ATTACHMENT STYLE OF CHILDREN IN FOSTER CARE AND ITS RELATIONSHIP
TO INTERPERSONAL COGNITIVE COMPLEXITY

A Dissertation by

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ABSTRACT

Attachment, originally postulated by John Bowlby, is the deep and long lasting emotional connection established between a child and caregiver in the first several years of life. It is the result of the interactive relationship that naturally occurs between infants and their caregivers; it has lasting effects that are manifested throughout various stages of life. In the absence of adequate care giving, secure attachment does not develop. The very purpose of foster care indicates that children in that system have been deprived of adequate care giving. This study sought to document the distribution of secure versus insecure attachment styles for foster children. In order to do this, the Relationship Structure Questionnaire was utilized to classify a sample of foster children into either secure or insecure attachment categories.

Additionally, this study attempted to assess the differences among children in foster care, categorized by attachment styles, in terms of their degree of interpersonal cognitive complexity. Interpersonal cognitive complexity is an individual difference variable in social information processing capacity. Individuals who are high in interpersonal cognitive complexity have relatively differentiated, abstract, and organized cognitive structures for describing and perceiving the thoughts and behavior of others. Highly developed interpersonal systems lend themselves to greater abilities in the acquisition, storage, retrieval, organization, and generation of information regarding other persons and social situations. The development of interpersonal cognitive complexity takes place naturally through the experience of living. Numerous parental qualities (e.g. style of discipline, expression of emotion, frequency of interaction, etc.) affect the development of this system. Although it has not been previously linked in

research, studies regarding the development of highly complex interpersonal cognitive systems seem to connect optimal development with parenting qualities that are part of a secure attachment relationship. This study predicted that individuals with secure attachment styles would generally have higher levels of interpersonal cognitive complexity than those with insecure styles of attachment. The Role Category Questionnaire was used to determine the level of interpersonal cognitive complexity for each participant.

Lastly, this project attempted to assess if there is a relationship between several foster care variables and attachment style and/or degree of interpersonal cognitive complexity. Specifically, age at initial entry into foster care, total number of placements experienced while in care, number of episodes in care, total number of months in care, and whether a child was placed with a familiar other were considered.

Results of the study showed that 89% of participants scored in the "secure" category of attachment. This made the comparison of attachment groups on interpersonal cognitive complexity and 'experience in foster care' variables impossible. A discussion follows that attempts to provide plausible explanations for the extraordinarily high percentage of participants who scored in the secure category. There were statistically significant negative correlations found with regard to length of time in foster care and number of placements with interpersonal cognitive complexity.

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CHAPTER I

INTRODUCTION

Never intending to adopt, I began doing foster care in 1998. To date, however, I have two adopted children. The decision to adopt these two was based on the connection they seemed to find in our family and the obvious turmoil it would have created in them for their "secure base" to disappear one day. The importance of the attachment relationship in their lives was obvious and there were many challenges we worked together to overcome. The source of these problems is assumed to be deficiencies in their historical care and environment. In awe, I watch them grow and develop, taking pride in my role as a "secure base." It is with delight that I watch them heal early wounds and begin the process of developing into healthy children. My fascination with this transformation has led me to study attachment theory and its relationship to other areas of life.

The first purpose of this research project is to determine the distribution of attachment styles within a foster care population. The second is to identify the relationship between interpersonal cognitive complexity and attachment style. Studies of interpersonal cognitive complexity have not historically related it to attachment theory although in discussions of development interpersonal cognitive complexity appears to increase in an environment of secure attachment that is facilitative of exploration and ultimately, optimal development. Therefore, identifying what, if any, relationship interpersonal cognitive complexity has to attachment style may provide information that has the potential to benefit not only the foster care population but may even apply to cognitive development in the natural home environment.

Foster Care

History of Foster Care

Foster care is the current system for managing social problems related to child abuse and neglect. It grew out of a system that was used by all classes and for primarily economic reasons. In the 1700's, various local government officials were designated as "overseers of the poor" and were given the duty of distributing relief to the poor. These officials also had the authority to "indenture" children from poor families rather than providing relief and they did so regularly. Besides indenture by government officials, children of 13 or 14 years were often formally or informally placed with another family for the purpose of learning a trade. The indenture relationship was primarily economic and expectations for providing for formal education or emotional and psychological needs were nonexistent. In colonial America, children were viewed as miniature adults who were expected to grow up as quickly as possible. Teaching children the value of hard work and the skills of a trade was at the heart of indenture.

In the early nineteenth century, however, a new view of childhood as a separate stage of life emerged. Childhood began to be seen as a stage of innocence that should be cultivated and nurtured. Children's character was to be shaped by leading them to internalize beliefs about behavior and morality. By the early nineteenth century, only children from low-income families were indentured. Many states had passed laws to regulate indenturing relationships to ensure that indentured children were treated properly and were able to participate in public education. By the twentieth century, indenture contracts were still in use but most had been replaced by other child welfare services. Subsequently, orphan asylums became the nation's predominant method of

caring for dependent children. The asylums were often used in conjunction with indenture but were heavily criticized, favoring placement of children with families. The idea of placing children in homes rather than institutions gained momentum when the Children's Aid Society (CAS) was founded in New York. The fundamental assumption was that children should be placed in rural homes rather than in institutions.

Thus, the "placing-out" system was born. CAS "orphan trains" became famous. Children were put on trains to join families in the Midwest; younger children were to be taken in and cared for as members of the family while older children were expected to perform work on farms where they were placed. In the late nineteenth century, placing out was often used by families of origin to help them weather difficult times brought on by a death, serious illness or extended periods of unemployment. Many of the children returned to their families within a few years of being placed elsewhere.

In the last quarter of the nineteenth century, child abuse and parental neglect became acknowledged as important societal problems. Societies for the Prevention of Cruelty to Children (SPCC) began to appear in eastern cities. They were given the authority to remove children from abusive or neglectful homes and place them in other homes or orphan asylums. Again, older children were placed with the expectation that they work to earn their keep. Younger children were not expected to work but were to be taken in "for love." Eventually placement agencies began making payments to foster families in an effort to ensure that children would not be valued exclusively for their labor. Changing to this "boarding-out" system led placement agencies to look more closely at the environment of the placement homes; agencies didn't want to pay people

to care for children unless the job was done well. This also led to limits being placed on the number of children that could be placed in any given home.

In further support of the emerging foster care system, the National Conference of Charities and Corrections took a public stand in 1899, favoring home placement for dependent children over institutional care. Additionally, the growing popularity of "boarding-out," sometimes known as foster care, was tied to the growth of the juvenile court system in the first few decades of the 1900s. The creation of a court system specifically for minors greatly increased the number of children who became state wards. Juvenile courts spoke about maintaining families but in practice, they more often removed children rather than trying to help the family as a unit. In the twentieth century, the foster care system further expanded as state Boards of Charity developed, strongly favoring home placement over asylums. They believed that the best place for a child was a "good home" and that asylum care was "unnatural." Furthermore, they believed children should be "placed out" as young as possible so they could grow to be part of the family.

In addition to political changes to the system, financial changes were occurring as well. Increasing financial involvement of state governments in the child welfare system meant that when children were removed from their homes, they were more likely to be boarded in a family home than cared for in an asylum. By 1950, more children were in foster homes than in institutions; by 1960, almost twice as many children were in foster care as in institutions. By 1968, more than three times as many children were in foster care as in institutions. Overall, the number of children being cared for in foster care stayed relatively stable through the 1940's and 50's, but the 1960's and 70's saw

explosive growth in the foster care system due to the rediscovery of child abuse and the beginning of *federal* funding for the foster care system. The introduction of kinship care, or foster placement with relatives, also contributed to the expansion of foster care during this time as funding became available to extended families caring for the children of relatives.

By 1980 there were 500,000 children in foster care in the United States, many of whom had been in out-of-home placements for years, with little or no contact with their birth families. The foster care system was floundering with little direction or guidance that would increase the likelihood of positive outcomes for children who "aged out" of the system. Some improvement occurred through the Adoption Assistance and Child Welfare Act (PL 96-272) passed in 1980 to promote family preservation, and where that was not possible, to require greater effort in attaining timely reunification between the child and his/her family. In 1997, the Adoption and Safe Families Act (PL 105-89) was passed in an effort to balance the emphasis placed on family preservation and reunification in PL 96-272 with an emphasis on the health and safety of children. One important aspect of this law is that it limits family reunification services to a 15-month period, requiring states to initiate termination of parental rights for children who have been in foster care for 15 out of the most recent 22 months. Because of these changes, the number of children in foster care was greatly reduced for a period of time but the decrease was short-lived. In part due to the easy access of drugs such as "crack" cocaine and methamphetamines, the number of children in foster care again grew significantly. In Kansas alone, 9,131 children were living in foster care in June 2007, up from 5,428 in the same month of the previous year (Berry & Logan, June 30, 2007).

Foster Care Experience

Given the large number of children affected by foster care, it seems logical that the system should attend closely to the potential effects that foster care may have on children. Unfortunately, however, much data is collected by the foster care agencies with little time or funding left for analysis. Nevertheless, over the years occasional researchers outside the system have conducted research regarding foster care. Their results provide mixed information. From child interviews, Fanshel and Shinn (1978) concluded that the initial process of separation from their parents is experienced by many foster children as catastrophic or minimally as quite sad and unpleasant. The initial parting is dramatic and frightening and children are generally ill-prepared. Older children *sometimes* report relief upon separation from their parents because of the conflict experienced in the home; younger children most often were sad. Regardless of age, the experience produced significant emotional turmoil. For children who had experienced the process and eventually returned home, 77% reported feeling "sad/bad/depressed/upset;" 9% percent felt "good." Of children remaining in foster homes, 63% felt sad/bad/depressed/upset and 10% felt good. Of the children living in institutions, 75% felt sad/bad/depressed/upset while 10% felt relieved. The remaining percentages were noncommittal. This information suggests there may be long term effects of the negative emotional experience of being in foster care.

In contrast, a 2002 study (Scholfield, 2002) of adults who had previously been in foster care reported positive emotions associated with being in foster care. The study showed that for most children in foster care, John Bowlby's concept of 'felt security' had not been experienced in their *birth family* but that feeling loved in their foster home was

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a frequent experience. Interviews showed that upon initial entry into a foster home, most children were quiet and suspicious, though a few were aggressive or overly affectionate with random strangers. Another segment of foster children demanded the attention of others but in ways that led to rejection and disappointment. The presence of fear (perhaps of abuse or abandonment) in most of their childhood histories was common and appeared to have disorganizing effects for children. Children frequently were fearful, chaotic, helpless or controlling, demonstrating their struggle with anxiety, low self-esteem and low self-efficacy. Their behavior often inadvertently isolated them from major sources of stimulation and learning--especially through their caregivers. The interest and energy they had available for exploration appeared limited, presumably by their previous family experience. Through the foster care experience, many reported they had ultimately felt empowered in their foster families and had been given choices by foster caregivers from the start. The experience of being encouraged to be active appeared able to not only generate self-esteem, but also a sense of competence and effectiveness that contributed to increasing autonomy. Foster care appeared to have an overall positive effect on these individuals. However, it is important to note that this study included only individuals who had maintained residence in a single foster home for three years or more; this is often not the case in today's foster care system.

Scholfield's study (2002) showed that for most adults the memory of being encouraged to get involved and take pleasure from activities merged with their general sense of reliable, sensitive care. Nevertheless, the quality of relationship experiences for children in foster care depended upon the interaction between the level of disturbance in the child and the quality of care giving experienced. In any case, new

behavioral responses were required in response to the rapid life changes experienced by these children. Foster children had to adapt to quality care which required becoming more flexible, able to use reason and emotion, and able to give as well as accept love. Many of the children with controlling tendencies needed to learn to communicate their needs directly, how to trust the availability of caregivers and how to regulate affect without retreating into defensive mechanisms. Experiencing pleasure and success in their own endeavors had to be learned. Age at placement may have had some effect, but even children placed as teens demonstrated what Schofield suggested is a "testament to the fact that the drive toward proximity in relationships is so fundamental to our being that it can be activated well beyond infancy (pp.263)."

Underlying behavior observed in foster children is typically, and understandably, significant turmoil. Besides the abrupt changes that take place in their living circumstances, most children in foster care are well aware of the sense of being "different" and the stigma that corresponds to their circumstances. Foster children have lost the possibility of having a "normal" childhood. Goffman (1964, pp.62) referred to foster children as being reduced from "a whole and usual person to a tainted, discounted one." He further acknowledged that simply being a foster child requires an explanation and a discussion of the potentially emotional topic of how they arrived there. Sadly, placement in foster care is often just an additional step in the turmoil; for many children in foster care, placement changes are frequent and the outcome is eventually adoption by a new family. In almost all cases, foster children lose an attachment figure at least temporarily and frequently it becomes permanent. In longitudinal research of foster care, Fanshel and Shinn (1978) found that the total loss of birth parents was the

experience of most children in their study. Coping with having no parents was an important task to be addressed. Data about children who did *not* lose contact with their birth parents however suggested that their burden was often even more severe. For those who did not experience a total loss of birth parents, malevolent interaction with their parents appeared to have contributed to the development of deviant careers and severe emotional disturbance over the life course of the participants. In a number of analyses, the study showed that occasional contact with the birth father appeared linked to positive outcomes, while intensive interaction with the birth mother or both parents was associated with more disturbance manifested in children. The difficulty faced by foster children in maintaining an identity with two separate families and/or being faced with redirecting loyalty for the original family to a new family appears, reasonably, to create significant internal turmoil.

Considering the difficulties faced by foster children, research provides mixed results as to the long term effects of being in foster care. In the process of longitudinal research regarding outcomes for foster children over time, Fanshel, et al. (1990) drew several conclusions related to children in foster care. 1) Traumatic events have an impact that reaches into adulthood. Common traumatic events specific to this population were physical abuse, exposure to disturbing sexual events prior to foster care, and a large number of living arrangements, including disrupted adoptions. 2) Physical abuse demonstrates the most predictive power regarding future behavior. Results showed that the strongest set of associations was between the initial physical abuse of a boy and later adult criminality, especially involving serious crimes. Additionally, there appeared to be a direct link from the physical abuse of boys to early histories of delinquent

behavior and poor educational achievement. 3) Turbulence in living arrangements produces undesirable associations, especially related to traumatic experience. Often foster care is considered the first separation from the birth family but, for most kids in Fanshel et al.'s study, multiple placements since birth were the common experience. The instability in living arrangements brought in its wake behavioral tendencies that proved challenging to caretakers with whom the child might be placed. For instance, Fanshel et al. found that a large number of living arrangements before entry into care was associated with more hostility and negativity at entry. While the instability most often derived from the original failure of birth parents, a child's dysfunctional defenses against rejection and their associated undesirable personality traits sometimes became a factor in the further disruption of living arrangements. 5) The child's condition upon exiting the foster system was usually the best single indicator of adult outcome measures.

