). Another problem with such tests is that some school systems use the tests as a gate keeper, that is, a way to prevent children from entering school until they can perform at a certain level on the particular readiness test. The use of readiness tests as a gatekeeper to deny school entry is considered problematic for three reasons: first, the decisions may keep out low-performing children even though they may benefit from attending; second, the decisions may influence the age and standards of the children who are actually attending; and finally, the tests themselves may lack the ability to make accurate predictions (Carlton, 1999). Also, there is little evidence that keeping children out of school in order to give them "the gift of time" would benefit them (Graue, 1993). It seems logical to argue that low-performing children are the ones who most need the school experience.

Another concern about the use of readiness testing involves the stress behaviors that young children demonstrate during standardized tests. The findings of Fleege et al. (1992) indicate that children display an increase in stress behaviors, such as constant moving, wiggling in seats, shuffling papers, calling out answers, and singing, while the tests are taking place. Such behaviors in the testing situation present a reactivity threat to the internal validity of test scores. Other research (Shepard, 1997) indicates that the standardized tests may no longer provide an accurate assessment of how the children are capable of performing. It is argued that educators are responsible for receiving training in the potential misuse of readiness testing in order to prevent negative effects on the children who participate. If a child is experiencing the stress behaviors mentioned above, and if the teacher is not educated on ways to handle his stress behaviors, the child's cognitive abilities may not be adequately demonstrated.

It is also possible that shyness during the testing procedure can play a role in a child's performance on standardized tests and therefore on measures of school readiness. Shy children have been shown to share less intimate relationships with peers as well as with teachers (Rydell, Bohlin, & Thorell, 2005). Regardless of the teacher's stability or warmth, shy children, even when observed at the end of the year, have been shown to have less secure relationships with their teachers, and the nature of that relationship may affect the teacher's perception of the child's school adjustment. If shy children are not making any kind of connection with their teachers even by the end of the school year, it seems that some shy children may not fully engage in the learning process; by extension it may be that shy children may not fully engage in the testing process.

#### Attachment Theory

Attachment refers to an emotional relationship that develops between a child and a primary caregiver over time (Ainsworth, 1973). The primary caregiver with whom the child has

developed a relationship can also be referred to as the child's attachment figure. All humans are born with a tendency to direct attachment behaviors, such as crying, looking, or reaching out, to human figures (Bowlby, 1969/1982). The infant's attachment behaviors are intended to elicit proximity with the attachment figure(s). If reliably achieved over time, increased proximity can foster a sense of security in the child. The need for proximity to an attachment figure during periods of stress seems to be universal with young children; however, a young child's method of expressing a need for proximity is related to the sensitivity of the child's caregiver when the child was an infant and toddler (Kennedy & Kennedy, 2004). A child's attitudes toward and beliefs about other people are argued to be related to the interactive experiences between the child and his attachment figure(s). A child's attitudes toward, beliefs about, and reactions to future teachers may also be related to the child's relationship with his attachment figure(s) (Bowlby, 1969/1982). The relationship involves the development of the expectations of parental dependability and responsiveness; future relationships between the child and other adults are thought to reflect similar expectations of another adult's dependability and responsiveness. In addition to the parent-child relationship's effect(s) on a child's socio-emotional skills, a child's understanding of his mother's availability can influence the child's cognitive skills as well. For example, Estrada, et al. (1987) found that maternal affect during an interaction task between a mother and a three-year-old child predicted the vocabulary skills of the child at four years of age.

In addition to cognitive performance, other research has shown that children's reactions to stressful situations could be predicted based on their relationships with their caregivers as infants. Through a procedure called the Barrier Box Situation (Arend's study (as cited in Srouffe, Egeland, Carlson, & Collins, 2005)), children who displayed nurturing, warm relationships with their caregivers at 18 months were in the most competent cohort when trying to complete a difficult task (i.e., open a box) without the presence of their caregiver. These children were able

to cope better when compared to their counterparts, that is, children whose relationships with their caregivers were inconsistent and cold. A key factor in the above study is that the children were in the stressful situation without their caregivers.

### **The Strange Situation**

The Strange Situation is a laboratory procedure that was designed by Mary Ainsworth (1973) to assess children's attachment relationships, by observing their different reactions and behaviors to stress or threat. The observed differences are used to derive the child's attachment classification (Ainsworth, 1973). The procedure involves eight laboratory episodes in which the child, who may be between 12 and 24 months of age, is exposed to periods of separation from and reunion with his primary caregiver, as well as exposure to an unknown adult (i.e., the "stranger"). The behaviors that are displayed when the child and the caregiver are reunited are considered the strongest evidence of the child's attachment relationships (Solomon & George, 1999). The specific behaviors that a young child exhibits during separation from and reunion with his caregiver in the presence of a stranger tend to fall into one of four clusters of behaviors, and they are used to determine the child's attachment classification. The four attachment classifications are referred to as type B: secure, type A: insecure-avoidant, type C: insecure-ambivalent (Ainsworth, 1973), and type D: disorganized (Main & Solomon, 1990).

### **Type B: Secure Attachment Behaviors in the Strange Situation**

During the Strange Situation, children who are classified as type B: secure may look around and may even become upset when separated from their caregivers. When they are reunited, the children may greet their caregivers with smiles, with vocalizations, or with gestures. When distressed or in the presence of a stranger, the children may seek close proximity to the caregivers. Once they are comforted, the children are readily soothed and may continue to explore. The above behaviors are important because they demonstrate that the children use their

attachment figures as secure bases from which to explore the world around them (Ainsworth, 1973). The children may also seek proximity with their attachment figures during times of stress; the caregiver can become a safe-haven for the child in stressful situations. A child with a secure attachment classification may be more likely to consider stressful events as less threatening than may an insecurely attached child. Securely attached children may also hold optimistic expectations about their abilities to cope with the sources of distress (Belsky, 2002).

#### **Type A: Insecure-Avoidant Attachment Behaviors in the Strange Situation**

During the Strange Situation, children who are classified as type A: insecure-avoidant may respond with minimal distress when separated from the caregiver. When they are reunited with their caregiver, insecure-avoidant children may actually avoid them. Children with an insecure-avoidant attachment classification may lean away from their caregivers or stiffen when their caregivers attempt to greet or console the children in times of distress or in the presence of the stranger (Ainsworth, 1973). Insecure-avoidant children may readily explore the environment with little display of using their caregivers as a safe haven to which to return when distressed.

#### **Type C: Insecure-Ambivalent Attachment Behaviors in the Strange Situation**

During the Strange Situation, children who are classified as type C: insecure-ambivalent may alternate between rejection and anger when separated from their caregivers. When they are reunited, insecure-ambivalent children may appear too upset to respond or to make eye contact with their caregivers; they appear hesitant about being consoled. Insecure-ambivalent children generally do not engage in exploration and therefore do not use their caregivers as secure bases from which to explore the world around them (Ainsworth, 1973).

#### **Type D: Disorganized Attachment Behaviors in the Strange Situation**

A fourth pattern of behavior, one in which there is no pattern or strategy that is coherent or could be described as organized, was identified and labeled “disorganized” by Main and

Solomon (1990). During the Strange Situation, children who are classified as type D: disorganized may display no predictable or effective pattern of eliciting caregiver behaviors from their caregivers in times of distress or in the presence of the stranger. The children seem to lack observable intentions or goals, and in some cases, disorganized children may exhibit actions that are completely contradictory. For example, the child may display complete stillness and then interrupted movements. It has been argued that the children may not view their caregivers as sources of safety (i.e., a safe haven) or as someone with whom they can “wind down” (Hughes, 2004). A child who is classified as type D: disorganized may also see his caregiver as a source of fear or may feel that the caregiver needs to be controlled if he is to be kept safe.

### **Internal Working Model**

Attachment theorists and researchers argue that a child’s behaviors that are observed during the Strange Situation, especially during separation and reunion, reflect a mental construction that is known as the internal working model (IWM, Ainsworth, 1973; Bowlby, 1969/1982). The IWM is an affect-laden mental representation of self, other, and of relationships; it is derived from interactive experiences and directs attention and organizes memory in a way that guides interpersonal behavior and interprets social experiences (Belsky & Pensky, 1988). It is a mental representation that informs the child about his self-worth and competence, and whether others are dependable, trustworthy, and responsive.

A child’s IWM guides his expectations about parental availability and responsiveness; it also provides a framework within which a child can construct subsequent working models of his own relationships with others (Page & Bretherton, 2001). Over time, the transactional patterns of the IWM can spill over from the parent-child relationship into relationships with others. Laible & Thompson (2002) found that in the case of stressful circumstances, children with secure attachments, children who are able to use a parent as a secure base, can internalize even more

complex coping mechanisms and communication skills because the foundation already exists in the parent-child relationship. A child with an insecure attachment, however, will continue to experience a lack of coping mechanisms and communication skills, which can contribute to further misunderstandings on the part of the child about the relationship and can lead to increased defenses in relationships with others.

Longitudinal research by Sroufe and Fleeson (1986) demonstrated evidence that children can evoke behaviors from others that confirm their IWM's. They found that teachers are likely to place high maturity demands and less control on young children who are classified as securely attached, confirming their IWM's as competent and worthy. In contrast, teachers use more control and some anger with children who are classified insecure-avoidant, confirming their IWM as unworthy. Teachers use more control and more nurturance with children who are classified insecure-ambivalent, confirming their IWM's as incompetent.

The IWM that is formed during interactions with a primary caregiver is argued to endure and to bridge gaps in physical proximity and time (Ainsworth, 1973). Moreover, Marvin & Britner's (1999) research indicates that a preschooler can continue to use his primary caregiver as a safe haven, regardless of their growing independence, due to his beliefs about himself and others (i.e., his IWM). Attachment classifications and their corresponding IWM's are argued to be relatively stable over a lifetime, provided that the environment remains stable as well (Lamb, Thompson, Gardner, & Charnov, 1985; Waters, Merrick, Treboux, Crowell, & Abersheim, 2000).

Children's IWM's can be observed in their interactions with others, and in addition to natural settings, there are procedural situations that are designed to evoke children's beliefs or perceptions about themselves and others (Bretherton, et al., 1990; Page & Bretherton, 2001,

Page, 2001). Through the telling of stories, investigators may peer more closely into a child's IWM, or at least into the child's perceptions of his close relationships.

#### Measuring Attachment Representations with the Narrative Story Stem Technique

A procedure known as the Narrative Story-Stem Technique (NSST; Page, 2001) was developed to identify attachment representations in young children. Unlike the Strange Situation that assesses attachment classifications and the corresponding IWM's and is based on observable behaviors in young children with limited verbal development, the NSST captures children's perceptions and spontaneous representations of others and relationships in children with more advanced verbal and communication abilities. In the procedure, a trained investigator begins a story, called a "story stem," that involves an issue between adults and children that has the potential to evoke children's perceptions of an adult's ability, warmth, nurturance, and likelihood of providing a "safe haven." An example of a possible story stem issue is a child's falling and hurting his knee. The child is asked to complete the story using a family of small figurines. One child's story completion of this story stem could be that the child runs to the parent figurine, and the parent places a bandage on the child's knee. In this case, the child's story completion displayed responsive and nurturing behaviors between the parent and the child figurine. Another child's story completion of this story stem could be that the hurt knee is never addressed and the parent figurine does nothing. In this case, the child's story completion did not demonstrate nurturing behaviors between the parent and the child figurine.

#### **Rationale for the Study**

Given the research on stress and its effects on children during standardized testing (Fleege et al., 1992), it is possible that the stress in a standardized testing situation could activate the child's internal working model. Depending on a child's attachment history, he may be more or less likely to see stressful situations as threatening or not (Belsky, 2002), and his perceptions

of relationships with others could frame the way that he responds during the standardized test. The current study sought to examine the possible relationship between school readiness as measured by standardized tests and preschoolers' attachment representations as measured by their observed perceptions of close relationships.

## CHAPTER 3

### METHOD

Two groups of data were collected in order to examine the relationship between children's school readiness and their perceptions of close relationships. School readiness was assessed with the Brigance Comprehensive Inventory of Basic Skills-Revised (CIBS-R, Glascoe, 1999). The children's perceptions of close relationships were assessed using the Narrative Story-Stem Technique (NSST) that is patterned on the Attachment Story Completion Task (Bretherton, Ridgeway, & Cassidy, 1990).

#### Participants

The original plan was to recruit the participants from the Diocese of Baton Rouge Catholic Schools. However, after going through the process of approval, at the last minute, the Diocesan School Board refused to let the children participate because the Board did not believe that the study would benefit the children. The secondary plan was to recruit the participants from the LSU Laboratory Preschool, and was activated by the failure of the original plan. The study's use of human subjects was approved by the Louisiana State University Institutional Review Board before the investigator proceeded with data collection. The preschool maintains a population of 20 students: 10 3-year-olds and 10 4-year-olds. Most of the four-year olds are in their second year in attendance at the LSU Preschool. Permission to conduct the project was obtained from the parents of the children; verbal assent was also obtained from the students at the time of data collection. An exclusion criteria of a minimum age of 45 months resulted in a potential pool of 12 children. Of the 12 children who met the age criteria of 45 months at the time of consent, 11 children participated in both sessions of data collection. One of the original 12 has a diagnosis of Down's syndrome, and although the child was able to complete the Brigance CIBS-R, the responses during the story stems were unintelligible. The videos of two

children's story completions were unfortunately misplaced. Of the remaining nine children, two were in the 3-year-old class and seven were in the 4-year-old class. Eight of the nine children are white, and one of the children is African American; five of the children are male and 4 are female. In addition, two of the children, Emily and Laura, are children who speak English as a second language (ESL); Emily speaks Arabic in the home and Laura speaks Italian with her mother. All the children live in two-parent homes.

### Data Collection Strategy

Data was collected in two sessions. In session one a female investigator who, following the usual procedure, was previously unknown to the children, administered the Brigance CIBS-R to each child. Over a period of two months, the Brigance CIBS-R was administered to the children within regular school hours. In session two a second female investigator, who was also one of the children's teachers, used the NSST technique to administer seven story stems to each child. Over a period of six weeks, the story stems were administered to the children during their regular school hours.

### Assessments

#### **School Readiness**

A canvass of 16 local primary schools indicated that the most common instrument that was used to assess school readiness was the Brigance CIBS-R, and therefore it was used in the current study. Over 300 items are available to assess five skill areas: 95 items that pertain to general knowledge and language comprehension skills, 15 items that pertain to gross-motor skills, 65 items that pertain to graphomotor and writing skills, 52 items that pertain to reading skills, and 79 items that pertain to math skills (Glascoe, 1999). The questions are answered by children in one of four possible ways: by pointing to a choice, by circling a choice, by drawing,

and by orally responding. The questions are designed primarily for use with students who are at least 5 years of age (Bradley-Johnson, 1999).

### **Attachment Representations**

The NSST is based on a procedure that was originally devised by Bretherton and her colleagues known as the Attachment Story Completion Task (Bretherton, Ridgeway, & Cassidy, 1990) to assess possible representations of attachment in young children through the use of story stems that are meant to activate the children's attachment system. In the protocol, a child is presented with the beginning of an attachment-relevant story, the "story stem," that is acted out by the investigator with the use of tangible figurines that represent family members. The child is asked to complete each story stem with the figurines. The procedure allows the investigator to use the story completions as a way to examine the child's perceptions of close relationships. Each story stem presents a stressful event that involves some conflict that preschoolers are likely to encounter in daily life. The stories are designed to activate attachment-related thoughts and feelings. Consequently the spontaneous responses, that is, the story completions, can reflect the child's attachment representations. A goal for the researcher is to peer into the child's internal working model of self, others, and relationships in order to identify the child's attachment representations.

Attachment representations that can be captured by children's story completions can include, but are not limited to, caregiving, parental authority, proximity-seeking, and a coherent story narrative (Page & Bretherton, 2001). Caregiving behaviors can include warmth and responsiveness on the part of the parent. For example, caregiving behaviors can be demonstrated when a parent addresses the physical or emotional needs of a child. Caregiving behaviors can also be demonstrated when a parent offers to help, to comfort, or to protect the child, either spontaneously or when asked. Parental authoritative behaviors can include imperative

communication and direction-giving on the part of the parent. For example, parental authority can be demonstrated when a parent directs the child to follow a rule or asks whether the child has followed a rule. Parental authoritative behaviors can also be demonstrated when a parent directs a child to perform a prosocial act or some other maturity demand. Proximity-seeking behaviors can include any attempt on the part of the child to reconnect with the parent after a period of absence, or any behaviors that protest initial separation of the parent from the child. For example, proximity-seeking can be demonstrated when a child who is sad, afraid, tired, or sick, approaches a parent to seek help or comfort. Proximity-seeking behaviors can also be demonstrated when a child cries out for help. A coherent story narrative is seen when a child can articulate details of the relationship that are understandable. A coherent story narrative can be demonstrated when a child addresses the central issue of the story. For example, in the story stem in which juice is spilled, a coherent story narrative could be demonstrated if the mom or dad cleans up the juice and perhaps gets more juice for the child. In the example, the central issue - spilled juice - was addressed in the child's story completion.

The reported study included 7 stories, including 6 that were drawn from the NSST: Birthday Party (a warm-up story that was not coded), Spilled Juice, Hurt Knee, Monster in the Bedroom, Departure, and Reunion. The seventh story, "Missing Snuggly," was added with the intended purpose of evoking the child's possible reaction(s) to a stressful situation while at school and while a parent is not present or available. Table 1 presents short descriptions of the seven stories that were used in the study.

Table 1

Short Descriptions of the Seven Story Stems

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Story Title	Story Description
Birthday Party	The mother calls everyone to the table to have a birthday party.
Spilled Juice	The family of four (a younger sibling, an older sibling, a mother, and a father) is sitting around the dinner table, and the younger sibling reaches across the table for some juice and accidentally spills the pitcher of juice.
Hurt Knee	The two siblings and the parents go to the park. The younger sibling sees a rock and wants to climb it. On the way up, the child falls down and cries out that he has hurt his knee.
Monster	The mother tells the older child that it is time to go to bed. The child goes into the bed room and reports seeing a monster.
Departure	The parents tell the children that they are going on a trip over night and that the grandma will stay with them. The child is asked to physically make the car, which carries the parents, drive away.
Reunion	The investigator drives the car back onto the table, and leaves the parents in the car and says that the parents are back from their trip over night.
Missing Snuggly	The teacher tells all the children that it is time for their nap and for everyone to get their blankets and pillow to lie down. The older sibling looks for his blanket and pillow and discovers that it is missing.

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## Procedures

### **School Readiness**

The administration of the Brigance CIBS-R took place at the children's preschool. The test administrator was trained by the investigator using the Brigance CIBS-R Inservice Program® video for administering the Brigance CIBS-R to a level of acceptable proficiency in following the accompanying protocol (Glascoe, 1999). The test administrator and the child's teacher, who would later administer the story stems, took each child to a room separated from the classroom, where the teacher left the test administrator and the child. The test administrator sat across a table from the child and administered the Brigance CIBS-R. The test administrator asked each set of questions in the order presented in the manual, and, following the protocol, when the child gave a specified number of incorrect answers in succession (the number differed among the different sets of questions), she moved to the next set of items; thus each child was presented with a different total number of items. After completing the administration of the test, the test administrator took each child back to the classroom.

### **Attachment Representations**

The investigator was trained by Dr. Timothy Page, LSU School of Social Work, using recorded videos of young children who had participated in a previous study (Bretherton et al., 1990). The investigator practiced administering the story stems using the NSST technique to five 4-year-old students at the LSU Child Care Center during two sessions. In the first session, she escorted three children, one at a time, to a testing room where she administered and videotaped the story stems. The three videotapes were reviewed by the investigator with Dr. Page, who made suggestions for improving her adherence to the protocol. In session two she returned to the Child Care Center and repeated the procedure with two additional children.

## **Administration of Story Stems**

The administration of the story stems for data collection took place at the children's preschool. The researcher, who was also one of the children's teachers, escorted each child out of the classroom to a separate room from the classroom, where she sat across a table from the child to administer the story stems. The investigator began a story using a family of figurines that included a father, a mother, an older sibling, a younger sibling, a grandma, and a teacher. After completing the story stem, which included acting out the story stem using the figurines, the investigator removed her hands from the table and asked the child, "What happens next?" Throughout the child's completion of the story, the investigator used three possible prompts to signal the child to either continue with or to complete the story: "show me what happens next," "anything else?" and "is that the end of the story?" The end of each story was signaled when the child had either directly addressed the central issue or had indicated that he had reached the end of the story, or when the child declined to continue after the prompts. After the seven stories were administered and completed, the investigator returned each child to the classroom. The children's story completions were videotaped, and the videotapes were stored for future coding.

## **Development and Definition of Measures**

### **School Readiness**

The Brigance CIBS-R contains five subscales: general knowledge and language skills, gross motor skills, graphomotor and writing skills, math skills, and reading skills. A child's performance on each subscale produces a raw score that is calculated as a fraction, with the number of items that the child answered correctly as the numerator and the number of items that were administered as the denominator. A sixth score, the total raw score, is obtained by summing the raw scores of the five subscales. The six raw scores for each child are presented in Table 2. Because each raw score is represented as a fraction, each fraction can also be converted into a

percentage of correct scores. The percentage of total correct scores, for example, represents the percentage of the total items that were actually administered, not the percentage of the total items that were available for administration. In Table 2, a seventh score, the total percentage score, is also presented. It should be noted that the children's names that appear both on the tables and in the text are pseudonyms in order to protect the identities of the children.