In light of the information available, foster children clearly demonstrate a population at risk. Additionally, foster care provides an *opportunity* for overcoming that risk if it is delivered well.

<div align="center">*Attachment Theory*</div>

The need for foster care alone suggests that foster children are at high risk for emotional and developmental problems. At the heart of these problems are separation issues related to attachment theory originally proposed by John Bowlby. Attachment theory is the application of the attachment construct, originally developed and formulated with regard to the mother-infant bond, to the conceptual and empirical understanding of human relatedness across the life span. Similar to earlier

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psychoanalysis, attachment theory maintains the fundamental belief that one's earliest experiences of relationships are formative in later life. The theory has two principal components: 1) a *normative* component which attempts to explain species typical patterns of behavior and development through which nearly every individual in the species proceeds and, 2) an *individual difference* component which attempts to explain stable, systematic deviations from those patterns and stages of the normative component (Simpson & Rholes, 1998).

First conceptualized by John Bowlby (1969), attachment is defined as an enduring affective bond exemplified by a predisposition to seek and maintain proximity to a care giver, especially in stressful situations. Its purpose is to enhance survival during infancy and promote adaptive development during the life span (Bowlby, 1969)." Bowlby theorized that attachment is based on the concept of an "attachment behavioral system," in which a homeostatic process regulates infant behaviors, especially proximity-seeking and contact-maintenance with one or possibly a few caregivers. It is an independent behavioral system, equivalent in function to other drive-behavioral systems, organized around specific attachment figures acting as the 'secure base' with the goal of 'felt security.' Bowlby hypothesized that felt security is particularly critical during the second half of the first year of life, and experiences during this time become a foundation for relationship behavior across the life span. The development of the attachment system at the time when the child is becoming mobile and recognizing object permanence is significant because it discourages the infant from straying too far from caregivers. It also activates exploratory behavior while in the protective presence

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of the caregiver. Bowlby considered this exploratory behavior essential for healthy cognitive, social, and emotional development.

Bowlby further hypothesized that the attachment system operates according to the principles of control systems theory, proposing that a set of environmental factors will activate the system, and once activated, the system will engage in specific actions that serve to achieve a specific goal. The environmental trigger occurs when a child realizes he can no longer easily reach the attachment figure, or when the child feels threatened or fearful. Accordingly, the attachment behaviors are initiated and the child may engage in any of several behaviors designed to re-establish proximity, such as hugging, clinging, and smiling. The behavior used will depend upon specific environmental factors, such as proximity of the attachment figure and the severity of the anxiety experience. These behaviors will change as proximity to the caregiver changes. When the goal is achieved, the control system is deactivated except for detectors that are alert for continued monitoring of environmental system activators. When the attachment system is deactivated, the child can use other behavioral systems such as exploration or feeding for optimal development.

In summary, attachment is something that children and parents create together in an ongoing reciprocating relationship that serves many developmental functions for individuals throughout their lifespan. Simply stated, secure attachments develop between infants and their caregivers who serve as receptive targets for their attachment behaviors. Caregivers who foster greater security tend to read their infants' cues of distress more accurately and find effective ways to comfort them. When infants are not particularly distressed, optimal caregivers remain physically and emotionally available

without being disruptive or intrusive. Ultimately, effective caregivers accept the difficulties and stress of caring for a child, including the limitations that attentive infant care imposes on their lives.

The Importance of Attachment throughout the Lifespan

The importance of attachment becomes more or less evident throughout various stages of the lifespan. While some researchers agree only that early attachment experience influences later experiences with intimacy (Thompson, 2000), others believe that early attachment experience underlies most all areas of development. Levy and Orlans (2000), for example, report that children who begin lives with secure attachments generally fare better in all aspects of functioning as they proceed through life. They specify the following developmental functions that attachment serves over time. 1) To learn basic trust and reciprocity, which serves as a template for all future emotional relationships; 2) To explore the environment with feelings of safety and security that lead to healthy cognitive and social development; 3) To develop the ability to self-regulate, which results in effective management of impulses and emotions; 4) To create a foundation for the formation of identity that includes a sense of competency, self-worth, and a balance between dependence and autonomy; 5) To establish a pro-social moral framework, which involves empathy, compassion, and conscience; 6) To generate the core belief system which encompasses cognitive appraisals of self, caregivers, others, and life in general; and 7) To provide a defensive system against stress and trauma that incorporates resourcefulness and resilience. Possibly nearly, if not, every facet of development is affected by attachment in one manner or another. Numerous researchers have sought to provide evidence of this.

Physical development. Siegel (1999) reports that the mind develops from the activity of the brain whose structure and function are directly shaped by interpersonal experience. Therefore, *human* connections shape the *neural* connections from which the mind emerges. Tucker (1992) reports a large body of evidence that supports the general principle that cortical networks are generated by an initial overabundant production of synaptic connections, followed by a process of competitive interaction that selects those connections that are most effective regarding the environmental information available. Environmental factors therefore play a crucial role in the establishment of synaptic connections after birth. For the infant and young child, attachment relationships are the major environmental factors that shape the development of the brain during the period of maximal brain growth. Attachment also establishes interpersonal relationships that help the immature brain use the mature functions of the parent's brain to organize its own processes. The emotional transactions of a secure attachment can serve to amplify a child's positive emotional states and modulate negative states. In summary, individual genetic potential is expressed within the setting of social experience, which directly influences how neurons connect to one another. The earliest of all social experience begins with attachment to a caregiver.

Cognitive development. A fundamental assumption of attachment theory is that in order to activate or deactivate the attachment system effectively and efficiently, a child must develop an "internal working model" of the attachment figure and of self in interaction with the attachment figure (Bowlby, 1969). Internal working models can be conceptualized as by-products of repeated attachment-related experiences. These

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models are rooted in the same brain processes that generally construct schemata to organize and process information systematically. Such models allow the child to be aware that the attachment figure is missing and recognize the attachment figure upon return. The internal working model is the way in which experience is encoded in the mind, including internal object representation, schema, script, and personal constructs. Unlike simple cognitive schema, working models are thought to include affective and defensive components as well as descriptive cognitive components (Bretherton, 1985; Main et al., 1985). The models provide heuristics for anticipating and interpreting behavior and intentions of others, especially attachment figures. Working models are considered to be the mechanisms through which continuity in the organization of attachment is achieved. Main, Kaplan and Cassidy (1985) have suggested that as a result of early attachment experiences, a child accumulates knowledge and develops a set of expectations about self, significant others, and the larger social world. These models regulate the attachment behavioral system, are laden with affect, and are resistant (although not impossible) to change. Bowlby theorized that repeated interactions of the same kind with one or more primary caregivers serve to structure and strengthen the emerging working models, rendering them increasingly resistant to change. This concept is similar to Piaget's thinking on assimilation and accommodation. During early development, working models tend to adjust themselves (accommodate) to new information. Once they are more firmly established, they guide the processing of attachment relevant information and tend to assimilate it into existing structure, sometimes creating significant distortions. Only when lack of fit between reality and

working models becomes extremely apparent do working models change (Bretherton, Ridgeway, & Cassidy 1990).

The core propositions underlying the internal working model include: 1) The basic impetus for formation of attachment relationships is provided by biological factors, although bonds that children form with caregivers are shaped by interpersonal experience; 2) experiences in earlier relationships create internal working models and attachment styles that systematically affect attachment relationships in the future; 3) attachment orientations of adult caregivers influence the attachment bond their children have with them; 4) internal working models and attachment orientations are relatively stable over time but they are not impossible to change; and 5) some forms of psychological maladjustment and clinical disorders are attributable in part to the effects of insecure internal working models and attachment styles.

The effect of attachment relationships on cognitive development may be substantial. Levy and Orlans (2000) report that early secure attachments typically suggest a greater awareness of the mental state of others, which in turn, not only produces a more rapid and effective evolution of morality but also protects the child from antisocial behavior. Fonagy (2001, pp. 165) states "the reflective function [of attachment] enables children to conceive of others' beliefs, feelings, attitudes, desires, hopes, knowledge, imagination, pretense, plans and so on…exploring the meaning of the actions of others is crucially linked to the child's ability to label and find meaningful, his or her own experience" (Fonagy & Target, 1997). Bee (1999) states, that from this experience, the self concept develops and serves as a filter for future experience, shaping choices and affecting responses to others. In terms of moral development, secure attachment leads to the

development of a core belief system that includes cognitive appraisals of self, caregivers, others, and life in general. Numerous other researchers have demonstrated that individuals who were securely attached as infants and toddlers fare better in various life stages related to issues of self-esteem, independence and autonomy, enduring friendships, trust and intimacy, positive relationships with parents and other authority figures, impulse control, empathy and compassion, resilience in the face of adversity, school success, and future marital and family relations (Jacobson & Wille, 1986; Main, Kaplan, & Cassidy, 1985; Sroufe, Carlson, & Shulman, 1993; Troy & Sroufe, 1987; Waters, Wippman, & Sroufe, 1979).

Behavior. Mary Ainsworth (1978) first observed and then demonstrated that children with secure versus insecure attachment styles behave differently under stressful circumstances. Through the development of the 'Strange Situation' she showed that infants who experience security readily seek comfort from attachment figures when distressed and are calmed more quickly and completely by their attachment figures than insecure infants. Additionally, children who experienced security were more willing to explore the environment around them, a behavior necessary for healthy cognitive and social development. Ainsworth also found that securely attached children, as determined by the Strange Situation, spend more time than insecurely attached children in exploratory play and are more cooperative with unfamiliar adults. Matas, Arend, and Sroufe (1978) examined the association between attachment classifications and later quality of play and problem solving. In fact, secure toddlers were found to engage in more imaginative play than both groups of insecure toddlers. Additionally, they were more enthusiastic, persistent, compliant, oriented toward the expression of positive

affect with fewer expressions of negative affect, prone to make better use of their mothers' suggestions during problem solving, and they were less aggressive than their insecure counterparts in their play. The differences were *not* attributable to developmental quotients or temperaments on which the three groups did not differ; these results were replicated by Frankel and Bates (1990). Ultimately, Ainsworth stressed the importance of a child being securely attached to facilitate better learning through the exploration of the physical and social environment. Through this exploratory play, social-cognitive development is optimized. As a component of social cognition, then, the development of interpersonal cognitive complexity appears related to the security of attachment.

Clearly, the early attachment experience potentially has lasting effects on all areas of development throughout the lifespan. Such functions have obvious implications for attachment as a critical contributor to affect regulation, impulse control, self-monitoring, and the experience of self-agency, which together culminate into outward behavior that influences the development of those around them. The far reaching effects of attachment relationships indicate it is an important area of research, particularly for at risk populations like foster children.

Styles of Attachment

Attachment bonds are believed to form with primary caregivers in all but the most extreme of conditions (e.g., extended isolation; numerous short term caregivers, etc.). (Bowlby, 1982). Because Bowlby believed that attachment relationships are built on the experience of *predictable, sensitive* care that he identified as the core attachment concept of 'felt security,' much is dependent on the caregiver's sensitivity and

responsiveness to the child and on the child's ability to trust in the caregiver's accessibility (Rothbard & Shaver, 1994). Effective care giving must address numerous concurrent needs, including physical, social, intellectual, identity, and emotional, in order for the child to feel valued for all aspects of the self. In turn, attachment security influences the degree to which negative affective states (i.e., anxiety, anger) are present in the context of attachment relationships. Since infancy and the first several years of life are believed to be a critical developmental stage in which children develop basic trust, patterns of relating, a sense of self, conscience, and cognitive abilities, a lack of either responsiveness or sensitivity may result in secondary conditional strategies (e.g., anxiety, clinging, vigilance or premature independence) becoming prominent. These strategies may be adaptive at the time but may hinder optimal development throughout the life span, especially with regard to subsequent relationships.

Beginning with the contribution of Mary Ainsworth's methodology, significant distinctions in attachment style were identified based on behavioral observation. Through the Strange Situation, Ainsworth demonstrated that secure children showed signs of distress when the caregiver left, sought the caregiver upon return, held the caregiver for awhile, and then returned to exploration and play. Insecurely attached children demonstrated two distinct types of behavior patterns (Ainsworth 1973; Ainsworth, Blehar, Waters, & Wall, 1978). Ainsworth labeled the first "avoidant," characterized by signs of distress during the time of separation and by a lack of acknowledgement or rejection of the attachment figure upon return. The second pattern was identified as anxious/ambivalent and was characterized by high levels of distress during separation and by mixed approach and rejection during the reunion period.

Bowlby (1988) found the differences in these patterns to be stable in the natural environment as well. In the natural environment, securely attached children were found to be more likely to interact well with others, explore their environment, and show emotional resiliency while avoidant children were more likely to be anxious and fearful at home and angry and/or attention seeking in school. The anxious/ambivalent children tended to cling to others, respond fearfully in their environment, and demonstrate emotional lability. After further research, Main and colleagues (1986) adopted an expanded model of attachment styles that included *four* categories of attachment: autonomous (secure), dismissive (avoidant), preoccupied (anxious/ambivalent), and unresolved (disorganized/disoriented). What this fourth set of infants had in common was not *new* patterns of behavior but rather sequences of odd behavior which lacked an obvious goal or explanation. These children appeared unable to maintain a consistent strategy for relating to caregivers when distressed. Either lacking a strategy or failing with their preferred strategy, unusual behaviors arose.

Internal Working Models. Underlying the behavioral patterns of these classifications is the cognitive component of attachment or the internal working model that has developed through the ongoing relationship experience with the primary caregiver. When caregiver responses are unpredictable, the infant experiences feelings of anxiety and anger. The expression of anger leads to mixed outcomes. Cognitively, at the end of infancy, secure children have learned the predictive and communicative value of many interpersonal signals; cognition and affect both have meaning balanced with regard to the source of information. On the other hand, avoidant children, have theoretically learned to organize behavior without being able to interpret or use affective signals;

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there is a sense of cognition but not affect. Therefore, avoidant children learned to avoid punishing consequences, but they did not learn how to elicit the care giving they desired. Continuing along these theoretical lines, ambivalent children have been reinforced for affective behavior but have not learned the cognitive organization that reduces inconsistency in a caregiver's behavior. Because ambivalent infants have not learned to change contingencies based upon caregivers' behavior, they are disorganized with respect to attachment, which functionally results in having no strategy by which to interact.