Table 2

Individual Performances on the Brigance CIBS-R (Glascoe, 1999) in Descending Order of Percent of Total Correct Responses

	Age in Months	Total Percent-age (%)	Total Raw Score	General Knowledge/ Language Skills	Gross Motor Skills	Grapho-motor/ Writing Skills	Reading Skills	Math Skills
Jonah	52	78	226/290	73/92	11/15	50/65	48/52	44/66
Emily <sup>a</sup>	48	69	184/268	69/95	12/15	12/41	52/52	39/65
Paul	53	67	184/273	70/95	10/14	17/53	44/52	43/69
Haley	51	64	172/268	71/85	8/15	25/61	46/52	22/55
Michael	48	62	168/274	66/94	8/15	4/43 <sup>b</sup>	39/52	36/64
Mary <sup>c</sup>	47	59	159/269	68/95	12/15	4/43 <sup>b</sup>	39/52	56/64
Joseph	57	59	160/274	70/95	15/15	21/51	11/52 <sup>b</sup>	43/61
Andrew	56	53	132/249	56/83	11/15	20/53	16/52	29/46 <sup>b</sup>
Laura <sup>a,c</sup>	46	37	84/225	50/91	5/13	1/37	1/26	5/32

*Note.* <sup>a</sup> Child who is ESL. <sup>b</sup> Child refused to continue. <sup>c</sup> Child in the 3-year-old class.

### Attachment Representations

The videotapes of the children's story completions were coded by two coders: the investigator and a second coder. After being trained to an overall interrater reliability of 78%, calculated as percent of agreement, the two coders viewed each child's videotaped story-

completions separately and coded the instances of 3 attachment representations of interest: caregiving, parental authority, and proximity-seeking. Overall story coherence was also assessed.

The investigator watched the videotapes and transcribed into a word processing document both the children's behavioral and oral responses and the investigator's prompts and responses. A set of the printed transcripts of each child's videotapes were prepared for each of the two coders. The two coders each watched the videotapes separately and, using the previously-prepared transcripts, coded the transcripts in the following manner. When a child's statement or behavior reflected an attachment representation of interest, one of the following codes was written next to the statement or behavior: 1 for caregiving, 2 for parental authority, and 3 for proximity-seeking. Story coherence was coded at the end of each story, using a 3-point, Likert-type scale, in which 1 indicated the lowest amount of story coherence and 3 indicated the highest amount of story coherence. If the central issue of the story was addressed by the child's responses or behaviors, the coder indicated this with a 3. If the central issue of the story was vaguely addressed, or the child's responses or behaviors lacked coherence, the coder indicated this with a 2. If the central issue of the story was never addressed, especially if the coder perceived any part of the child's responses or behaviors as frightening, for example if there was any violence, the coder indicated this with a 1.

There were only a few instances in which parental authority representations were observed, and that particular attachment representation of interest was therefore omitted from further analysis. The interrater reliability, calculated as percent of agreement, for story coherence representations was unacceptably low, 50%, and therefore was also omitted from further analysis. The interrater reliabilities for the remaining two attachment representations are as follows: 74% for caregiving and 68% for proximity-seeking. For the purpose of calculating the

occurrence of the attachment representations for each child in each story completion, a caregiving (C) or proximity-seeking (PS) representation that was identified in a transcript by only one of the coders was considered to have occurred. The use of the codes in such a manner accounts for the likelihood that a behavior may not have been seen by one of the coders during the coding process. It assumes that if a behavior was seen by one of the coders during the coding process, the behavior did, in fact, denote the occurrence of that attachment representation in that particular story. In those cases in which the second coder had identified an attachment representation that was not originally identified by the principle investigator, or vice versa, the principle investigator reexamined the individual transcript and confirmed the occurrence of that particular attachment representation.

In order to compare the children's readiness scores with their attachment representations, the children's individual scores for the general knowledge/language skills (GK/L) subscale, rather than the total scores, were chosen for the following reasons: the GK/L subscale contains the largest number of possible items (95), and the nature of the items in the subscale is such that many types of subjects are covered within the one subscale. For example, the subscale includes questions that assess the child's ability to locate body parts, the ability to count as high as possible, the ability to draw a person, and the knowledge of his home address.

## CHAPTER 4

### RESULTS

#### Analysis

##### **School Readiness**

The individual children's CIBS-R scores are presented in Table 2 in descending order by each child's percentage of total correct scores. As can be seen in Table 2, the total number of items that were administered ranged from a low of 225 to a high of 290. The total percentage of correct responses to the administered items ranged widely, from a low of 37% to a high of 78%. The children, as a whole, obtained the highest average score on the GK/L subscale. Moreover, in the graphomotor/writing skills subscale, there were two instances in which a child refused to continue; the children obtained the lowest average score in this subscale. One child, Andrew, refused to continue the math skills subscale.

The range of the number of GK/L items that were administered was not large, ranging from 83 to the maximum of 95. The percentage of correct GK/L responses, however, ranged from 62% (Laura, a child who is ESL and is in the 3-year-old class) to 84% (Haley, a child in the 4-year-old class). Of the nine children, only Haley had a percentage correct above 80% on the GK/L subscale. Six children had a percentage correct in the 70's and two children in the low 60's.

##### **Attachment Representations**

See Table 3 for examples from the children's transcripts of caregiving representations and Table 4 for examples from the children's transcripts of proximity-seeking representations. At least one child's example from each story is provided. See Table 5 for the presence and absence of caregiving and proximity-seeking representations of the children in each of the stories. It is important to note that the indications of attachment representations do not denote frequency, that

is, even if a child displayed more than one instance of a particular attachment representation within a single story, it is indicated by only one ‘C’ (for caregiving) or one ‘PS’ (for proximity-seeking) in Table 5. As can be seen in Table 5, all 9 children displayed at least one caregiving representation in the Spilled Juice story, and all but one child displayed at least one caregiving representation in the Hurt Knee story. Proximity-seeking behaviors were demonstrated most prevalently in the Departure and Reunion stories; eight of the nine children displayed at least one instance of proximity-seeking during these two stories. This is consistent with the previous literature that argues that some children’s attachment representations, in particular the protesting of initial separation and the attempts to reconnect after being separated, can best be captured during the Departure and Reunion story completions (Kennedy & Kennedy 2004; Page & Bretherton, 2001; Solomon & George, 1999). It is particularly interesting to note the sum of Haley’s representations compared with those of Paul, Joseph, Michael, and Andrew. Whereas Haley displayed 11 instances of the two attachment representations during the 6 story completions, Paul, Joseph, Michael, and Andrew each displayed only 4, and Andrew, in fact, displayed no instances of proximity-seeking behaviors during any of the story completions.

Table 3

Examples of Caregiving Representations From Selected Children’s Transcripts

<u>Story Stem</u>	<u>Child’s Quote/Behavior</u>
Spilled Juice	
Paul	“Then the Daddy goes and fixes some more”
Emily	“The mommy and dad says, ‘It’s ok, we can clean it up.’”
Michael	“Then they get more food then, then so, so John doesn’t spill it like he gets a top and put it on there ... it was locked on there.”

table, cont’d

### Hurt Knee

Haley “And then she gets a bobo ... and then Papa puts a band-aid on it.”

Emily “The mommy says, ‘It’s ok, I’ll put a band-aid on it.’”

Jonah “And then ... they give him a band-aid ... it’s the mama bear.”

### Monster

Mary “[Father says,] ‘There’s a monster in your bed, then I’m gonna get it.’”

Paul “Then the daddy gets a knife and cuts the monster up.”

### Departure

Haley “... and then she [grandma] puts them to bed”

Mary “Then, then Grandma says ... ‘You’re gonna sleep with me.’ Then they lay down together.”

### Reunion

Michael “Then they go to sleep in their beds ... they went to get some breakfast.”

### Snuggly

Jonah “And then ... teacher goes and get and gets a new one.”

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### Table 4

#### Examples of Proximity-Seeking Representations From Selected Children’s Transcripts

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##### Story Stem

##### Child’s Quote/Behavior

### Spilled Juice

Haley “And then sister says sorry.”

### Hurt Knee

Mary “Mama, can you please put a band-aid on my knee? I hurt my knee.”

table cont’d

Monster

Mary “And then she runs to her dad, and she says, ‘Come on, Dad, I need you.’”

Jonah “... And everyone was was happy to see him awake again.”

Departure

Emily “And then Susan, and then they ... miss it ... their mommy and daddy.”

Joseph “Then they come back.”

Reunion

Haley [Gasps and takes mother and father out of the car]

Michael “Oh, they uh, look at them and say, ‘You’re back, You’re back.’”

Laura “[runs child to the car] she misses mommy ... gonna give her a hug”

Snuggly

Michael “... so the dad came and found it.”

Haley “Then she [teacher] goes, ‘oh no it’s gone?’ [brings child to teacher]”

Table 5

The Children’s Attachment Representations in the Story-Stem Completions and Their CIBS-R General Knowledge/Language (GK/L) Subscale Scores

	Story Completions							GK/L Subscale	
	Spill	Hurt	Monster	Snuggly	Departure	Reunion	Sum	Raw Score	Percent-age (%)
Haley	C PS	C PS	C PS	C PS	PS	C PS	11	71/85	84
Mary <sup>a</sup>	C	CPS	C PS	C	C PS	PS	9	68/95	72
Jonah	C	C	C PS	C	C	C PS	8	73/92	79

table, cont’d

Laura	C	C	C	C PS	PS	PS	7	50/91	62
<sup>a,b</sup>									
Emily <sup>b</sup>	C	C	C		PS	C PS	6	69/95	73
Paul	C	C		C	PS		4	70/95	74
Joseph	C	C	C		PS		4	70/95	74
Michael	C			C PS		PS	4	66/94	70
Andrew	C	C	C	C			4	56/83	63

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*Note.* C = caregiving representation. PS = proximity-seeking representation.

<sup>a</sup> Student in the 3-year-old class. <sup>b</sup> ESL Student.

It is also interesting to compare the differences in the Departure and Reunion story completions between Andrew's (age 56 months; see Appendix B-2 for his complete transcript) responses and Haley's (age 51 months; see Appendix B-5 for her complete transcript) responses. In the Departure story, after the investigator removed her hands and said, "Show me what happens next," Andrew's response was, "... and then some soldiers kill them ..." (no attachment representation). Haley's response to the same story stem was, "... now the mommy and daddy come home ..." (proximity-seeking representation). In the Reunion story, after the investigator removed her hands and said, "Show me what happens next," Andrew's response was, "Um, they jump out of the car, but it's too late; they jump into the sea, 'Ah,' ... wow that was cool ... now we're done" (no attachment representation). Haley's response to the same story stem was that she gasped and grabbed the mother and father out of the car (proximity-seeking representation). She later said, "then the mama holds the sister" (proximity-seeking representation), and at the end of the story, she purposefully gathered all four of the figurines together and looked at the investigator with a smile. The extreme differences that are displayed by Haley and Andrew are

found not only in the comparison of their total number of attachment representations but also in the comparison of their performances on the GK/L subscale.

### **Comparison of School Readiness and Attachment Representations**

Table 5 shows a comparison of each child's caregiving and proximity-seeking representations with his performance on the GK/L subscale of the Brigance CIBS-R. The children are ranked in descending order by the total number of attachment representations that were observed. Notice again, that Haley, who demonstrated the highest number of caregiving and proximity-seeking representations (11), also scored the highest percentage of correct scores on the GK/L subscale (84%), while Andrew, who demonstrated the lowest number of caregiving and proximity-seeking representations (4), also scored the lowest percentage of correct scores on the GK/L subscale (63%).

A visual inspection of the data that is reported in Table 5 indicated that there was an absence of concordance between the children's sums of attachment representations and their percentage scores on the GK/L subscale. The Spearman's rank correlation coefficient,  $r_{ranks}$ , was .35 ( $p = .36$ ). The absence of concordance is due primarily to the scores of the two children who were in the 3-year-old class, Mary and Laura, whose scores on the GK/L subscale rank sixth and ninth, respectively; their attachment representation sums, however, rank second and fourth, respectively. The Brigance CIBS-R was designed for children in kindergarten and above, and Mary and Laura's lower level of school experience, compared to the 4-year-olds who were in their second year at the preschool, may have compromised their performances on the Brigance CIBS-R. Therefore, a Spearman's rank correlation coefficient,  $r_{ranks}$ , between the total number of attachment representations and their percent correct GK/L scores was calculated omitting Mary and Laura's scores ( $n = 7$ ). The  $r_{ranks}$  for the 7 children who were in the 4-year-old class was .72,  $p = .07$ , which approaches statistical significance.

A third child who contributed to the absence of concordance is Emily. Although Emily is a child in the 4-year-old class, her primary language is Arabic, and this could have accounted for her GK/L subscale score ranking fifth of the nine children (the rank order of her sum of attachment representations was third). Table 6 presents the children's rank order of the sums of attachment representations and the GK/L percentage correct scores of the children in the 4-year-old class, primarily English speaking; that is, Table 6 presents the children's rank orders when they are equated for school experience and primary language. The  $r_{ranks}$  for the 6 children's rank order was .86,  $p = .03$ .

Table 6

The Rank Order of the Sums of Attachment Representations and the GK/L Percentage Correct Scores of the 4-Year-Old Primarily English Speaking Children (n=6)

	<u>Sum of Attachment Representation</u>	<u>GK/L Percent Correct Score</u>
Haley	11	84
Jonah	8	79
Paul	4	74
Joseph	4	74
Michael	4	70
Andrew	4	63

$r_{ranks} = .86, p = .03$

Laura is a child who is of particular interest for several reasons. As mentioned above, Laura is a child who is ESL and is in the 3-yr-old class. Although Laura scored the lowest percent correct of the 9 children on the GK/L subscale (62), she displayed 7 total attachment representations, which places her in the upper half when compared to the other nine children. In particular, she displayed proximity-seeking behaviors in both the Departure and Reunion stories

(see Appendix B-1 for her complete transcripts). Although Laura's first language is Italian, which may have impacted her performance on the Brigance CIBS-R, she was able to display disproportionately more attachment representations through her manipulation of the figurines. For example, in the Reunion story Laura ran the child figurine to the car to meet the mother and father figurines, and this non-verbal behavior was coded as a proximity-seeking representation. Regardless of her very young age, her lack of school experience and her language barrier, Laura demonstrated a total number of attachment representations that outnumbered five other children, all of whom were in the 4-year-old class.

## CHAPTER 5

### DISCUSSION

The study was conducted to explore the possibility of a connection between young children's attachment histories and their performance on the types of tests that are routinely used to determine the child's readiness for formal schooling. The attachment literature (e.g. Ainsworth, 1973; Belsky & Pensky, 1988; Bowlby, 1969/1982) argue that children's attachment histories are reflected in their different IWM's, and that the IWM is activated when children experience stress; that is, children with different IWM's react differently in stressful situations (e.g. Belsky, 2002; Laible and Thompson, 2002). Later research (e.g. Fleege, et al, 1992) found that children experience stress during standardized testing situations. The study examined the possibility of a link between attachment histories and standardized testing, one that is mediated by children's IWM's of self and others. The possible link was explored by observing young children's perceptions of close relationships (i.e., their attachment representations) seen in their story completions and by comparing the differences among the children's perceptions with their differences in their performances on a standardized test. In the current study, the varying responses of the children's story completions during the NSST show evidence of a connection with their different possible attachment classifications that are described in the Strange Situation in the review of literature (Ainsworth, 1973; Main & Solomon, 1990). For the purposes of the interpretation of results, it is assumed that the different attachment representations that were demonstrated by the children suggest the different attachment qualities that can logically fall into one of the four categories of attachment classifications, and consequently of the children in the study, that the resulting behaviors mirror the research that describes children's attachment classification in relation to school behaviors (Arend's study (as cited in Srouffe, Egeland, Carlson, & Collins, 2005); Belsky, 2002; Laible & Thompson, 2002). The different attachment

qualities of the children are assumed to reflect the four attachment classifications, even though they do not provide evidence of it. This is one of the reasons that the four attachment classifications, as well as the behaviors that are associated with them, were so thoroughly described in the review of literature.

The results of the study showed that when the rank order of the children's attachment representations were compared with the rank order of their performances on the most representational portion of a standardized test, a connection did seem to exist. The strongest connection was shown within the cohort of children who were in the 4-year-old class and who spoke English as a primary language. Four of the nine children who demonstrated an impoverished number of attachment representations, which suggests insecure attachments, also obtained low GK/L scores. Two other children, Haley and Jonah, who demonstrated the two highest numbers of attachment representations, which suggests secure attachments, also obtained the two highest GK/L scores. This could provide evidence that children's attachment histories are related to how they perform on standardized tests.

This also suggests that if children are being kept out of school because of low test scores, then an extra year of development, "the gift of time," may not provide them with the cognitive maturity that is assumed to be lacking. Children's attachments and representations have been shown to be relatively stable over time if the caregiving environment also remains stable (Lamb, Thompson, Gardner, & Charnov, 1985). Therefore, if children's performances on the standardized tests are associated with their coping styles and their emotional security (i.e., their IWM's) rather than with cognitive maturity, another year of out-of-school experience would not help to increase their performances on standardized tests.

In the case of Laura, who is a 3-year-old and whose second language is English, it was found that she was able to demonstrate her perceptions of close relationships by manipulating the

figurines during her story completions, and therefore her attachment representations rank was high although her test performance rank was low. Perhaps she could have scored higher on the GK/L subscale had she spoken English as a first language, or if she had had another year of experience in the preschool, as did her 4-year-old counterparts.

The results of the study seem to suggest that children's perceptions of close relationships, and the effects of those perceptions on their behaviors under stress, are related to their performances on standardized testing that is used to assess school readiness. It may be possible, then, that if we sought to learn more about children's perceptions of relationships, we could gain more insight into the differences in children's scores on school readiness tests. It may be that emotionally secure children have greater opportunities for cognitive skill development because they are more likely to be able to focus in a standardized testing situation. Perhaps it is more than cognitive ability or developmental milestones.

#### Limitations and Clinical Implications

The study could be improved in many ways, primarily because the low number of participants did not allow for generalizability. However, the low number did allow for a more in depth analysis of the individual children's answers to both the measures of attachment representations and the school readiness tests. Although a Spearman's rank correlation coefficient was calculated, the results of the study are not statistically powerful. The study could also be improved by using a standardized test that is written for children who are younger than kindergarteners. Even though the Brigance CIBS-R was chosen for its ecological validity, it was written for children who are in kindergarten.

Also, in attempting to examine children's attachment relationships, the NSST does not provide a way to classify attachment (i.e., to assign attachment classifications). It is designed to observe their perceptions of close relationships through spontaneous story completions. The use

of attachment classifications could have allowed for a more direct connection to the research that discusses attachment classifications in relation to the many concepts discussed in the literature that was used in the study. However, the ability to assign attachment classifications still primarily comes from the Strange Situation (Ainsworth, 1973), which is used with children who are up to 24 months of age. It was thought that the use of verbal language in the NSST would be a better fit to observe attachment representations in older children than the use of the nonverbal language in the Strange Situation.

According to the findings of the study, it seems that if teachers could learn about their students' attachment histories, they could become more aware of how to treat the children of various attachment qualities. Belsky's research (2002) argued that students' attachment qualities seemed to predict the ways that they were treated by their teachers. If teachers could understand and respond accordingly to their students' different attachment qualities, they might positively affect a young child's ability to learn.

Despite the limitations of the study, there seems to be justification to further explore the questions of what contributes to children's performances on standardized tests, and the use of the tests to determine school readiness.

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APPENDIX A  
SEVEN STORY STEMS

### *Description of Figures and Processes*

In the study, a bear family, instead of a human family, is used for the enactment of story-telling. The family consists of mother, older sibling, younger sibling, father, grandmother, and teacher. The sibling figures used in the stories are always of the same gender as the child, in order to encourage the child's identification with the child figures.

For each of the stories in the protocol, there is a central problem or issue that the child is expected to address (e.g., in Hurt Knee, the child is expected to address the problem of the child's hurt knee). A given child's response to a story is evaluated on the basis of how it compares with the expected response. Expected responses have been compiled through observations of children's responses to this story-telling task in several different samples. The "prompt" that appears in the story texts below provides the appropriate language for redirecting the child to the story's central problem when he does not spontaneously address it. It is important for the investigator to keep the central problem for each story in mind to ensure that an opportunity will always be given to the child to address the issue.

The text below represents the verbatim commentary of the investigator (I). Text which appears in quotes is attributed to one of the bear figures. Directions appear in parentheses.

*Introduction of Bear Family*

I: I have a bear family. This is the mom. (begin bringing out the family one member at a time, as they are named.) This is the dad. And here's the older brother/sister, and his/her name is Paul/Jane. And here's the younger brother/sister and his/her name is John/Susan. And here's the grandma.

Now, let's see if you remember who all these people are. Who's this? (point to each figure in turn: mother, father, older sibling, younger sibling, grandmother, teacher). Good!

And what I like to do with the bear family is tell stories. This how it works: I'll start a story about them and you can finish it any way you want, ok?

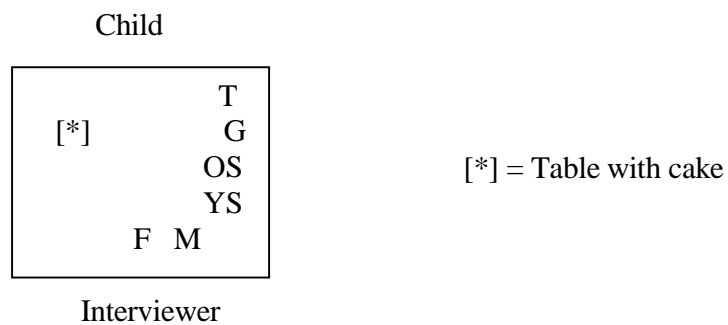
Let me show you what we have for the first one.