In light of this information, the importance of early interaction with the caregiver in learning to develop strategies for relationships over the life span is evident. Foster children, by definition, are at risk.

Adult and Adolescent Attachment

When individuals have not experienced secure relational strategies early in their lives, these deficiencies are likely to persist throughout childhood, adolescence and into adulthood. Therefore, the topic of attachment continues its relevance throughout the lifespan. Although during various stages of life, attachment behavior may look quite different, analogous underlying strategies may still be present. Even through adolescence, which is frequently known as a period of instability and intense relational pressure, there are observable differences in those with secure vs. insecure styles of attachment (Armsden & Greenberg, 1987). Because adolescent behavior more closely resembles that of adults, adolescent attachment is often categorized in adult attachment terms and measured accordingly.

Theories of adult attachment began in 1980, when Bowlby expanded his theory of

attachment to include a number of adult variations of the insecure infant attachment styles. These included compulsive care-giving, compulsive care-seeking, compulsive self-reliant, and angry withdrawn styles. The conceptualization of adult attachment led to a new line of research in social psychology. In 1987, Hazan and Shaver began to study romantic love as fundamentally an attachment process through which the bonds of affection are formed. Following Ainsworth's lead, they proposed three adult attachment styles. Since that time, numerous other researchers have proposed several variations of adult attachment style. Most of these models assume three or four attachment classification groups, following the lead of developmental psychology. The basis of the four category model began with the systematization of Bowlby's definition of internal working models (1973). Bartholomew and Horowitz (1991) theorized, tested and confirmed two continuously distributed dimensions, defining four rather than three principal attachment styles in adults. The four category model emphasizes an individual's internal representation of self (positive vs. negative) and significant others (positive vs. negative) in relationships. Retaining the secure and preoccupied styles of attachment, Bartholomew (1990) distinguished two forms of avoidant attachment: fearful-avoidance, conveying significant fear of closeness, and dismissive-avoidance that is counter-dependent. These representations coincide with the degree of anxiety and avoidance experienced in attachment relationships, providing a two dimensional measure which results in a four category classification system. Consistent with this line of research, Brennan, Clark, and Shaver (1998) developed the Experiences in Close Relationship (ECR) questionnaire which was an attempt to combine all self-report attachment measures into a single questionnaire, maximizing both validity and

reliability. This version was followed shortly by a revised version (ECR-R) developed by Fraley, Waller, and Brennan (2000). This ultimately led to the development of the Relationship Structure Questionnaire (RS Questionnaire) (Fraley, 2006) which consists of 10 items derived from the ECR-R written such that the instrument can be used to assess attachment styles with respect to different interpersonal targets. The result is an overall attachment score as well as four individual scale scores that allow comparison of attachment styles to different attachment figures. This questionnaire demonstrated test-retest reliability of .65 over a 30 day period in the domain of romantic relationships (including those whom experienced breakups during this time) and .80 over the same time frame in the parental domain. Initial research also showed that the questionnaire is meaningfully related to relationship satisfaction, likelihood of break up and perception of emotional expression (Fraley, Niedenthal, Marks, Brumbaugh & Vicary, 2006). Besides following the consensus that a two dimensional model more accurately reflects attachment style, the Relationship Structure Questionnaire has the added advantage of allowing comparison between attachment styles toward different attachment figures and providing an overall composite score. It is therefore the instrument that this study will use to measure attachment style among foster children. Scores on the Relationship Structure Questionnaire result in one of the following classifications.

Secure. The secure pattern is defined by positive view of self and others, invoking the combination of low avoidance and low anxiety. It clearly coincides with the secure childhood category of attachment. Adults with secure attachment styles are characterized by an internalized sense of self worth and comfort with intimacy in close relationships. Fonagy et al. (1991) found that, behaviorally, individuals with secure

attachment styles, as classified by the Adult Attachment Interview, tended to maintain a coherent discussion of their personal attachment history and its influence on their being. They were particularly able to integrate positive with negative feelings and use self-reflective functioning in understanding their own personal mental states as well their parents' states in a more complex way. Additionally, the interviews demonstrated objectivity and balance in the discussion of childhood experiences, whether favorable or unfavorable, and presented a narrative picture that was both coherent and believable.

Preoccupied. The preoccupied style of adult attachment is characterized by a negative view of self and positive, yet apprehensive, view of others model. This results in high anxiety and low avoidance in interpersonal relationships. It coincides with the anxious/ambivalent childhood category of attachment. Preoccupied individuals, like fearful ones, have a deep seated sense of unworthiness. Their model of others as positive motivates them to validate their precarious self-worth through excessive closeness in personal relationships. Anxiety or ambivalence results from a strong need for care and attention from attachment figures coupled with a deep, pervasive uncertainty about the capacity or willingness of attachment figures to respond to such needs. Fonagy et al. (1991) found that individuals who demonstrate a preoccupied state of attachment were not able to describe their attachment biography coherently, and they showed an inability to move beyond an excessive preoccupation with involvement in attachment relationships. Their minds appear overwhelmed and confused by the topic of attachment, evidenced by incoherence in their attachment autobiography and preoccupying anger or passivity.

Fearful. First theorized by Bartholomew and Horowitz (1991), fearful-avoidant individuals hold negative views of both self and others. People with fearful styles of attachment have high scores on both dimensions of anxiety *and* avoidance. Like preoccupied individuals, fearful individuals are highly dependent on others for validation of their self worth. However, because of their negative expectations of others, they shun intimacy to avoid the pain of potential loss or rejection. The fearful style appears to correspond to the more recently identified fourth style of childhood attachment, disorganized/disoriented, that was first identified by Main and Solomon (1990). In Bartholomew and Horowitz's research, the fearful group was rated significantly lower than the secure and preoccupied groups on self-disclosure, intimacy, level of romantic involvement, reliance on others, and use of others as a secure base when upset. They were also rated as uniquely low in self-confidence and as low on balance of control scales, suggesting a tendency to assume a subservient role in close relationships.

Dismissive. Dismissive avoidant individuals have a positive self view while maintaining a negative view of others. This category reflects a high avoidance approach while minimizing anxiety. Dismissive individuals avoid closeness with others because of negative expectations; they maintain their high sense of self worth by defensively denying the value of close relationships and by stressing the importance of independence. Their avoidance in interpersonal relationships results from discomfort with psychological intimacy and the desire to maintain psychological independence even in close relationships. Individuals who are categorized as dismissive through their AAI interviews were found to minimize the importance and impact of attachment relationships in their own lives by idealizing or devaluing their parents (Fonagy et al.

1991). They appeared cut off from the emotional nature of their childhood attachment experiences and demonstrated a deficit in recall ability; cognitive formations appeared radically disconnected from affect.

Despite the appearance of experiencing minimal anxiety, Kobak and Sceery (1988) found that college students who scored as more avoidant or dismissive of attachment on the AAI produced stronger skin conductance responses during the interview when giving answers that appeared to be defensive distortions or denials. This combination of autonomic arousal and denial of distress is reminiscent of Sroufe and Waters' 1977 demonstration that avoidant infants in the Strange Situation have high heart rates while acting behaviorally as if they are not bothered at all by mothers' departure.

Continuity versus Discontinuity of Attachment Styles

Longitudinal research on attachment has begun to document stable patterns of attachment across the lifespan. Thompson, Lamb, and Estes (1983) found 58% continuity between attachment classifications at 12.5 and 19.5 months of age. Similarly, Waters (1978) found 96% continuity of attachment at 12 and 18 months. In assessing attachment to mother and father separately, Main and Weston (1981) found stability between infant-father (81%) and infant-mother (73%) attachment classifications over a period of several months.

For older children, the results are similar. Main et al. (1985) completed a longitudinal study of children who were observed in the Strange Situation at twelve and eighteen months of age. The children were then reassessed at age six. Attachment to their mother at age six proved highly related to attachment to their mother in infancy (r = .76) but only slightly related to attachment to their father in infancy (r = .30). Main et al.

speculated that this difference may have been due to children spending more time with their mothers than with their fathers during that period of their lives.

Discontinuity. Conversely, there have been studies to increase knowledge about *discontinuity* in attachment styles and its origin. Easterbrooks and Goldberg (1990) examined the correlates of discontinuity in attachment when subjects reached kindergarten following an assessment of attachment quality to both mother and father during toddlerhood. Results showed significant interactions between the stability of the home environment, as measured by the extent to which maternal work patterns remained stable, and the quality of attachment. Other researchers have also found correlates with the characteristics of the care giving that children received. For instance, Egeland and Farber (1984) found that mothers of infants who were secure at twelve months but insecure at eighteen months had similar care giving skills to mothers whose children remained secure, but that they differed in certain affective and personality characteristics. The mothers of children who became insecure seemed less delighted with their infants and scored higher on measures of hostility and suspiciousness. These results suggest that care giving skills are critical in the early formation of secure attachment and that the mothers' personality and affective characteristics play an important role in the maintenance of this security as children grow older. Those children who changed from insecure to secure classifications tended to be associated with the increased development of care giving skills among young, originally immature or incompetent mothers. Interestingly, there were no differences across groups in the number of stressful life events between the two assessments. The researchers interpreted this as suggesting that changes in life circumstances don't necessarily affect

the attachment behavioral system unless they are first associated with changes in the quality of care giving.

Another significant finding in the study of the long term effects of early attachment and continuity was found by Sroufe, Egeland, and Kreutzer (1990). They observed that when two groups of children, originally classified as secure or insecure in the Strange Situation, demonstrated difficulty adapting in preschool years, a significant rebound toward positive functioning in elementary school was experienced by those with more secure early attachment histories. This suggests that the effects of early attachment relationships could be masked at particular points in development only to reassert themselves at a later time. Sroufe et al. felt these results demonstrated that continuity reaches beyond the realm of direct maternal influence and that those factors, having become internal to the individual, as opposed to immediate environmental contingencies, are responsible for observed behavior.

Continuity Related to Foster Care. While continuity is generally perceived positively, the concept of discontinuity may prove useful for those who have experienced foster care. If the early experience of attachment was insecure, the potential for change is constructive; the care giving experience from birth through adolescence has the potential to increase or decrease secure relational behavior. Attachment relationships consisting of emotionally involved interpersonal connections may serve to allow synaptic connections to be altered even into adulthood. For some individuals who have experienced suboptimal attachment experiences, the brain may remain open to further growth and development. As suggested by Kagan (1997), if the capacity of the mind to adapt remains into adulthood, then emotional relationships we have throughout life may

be seen as a medium in which further development can be facilitated. Information regarding ways to overcome the potentially negative effects of early insecure attachment is likely to prove significant for children in foster care and their care givers.

Measurement of Attachment

The measurement of attachment classification has remained cluttered due to the differences in approach by various researchers. Developmental psychology has begun to examine attachment as a life-span concept, through strict adherence to operationalizations and methods used by Ainsworth (Bowlby 1982). These methods consist of interview and Q-sort methods that try to assess the same *three* attachment patterns as the original experimental procedure.

A second line of research is among social/personality psychologists who apply social psychology methods like questionnaires and surveys to the study of normative adult attachment. The first and most widely used interview measure of adult attachment—the Adult Attachment Interview (AAI, George et al., 1985)—classifies adults into one of *four* attachment categories. There are numerous other self report measures that generally result in a three or four category classification system, the most recent research emphasizing the four category model. These self report measures are by and large designed to assess attachment style or security while maximizing the reliability of instruments and convergent validity. The self report measures have a few advantages over the interview method. They are, of course, easier to administer and to score, and they directly assess the views adults have about contemporary attachment figures. Thusly, self report scales are assumedly better suited to assess working models that guide social behavior in peer and romantic relationships, but poorer at indexing working

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models that govern parenting and care giving. A major criticism of both attachment interviews and questionnaires is that retrospective self-reports cannot be trusted. First, it can be argued that memories of childhood attachment relationships may be filtered through cognitive-affective biases that are distorted by subsequent attachment experiences. Secondly, insecure adults may be simply displaying generally negative self-report bias.

In an effort to consolidate various theories of attachment several meta-analyses have been conducted. Following the development of the two dimensional model relating view of self to view of other by Bartholomew and Horowitz (1991), Griffin and Bartholomew (1994) examined numerous articles, concluding that all of the major scales map onto the view of self vs. others dimensions reasonably well. Consistent with this finding, a factor analysis of all existing English language dimensional measures of attachment style was conducted by Shaver and Mikulincer in 1998. They concluded that all of the measures of attachment could be reduced to two orthogonal dimensions, namely attachment anxiety (fear of separation and abandonment) and attachment avoidance (discomfort with intimacy and dependency). These emotional response dimensions correspond well to the cognitive appraisal of self and others as either positive or negative. In fact, some researchers use both labels for the two dimensions in their studies suggesting that a negative model of self is closely associated with anxiety about abandonment and that a negative model of others is closely associated with avoidant behavior (Brennan, Clark & Shaver, 1998).

Distribution of Attachment Classification

In 1983, summarizing American studies using Ainsworth's three original categories

of infant attachment, Campos et al reported that of the infants and toddlers sampled, 62% were classified as secure, 23% as avoidant, and 15% as anxious/ambivalent. Similarly, Ammaniti, et al. (2000) found that the distribution of 10 year olds across attachment classifications was 64% secure, 29% dismissing, and 7% preoccupied. If the unresolved category was added in, 64% were classified as secure, 26% as dismissing, 3% as preoccupied, and 7% as unresolved.

Similar results have been found among adult populations. Based on Campos et al.'s information, Hazan and Shaver (1987) sampled adults regarding romantic love, hypothesizing that roughly 60% of the sample would be classified as secure and the remainder would be split fairly evenly between the two insecure types with possibly a few more in the avoidant group than in the anxious/ambivalent group. Based on a sample of 620 adults recruited through the newspaper, they found that 56% were classified as secure, 25% as avoidant, and 19% as anxious/ambivalent. Interestingly, only 6% of the secure group had been divorced compared with 10% of the anxious/ambivalent group and 12% of the avoidant group. In a second study involving a college sample, Hazan and Shaver (1987) found that 56% of 108 college students sampled were classified as secure, 23% as avoidant, and 19% as anxious/ambivalent. Mickelson et al (1997) obtained similar results in a nationally representative sample of adults; 59% of the sample were classified as secure, 25.3% as avoidant, and 11.3% as anxious.