*Warm-up: Birthday Party*

This story serves as an introduction and warm-up; it is not for coding.

Props: table, birthday cake

Characters: Teacher (T), Grandma (G), Older Sibling (OS), Younger Sibling (YS), Mother (M), Father (F)



I: For this story we'll need the table. And we'll need this. What do you think this is? (bring out birthday cake and show it to the child). Right! And here's how this story goes: The mom has been baking a beautiful birthday cake in the kitchen all day. And she calls out, "Come on, everybody, let's have a birthday party!" [Remove hand from figurines; place in lap, look at child.]

Show me and tell me what happens.

Encourage the child to play with the figures and invent a story. It may be necessary for the interviewer to provide some direction for a story if the child is reluctant to get started. Demonstrate how the figures can play, talk and move about. Be sure to demonstrate talking by moving a character as you have it talk. The interviewer uses this motion in all the stories.

Prompts:

What do you think they do at the party?

Can you show me how they do that?

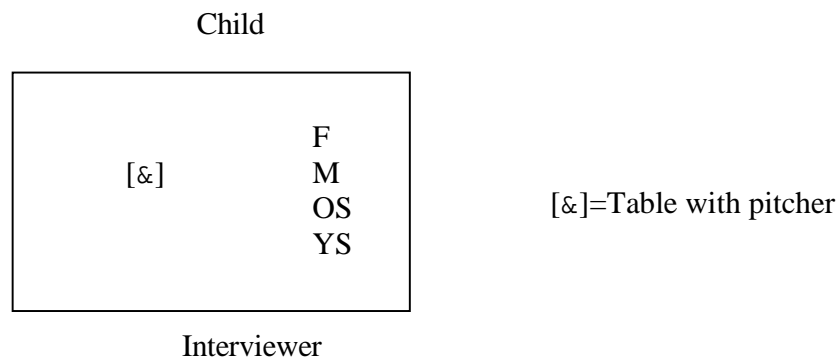
Transition:

I: Well, let's get ready for the next story. We're not going to need Grandma or Teacher for this story, so they'll go home. For this next story, we'll need the table again. And in this one, the family is going to have supper together. Can you put the family around the table to get them ready for supper? Thanks.

*Spilled Juice*

Props: table, pitcher

Characters: Mother (M), Father (F), Older Sibling (OS), Younger Sibling (YS)



I: And here's how this story goes: Here's our family sitting around the table, having supper. And little John/Susan reaches for some juice and, Uh Oh!, he/she spills the juice! (Make the younger sibling knock the juice off the table.) [Remove hand from figurines; place in lap, look at child.]

Show me and tell me what happens.

Prompts:

(If nothing is done about the spilled juice) What do they do about the spilled juice?

(If the subject responds to the question without acting the response out with the figures) Show me how they do that.

(If the subject is vague about who is performing an action) Who did that?

Transition:

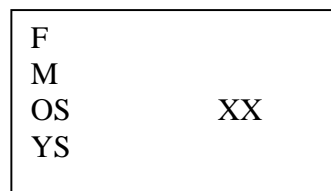
I: That was a good story, [child's name] (this reinforcement is provided for all stories). Let me show you what we have for the next one. For this one, we won't need the table or the cake. We will need this (bring out the felt/construction paper "grass"). I pretend this is the grass. And this (bring out the sponge "rock") is a rock, and this is the park.

*Hurt Knee*

Props: grass (green felt or construction paper), rock (sponge)

Characters: Mother (M), Father (F), Older Sibling (OS), Younger Sibling (OS)

Child



XX = rock on grass

Interviewer

I: Here's how this story goes: The family is going for a walk in the park. And little brother/sister John/Susan says, "Hey everybody! Watch me climb this high, high rock! Uh! Uh! (Investigator makes noises of exertion as the younger sibling climbs the rock; just before reaching the top of the rock, the younger sibling falls to the ground, equidistant from the positions of the father and the mother figures) Ah hah! (crying sound) I hurt my knee!" [Remove hand from figurines; place in lap, look at child.]

Show me and tell me what happens.

Prompt:

(If the injury to the child is not addressed) What do they do about his/her hurt knee?

Continue to clarify if actions or characters in the subject's representations are ambiguous.

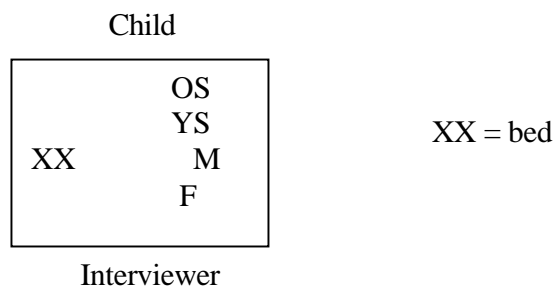
Transition:

I: That was a good story [child's name]! And for this next one, we won't need the grass or the rock but we will need this (bring out the bed); what do you think this is? Right!

*Monster in Bedroom*

Props: bed

Characters: Mother (M), Father (F), Older Sibling (OS), Younger Sibling (YS)



I: And here's how this story goes: The mom says to little Paul/Jane, "Paul/Jane, it's time for you to go up to bed." And brother/sister Paul/Jane says, "O.K., mom," So, Paul/Jane goes up to his/her room, and opens the door, and says, (with alarm) "Ah! There's a monster in my room! There's a monster in my room!" [Remove hand from figurines; place in lap, look at child.]

Show me and tell me what happens.

Prompt:

(If nothing is done to respond to the younger sibling's fear.) What do they do about what Paul/Jane said about the monster? (This language is chosen to avoid labeling the emotion for the child.)

Transition:

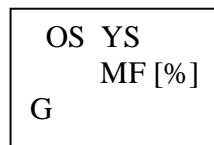
That was a good story, [child's name]. For this one, we won't need the bed, but we will need this (bring out the family car); what do you think this is? Right, it's a car. And we'll also need the grandma for this story. It looks like the mom is going to go on a trip.

*Departure*

Props: family car

Characters: Mother (M), Father (F), Grandma (G), Older Sibling (OS), Younger Sibling (YS)

Child



[ % ] = car

Interviewer

I: So, here's how this story goes: The mom says to Paul/Jane and John/Susan (turn mother to face the children), "Boys/Girls, we are leaving on my trip, now. We'll see you tomorrow; Grandma will stay with you." [Remove hand from figurines; place in lap, look at child.]

Show me and tell me what happens.

Interviewer should make sure that the child puts the parents in the car and makes them drive off.

Intervene only if the child does not make the car drive off. If the child puts the children in the car say: "No, they can't go on this trip." The requirements of this story are that parents go away and that the children do not accompany them. After the child (or if necessary, the interviewer) makes the car drive off, then the interviewer puts the car under the table, out of sight. If the child wants to retrieve the car, the interviewer replies: "No, they're not coming back yet."

I: And away they go! (as the car is moved under the table.)

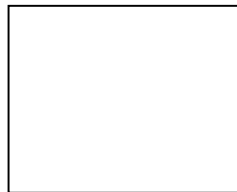
Show me what happens next.

*Reunion*

Props: car

Characters: Grandma (G), Older Sibling (OS), Younger Sibling (YS), Mother (M), Father (F)

Child



Figures will begin from where they were in the last story.

Interviewer

I: You know what? It's the next day and Grandma looks out the window and she says, "Girls/Boys, Mom and Dad are home from their trip." (Bring the car with the passenger(s) out from under the table, and set it on the table at a distance from the family). [Remove hand from figurines; place in lap, look at child.]

Show me and tell me what happens.

Prompts:

(If child does not spontaneously take the figures out of the car) What do they do now that the Mom and Dad are home?

Transition:

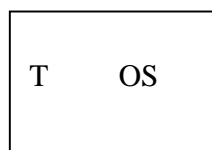
We have just one more story, [child's name]

*Missing Snuggly*

Props: none

Characters: Teacher (T) and Older Sibling (OS)

Child



Interviewer

I: For this next story, we are going to need Paul/ Jane, and do you remember who this is

(Investigator brings out the teacher)? Right! This is the teacher bear!

I: This is how this story goes. The teacher says, “Ok, class, it’s time for nap. Everybody get your blankets and your pillows and lie down.” And Paul/Jane runs to his/her cubby, looks around (manipulate OS over to show him/her looking for something), and says, “Oh no, my snuggly is missing!” Show me and tell me what happens next. [Remove hand from figurines; place in lap, look at child.]

Show me and tell me what happens.

Once the child is finished with the story, the interviewer says, “Well, that’s the end of all of our stories. Thank you for helping me, [child’s name].”

APPENDIX B  
STORY COMPLETION TRANSCRIPTS

B-1: Laura's Story Completion Transcripts

*Laura: Spilled Juice*

C: Walks YS over from table

I: What's happening?

C: More juice

I: (Repeats) who gets more juice?

C: Me

I: You? Which bear gets more juice?

C: (walks F around)

I: Daddy bear?

C: The mama (grabs M)

I: The mama, ok...anything else?

C: Yeh

I: What?

C: The baby

I: The baby what?

C: That one

I: What about her?

C: She drinks

I: (Repeats) is that the end?

C: Yeh

*Laura: Hurt Knee*

C: A Band-Aid

W: (Repeats)

C: Gets a Band-Aid

I: (Repeats) then what?

C: Tries it

I: (Repeats)

C: Cross it

I: What? (C Repeats) cross it?

C: Yeh

I: Oh... anything else?

C: Yeh (hold YS on top of rock)

I: Does anything else happen, or is that the end of the story?

C: Not fall

I: (Repeats) good, Laura, is that the end of the story?

C: Yes

*Laura: Monster in Bedroom*

C: The baby...

I: The baby what?

C: The baby wants to get to sleep

I: (Repeats) what happens with the monster?

C: Mmm eats him

I: Who eats him?

C: The bears

I: The bears eat the monster?

C: (nods)

I: Which bear?  
C: The bears  
I: Which bear?  
C: (picks up M and walks around)  
I: Oh...does the mommy bear eat the monster?  
C: No  
I: No? Does Jane eat the monster?  
C: Yes (then picks up F)  
I: Does the daddy bear eat the monster?  
C: No  
I: Who eats the monster?  
C: This one  
I: This is Jane. Does Jane eat the monster?  
C: Yes  
I: Yeh, ok...does anything else happen?  
C: Yeh  
I: Show me and tell me.  
C: (Picks up YS and walks her around)  
I: What's happening? What is she doing?  
C: Fighting the monster  
I: What's she doing?  
C: Fighting the monster  
I: Fighting the monster, Susan's fighting the monster.

C: No, finding the monster

I: Oh, Susan's finding the monster... is that the end?

C: No, not yet

I: Not yet?

C: You forgot the chairs?

I: I forgot the chairs?

C: Yeh

I: Well they're in the bedroom and all they need is this bed... how does the story end? (repeats)

C: She sleeps (holding OS)

E: She sleeps. Is that the end?