Since the development of the two dimensional model of attachment styles, the proportions have shifted somewhat. Using their four category model, Bartholomew and Horowitz (1991) found that 47% of 40 college students sampled were classified as

secure, 18% as dismissing, 14% as preoccupied, and 21% as fearful. This distribution was similar to that found by Kemp and Neimeyer (1999); 50% of a college sample of 772 clearly classifiable students were categorized as secure, 22% were classified as fearful, 15% were classified as dismissing, and 13% were classified as preoccupied. Searle and Meara (1999) found somewhat similar results in a sample of 670 college students. Forty percent were found to be secure, 19% as preoccupied, 17% as avoidant, and 24% as fearful.

Distribution among foster children. Although there have been numerous studies examining the distribution of attachment classifications among various age groups, information regarding attachment style distribution among children in foster care is sadly lacking. This is a significant gap in literature given that children in foster care have, by definition, been insufficiently cared for. They are likely therefore, to be at higher risk than average for insecure attachment histories. Research regarding this distribution may be considerably valuable to those organizations expected to provide care and treatment for children in this group.

Summary

Research has repeatedly demonstrated the influential nature of attachment in a multitude of developmental aspects; children who have lacked secure attachment relationships early in their lives often experience negative impacts in later development. This is significant to a foster care system which has been created specifically to care for children whose home environments lacked adequate care. Therefore, it seems likely that individuals who have experienced foster care are at a higher risk for attachment related issues that those who have not been part of the foster care system. The first

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objective of this research proposal is to determine the distribution of attachment styles within a foster care population.

Interpersonal Cognitive Complexity

Cognitive complexity is an individual difference variable associated with a broad range of skills and related abilities. It is the degree of differentiation, articulation, and integration within the cognitive system. Cognitive complexity is considered to be content free and domain specific. Burleson and Caplan (1998) specify that cognitive complexity should not be viewed as a personality trait but as an information processing variable. A comparatively large number of finely articulated, abstract and well-integrated elements are regarded as relatively complex. Therefore, cognitively complex individuals possess greater expertise that is the result of experience and knowledge in a particular domain and thusly have greater information processing capacity in that domain.

The degree of expertise for any domain is a function of experience and involvement within that domain. The result of possessing that knowledge is demonstrated in numerous ways. Expert-novice research demonstrates that experts of a particular subject are better able to 1) develop detailed, discriminating representations of phenomena (Lurigio & Carroll, 1985); 2) recall information from memory quickly (Smith, Adams, & Schorr, 1978); 3) organize schema-consistent information quickly (Pryor & Merluzzi, 1985); 4) notice, recall, and use schema-inconsistent information (Bargh & Thein, 1985); and 5) resolve apparent discrepancies between schema-consistent and schema-inconsistent information (Fiske, Kiner, & Larter, 1983).

A specific system of interest to this study is *interpersonal* cognitive complexity. It is best viewed as an individual difference in the social information processing capacity and

not as a motivational orientation or predisposition. Individuals with highly developed

interpersonal systems are better able to acquire, store, retrieve, organize, and generate

information about other persons and social situations. Individuals who are high in

interpersonal cognitive complexity are relatively differentiated, abstract, and organized

in their cognitive structure for describing and perceiving the thoughts and behavior of

others. Research has shown that persons with cognitively complex systems of

interpersonal constructs 1) form more detailed and organized impressions of others

(Delia, Clark, & Switzer, 1974); 2) are better able to remember impressions of others

(O'Keefe, Delia, & O'Keefe, 1977); 3) have the ability to reconcile and integrate

potentially inconsistent information about others (Nidorf, & Crockett, 1965; Press,

Crockett, & Delia, 1975); 4) learn complex social information quickly (Delia & Crockett,

1973); 5) use multiple dimensions of judgment in making social evaluations (Shepherd

& Trank, 1992; Clark, Willinghanz, O'Dell, 1985; O'Keefe, Murphy, Meyers, & Babrow,

1989); 6) demonstrate the ability to recognize and understand the affective, cognitive,

and motivational features of others' perspectives; 7) tend to form more dispositionally

and motivationally oriented impressions of people (Delia, 1972); and 8) rely less on

global evaluation and simplifying social schemes in understanding patterns of

interpersonal relationships (Delia & Crockett, 1973).

Modes of Communication. Person-centered communicators are those who are able

to take into account the perspectives of others as they attempt to communicate, tailoring

their messages such that it will be most effectively received. Person-centered

communicators view others as psychological entities apart from themselves, possessing

covert intentions, feelings, and perspectives. They perceive social relationships as

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based on negotiated and growing understanding, and they assume that others with whom they communicate are psychologically distant from themselves. This type of communication requires a relatively high degree of interpersonal cognitive complexity.

Communication, although usually quite automatic, requires a number of cognitively complex abilities. Minimally, perceiving others and defining social situations, producing messages, interpreting and responding to messages of others, and coordinating interaction with others is a part of any communication event. Each of these skills engages an individual's social information-processing system. As interpersonal cognitive complexity increases, so does the corresponding ability to communicate effectively. Numerous studies have demonstrated this association. In studies of perception, researchers have shown that cognitively complex perceivers are more accurate at identifying others' emotional states (Burleson, 1982, 1994; Applegate, Burleson, & Delia, 1992), are more likely to make sophisticated inferences about others' dispositional qualities, and are more likely to use situational information than their less complex counterparts (Clark, Willihnganz, & O'Dell, 1985; O'Keefe, Murphy, Meyers, & Babrow, 1989). Additionally, persons with highly differentiated systems of interpersonal constructs have been found to outperform their less differentiated peers in reconciling and integrating inconsistent information about others (Nidorf & Crockett, 1965). Consistent with this finding, Delia, Clark, & Switzer (1974) found that interpersonal construct differentiation is positively associated with the degree of organization exhibited in naturally formed impressions of others.

In delivery of a message, person centered individuals demonstrate an awareness of and an adaptation to subjective, affective, and relational aspects of the communicative

context. These individuals tend to be more responsive to the intentions and remarks of their communication partners, and messages are tailored to characteristics of both their partner and the situation. Person-centered communicators attend to relevant features of the communicative context and appear to encourage reflection about persons and the social situation surrounding them (Applegate, Burke, Burleson, Delia, & Kline, 1985). By and large, the association between interpersonal cognitive complexity and person centered communication has proven robust across both subject populations and measurement instruments.

Development of Interpersonal Cognitive Complexity

According to Werner (1957), "all things said to develop do so in accord with the orthogenetic principle; wherever development occurs, it proceeds from a state of relative globality and lack of differentiation to states of increasing differentiation, articulation, and hierarchic integration." Applied to personal constructs, Werner's orthogenetic principle suggests that through the course of childhood and adolescence, people will develop more differentiation, articulation, and integration in their construct systems.

According to Jennings (1975) and Little (1972), stable individual differences in interpersonal cognitive complexity appear to originate in childhood and persist across the life cycle. The socialization practices of parents reportedly have substantial impact on children's levels of interpersonal cognitive complexity. Particularly influential are parental modes of discipline and nurturance (Applegate, Burleson, & Delia, 1992; Burleson, Delia, & Applegate, 1995) and the frequency and manner in which parents talk about feelings and other internal states (Dunn, Brown, & Beardsall, 1991; Dunn,

Brown, Slomowski, Tesla, & Younglade, 1991). Another factor influencing differences in interpersonal cognitive complexity appears to be the frequency of social interaction; peer interaction is especially important.

Simply stated, interpersonal cognitive complexity develops naturally through the experience of living. For individuals who have spent time in foster care, the experience of living is much different than for individuals who have not. Separation, loss, unpredictability, and instability are frequently a way of life. Rutter (1984) states that what is probably needed for optimal cognitive development is a combination of active learning experience that promotes cognitive competence within a social context where relationships promote self confidence and an active interest in learning independently. This resembles Bowlby's claim that an environment that provides felt security enables a child to freely explore, therefore providing optimal developmental opportunity. In research on cognitive complexity, Hartup (1985) reports that relationships have been thought to serve the following three functions in social-cognitive development. 1) They provide the context in which basic competencies emerge. These competencies include language, impulse regulation, self-system, and methods for coordinating one's action with those of others and knowledge about the world. 2) Relationships also provide the emotional and cognitive resources that furnish the individual with the security and skills necessary to explore new territory, meet new people, and tackle new problems. Buffering and/or protection from stress occur through relationships which serve as instruments for problem-solving; 3) Relationships, as the forerunner to other relationships, also provide templates for the construction of new relationships. In foster care, frequently, children experience anxiety and insecurity that comes with the

unknown, possibly preventing the exploration needed for optimal development. Reasonably, there must be stability and security in a child's environment for interpersonal cognitive complexity to develop and a lack of security is likely to hinder that development.

Rutter also suggests there are other equally important non-cognitive developmental effects that influence later cognitive functioning. These include children's self concepts, aspirations, attitudes toward learning, self-esteem, commitments to education, and styles of interaction with parents, teachers, and others in the environment; attachment researchers have linked each of these areas to attachment theory as well. Furthermore, Rutter states that permanence arises in these qualities because 1) an acquired skill either increases or decreases opportunities, 2) acquired styles of interaction influence children's responses to new environments and finally 3) children's self-concepts influence how they perceive new circumstances and respond to new challenges. For children in foster care, this may be yet another dimension in which deficient care giving has long lasting effects.

Theory and substantial research demonstrate the reality of environmental effects, including attachment, on development; this reasonably includes the development of interpersonal cognitive complexity. Fanshel and Shinn (1978) report that although the environment has only a modest effect on IQ within the normal range of environments, the effects on other aspects of cognitive performance appear much greater. With respect to *blatantly* disadvantaged circumstances, however, the effects are substantial with respect to *all* aspects of cognitive functioning. Regarding the proposed study, foster care most likely fits the expectation associated with 'blatantly disadvantaged'

considering the extreme conditions necessary to instigate a child's removal from their

home of origin. Still, the types of environments that have the greatest effect on socio-

emotional and behavioral functioning are different from those with the greatest impact

on cognitive development. In particular, discord and discontinuity in relationships appear

most important to socio-emotional and behavioral development whereas opportunities

for active learning seem most influential for cognitive development. In regard to

interpersonal cognitive complexity, both socio-emotional *and* cognitive development is

arguably at risk. In attachment research, 'felt security' is the facilitator of active learning

and exploration, which leads to cognitive development, and the facilitator of socio-

emotional development via ongoing social interaction with the caregiver. It would seem

reasonable then, to expect children with secure attachment histories to have higher

levels of interpersonal cognitive complexity.

Measurement

There are a variety of methods for obtaining an estimate of one's interpersonal

cognitive complexity although stronger validity coefficients have been found with the

Role Category Questionnaire (RCQ) than with other measures of interpersonal cognitive

complexity (Burleson & Caplan, 1998). The RCQ was developed by Crockett in 1965. It

is a free response instrument that samples the interpersonal construct system

(Burleson, Applegate, & Delia, 1991; Crockett 1965) and it has been used widely in the

fields of communication and social science (Burleson & Caplan, 1998; Burleson &

Waltman, 1988). Additionally, the RCQ has been recognized for its measurement

association with person-centered communication, including studies that involve various

age groups and communication settings (O'Keefe, Shepherd, & Streeter, 1982).

RCQ Format. In Crockett's original version of the RCQ, participants wrote

descriptions of eight known peers, spending three minutes on each description

(Burleson & Caplan, 1998). Descriptions were then analyzed for the number, type, and

levels of integration of unique constructs to determine a general index of interpersonal

cognitive complexity. Further research showed that describing two well known peers

similar to the participant's age, one liked and one disliked, in a period of five minutes

each was as effective in obtaining a reliable estimate of interpersonal cognitive

complexity as the original method (Burleson & Waltman, 1988). Although there are

numerous other variations of the RCQ, the two peer version remains the one most

widely used, (Burleson & Caplan).

RCQ Administration. Although typically read by participants, instructions for the RCQ

may be orally administered. Following delivery of the instructions, a few simple prompts

are allowed to encourage the participant to describe each peer as fully as possible

(Burleson & Waltman, 1988). Although administration of the RCQ may take place

individually or within a group setting, this will partially depend on whether responses are

given in oral or written form. Both are acceptable although individual administration, of

course, requires further transcription of responses; with some groups, however, the

extra effort may prove beneficial to the response set obtained. By allowing variation in

the structure and administration of the instrument, the utility of the RCQ is enhanced

with various populations including children (Burleson & Caplan; Burleson & Waltman,

1988).

Scoring. Specific scoring procedures are generally determined by the purpose of the

research and will result in a score that estimates one of three components of the

interpersonal construct system. The first, differentiation, is the most commonly used method in research and consistently demonstrates high levels of inter-coder reliability, commonly exceeding .90, for formally trained coders. Descriptive aspects such as appearance, physical or demographic characteristics, or social roles are typically not scored, although a given population may justify such inclusion. Children, for example, typically describe others more concretely than do adults (Burleson & Waltman, 1988). The second component is abstractness pertaining to the extent to which descriptions of others include psychological constructs, such as motives, traits, and dispositions. It is generally a more complex method of scoring but continues to generate inter-coder reliability exceeding .90. The third component is overall hierarchical organization. This method of scoring is more complex and far less commonly used in research with the RCQ. All three scoring methods are moderately to highly correlated (O'Keefe & Sypher, 1981).

Reliability and Validity. O'Keefe, Shepherd & Streeter (1982) conducted a study to test the reliability and comparability of the RCQ to other measures of interpersonal cognitive complexity. Test-retest reliability over the span of one month for the differentiation scoring method of the RCQ was adequate, *r* = .84 (*p* < .001), indicating stability in RCQ-generated estimates of cognitive complexity. Studies have also generally demonstrated support for the validity of the RCQ. RCQ measures of cognitive complexity have been found to be associated with perspective-taking skills in samples of both adults and children and significant correlations were found between the RCQ and indices of theoretically-related socio-cognitive and communicative functioning, suggestive of construct validity (Burleson & Caplan, 1998). Burleson (1982) and Clark

and Delia (1977) similarly have found positive correlations between construct differentiation and abstractness and Rothenberg's (1970) affective role-taking measure. Additionally, the ability to produce person-centered messages has been found to be positively associated with cognitive complexity (Burleson & Caplan, 1998). Furthermore, Applegate (1982) demonstrated an association between cognitive complexity and the ability to persuade others, to discipline or regulate others' actions (Applegate et al., 1985; Kline, 1991), to manage interpersonal conflicts (Carrocci, 1985; Saine, 1974), and to make abstract information more understandable (Rowan, 1990). Others found that more cognitively complex individuals are able to infer multiple causes for the actions of others, as well as for the consequences of such actions, when compared with less complex persons (Clark, Willihnganz, & O'Dell, 1985; O'Keefe et al., 1989). The RCQ has also demonstrated predictive validity. O'Keefe, Delia, and O'Keefe (1977) found that an individual's interpersonal cognitive complexity score predicted ability to recognize, reconcile, and integrate potentially inconsistent information about others. Using the RCQ, Applegate, Kline, and Delia (1991) found that the RCQ was a significant predictor of criterion measures on indices of social reasoning and person-centered communication, performing better than three other measures of construct development used for comparison.

Some researchers (Beatty & Payne, 1984; Powers, Jordan, & Street, 1979) have expressed concern that RCQ measures are confounded by other factors, such as intelligence and verbal or writing abilities; several studies refute this notion. Interpersonal cognitive complexity estimates using the RCQ have generally been shown to be independent of measures of loquacity (Burleson, Applegate & Neuwirth, 1981;

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Burleson, Waltman & Samter, 1987), general or verbal intelligence (Allen et al., 1991;

Allen, Mabry & Preiss, 1997), vocabulary, verbal fluency, and academic achievement

(Allen et al., 1991), narrative writing ability (Burleson & Rowan, 1985) and writing speed

(Burleson, Applegate & Neuwirth, 1981). Applegate et al. (1985) also demonstrated that

the RCQ is free from such potentially confounding variables as verbal intelligence,

verbal fluency, loquacity, general intellectual abilities, GPA, performance on

standardized tests such as SAT, narrative writing skill and writing speed. Additionally,

RCQ-based measures of cognitive complexity do not appear confounded by many

personality traits (Burleson & Waltman, 1988; O'Keefe & Delia, 1982).

In summary, the RCQ appears to generate an adequately reliable measure of

interpersonal cognitive complexity. Additionally, RCQ measurements appear correlated

with indices of socio-cognitive and communicative skills that appear theoretically related

to interpersonal cognitive complexity. This estimate appears to be free of confounding

factors such as intelligence, verbal or writing abilities, and a variety of personality traits.

Conclusion

Although attachment and interpersonal cognitive complexity have never been

directly linked in research, studies in both areas report that optimal cognitive

development takes place in an environment that promotes active learning and

exploration within the context of secure, supportive relationships. These relationships

provide the emotional and cognitive resources needed for exploring new territory and

new relationships; they also provide protection from stress. Of course, many children

exist whose relationship experience has been less than secure or supportive. Foster

children, for example, would appear at higher risk than the general population for a

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history of inadequate care giving. The purpose of this research is first to determine the distribution of attachment styles among foster children. Secondly, this project will seek to document the relationship between attachment style and interpersonal cognitive complexity.

Research Questions

1. What is the distribution of attachment styles within a foster care population?

This study attempted to answer this question by using the Relationship Structure Questionnaire administered to children, ages 15-20, who were currently in the care of United Methodist Youthville (UMY) due to parental abuse and/or neglect. Children were categorized by the two dimensional measurement of relational anxiety and avoidance with a resulting classification in one of the four categories discussed previously.

2. Are there differences among children in foster care, as classified by attachment style, in terms of interpersonal cognitive complexity? This question was addressed using the Role Category Questionnaire (RCQ) administered to same group of UMY children identified in Question 1. Differences between groups of securely attached versus insecurely attached children, as well as differences between the different categories of insecure attachment were compared. Securely attached children were expected to demonstrate higher degrees of interpersonal cognitive complexity than those insecurely attached; there was no speculation with regard to the differences that were expected between insecure categories.

Additionally, several exploratory areas were addressed related to factors associated with foster care that have the potential to influence attachment style and/or interpersonal cognitive complexity. In this case, age at first placement into foster care,

number of placements experienced while in foster care, number of episodes in foster care, cumulative number of months in foster care, and whether a child was initially placed with a familiar other or not were considered. Lastly, this study attempted to compare this sample's results to UMY's statewide data to get a sense for how applicable the results were to foster children in general.

CHAPTER II

METHODOLOGY

Participants

Participants were adolescents, ages15-20, who were currently in state custody in the care of United Methodist Youthville (UMY). UMY is a private contractor in Kansas for child protective services. Of 81 adolescents approached, 77 agreed to participate while four declined. Of the 77, five were later excluded because, upon receipt of the demographic data, they were found to have developmental diagnoses (e.g., mental retardation, Pervasive Development Disorder, etc.) that may have interfered with the ability to fully understand the tasks required. Six more participants were also excluded because demographic data indicated they were not yet 15 years old. One additional participant was excluded due to seemingly sarcastic and ingenuous responses. The final result is a convenience sample of 65 adolescents.

Of the remaining 65 participants, 57% were female and 43% were male. The average age of participants was 17 years. Educational status reported by the social worker showed that 39% of participants had completed 9th grade, 31% had completed 10th grade, 12% had completed 11th grade and 14% had completed 12th grade at the time they responded to the surveys. Regarding race/ethnicity, 49% of participants were identified as Caucasian, 29% Hispanic, 8% African American, 2% Asian, and 11% mixed. See Table 1.

Table 1
Demographic Information of Participants

Gender	
Female %	56.9
Male %	43.1
Age in Years M (SD)	17.0 (1.16)
Education Level[a]	
9th %	38.5
10th %	30.8
11th %	12.3
12th %	13.8
Missing Data	4.6
Race/ethnicity[b]	
Caucasian %	49.2
Hispanic %	29.2
African American %	7.7
Asian %	1.5
Mixed %	10.5

Note. n = 65.

[a] n = 62. [b] n = 64.

Recruitment

Adolescent foster children in Kansas frequently have the opportunity to participate in workshops geared toward independent living skills and higher education. These group settings provide an opportunity for collecting data from several individuals at a time. As adolescents attended these workshops, they were given the opportunity to participate in this research project. In addition to these workshop settings, UMY adolescents who were placed at a UMY residential facility and at the Wichita Children's Home also had the opportunity to participate. An additional venue for data collection was the Child Lounge at UMY where children were waiting for various scheduled events (e.g., visitation, case plans, etc.) to begin.

In each case, staff introduced the researcher who then presented the details of what participation required as approved by WSU's IRB and UMY's Research Committee. Each potential participant was provided with copies of all instruments to be completed as well as the assent form to review. The researcher orally reviewed the purpose of the research as well as the tasks that would be required of the participants. Potential participants were informed participation was voluntary and there would be no negative consequences if they chose not participate. If they chose to participate, they were also given the option of having their response sheets remain confidential or being copied for their UMY file. They recorded their decision on the assent form.

Procedures

Participants were first given a brief written description of the project (see Appendix A, Assent Form) requiring their signature to assent to participation or decline; this form was also reviewed with them verbally prior to their participation. To ensure participants

were fully informed about the process to which they were assenting, the Assent Form was accompanied by each instrument to be completed. Demographic forms that would be completed by their social workers regarding their experience in foster care were also provided. Each participant was allowed to review these forms prior to giving assent.

In addition to agreeing to participate, the Assent Form also gave participants the option of having their survey responses become part of their UMY record or remaining confidential. Each participant initialed which option they preferred. Following completion of this form, adolescents completed the Role Category Questionnaire (see Appendix B) with instructions as written. Next, they completed the Relationship Structure Questionnaire (see Appendix C). Following completion of this information, participants were thanked and returned to their activities. After participants' responses were collected, Demographic forms (see Appendix D) were sent to a team social worker who volunteered to research the data requested regarding the foster care experience, demographics, and diagnostic information for each adolescent.

Instruments

Role Category Questionnaire. Instructions for completion of the RCQ (Crockett, 1965) were provided orally by the researcher. Participants were then given approximately five minutes to provide as many descriptor words as possible regarding first a peer they liked followed by approximately five minutes to provide as many descriptor words about a peer they don't like. Participants were encouraged to think of as many words as possible but were allowed to move to the next task if they reported they were finished prior to the five minute timeframe. On occasion, the researcher provided assistance with spelling specific words if requested by a participant.

For scoring purposes, RCQ responses were unitized-- identified as individual concepts--and listed by the researcher in order to be scored independently by two coders. The second coder was involved in the development of the codebook and thusly very familiar with the coding process. Responses were then coded individually by the researcher and the assistant following the codebook that was developed through the process of this project in conjunction with another researcher (See Appendix E). For the purpose of this project, interpersonal cognitive complexity scores were calculated with consideration to both concrete and abstract constructs. This was done in order to maximize variance since participants were relatively young and younger individuals have been previously shown to think more concretely. Scores for both concrete and abstract constructs were calculated separately as well as in combination to allow further exploration of the data regarding the types of constructs given by this population.

The codebook used to guide the scoring process was developed around the work of Delia, Clark, and Switzer (1974). In addition to counting abstract constructs as commonly done by other researchers, Delia, Clark, and Switzer used five categories to code the RCQ. The first two categories, 1) general attitudes, beliefs, or values and 2) psychological traits, dispositions, or motivation, were viewed as abstract constructs. The final three categories, 3) behavioral acts or specific abilities, 4) social roles or demographic information and 5) physical characteristics were considered concrete constructs.

Guided by this codebook (See Appendix E), each participant response was determined first to be relevant or irrelevant to the task at hand. Items were determined irrelevant if there was not enough information provided, if the information pertained only

to interaction with the participant and not to people in general, or if a construct was repeated earlier in the list. If determined to be relevant, the response was further assessed for its concrete versus abstract nature. In the event of coder disagreement, the faculty chair of the dissertation committee provided a third opinion. Final categorization was determined by the majority opinion. After coding the first fourteen participants' responses, inter-rater reliability was determined to be 96.5%; follow up assessments indicated this figure remained consistent. This high reliability score is attributed to the detail provided in the codebook jointly developed with other researchers in the department.

In attempting to collect data that required participants to respond with written words, there was some difficulty in interpretation. Some of the difficulties included participants' use of "texting language" which included abbreviations and initials that are frequently used among adolescents when using their cell phones. At times coders were familiar with this "language;" other times, adolescents were asked to interpret. Another set of abbreviations also appeared in responses. A few participants responded using abbreviations used for tracking their "infractions" common to residential facilities they had stayed at; staff familiar with these abbreviations facilitated translation. Additionally, a number of slang words were used that required familiarity with gang-type language i.e., hoodrat, hood. These were included if at least one of the coders was familiar with the term or knew an adolescent who could identify the term. Lastly, some participants seemed to view this opportunity as a "legal" method for throwing out numerous vulgarities and name calling. It was difficult at times to assess if this was only name calling or also identified some personality or psychological trait. Constructs were

counted if they were thought to hold a meaning (i.e., bitch, jerk) that identified a

personality trait but not counted if coders came to a consensus that there was no

meaning usually intended with such a name.

Relationship Structure Questionnaire. After completion of the RCQ, participants

completed the Relationship Structure Questionnaire (Fraley, 2006) which consisted of

10 attachment-related statements, to be rated on a scale of 1 to 7 regarding four

different attachment figures: a mother-like figure, a father-like figure, a dating partner,

and a best friend. If a participant insisted they did not have that type of attachment

figure, they were allowed to skip it; this occurred only with father-figures. In order to gain

insight regarding what relationships were being responded to as parental attachment

figures, participants were asked to state the legal status of the relationship about which

they responded for mother- and father-like figures. They were also asked to report the

duration of the relationship. In regard to dating relationships, as directed by the

instructions of the Relationship Structure Questionnaire, participants were allowed to

answer regarding an actual relationship, past or present, or a relationship they sought in

the future. Participants were asked to identify whether responses were in regard to an

actual versus hoped-for relationship, and if actual, the duration of the relationship.

Regarding best friend responses, participants were asked to identify if the friend was

the same or opposite gender as they were and the duration of the relationship.

Scores for the Relationship Structure Questionnaire were calculated by inputting the

data into SPSS and following the author's instructions. For Anxiety scores, items 7-10

were averaged for each attachment figure and a global anxiety score was computed by

averaging the anxiety scores for all attachment figures. Avoidance scores were

calculated by averaging items 1-6 while reverse keying items 1-4. Global avoidance scores were computed by averaging avoidance scores across all attachment figures. Seven participants declined providing responses regarding father-like attachment figures, stating they had never had one. Nevertheless, their data was included with the appropriate adjustments to the averaging process by totaling their anxiety and avoidance scores and dividing by 3 rather than 4.

CHAPTER III

RESULTS

Experience in Foster Care

'Experience in foster care' and demographic data provided by the social worker was

obtained through an agency database. In several instances, the social worker indicated

that the data was not available in the database but provided the information that was.

Based on this data, the following information was compiled. See Table 2. The mean age

of the sample at first entry into foster care was 13.4 years. The average number of

months in foster care was 40.9 months and the average number of episodes in foster

care was 1.3. For those children who had multiple episodes in foster care, the total

number of months in care for each episode was not available and is therefore not

included in the average number of months in care. The average number of placements

experienced by this group of participants was 13. While many in the sample had a

relatively small number of placements, there were many who experienced numerous

placements. There appeared to be no "typical" experience.

Because of their potentially traumatic life experience, children in foster care are

frequently referred for a mental health evaluation to determine their need for therapeutic

intervention. In regard to mental health diagnosis, data available was provided by the

team social worker. In the case of no recorded diagnosis, it was difficult to determine if

the data was missing or if there was truly no diagnosis. It should be noted that in some

cases, simply being referred for an evaluation results in a diagnosis because insurance

requires it in order to pay for the evaluation. At other times, kids who demonstrate

mental health issues, particularly those of a behavioral nature, may have moved

frequently and are not therefore in one location long enough to attend a mental health

evaluation or have the information recorded accurately. Therefore, a diagnosis may not

be recorded even if mental health issues are present. Additionally, some children have

been determined to have multiple diagnoses while others have seen multiple mental

health providers who have interpreted their mental health issues differently and

therefore, have multiple diagnoses listed. Diagnostic information was the most

frequently unavailable and potentially skewed of all the information in Table 2.

Table 2

Experience in Foster Care and Mental Health Diagnosis

Age (in years) at first entry into foster care M (SD)[a]		13.43 (2.89)		
Total number of months in foster care M (SD)[b]		40.93 (37.18)		
Number of episodes in foster care M (SD)[c]		1.25 (.53)		
Total number of placements in foster care M (SD)[d]		12.97 (11.64)		
Placement with familiar other % (N)	Yes	13.8 (9)	No	86.2 (56)

Diagnoses

Behavior % (N)	58.5	(38)
Mood Disorder % (N)	35.4	(23)
Attention Deficit Disorder % (N)	23.1	(15)
Anxiety Disorder % (N)	16.9	(11)
Adjustment Disorder % (N)	10.8	(7)
Personality % (N)	4.6	(3)
Substance Abuse % (N)	4.6	(3)
Attachment-related % (N)	1.5	(1)
Other % (N)	1.5	(1)

Note. Diagnoses are not mutually exclusive. 18 participants had 1 diagnosis; 22 participants had 2 diagnoses; 11 participants had 3 diagnoses; 2 participants had 4 diagnoses; 12 participants had no diagnosis.