C: No, not yet

I: Ok, well show me how the story ends, Laura.

C: Not the end now

I: I'm sorry what? Not the end now? Well show me how the story ends.

C: Mmm, first we do some... (I: what?) first we do some...

I: First we do some... first we do some what? Laura, show me how the story ends, because we have another story to do. So is that the end of this one?

C: No. This one

I: This one what?

C: This

I: The mom? What does she do?

C: Take a bath

I: (Repeats)... ok... then what?

C: She washed her clothes

I: (Repeats)... whose clothes?

C: She go take a bath (coughs)

I: Oh, I'm sorry you're coughing... ok is that the end?

C: No

I: Laura, show me how the story ends, baby.

C: She takes a bath

I: Susan takes a bath?

C: No her (YS) and the mama

I: The mom? Oh, so she takes ...

C: No, the baby

I: This is Susan

C: [Unintelligible]

I: What's happening?

C: She sleeps

I: She sleeps?

C: I'm finished

*Laura: Departure*

C: Ride it

I: Ride it?

C: The mama drives

I: The mama drives, then what?

C: The daddy goes to bed ... and the baby one goes

I: The baby will not go?

C: No, the baby one goes

I: The baby one goes, well this is a trip just for Mom and Dad. And Grandma is staying with them.

C: (Drives car away with YS and OS in the car)

I: So, so you need to make sure that it's just Mom and Dad in the car.

C: But they're in their seats

I: (Repeats) as a question) But you need to take them out of their seats, Laura, this is a trip just for Mom and Dad ... there we go, and they're with Grandma. Ok, now what? Now, how do t go on a trip?

C: Drive off

I: Drive off, ok, now tell me what happens?

C: They miss mommy and daddy

I: Who misses mommy and daddy?

C: The sisters

I: The sisters? So what happens?

C: They cry

I: They cry? Then what happens? What?

C: When they back

I: When are they gonna come back?

C: She goes and gets her toys

I: (Repeats)

C: Yeh, then they come back

I: Then they come back, is that they end of the story?

C: Yeh

*Laura: Reunion*

C: (Runs YS to the car) she misses mommy

I: (Repeat)

C: Yeh, and she's gonna give her a hug ...

I: (Repeats)

C: ... and the dad

I: (Repeats) All right ... then what?

C: Then they're gonna go for ...

I: They're gonna go for?

C: ... a ride

I: A ride, ooo

C: Then they're gonna leave and say bye bye to Grandma

E: (Repeats)

C: (Puts G in car) then they're leaving

I: They're leaving. Is that the end?

C: Yeh

*Laura: Missing Snuggly*

C: She lost it

I: She ... tell ... show me what she does?

C: Someone take it

I: Someone took it? So what does she do ... What does she do? That's ok, we'll, we'll clean that up later. So what happens?

C: She lost it

I: Jane lost it?

C: Yeh

I: So what does she do?

C: Put at home?

I: Who put it at home?

C: Her mama and dad

I: Her mama had put the snuggly at home ... so what does she (pointing to OS do)?

C: Go to Grandma's house

I: Mmm, so what happens here at school?

C: She found it, (walks OS over to T), she found it.

I: So what's happening here (points to T and OS)?

C: She found it... takes T and puts with OS

I: What's happening?

C: She's hugging

I: She's hugging the teacher?

C: Yeh

I: Is that the end of the story?

C: Yeh

## B-2: Andrew's Story Completion Transcripts

### *Andrew: Spilled Juice*

C: Uh, he spills all over the place, he cries

I: Then he cries?

C: Yeah

I: Then what happens?

C: They put him in the corner

I: They put him in the what?

C: Corner

I: In the corner?

C: (Nods) Yes

I: Can you show me and tell me how they put him in the corner?

C: I don't know how

I: You move the bears

C: I don't know how, I don't know how

I: Do they put him in the corner?

C: Yeah

I: Then, then take this one and put him in a corner.

C: (Puts YS over to side of table)

I: Ok, does anything else happen?

C: (Shakes his head)

I: Does anybody do anything about the spilled juice?

C: They clean it up ... and they

I: Who cleans it up?

C: This bear, this ... (Points to OS, M, and F)

I: Can you show them cleaning it up?

C: (OS, M, and F clean juice)

I: Does anything else happen?

C: Um, no

*Andrew: Hurt Knee*

C: They give him a band-aid

I: Can you show me?

C: (M puts band-aid on YS)

I: Does anything else happen?

C: (Shakes his head)

I: No? All right

*Andrew: Monster in Bedroom*

C: Uh (I: show me) he kills it

I: Who?

C: (Points to OS)

I: Big brother Paul?

C: Yeah, with his magic sword

I: (Repeats)

C: Then, then he goes to bed, do do do

*Andrew: Departure*

C: They jump in the car and they go off, do do do

I: Bye, then what happens?

C: Uh, some soldiers kill them. Oh boy

I: (Repeats)

C: Then ... then they put them ... [unintelligible] ... and they put, then they're alive again

I: Then they're alive again? Ok, so then what happens?

C: (Hurts himself while manipulating bears and says a series of the words “ouch” and “ouchy”)

C: (“I don’t know” gesture)

I: Is that the end of that story?

C: Yeah yeah

*Andrew: Reunion*

C: Um, they jump out of the car, but it’s too late; they jump into the sea ... Ahhh ... [swoosh noise] ...wow that was cool, ah ha ... um ... [unintelligible] now we’re done

I: That’s the end of that story?

C: (Nods)

*Andrew: Missing Snuggly*

C: Uh, the teacher finds it and gives it to him, and she ... she hits hit, and she hits her head

I: Does anything else happen?

C: Uh, no

B-3: Jonah’s Story Completion Transcripts

*Jonah: Spilled Juice*

C: And then and then ... he’s thirsty

I: Who’s thirsty?

C: The ... everyone

I: Everyone’s thirsty? Then what happens?

C: And then ... they go to get another pitcher of milk

I: Who does?

C: They all go

I: They all go? Can you show me how they all go ...

C: They all go get, they, they she (M) holds the pitcher of milk, and then she goes to the table and then she gets it

I: (Repeats) ... what about the spilled juice?

C: The spilled juice ... she cleans it up and she cleans it up with this guy

I: Who's this guy?

C: With all the guys ... with all of them. Um, she couldn't do it without them. With, she couldn't do it if she was all alone

I: (Repeats)

C: Yeah, she couldn't do it if, she could do it if Tyrone helped. If Tyrone and Paul, and big brother Paul would help

I: Oh, I see. Does anything else happen in that story?

C: And then they they they drink the pitcher of juice ...

I: (Repeats)

C: And .... it was really cool

I: (Repeats)

*Jonah: Hurt Knee*

C: And then ... they give him a band-aid

I: Who gives him a band-aid?

C: It's it's the mama bear

I: The mama bear gives him a band-aid?

C: And then he climbs it, and then ... and then, [exertion noises] he did it!

I: He did it

C: [Exertion noises] ... he did it

I: (Repeats)

C: He really can do it

I: (Repeats)

C: He can do it, just watch. How 'bout you try.

I: How 'bout I try? Ok. He did it

C: And now he isn't hurt ... and now (I interrupts with "Is that ... oop")

I: Is that the end of the story?

C: And ... no, there's more happens. But when, when he climbs up, and he, and he jumps up  
and he comes down. And he, and he slams

I: He slams?

C: And then, he says he slams in here

I: Oh no, and then what happened?

C: And then ... she gives him another band-aid

I: (Repeats)

C: And then he felt better

I: (Repeats)

C: And then ... the mama bear tries (M climbs the rock). She did it. And then ... big brother  
Paul tries ... but he did do it

I: He did do it

C: And then ... Papa bear tries, and he can do

I: And he can do it, the whole family can do it

C: And the grandma tried (holding M), and she did it. And she (repeats multiple times) and she,  
and Tyrone tries ..

I: That was a good story

C: Yeah that was ... we could have two more stories ...

*Jonah: Monster in Bedroom*

C: And then ... he runs.

I: He runs?

C: And then ... he tries to get away from him, but he, but he's, but he's following him.

I: Oh gosh, so then what happened?

C: And then, and then he runs and runs, but he, but the monster's getting out of breath

I: (Repeats)

C: Yeah, and then ... he goes in to bed. And then he wakes up and then he goes to sleep. And then he wakes up, he goes and and and says, 'good morning'

I: Says 'good morning' to who?

C: To everyone

I: To everyone, and then what?

C: And everyone was was happy to see him awake again

I: (Repeats), well that was a great story

C: What's this? What's this?

I: That is a pillow, and you showed me that when you used the bed and went to sleep. So that's the end of that story

C: How about we go ...

*Jonah: Departure*

C: And then he goes in the, in the car, and then he ... (F leaves without M)

I: But the mom and dad are going on the trip

C: (Puts M in the car with F)

C: And then ... he goes on a trip

I: On a trip ... oh, there they go- bye! And then what happens?

C: And then ... (I: show me) And then ... grandma bear teaches them to stand up.

I: (Repeats) show me

C: And then she says, "Do what I do"

I: (Repeats)

C: And then ... Tyrone tries, but, but he did it.

I: But he did it? Oh good. That was a good story ...

*Jonah: Reunion*

C: And then ... they come out of the car, and then ... they say

M and F: Did you have fun?

C: And then ... they said yes. And then ... somebody else was driving the car

I: There they go

C: And then it comes back

I: (Repeats)

C: And it comes back, and then ... then Paul, Paul was bigger than the [unintelligible]

I: Paul was bigger than then [unintelligible] ...

C: No he *is* bigger

I: Oh, he is bigger? Ok

C: And ... now he's a dog

I: He's a dog?

C: Yeah, (I: ok) and he goes, and then he drives away

I: He drives away

C: It's cool that ... why did he fall down?

W: Those do sometimes. That's just the way that they were made ... well that was a good story,  
Jonah.

*Jonah: Missing Snuggly*

C: And then ... teacher goes and get and gets a new one.

I: (Repeats)

C: And then she brings it to him

I: Oh, I see

C: And he ... and says that he really like it

I: (Repeats)

C: Then the teacher tells John to tell him that its time to ... if they raise their hands they can  
come up ...

I: (Repeats)

C: And then ...we're gonna play cards

I: Uh huh

C: And then the teacher comes and .... (T brings something)

I: Well that was a good story, Jonah

B-4: Michael's Story Completion Transcripts

*Michael: Spilled Juice*

C: Ok, they wipe it up

I: Who wipes it up?

C: Uh ... (pats M bear) that one

I: (Whispers) the mama bear? Can you show her wiping it up?

C: They just lick it up

I: (Repeats)

C: Yeh [Slurp sounds]

I: Then what happens?

C: Uh, then they put, this up. And they get some more juice.

I: Who gets more juice?

C: Uh ... the (pats F bear) Daddy bear

I: Oh. Anything else?