[a] n = 58. [b] n = 59. [c] n = 64. [d] n = 64.

Distribution of Attachment Style

In order to complete the first research objective of this project, which was to determine what the distribution of attachment styles is within a foster care population, each case was categorized into an attachment style depending on whether they fell into the high or low range of avoidance and anxiety following the two dimensional model of attachment. See Figure 1. First, scores for anxiety and avoidance were calculated for each participant. The average anxiety score for the sample was M = 2.23, SD = .95; the average avoidance score was M = 2.57, SD = .97. Following the calculation of the anxiety and avoidance scales, on both scales, those who scored four or less were considered low; those who scored more than four were considered high. Subsequently, those who were low in both avoidance and anxiety were categorized as secure. Those who were high in anxiety and low in avoidance were categorized as preoccupied. Those who were low in anxiety and high in avoidance were categorized as dismissive and those who were high in both anxiety and avoidance were categorized as fearful.

Figure 1.
Model of Attachment Styles
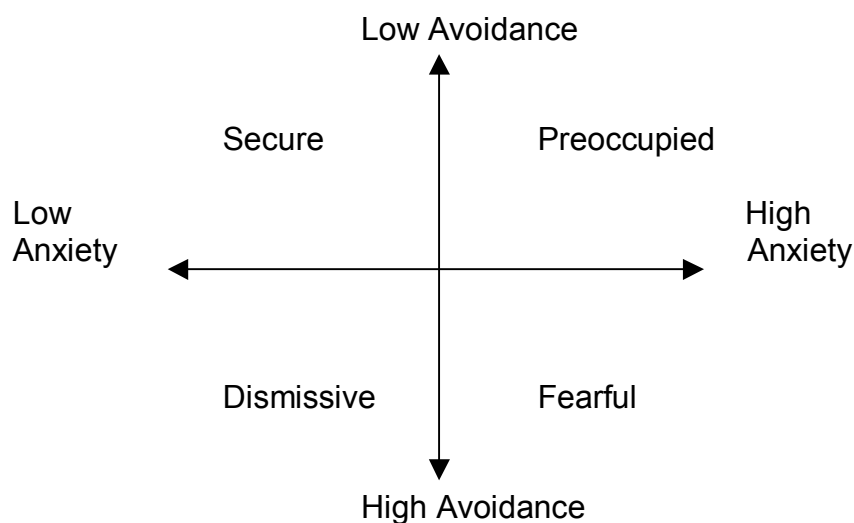
In analyzing the distribution of attachment styles, it was found that an extraordinarily high percentage of the sample scored in the Secure category. 89.2% of participants received a global attachment score in the Secure category; 3.1% in the Preoccupied, 6.2% in the Dismissive, and 1.5% in the Fearful. Regarding individual attachment figures, father figures had the lowest percentage (52.3%) in the Secure category while best friends had the highest percentage (90.8%) in the Secure category. Dating partners and mother-like figures came in second and third respectively with 78.5% and 73.8% in the Secure category. See Table 3.

The most common parental figures about whom participants responded were their biological parents. Forty-five percent responded about their biological mothers while 48% responded about their biological fathers. The second most common parental attachment figure in both cases was foster parents; 25% of participants responded regarding a foster mother while 17% responded regarding a foster father. The average length of relationship varied greatly as shown in Table 3. The distribution of attachment styles, the official relationship status of both the father and mother-like figures, and the duration of each attachment relationships are also presented in Table 3.

Table 3
Frequency of Global and Specific Attachment Styles

	Global	Mother Figure	Father Figure[a]	Dating Partner[b]	Best Friend[c]
Secure % (N)	89.2 (58)	73.8 (48)	52.3 (34)	78.5 (51)	90.8 (59)
Preoccupied % (N)	3.1 (2)	6.2 (4)	4.6 (3)	1.5 (1)	4.6 (3)
Dismissive % (N)	6.2 (4)	7.7 (5)	12.3 (8)	10.8 (7)	4.6 (3)
Fearful % (N)	1.5 (1)	12.3 (8)	20.0 (13)	9.2 (6)	0 (0)
Attachment Figure					
Biological parent		44.6 (29)	47.7 (31)		
Foster parent		24.6 (16)	16.9 (11)		
Adoptive parent		9.2 (6)	4.6 (3)		
Step parent		6.2 (4)	7.7 (5)		
Relative		6.2 (4)	6.2 (4)		
Friend's relative		6.2 (4)	--		
Professional		3.1 (2)	1.5 (1)		
Other		1.5 (1)	1.5 (1)		
Average length of relationship in months M (SD)		127.55 (82.01)	130.91 (85.42)	27.76 (31.00)	68.31 (63.64)

[a] Seven participants reported they had never had any attachment figure that resembled a father-figure to them. Averages are reported on the remaining 58 participants.

[b] Fifty-five participants responded about a real relationship; 10 responded regarding a relationship hoped for in the future.

[c] Thirty-seven participants reported that their best friend is the same gender as they are; 14 reported their best friend is opposite gender; 14 did not indicate gender of best friend.

Interpersonal Cognitive Complexity. The second research objective of this project was to determine if there were differences among adolescents in foster care, as categorized by attachment style, in terms of interpersonal cognitive complexity. For this sample, the average RCQ score was 15.06, SD = 7.14; the average number of abstract constructs given was 13.38, SD = 6.32, and the average number of concrete constructs given was 1.71, SD = 2.89. The original intent was to compare groups of secure versus insecure attachment styles in terms of interpersonal cognitive complexity as measured by the RCQ. In addition, each subtype of insecure attachment style was also to be compared regarding RCQ scores. Securely attached children were expected to demonstrate higher degrees of interpersonal cognitive complexity. Conversely, insecurely attached children were expected to display lesser degrees of interpersonal cognitive complexity although there were no projections regarding the differences between insecure subtypes. Unfortunately, these comparisons were limited due to an unexpectedly low variance in the distribution in attachment styles. See Table 4.

Demographic and Foster Care Experience Variables. Despite limitations in comparing RCQ scores by attachment style, several other findings were noteworthy. The last objective of this research was to investigate any possible relationships between demographic and 'experience in foster care' variables with attachment style and interpersonal cognitive complexity. First, this study sought to determine whether attachment style varied as a function of 'experience in foster care' variables, specifically age at first entry, total number of months in foster care, number of placements in foster care and placement with a familiar other. The intent was to gain some insight regarding the impact of potentially critical variables of foster care experience on attachment style.

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These analyses were not feasible due to the unexpectedly low frequency of insecure attachment styles in the sample obtained.

Secondly, interpersonal cognitive complexity scores were analyzed with consideration to demographic information, specifically, gender, ethnicity, and education. The results are shown in Table 4. Gender differences in RCQ scores were found to be significant although racial/ethnicity differences were not. The average total RCQ score for males was 12.29, SD = 6.02 while the average total RCQ score for females was 17.16, SD = 7.27. Hispanics achieved an average total score of 18.00, SD = 7.18; Mixed 15.14, SD = 5.76; Caucasians 14.97, SD = 7.48; African Americans 14.74, SD = 7.67 and Asians 12 (no SD due to only one participant). Educationally, there was no significant difference between grade levels on overall RCQ scores; 9th graders received an average RCQ score of 12.56, SD = 5.61, 10th graders 16.00, SD = 7.47, 11th graders 15.25, SD = 6.78, and 12th graders 16.11, SD = 7.27. Only those in the group who had just completed 9th grade appeared somewhat lower than the higher grades, but in fact, the difference was not statistically significant. In reviewing data regarding the abstract versus concrete nature of responses given by these adolescents, the large majority of responses were abstract regardless of age, gender, ethnicity and education.

Table 4

RCQ Scores by Demographic and Attachment Style Groups

	Concrete	Abstract	Total
Gender*			
Female M (SD)	2.30 (3.63)	14.86 (6.38)	17.16 (7.27)
Male M (SD)	.93 (1.09)	11.43 (5.78)	12.29 (6.02)
Race/Ethnicity[a]			
Hispanic M (SD)	2.80 (3.83)	15.20 (9.47)	18.00 (7.18)
Mixed M (SD)	.71 (1.50)	14.43 (6.08)	15.14 (5.76)
Caucasian M (SD)	1.69 (3.02)	13.34 (6.55)	14.97 (7.48)
African American M (SD)	1.89 (3.02)	12.84 (5.77)	14.74 (7.67)
Asian M (SD)	0 --	12.00 --	12.00 --
Education[b]			
9th M (SD)	.88 (1.24)	11.68 (5.61)	12.56 (5.61)
10th M (SD)	1.95 (3.72)	14.15 (6.17)	16.00 (7.47)
11th M (SD)	2.37 (2.92)	12.88 (5.91)	15.25 (6.78)
12th M (SD)	1.89 (2.89)	14.22 (8.03)	16.11 (7.27)
Attachment Style			
Secure M (SD)	1.83 (3.02)	13.14 (6.38)	14.93 (7.31)
Dismissive M (SD)	.50 (1.00)	12.75 (3.30)	13.25 (4.19)
Preoccupied M (SD)	1.50 (2.12)	15.00 (2.83)	16.50 (0.71)
Fearful M (SD)	0 --	27.00 --	27.00 --

Note. N = 65.

* p = .05, eta = .341.

[a] n = 64. [b] n = 62.

Lastly, RCQ scores were correlated with 'experience in foster care' variables. There were two statistically significant correlations, p<.01. Both total months in foster care and the number of placements experienced while in care was negatively correlated with RCQ scores, r (59) = -.39 and r (64) = -.25 respectively, suggesting that the longer a child was in care and the more placements they had experienced, the lower their scores in interpersonal cognitive complexity. See Table 5. These two variables of 'experience in foster care' are somewhat related. To some extent, a child who has been in foster care longer is likely to have experienced more placements; this is evident through a correlation of these two variables r (59) = .57, p<.01.

Table 5
Correlations between RCQ Scores and Experience in Foster Care

	Concrete	Abstract	Total
Current Age	-.06	.01	-.01
Age at Entry into Care	.10	.22	.25
Total Foster Care Months	-.12	-.40**	-.39**
Number of Placements	.02	-.30**	-.25**

**p<.01

CHAPTER IV

DISCUSSION

In summary, this study sought to determine 1) the distribution of attachment styles in an adolescent foster care population; 2) whether interpersonal cognitive complexity varied predictably by attachment style; and 3) whether 'experience in foster care' variables influenced attachment style and/or interpersonal cognitive complexity. This discussion section will first address findings regarding the distribution of attachment style followed by findings regarding interpersonal cognitive complexity. Lastly, findings regarding 'experience in foster care' variables will be reviewed.

Measuring Attachment

In exploring the types of attachment styles common to foster children, this study found that 89% of participants scored in the securely attached group. This is a much larger percentage than general population studies sampled in various settings where 47%-64% of respondents have been found to score in the secure category (Bartholomew & Horowitz, 1991; Campos, et al, 1983). That the percentage of secure attachment styles in this sample would be so much higher than all other studies of attachment is unlikely, particularly with consideration to the unhealthy and disruptive nature of childhood relationships of children in foster care. Therefore alternative explanations were considered.

First, of course, is to review the instrument used to assess attachment in this study. It is relatively new and has not yet been validated to the degree that other instruments have. Nor have there been any published studies using this instrument with adolescents. Still, this factor alone seems an unlikely source for such an atypical

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distribution of attachment styles. The instrument is similar in content and structure to several others that have previously been used with general population studies, including adolescents, suggesting reasonable expectations of validity. Furthermore, it was derived from earlier instruments that are believed to measure attachment which have been used extensively in research. It also clearly follows the theoretical approach to attachment which purports a two dimensional model that includes measures of anxiety and avoidance.

Even so, there is one notable difference in this instrument that may contribute to a defensive response style resulting in this remarkable distribution; this may be especially true with consideration to the life circumstances of this population. While many instruments ask similar questions, the questions are not usually geared toward *specific* attachment figures. Frequently statements are posed in a way that asks respondents to report about their general style of relating to others rather than their feelings toward a specific relationship. Children in foster care have often had parental relationships severed by the "system" and frequently come to see their families as victims. In responses being geared toward feelings regarding specific attachment relationships rather than an individual's general approach to relationships, one may evoke defensive responding based on a sense of loyalty to the attachment figure rather than an actual internal working model used in attachment relationships in general. In my clinical experience as well as my experience fostering children, there seems to be a tendency to idealize relationships that have been disrupted, particularly for children in foster care. Frequently children have reported consistent and powerful desires to return home just to leave the same home voluntarily after reintegration has occurred. Frequently they cite

parental qualities that were intolerable in their opinion as their reason for leaving. This occurs despite strong verbalizations of loyalty to parents, parental innocence, family victimization and the desire to reintegrate during the time they are separated. In this study, nearly half of participants responded to the survey about their biological parents. These are relationships that the "system" has disrupted and the result may be an apparent idealization of the severed relationship. Because the global attachment style is an average of scores across four attachment figures, two being parental figures, idealization of these relationships may be reflected in the high number scoring in the 'secure' category.

Dismissive Styles and the Measurement of Attachment. Another plausible alternative to explain the extraordinarily high percentage of secure attachments reported in this study is a possible orientation toward dismissive styles of attachment that results in a distorted cognitive process particularly related to attachment relationships. In entering the responses to attachment related questions, it was observed that ratings were frequently extreme. While participants had the opportunity to agree or disagree on a 7 point scale, it was not uncommon to see responses that were either 1's or 7's with no in-between scores. While it may be that participants did not understand or respond sensitively to the exercise, another possibility exists. Fonagy et al. (1991), using the AAI reported that persons with dismissive styles of attachment were characterized by either idealizing their parents or devaluing them. Neither historical account was supported by fact. In fact, the dismissive participants were generally unable to provide a coherent history regarding their childhood and their memories were distorted and inconsistent. Also supportive of the distorted nature of relationship cognitions reported by dismissive

individuals is previous research that shows dismissive individuals experience physiological reactions suggestive of anxiety in regard to attachment related issues even though they do not report feelings of anxiety (Kobak & Sceery, 1988; Sroufe & Waters, 1977). While dismissive individuals seem to respond physiologically to relational information, indicating interpersonal needs and anxiety, they appear to deny or suppress these thoughts and feelings at least outwardly.

The dismissive style of attachment therefore seems to be a strategy to suppress anxiety rather than a genuine lack of anxiety. In fact, without anxiety, in other words, discomfort, at some level, what is there to avoid? Avoidance is a strategy for minimizing discomfort-- in terms of attachment, anxiety. Anxiety in attachment theory is related to the evaluation of self worth. Self worth typically grows out of feelings that begin with parental approval and acceptance. Children in foster care have, by definition, been deprived of adequate, supportive care that naturally plants the seeds of positive self worth. The resulting options are to recognize anxiety related to questions of self worth and continue efforts to resolve these feelings or to deny and suppress the feelings of anxiety. Foster care is an unlikely circumstance for overcoming these powerful though perhaps erroneous perceptions of self that began with shortcomings in the family of origin. If resolution of anxiety is not then a viable option, one is left with the choice of altering cognitions, including memories and appraisals of other, without supporting evidence. The question then becomes, 'how does this translate into the all-or-nothing ratings regarding attachment figures that were reported by many of the participants in this study?'.

Researchers Graham and Clark (2006) may provide insight into this phenomenon. They hypothesized and found support for the theory that individuals with low self esteem have competing, yet incompatible, drives to achieve the goal of experiencing positive feelings of self worth. Because they lack an internal sense of positive self worth, their first drive is to develop and strengthen close relationships to gain external approval; the second is to protect themselves from rejection that would suggest they are unworthy. The cognitive structure in which positive and negative relationship information are tied together cannot serve either motive well. Low self esteem individuals therefore develop segregated banks of interpersonal information. In an effort to be associated with "perfect" partners who will reflect positively on them, and avoid flawed partners who will reflect negatively on them, those low in self esteem focus closely on partners' positive attributes and avoid thinking about negative attributes during low threat periods of time. Relationship researchers have termed this tendency in people "sentiment override" and although it is strong in the beginning stages of any relationship, it typically dissipates over time as the relationship becomes well-established. Graham and Clark suggest that this process does *not* dissipate for individuals with low self-esteem and remains a particularly powerful force, likely to persist perhaps for the duration of the relationship. They further theorize that because all relationships will eventually have an event that may be interpreted as threatening, a store of negative partner information will also begin to develop as people with low self esteem switch their focus to partner flaws to fulfill their goal of self-protection through devaluing the relationship. These individuals tend to be hypervigilant and reactive to signs of possible rejection as well as cautious and self-protective in the presence of such signs. Once a threat is detected, people low

in self-esteem shift their motives from establishing the perfect relationship to protecting themselves from rejection. People high in self-esteem, on the other hand, feel accepted by others and are not overly concerned about the implications of others for themselves. Therefore they do not need to focus on exclusively on positive attributes to feel comfortable approaching others nor do the need to focus exclusively on negative attributes for self-protective purposes. This theory provides an explanation for the development of segregated or compartmentalized assessments of people that tend to be all positive or all negative, as is the case of individuals with dismissive attachment styles.

This theory may translate into an explanation for foster children responding with extremes in regard to the relationship with their parents. In the case of idealization or devaluation of relationships common with dismissive individuals, children may view their parents as perfect to support their belief of themselves as being lovable and accepted. Conversely, they may deny the importance of the relationship and devalue their parents in an effort to protect themselves from feelings of rejection, especially since the circumstance of foster care may translate into feelings of rejection. In a population that has chronically had reason for anxiety in relationships and yet had few options for addressing this anxiety, perhaps a dismissive style is the most viable coping strategy. The nature of the "system" limits ongoing, dynamic relational interaction that builds on previous experience and continues to grow and change internal working models about the nature of a particular relationship and requires the integration of new experience with old and good experience with bad. Therefore the only strategy readily available to children in foster care may be to alter cognitions about the relationship—regardless of

the accuracy of the new cognition. This may provide at least a partial explanation of the high rate of secure attachment reported in this group.

Interpersonal Cognitive Complexity

In regard to the second research question presented in this study, data did not provide the necessary requirements to perform statistical comparison between attachment groups in terms of interpersonal cognitive complexity. Because nearly 90% of participants scored in the secure category, statistical comparison among those categories in regard to interpersonal cognitive complexity was not possible. This also prevented the relationship between anxiety and interpersonal cognitive complexity from being explored. Further research into the accuracy of the attachment classification of this sample using alternative measurement instruments may allow the relationships between interpersonal cognitive complexity, anxiety and attachment to be studied statistically.

Despite the lack of direct evidence linking anxiety in relationships to decreased interpersonal cognitive complexity, there is some indirect evidence with regard to "experience in foster care" variables. Statistically significant negative correlations were found between both the length of time in foster care and number of foster care placements with interpersonal cognitive complexity scores. In an effort to explain this, anxiety appears possibly indirectly related. While anxiety was not detected in the measure of attachment, alternative reasons for that were considered above. Additionally, one can reasonably conclude that the circumstance of being in foster care for an extended period of time and of having numerous placements would translate into uncertainty about the future which normally produces at least moderate levels of anxiety

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in anyone regardless of attachment style. Hypervigilance regarding these circumstances is likely to result in being overly focused on these issues while ignoring other factors that are typically part of the developmental process—in this discussion, interpersonal information. Future research that obtains a measure of global anxiety would perhaps facilitate exploring the proposed link between diminished interpersonal cognitive complexity and the length of time in foster care and numerous placements while in foster care.

Limitations of Research

With regard to this study, there are some limitations that should be noted. The sample size in this study was a relatively small one with responses from adolescents in the custody of only *one* organization in *one* state. The findings may not be representative of foster children as a whole and in fact, data that might have been used to indicate generalizability within the state of Kansas were not available. The lack of generalizability may be particularly true given the nature of the privatized contract in Kansas. Contracts are awarded by region which means that some agencies serve primarily rural families while others serve primarily urban families. It is quite possible that there are regional differences in these families would affect the outcome of this study.

In addition to these limitations, as noted earlier, the instrument used to measure attachment in this study was a relatively new one that does not have extensive research regarding validity. Several possible sources of distortion of this instrument were noted above. Along the same line, although not especially helpful in explaining the results of this study, another factor to be considered in the measurement of attachment, is that

besides a person's internal orientation toward relationships, there is the possibility that, in regard to specific attachment relationships, one may have experienced a particular person as untrustworthy and/or unreliable, possibly generating anxiety and/or avoidance with regard to that relationship--but reasonably so. That may be a separate and distinct relational strategy not consistent with the participant's general strategy toward interpersonal relationships. Because of this, instruments that ask participants to identify how they generally approach relationships might be a more valid measure of internal attachment processes. Having both a measure of how they are attached to particular figures in their lives as well as a measure of general attachment orientation might provide information about what relationships have been most influential in the development of their internal attachment system.

Future Research

Based on the findings of this study, further investigation is needed to determine if the proposed explanations regarding the high representation of 'secure' attachment style in this sample are on target as well as to further explore the relationship of attachment style to interpersonal cognitive complexity and 'experience in foster care' variables. A more pronounced link to anxiety may facilitate each of these goals.

Attachment. Because questions about specific relationships, such as those that make up the Relationship Structure Questionnaire, may logically result in a response set less informative about general orientations toward relationships and more informative about feelings toward a specific person, I propose additional research that uses a four paragraph measure of self described orientation toward relationships, such as the Relationships Questionnaire by Bartholomew and Horowitz (1991). Additionally, a

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clinical measurement technique, specifically the Attachment Interview for Childhood and Adolescence (AICA; Ammaniti et al., 1990) that will provide an objective measure of attachment should be used in tandem. In the event that dismissive attachment styles in particular provide distorted views of historical relationships, using denial and suppression to cope with anxiety, self report may not be an adequate measure of attachment style. The use of the two measurement techniques would clarify any discrepancies between self report and clinician report of attachment style. Both could then be related back to the attachment style participants scored in this study, providing validation—or invalidation—of this newer instrument as well as shedding light on the seemingly high percentage of secure attachment styles scored in this study. In addition to the measurement of attachment, a measure of anxiety not specific to relationships might provide indirect evidence of anxiety experienced by dismissive individuals that they deny is associated with relationships but present nonetheless.

If indeed, dismissive attachment style is more prevalent than it appears and the skewed nature of the results is due to compartmentalized thinking, potential interventions may focus on helping foster children develop a positive self concept independent of deficient relationship experiences in their past. This intervention may also focus on helping youth evaluate historical memories for their factual basis and integrate the emotional experience of loving someone while recognizing both positive and negative qualities. This process would facilitate healthy grieving and limit setting, rather than denial and suppression, resulting in integrated cognitive processes that further healthy development. While psychotherapy may be a beginning point for this intervention, the majority of the work would likely be done through the education of

foster parents who provide experiential feedback on these issues on a daily basis. The experience of living in a foster family is likely to provide the most powerful opportunities for overcoming the self doubts that seem to underlie dismissiveness.

Interpersonal Cognitive Complexity. In hope of eventually achieving the second objective of this study--identifying a relationship between attachment style and interpersonal cognitive complexity--the separate measure of anxiety proposed in the previous section may be useful in this area as well. Because anxiety seems to be the logical common factor in attachment style and the development of interpersonal cognitive complexity, a more intentional and deliberate look at anxiety as a mediating factor may provide the information necessary to substantiate such a relationship.

In regard to the technique used to measure interpersonal cognitive complexity in this study, it appeared that adolescents in this sample were sufficiently abstract in their assessment of others making it unnecessary to include concrete concepts in the measure of interpersonal cognitive complexity. While the method of including concrete constructs was utilized in this study to capture the potentially concrete nature of thinking common in youth, responses to the RCQ consisted overwhelmingly of abstract constructs demonstrating that the adolescents in this sample were quite able to provide abstract responses.

Experience in Foster Care. If future research is able to obtain the added measures of attachment and anxiety that are proposed above, exploring the relationships between these factors and variables in the foster care experience, as originally intended, might reveal areas where systemic changes might improve outcomes for children in foster care. Additionally, further exploration into the relationship between diminished

interpersonal cognitive complexity and both the length of time in care and the number of placements while in care may be useful. It is possible that individual differences have contributed to both of these variables. In order to effectively design an intervention for any of these variables, additional information is needed to explain the relationship.

Procedures. Lastly, in planning for the data collection process to be utilized for further research, I found that collecting data on an individual rather than group basis made interpretation of the data less ambiguous. Data collected individually was more complete and clarifications were able to be made when necessary. Therefore, future research should consider collecting data on an individual basis in order to collect the most useful information.

Conclusion

In conclusion, the distribution of secure attachment styles found in this sample was extraordinarily high to the degree that the data is considered to be an inadequate representation of the participants' actual attachment style. The measurement instrument's use of questions toward specific attachment figures rather than a general orientation toward relationships is considered to be one possible source for achieving this atypical distribution. This may be in the form of defensive responding where participants feel protective toward specific estranged relationships or it may be related to documented inconsistent attachment information provided by a dismissive style that could be reasonably prominent in this sample. Future research may further substantiate these ideas by concurrently measuring attachment through self report and clinician report in conjunction with a measure of global anxiety.

Because the distribution of attachment provided limited variance, the relationship between interpersonal cognitive complexity and attachment style could not be statistically compared. There were however notable negative correlations with regard to number of months in foster and number of placements in foster care with RCQ scores. Because both of these 'experience in foster care' variables appear reasonably linked to anxiety, future research should pursue the possibility that anxiety may provide a link between attachment style and the development of interpersonal cognitive complexity.

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APPENDICES

Appendix A

INFORMED ASSENT TO ALLOW INFORMATION ABOUT 1) RELATIONSHIPS OF FOSTER CHILDREN AND 2) ITS LINK TO HOW THEY THINK ABOUT OTHER PEOPLE TO BE USED FOR RESEARCH PURPOSES

PURPOSE: I understand that I have been invited to participate in a study about attitudes and feelings that kids in foster care have about relationships and to understand if this is related to how they think about other people.

PARTICIPANT SELECTION: I understand that I was invited to participate in this study because I am in foster care with United Methodist Youthville (UMY) and am old enough to participate in their Independent Living program. Sixty kids will participate in this study.

EXPLANATION OF PROCEDURES: If I choose to participate, I will be asked to complete two surveys. In the first survey, I will be given five minutes to name as many characteristics as I can think of about a person that I like. Then I will be given the same amount of time to name as many characteristics as I can about a person I do not like. In the second survey, I will be asked to identify how strongly I agree or disagree with statements regarding four different relationships in my life. Besides the surveys I complete, my social worker will provide the researcher information about how long I have been in foster care, how many placements I have had, etc. to see if these factors are related.

DISCOMFORT/RISKS: I understand that the researchers do not expect me to experience any discomfort or be put at risk if I participate in this study.

BENEFITS: I understand that by learning about the thoughts and feelings of kids in foster care, social workers and foster parents may be better able to help kids who are in foster care.

CONFIDENTIALITY: I understand that any information obtained in this study will remain confidential and will be disclosed only with my permission. No individual information identifying me as the participant will be released. If I wish, however, I may choose to make this information part of my UMY file so that it might help my social workers help me in the best way possible.

REFUSAL/WITHDRAWAL: I understand that participation in this study is entirely voluntary. My decision whether of not to participate will not affect my future relations with Wichita State University or UMY. If I agree to participate in this study, I am free to withdraw from the study at any time without penalty.

CONTACT: I understand that if I have any questions about this research, I can contact Laura Turner at (316) 992-1601 or Dr. Louis Medvene at (316) 978-3822. If I have questions pertaining to my rights as a research participant, I can contact the Office of

Research Administration by mail at Wichita State University, Wichita, KS 67260-0007, or by telephone at (316) 978-3285.

I am not required to participate in this study. My signature indicates that I have read the information provided above and have voluntarily decided to participate.

I will be given a copy of this page for my records.

_____ I agree to participate in the research project.

      _____ I would like the surveys I complete to become part of my UMY file.

      _____ I DO NOT want the surveys I complete to become part of my UMY file.

_____   _____
Signature   Date

_____
Printed Name

_____   _____
Signature of Witness   Date

_____
Printed Name of Witness

Appendix B

Adapted Role Category Questionnaire

<div style="border: 1px solid black; text-align: center;">

Exercise in Perceiving Others

</div>

ID Number: _____

Step 1

A.   A person your own age whom you like (initials): _____

B.   A person your own age whom you dislike (initials): _____

~ Stop! Please wait for instructions before turning page ~

___Step 2___

On the lines below, describe **person A (liked)**, _____, as fully as you can. List one word or phrase on each line. List as many as you can think of. Do not simply list words that make him/her different. Also list words or phrases to describe this person that are common to other people you know. These questions may help you:

* What does this person respect?
* How does this person treat others?
* What do you like or dislike about how this person treats others?