C: Yes ... uh ... uh well like, then they get more food then, then so, so John doesn't spill it like he get a top and put it on there. And they, and he knocks it down (I: oh) but it didn't spill. It was locked on there

I: Oh, cool

C: So they had a hole inside the top so they could drink it

I: That's a great story. Is that the end of the story?

C: Uh ... not yet

I: Oh, how does the story end?

C: Uh ... first he crawls under the table. And he just found a gumball ...

I: (Repeats)

C: That Goldilocks left ... left her gumball under the table

I: Well that was a great story

*Michael: Hurt Knee*

C: Then he tries, then he tries to jump and get on the rock

I: Ooh. Does anybody do anything about the hurt knee?

C: They get a band-aid

I: Who gets a band-aid?

C: Uh ... the brother gives him a band-aid

I: That was a great story

*Michael: Monster in Bedroom*

C: Then he started to go to the closet and get a stick to break it apart. He had a hook on a stick and he flung it into the monster.

I: Can you show me how he does that?

C: [Flinging sound]

I: Wow. Anything else?

C: Then he just went to sleep. Then he got up and talk, like, he was like.

OS: Oh know ... AHHH there's a bear in here! Actually that's my friend

I: Anything else?

C: yes like, uh ... is there another story?

I: Mm hmm. There is. Are you through with this one?

C: Yeh

*Michael: Departure*

C: Oh. They walk to the car, get in there, and go on a trip. [Car sounds]. And actually, then they had a flat tire. That's how... how they had a flat tire fell down

I: Oh goodness. Does anything happen at the house? 'Cause I'm gonna make this car drive away. Can you make them drive away for me? Because they're going on a trip overnight. [C: car Noises]. Thank you. Now what happens at the house?

C: They wanted to play. They went to play for a few nights. [noises] Ow. Then they play "Owie Owie Owie"

I: Oh. Show me how they play Owie Owie Owie

C: They step on a thumbtack and go, "Owie Owie Owie"

I: (Repeats)

C: Like a pretend one

I: Oh, ok

YS: [Thumbtack sound] "Owie Owie Owie." Then the brother bear ...

OS: [Thumbtack sound] "Owie Owie Owie." Here comes the grandma bear

G: [Thumbtack sound] "Owie Owie Owie"

I: Is that the end of the story?

C: Yes

*Michael: Reunion*

C: Oh, they uh, look at them and say ...

OS and YS: You're back, You're back. Then they go to sleep in their beds

I: Can you show me?

C: They went to lay down and go to sleep. And the one, and the grandma one spend the night with them. That's her bed. And then she said, she said

G: Morning time

C: And they said, and they stretched up, and they went to get some breakfast. They got porridge. They ate it all up. So, they were so full that, that, they, then [coughs] ... these guys are like out of the car. And they got up. Then they ... then they go like this (stands M and F up). And that's the end

*Michael: Missing Snuggly*

C: Then they, they looked from up in the other one. And they just found a little mouse. (I: show me) He broke it up and ate it

I: Can you show me what happens?

C: He climbed up the ladder and falled. So they called the mama bear and the daddy bear ...  
fell.

I: They called the daddy bear

C: And they, and he said, "I'll be on my way." And then he's here. Now here

I: And then what?

C: And then he find it, and he found it!

I: Found what?

C: It was under the sink!

I: What was under the sink?

C: The snuggly

I: The snuggly ... so the dad came and found it

C: Well, it's starting togeth ... a little cold. And all the windows were up. But who just pulled them up? Then he was like "pff pff" (OS to M)

I: Is that the end of that story?

C: Oh yeah.

#### B-5: Haley's Story Completion Transcripts

##### *Haley: Spilled Juice*

C: And then papa and mama get really angry (smiles)

I: Show me what happens when they get angry

C: Then they wipe it up

I: Who wipes it up?

C: Mama, sister, and dad

I: Can you show me how they wipe it up?

F: (Wipes)

C: (Wipes)

M: (Wipes)

C: All finished

C: And then sister says sorry

I: (Repeats)... does anything else happen?

C: And then they go somewhere, but someone, but she's really little so papa has to drive and little sister has to sit in the back 'cause she's much much bigger. Papa drives. Mama sits  
(C places siblings behind M and F)

I: The end?

C: (nods)

I: All right ...

*Haley: Hurt Knee*

C: And then she gets a bobo

I: (Repeats) ... and then what?

C: And then Papa puts a band-aid on it

F: (Puts band-aid on YS)

I: (Repeats) ... and then what?

C: And then mama says, and then daddy says

F: Let's go home

I: (Repeats)

F: (Holds YS and walks away)

C: And then sister and mama get to stay, but she's she never fell down and she just jumps and

she doesn't hurt herself. Then they all go home.

I: Is that the end of the story?

C: (Nods)

*Haley: Monster in Bedroom*

C: And then she calls all of her family of her family ...

F, YS, and M all come to bedroom

C: And then they [all] say "all it is is a rocking chair ..."

I: (Repeats)

C: And they have to both go to bed (places OS and YS in same bed)

I: (Repeats)

C: They're falling

C: And then it's morning

I: (Repeats)

C: And then what they do is ... mama has to ...

M: (Kisses OS)

C: ... Mama has to go somewhere

I: (Repeats)

C: Her, her, and her (Grabs F) ... they all go. And then what they do is just stand in a line.

Whoa

I: They stand in a line

C: This one, this one, and this one ... (all four are in a line) ... [unintelligible] ... the end

*Haley: Departure*

C: And then they get in the car and papa drives

I: So they leave?

C: Yeah ... (playing with G)

I: Can you show them leaving?

C: Yeah (drives the car away)

I: Now what happens?

C: And then grandma says

G: Bed time

C: And then she puts them to bed, and then mommy and daddy are home!

I: Oh, I see, but this is a trip overnight

C: Then grandma needs to take off her glasses. And then she has to wear them for one minute so she can ...

I: She has to what?

C: She has to wear them for one minute so she can see

C: One minute, ok

C: And then puts them to sleep and then grandma leaves the house and she's gone.

I: Oh no and then what?

C: And then sister goes to find her and then she finds her, and then they come home.

I: (Repeats)... is that the end of the story?

C: Yeah and then now the mommy and the daddy come home

I: Well this is what happens at the beginning of this next story

*Haley: Reunion*

C: (Before the statement of "show me what happens") Gasps and takes M and F out of the car with one hand while holding YS and OS in the other hand

I: Show me what happens

C: And the then mama holds sister (OS); and then they all go; and then grandma goes back home.

C: Drives the car around and then takes all 4 bears out of the car and places them down together (purposefully gathers them one last time)

C: The end

*Haley: Missing Snuggly*

C: Then she goes

T: 'Oh no it's gone?' (brings the YS to T)

C: And she says

OS: 'yeah'

C: And then they and then they look and it's gone? And then (T and OS walking together) they ... it's gone? And then something happens and then they walk (T and OS walking together). Teacher has to hold her hand so she won't get hit by a car

I: Oh

C: And then they walked and then they fell

I: (Repeats)

C: And then got up quick before they fell. And then they went back and then she snuggled up

OS: (Lies down)

C: And then teacher did ...she (whispering) walked out really quietly

I: (Repeats) in a whisper

B-6: Paul's Story Completion Transcripts

*Paul: Spilled Juice*

C: Then the Daddy goes and fixes some more ... (F fixes more and brings it back to the table)

C: Then he grabs the juice and he drinks it ... (Takes the cup from the table and puts in on the

“ground”) and then the cup breaks

F or M : Oh no our special anniversary cup broke, how will we get another one?

I: our special anniversary cup broke?

C: yeah

I: And then what?

C: (Possibly in the voice of M or F) then we have to, now we have to throw it away

I: Ok, throw it away. Then what?

C: Now we all have to go to sleep. These go, they get to drink. (First picks up OS and YS then M and F). He (F) got the drink. He had to go the bathroom [makes sounds of going to the bathroom]

C: (To I) You like to keep his pants on?

I: Yes, I do, thank you

C: Now the story is, the end

I: The end

C: Now is there another story?

*Paul: Hurt Knee*

C: [Repeats the crying sound before stem is finished]

YS: Then he got up and then I fell again and then I got up and I fell again. Brother Paul gives me my baby bed.

C: (Puts YS down, gets OS and walks him to the rock and climbs him up the rock)

OS: Oh that was not too hard ... wup (as he jumps off the rock). That wasn't hard at all (F picks up the rock) [unintelligible speech at first] This foolish rock

I: Foolish rock?

C: This, This rock, is this actually a sponge?

I: Yes, but we're pretending it's a rock in our story

C: Then Paul throws the rock

I: Oh goodness, then what happens

C: Then they make it into furniture, then, can you get me that table?

I: Actually, let's see how you can finish the story with what we have here

C: So Paul (using F figure) gets on the, he got a knife and cut the rock. Got a knife and he broke the rock ... both the rocks. The end

*Paul: Monster in Bedroom*

C: (Trying to use figure) Then Paul, then the daddy gets a knife and cuts the monster up

I: (Repeats)

C: And then he puts him in the garbage can

I: (Repeats)

C: Then Paul goes to bed

I: (Repeats), is that the end of the story?

C: And then he wakes up in the morning and he says

OS: Ah the whole house is gone, I'm in the forest! I want to go outside

C: Is this really a napkin?

I: Yes, but we're pretending it's a pillow

C: The end

*Paul: Departure*

C: (Puts OS and YS in the car) Then the children hop on board and Paul drives away

I: Oh Paul drives away? But this is a story for our *parents* to go on a trip overnight and the children are not going

C: (Removes OS and YS and puts M and M in the car)

C: Then the whole family decides to go ...

I: But this is a trip for just the mommy and daddy bear and grandma will stay with you

C: Before they leave, then Paul, Dad's pants fall off and they left (drives them away).

I: So then what happens?

C: Then they get out of the car ... [unintelligible] ... and he says

F: Ah your pants are wet and you pee peed

I: (Repeats)

F: And you pee peed on them ... oh ... you must go find you pants

C: Put his pants back on. Are these toy bears?

I: Mm hm

C: But then they're real bears? Is there's just one more ... story?

I: Mm hm

C: But I want to do a couple more, and then they get up and they go on a plane. Pretend this is the airplane (flies it up and down). Then they fly back, and then they went and said

M and F: Grandma, did they behave well?

G: Yeah, they were very very well

C: These glasses are upside down

I: I'll fix them later, how about that?

C: But I want to fix them now

I: Well let me start the next story

*Paul: Reunion*

C: Then Paul looks behind (holding F), (M falls) then they both lay down, and then they crash

into Paul

I: Oh goodness

M: Oh no, we crashed into Paul. Ahhh (as M and F are moved through the air onto the table).

C: The end. Any more stories?

*Paul: Missing Snuggly*

C: (Holds onto OS while story stem is being presented)

C: And then ... he was like ... then he falls into the trashcan

T: Oh now Paul fell in the trashcan

C: Then she picked him up

T: Paul you should never fell into the trashcan, do you understand me

OS: Yes ma'am, yes, I understand, yes. Then, And now I have to get my snuggly back ...

C: He goes over to the trashcan

OS: Oh no my snuggly's in the trashcan

C: And he gets it out and goes to sleep. Then she boosh ... boom. Now let's do another one

I: Was that the end of the story?

C: Yeah, I want to do another one.

B-7: Emily's Story Completion Transcripts

*Emily: Spilled Juice*

C: The mommy and dad says

M and F: It's ok, we can clean it up

I: And the then what?

C: And the sister says

OS: I can clean it up ... I ...

C: She holds her dress like this and steps in the juice and says,

OS: It's very cold and my hands will ... and keep on ... and I'm gonna clean this up; and I'm gonna put some more juice and then ...

C: And then Susan drinks up the juice and then uh she drinks, she's finished. But the second day, Goldilocks came and then papa bear said

F: Not quite, it was very hot

C: They sleep inside their tent all morning until they hop into this house, and then he clean it all up and then it's gone, and then he put it under the table, and then he "do-es" like that, and then all the bears do like that because ... I can't get it, and then he, Susan [unintelligible] and then he hided, and then he's gonna eat it.

I: Is that the end of that story?

C: Uh, yes

*Emily: Hurt Knee*

C: The mommy says

M: It's ok, I'll put a band-aid on it

I: Can you show me?

F: (Puts a band-aid on YS)

C: And then Susan says, climbs up the rock, then she sleeps on it.

I: Ooh

C: Then she rolls and hurts her head instead

I: Oh no, so then what happened?

C: So the papa says

F: We'll put another band-aid on it, we're gonna put some Susan on it

I: (Repeats)

C: Yes, that's when, for when she hurt her rock finger, and then she hurts her head

I: (Repeats)

C: Yes ... [unintelligible] ... and then (F head put against YS head repeatedly) ... and that's for ...

I: What is he doing?

C: He's knocking up her head because he's gonna put some, um, a little tiny band-aid on it

I: (Repeats)

C: And then this big rock is not ... a ... rock so it climbs up on her head and then

Rock: Who are you? Who are you?

YS: I'm Susan, and who are you?

Rock: I am a monster

C: And then she says

YS: I was just a little girl

Rock: Well I'm a little girl, too

I: Is that the end of the story?

C: Yes

*Emily: Monster in Bedroom*

C: (Holding the mama bear)

M: I wanna see ... I'll do fire on him

I: Show me

C: And then papa bear says (while holding onto M)

F & M: There's a monster in the room. I'll do fire on him, and can you call the fire man to fire it?

F: Ok

M: (Dials) ... it is for you

F: Can you fire this?

C: There was no more monster and he wanted to sleep (placing OS in bed)

*Emily: Departure*

C: They're going to go in the car and this ... and he's sleeping (F fell) .... and grrrrr [intelligible]

I: And they drive away (removing car) so then what happens?

C: ... and then Susan, and then they ... miss it

I: They miss what?

C: Their mom and daddy

I: (Repeats)

C: And then one time they saw something Susan saw

I: They saw something Susan saw?

C: Yeah, now, she already jumped on the table all day, but looked what happened

I: What happened?

C: There was a noise

I: (Repeats)

C: Yes

YS: (Knocks on OS)

C: There's something knocking on the table on her head; something left and called

YS: Mommy daddy come back home

I: Oh, so somebody called?

C: Yes, grandma called

I: Repeat

YS: Daddy, mommy, I need you

C: Actually she called (pointing to YS)

I: Oh, Jane called, ok

C: No, that's Susan

I: Oh, you're right, I'm so sorry Emily, thank you

C: Called and called

YS: Mom and Dad there's something knocking at the table, can you come back quickly?

I: Wow, is that the end of the story?

C: No, and then those peop ... , Susan and Jane's mother and father comed back, and then they said

OS and YS: We miss our mommy and daddy we want to come back. We want to take a bath and we need two people

I: You need two people?

OS: And I need to take off my dress to take a bath ... see? I can't take it off, Susan, 'cause t that's the rule, so mom and dad need to go back quickly.

C: So that's the end of the story

*Emily: Reunion*

(M and YS meet)

YS: I missed you mommy, look what happens when I ... Susan ... and ... [intelligible] (knocks on OS head)

M: Oh my goodness (knocks on OS, too)

C: He eat all the head up (dad knocks on OS) and they all go to sleep on ... and they go on a vacation ... out and that's the end of the story

*Emily: Missing Snuggly*

C: She found her snuggle, but it was under the table. She pick it and she had, there's two pages left. And then Susan said, (holding OS)

OS: I'm sleepy now, I'm gonna go to bed, she said, "I like my pillow that's pink, and I like my pink blanket"

I: You like your pillow that's pink?

#### B-8: Mary's Story Completion Transcripts

##### *Mary: Spilled Juice*

C: And then [unintelligible] takes the cup off the table, and everybody wipes it

I: Everybody wipes it

C: Everybody gets a turn

I: (Repeats)

C: And then little sister Susan gets the cup and takes a big sip a' juice (drinking sound), and mama [drinking sound] ... and dada [drinking sound], and little ... big sister Jane [drinking sound], and drink it all up. Now what do we do?

I: We have another story. Is that the end of the story?

C: Yeh

##### *Mary: Hurt Knee*

C: Then she goes to her ma ... mother 'cause she brought some band-aids, and she says

YS: Mama, can you please put a band-aid on my knee? I hurt my knee

M: Says (sound of putting on band-aid) There

C: And then, big sister Susan ... and then big sis, big sister Jane get her on her back and she climbs, climbs, climbs. And they're at the top.

I: They're at the top

C: And then she hugs her

YS: Hmm, I love you, sister

C: And they climb down. Then she puts her down and she says

YS: Thank you sis, thank you sister

C: And then they go right back home, and that's the end

*Mary: Monster in Bedroom*

C: And she runs to her dad, and she says

OS: Come on dad, I need you

F: Oh, there's a monster in your bed, then I'm gonna get it out. Got it

C: And then, and then she lays down [unintelligible] and pats her, then mama comes the room  
and pats her

I: And pats her

C: And then Sister Jane (YS) and pats her. Then they all go to sleep.

I: And they all go to sleep, is that they end of that story?

C: Yes

*Mary: Departure*

C: And then they go to the car and jump in and [car noises] then, they go to, to the hotel and  
they stay there over night

I: So what happens here overnight? What happens here?

C: Then, then Grandma says

G: Time for bed kids. Let's go get in our beds, you're gonna sleep with me.

C: Then they all lay down together

I: Oh, they all lay down together

C: And then the next morning, Sister Susan wakes up very early

YS: Uh ... people, it's time to get up

C: Then the grandma gets up and says

G: Little sister Susan, it's not even time, your sister Jane is still asleep

C: Then she says

YS: Ok, I'll do it

C: Then they all go back to sleep. Then, and then Sister Jane wakes up, Grandma, and little sister Susan. Then go to see mama.

YS: She was supposed to be here about now

C: Then, they heard "jhu jhu" and grandma said

G: It's it's mama ... and dada

C: And then, then she (YS bear) runs around the room

YS: I can't see her

C: And then she says to grandma

YS: Why is she not coming?

C: Then she says

G: 'Cause she's not here

I: Is that the end of the story?

C: (Nods)

*Mary: Reunion*

C: Then they, then she ho ... , and then (OS bear), sister Jane hops in the car. And then, mama hops up from sleeping. And daddy hops up from sleeping, too. And then, little sister Susan grabs grandma's hand and they both jump in. Little sister Susan gets her own spot, and then turn, turn, turn, turn a little bit. And grandma has to sit down in her chair. Then, then the big

people get up, and they go [car noises] all the way to the airport. Then she (G) jumps out of the car and gets on the plane. Then she says

G: Bye bye. Glad to see you again ... [unintelligible]

C: That's the end of that story

*Mary: Missing Snuggly*

C: Then teacher comes and she gets her snuggly on the floor and she says

T: Here's your snuggly

C: Then she lays down on the floor by her snuggly and her 2 blankets. Then the teacher goes to the lights and goes "pssh" [lights out sound]. Then she gets, then she moves the chair. Then she comes back [light noise], turns the lights on. Then, then Jane gets her snuggly, then she puts it back in her cubby her cubby. And that's the end of that story

B-9: Joseph's Story Completion Transcripts

*Joseph: Spilled Juice*

C: Cleans it up

I: Who cleans it up?

C: Daddy

I: Then what?

C: Then he puts it back

I: (Repeats) ... puts what back?

C: The drink back ... [I (Repeats)] back in order

I: Back in order? Does anything else happen?

C: No

*Joseph: Hurt Knee*

C: He fixes it (holding F)

I: Daddy fixes it? How?

C: By putting wrapping aro ... around ...

I: By putting wrapping around ... ?

C: Tissue

I: Tissue? Does anything else happen?

C: You know what they do to fix your ar ... your arm or knee?

I: What do they do?

C: They cut it open and then they wrap around tissue.

I: Huh ... I did not know that ... is that the end of the story?

C: (Nods)

*Joseph: Monster in Bedroom*

C: Then the fath ... then the father says 'no there's not'

I: (Repeats) ... so then what happens?

C: That's it ... [I repeats] I like to do them quick

I: You like to do them quick ...

*Joseph: Departure*

C: Then they come back

I: Ok, does anything happen here? (points to OS, YS, and G)

C: (Shakes head) that's it

*Joseph: Reunion*

C: That's it?

I: Hmm?

C: (Repeats)

I: That it? Nothing happens?

C: I like to do them quick

I: Well does anything happen here?

C: (Shakes his head)

*Joseph: Missing Snuggly*

C: Uh ... that's it

I: Does he do anything?

C: No

I: Nobody does anything about the missing snuggly?

C: (Shakes his head negatively)

I: No? Are you sure?

C: I like to do them quick

I: But you didn't do anything with the story

C: That was the last one

I: (Repeats) ... so nothing happens in our story?

C: (Shakes his head negatively)

## VITA

Katherine (Kate) Anne Darbonne was born to Victor and Constance Darbonne in Lake Charles, Louisiana. She is the second of three children. She comes from a very large family and has always loved children. Although she began her college curriculum as a nursing major, she switched to early childhood education by the end of her sophomore year. She graduated from Louisiana State University in the spring of 2005, having obtained a bachelor's degree in human ecology with a concentration in nursery school and kindergarten teaching. She also obtained a minor in Psychology.

Kate returned to LSU in the fall of 2005 for graduate work in child and family studies, a program that was in the School of Human Ecology where she first received her undergraduate degree. Upon entering graduate school, she decided to look at attachment classifications and school readiness. Kate chose to work with Dr. Sarah Pierce, because she was interested in attachment, and Dr. Pierce had introduced her to the theory as an undergraduate student.

Throughout her graduate school experience, Kate's life changed dramatically. She dated and became engaged to David Dawson, Jr., she became an aunt for the first time, and she became a godmother three times. Kate and David were married in September of 2007.