* What are this person's values?
* What are this person's habits?
* How does this person act or behave?

Try to describe this person well enough that a stranger would recognize him/her based on your description. If you reach the last line in the first column and have more to write, begin listing more on the second column. **Please spend only about five (5) minutes describing him/her.**

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

Step 3

On the lines below, describe *person B (disliked)*, _____, as fully as you can. List one word or phrase on each line. List as many as you can think of. Do not simply list words that make him/her different. Also list words or phrases to describe this person that are common to other people you know. These questions may help you:

* What does this person respect?
* How does this person treat others?
* What do you like or dislike about how this person treats others?

* What are this person's values?
* What are this person's habits?
* How does this person act or behave?

Try to describe this person well enough that a stranger would recognize him/her based on your description. If you reach the last line in the first column and have more to write, begin listing more on the second column. **Please spend only about five (5) minutes describing him/her.**

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

Appendix C

Relationship Structure Questionnaire

This questionnaire is designed to assess the way in which you mentally represent important people in your life. You'll be asked to answer questions about your parents, your romantic partners, and your friends. Please indicate the extent to which you agree or disagree with each statement by circling a number for each item.

Please answer the following 10 questions about your **mother or a mother-like figure.**
----

 1. It helps to turn to this person in times of need.
strongly disagree 1   2   3   4   5   6   7 strongly agree

 2. I usually discuss my problems and concerns with this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

 3. I talk things over with this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

 4. I find it easy to depend on this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

 5. I don't feel comfortable opening up to this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

 6. I prefer not to show this person how I feel deep down.
strongly disagree 1   2   3   4   5   6   7 strongly agree

 7. I often worry that this person doesn't really care for me.
strongly disagree 1   2   3   4   5   6   7 strongly agree

 8. I'm afraid that this person may abandon me.
strongly disagree 1   2   3   4   5   6   7 strongly agree

 9. I worry that this person won't care about me as much as I care about him or her.
strongly disagree 1   2   3   4   5   6   7 strongly agree

10. I don't fully trust this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

What relationship is this person to you? (example: foster mom, biological mom, teacher, aunt, step mom, etc.) _____

How long have you known this person? _____

Please answer the following 10 questions about your **father or a father-like figure.**
----

1. It helps to turn to this person in times of need.
strongly disagree 1   2   3   4   5   6   7 strongly agree

2. I usually discuss my problems and concerns with this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

3. I talk things over with this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

4. I find it easy to depend on this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

5. I don't feel comfortable opening up to this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

6. I prefer not to show this person how I feel deep down.
strongly disagree 1   2   3   4   5   6   7 strongly agree

7. I often worry that this person doesn't really care for me.
strongly disagree 1   2   3   4   5   6   7 strongly agree

8. I'm afraid that this person may abandon me.
strongly disagree 1   2   3   4   5   6   7 strongly agree

9. I worry that this person won't care about me as much as I care about him or her.
strongly disagree 1   2   3   4   5   6   7 strongly agree

10. I don't fully trust this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

What relationship is this person to you? (example: foster dad, biological dad, uncle, teacher, step dad, etc.) _____

How long have you known this person? _____

Please answer the following 10 questions about your **dating partner.**

Note: If you are not currently in a dating relationship with someone, answer these questions with respect to a former partner or a relationship that you would like to have with someone.

----

1. It helps to turn to this person in times of need.
strongly disagree 1   2   3   4   5   6   7 strongly agree

 2. I usually discuss my problems and concerns with this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

3. I talk things over with this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

4. I find it easy to depend on this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

5. I don't feel comfortable opening up to this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

6. I prefer not to show this person how I feel deep down.
strongly disagree 1   2   3   4   5   6   7 strongly agree

7. I often worry that this person doesn't really care for me.
strongly disagree 1   2   3   4   5   6   7 strongly agree

8. I'm afraid that this person may abandon me.
strongly disagree 1   2   3   4   5   6   7 strongly agree

9. I worry that this person won't care about me as much as I care about him or her.
strongly disagree 1   2   3   4   5   6   7 strongly agree

10. I don't fully trust this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

Did you answer this questionnaire about an actual relationship? (circle one)

No   Yes   If yes, how long have you known this person? _____

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Please answer the following 10 questions about your **best friend.**
----

1. It helps to turn to this person in times of need.
strongly disagree 1   2   3   4   5   6   7 strongly agree

2. I usually discuss my problems and concerns with this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

3. I talk things over with this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

4. I find it easy to depend on this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

5. I don't feel comfortable opening up to this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

6. I prefer not to show this person how I feel deep down.
strongly disagree 1   2   3   4   5   6   7 strongly agree

7. I often worry that this person doesn't really care for me.
strongly disagree 1   2   3   4   5   6   7 strongly agree

8. I'm afraid that this person may abandon me.
strongly disagree 1   2   3   4   5   6   7 strongly agree

9. I worry that this person won't care about me as much as I care about him or her.
strongly disagree 1   2   3   4   5   6   7 strongly agree

10. I don't fully trust this person.
strongly disagree 1   2   3   4   5   6   7 strongly agree

Is your best friend the same or opposite sex of you? _____

How long have you known your best friend? _____

THANK YOU FOR YOUR HELP!

Appendix D

DEMOGRAPHIC INFORMATION

1. ID Number: _____

2. Gender: _____ Female _____ Male

3. Date of Birth: __/__/____

4. Level of education completed *(circle the highest grade completed)*:
   High School: 9   10   11   12

5. Race/Ethnicity *(check more than one if appropriate)*:
   _____ Caucasian   _____ African American
   _____ Native American   _____ Asian
   _____ Hispanic
   _____ Other: _____

6. Age at first entry into foster care: _____ years _____ months

7. Number of episodes in foster care: _____

8. Total number of months in foster care: _____

9. Total number of placements in foster care: _____
   Long term: _____
   Short term/emergency: _____

10. Original placement with familiar other: Y   or   N

11. Diagnosis by clinician:

THANK YOU FOR YOUR HELP

> # Role Category Questionnaire Codebook
> ### *For Laura Turner & Hannah Wolcott's dissertations; primary contributor: Kerry Grosch*
>
> The rules that follow serve as guidelines for making judgments about each person's descriptions of others.
>
> ---
>
> ### *The task for each coder is in general two-fold*
>
> **1. To rule out entries that should not be included in the differentiation score.**
>
> - Irrelevant information—relation to self, etc. (IRR)
> - Insufficient information provided (NSF)
> - Repeat of an earlier entry (RPT)
>
> **2. To determine whether included entries represent a psychological construct: Scored as "A" (abstract)**
>
> - Psychological traits or characteristics, personality, disposition, or motivational traits
>
> - General attitudes, beliefs or values
>
> - Concrete constructs strengthened to the level of abstract constructs through the use of modifiers (i.e., adjectives or adverbs or strengthened in some way (Kunkel's rules)). Key reference: Delia, Kline & Burleson (1979).
>
> **or represents a concrete construct: Scored as "C"(concrete)**
>
> - Social roles, specific abilities or demographics (age, gender, etc)
>
> - General or isolated behavior
>
> - Physical appearance
>
> ---
>
> Interpersonal cognitive complexity (ICC) in adults is generally measured by counting the number of psychological constructs which yields a "differentiation" score. In contrast, an ICC differentiation score for children is frequently measured by counting *concrete* constructs in addition to abstract constructs in recognition of the concrete nature of lesser developed cognitive capacities.
>
> Rules are illustrated through examples provided by CNAs and adolescents in foster care describing others. Explanations are provided (see Rationale) where clarification may be helpful. In general, examples of constructs are compiled from multiple participants.
>
> For clarification, "OR" is used with examples provided *by the same participant*, and in such instances, only one entry is counted as a construct; not both.

General definitions

Psychological traits or attributes, personality, disposition, or motivational traits:
- An abstract term or phrase (e.g., outgoing, friendly, caring, rude, conniving) indicative of the psychological realm (i.e., traits, thoughts, motivators, etc.)
- May include behavioral description if repetitive and strongly allusive of a psychological characteristic or attribute (e.g., "always gives people hugs and kisses when she comes and goes" infers "affectionate")

General attitudes or beliefs:
- Disposition, feeling, position, etc., with regard to a person or thing (e.g., puts others before self, respectful of women, etc.)
- Tendency or orientation, especially of the mind (e.g., always looks at the bright side, ignores negative behavior, etc.)

Degrees of strength or intensity:
- Addition of an adjective, adverb, or noun to a description that strengthens the psychological nature of the descriptor (e.g., avid, fanatic, freak, nut, crazy, phenomenal, good, great). Examples: sports crazy, extraordinary dancer, dynamic photographer, athletic, great cook

Social roles, specific abilities or demographics:
- Social status or position (e.g., banker, thief, neighbor, etc.)
- Incidental familial status (e.g., mother, father, single, divorced, etc.)

General or isolated behaviors:
- A one-time or occasional behavior or general hobby without emphasis of strength or intensity of involvement (e.g., golfer, plays cards, a reader, lies, smokes).

Physical appearance:
- A clearly physical characteristic (e.g., height, weight, hair color), excluding hygiene that is determined to represent how one feels about oneself.

Coding example

	Coder score	
Entry	*Abstract*	*Concrete*
Really smart	1	
28 years old		1
A golfer		1
Respects God	1	
Considerate	1	
Is a banker		1
Honest to a fault	1	
Kind hearted	1	
A devout Catholic	1	
A chain smoker	1	
Very smart	0 (RPT)	
Gregarious	1	
Upstanding	1	
Score →	**9**	**3**

Overarching principle: where possible, give the benefit of the doubt and count!

<u>*Rule 1:*</u> Constructs with synonymous qualities
Whenever two nearly synonymous (but not identical) qualities are provided by the same participant, give the benefit of the doubt and count both as separate constructs. Further specifications of this rule are provided in Rules 2 through 4.

Examples of synonymous qualities, in which both are counted:
- **"Friendly" and "outgoing":**
  - Friendly = A
  - Outgoing = A
- **"Loud" and "boisterous":**
  - Loud = A
  - Boisterous = A
- **"Respects boss" and "respects parents":**
  - Respects boss = A
  - Respects parents = A
- **"Values loyalty" and "values honesty":**
  - Values loyalty = A
  - Values honesty = A

Examples of duplicates by same participant, in which <u>only one</u> is counted:
- **"Friendly with everyone" and "friendly to everyone":**
  - Friendly with everyone = A
  - **OR** Friendly to everyone
- **"Likes to tease" and "teases sometimes":**
  - Likes to tease = A
  - **OR** teases sometimes

<u>*Rule 2:*</u> Words with both psychological and physical meanings
When the participant uses a word or phrase that can refer to either psychological or physical traits, or has both a psychological and physical component, use the most common or basic meaning for classification.

Examples of word with both psychological and physical components
- **"Strong" = C**
- **"Adorable" = C**
- **"Cute" = C**
- **"Beautiful" = C**

Rule 3: Qualifying adverbs or adjectives, opposites
When the participant uses an adverbial or adjectival qualifier that appears to be an intrinsic part of the noun it modifies, contrary to Rule 1, the two words are scored as a single construct. It is presumed that the qualifier refers to the *degree to which* the attribute is held, or to *one manner in which it appears*, rather than to a qualitatively different attribute. ***However:*** if two constructs are *opposites*, both words or word phrases are counted separately.

Examples of qualifying adverb or adjective:
- **"Unreasonably selfish" = A**
  - Degree of selfishness, not distinct quality of unreasonableness
- **"Emotionally unstable" = A**
  - Instability described, not a distinct construct of emotional

Examples of opposites:
- **"Always smiling" and "never smiles":**
  - Always smiling = A
  - Never smiles = A
- **"Caring" and "uncaring":**
  - Caring = A
  - Uncaring = A
- **"Friendly" and "unfriendly":**
  - Friendly = A
  - Unfriendly = A
- **"Kind" and "unkind":**
  - Kind = A
  - Unkind = A

Examples of duplicates by the same participant, in which only one is counted:
- "Always sarcastic" and "sarcastic":
  - Always sarcastic = A
  - **OR** "sarcastic"
- "Can be caring" and "caring":
  - Can be caring = A
  - **OR** "caring"

Rule 4: Identical vs similar meaning words
Identical, repeated words or phrases are scored only once. Words very similar in meaning but not identical are scored twice.

Examples of similar meaning words by the same participant:
- **"Emotional" and "emotionally unstable"**
  - Emotional = A
    - Suggests the person can be very happy, sad, mad, etc. at times
  - Emotionally unstable = A

- Suggests the person has mental health problems
- **"Domineering," "assertive," and "aggressive"**
  - Domineering = A
    - Controlling others, tyrannical
  - Assertive = A
    - Confident, self assured
  - Aggressive = A
    - Hostile, harsh

Examples of duplicates by the same participant, in which only one is counted:
- **"Helpful," "very helpful," and "helpful in some ways"**
  - Helpful = A
  - **OR** very helpful
  - **OR** helpful in some ways
    - These are all degrees of helpfulness or being helpful.
- **"Kind," "kind hearted," and "is kind"**
  - Kind = A
  - **OR** kind hearted
  - **OR** kindness
    - These are all variations of being kind

Rule 5: Idioms
Coders should seek consensus and provide rationale when interpreting a phrase as an idiom.

Examples of idioms:
- **"Always dwelling on the past" = A**
  - Someone who is constantly harping on the past, always bringing it up, perhaps blaming/complaining of it all the time. This is different from the entry "can't get over the past" or "can't forget the past."
- **"Can pray in any situation" = A**
  - This is both a common phrase (idiom) and indicative of someone who is "religious" or has a secure faith base.
- **"Can't forget the past easily" = A**
  - Someone who "holds grudges" and doesn't let go of the past.
- **"Can't get over the past" = A**
  - Someone emotionally hurt or wounded, but who may or may not be aware of the source of this pain. This person may be reactive toward others or situations, but unaware (or aware) of the connection.
- **"John is a big, fat slob" = A**
  - Someone who doesn't take care of himself, who has "let himself go."
- **"Never meets a stranger" = A**
  - Someone who is friendly or outgoing.
- **"Strong outside; weak inside" = A**
  - Someone who bluffs but is secretly unsure, unconfident, or a softy.
- **"Tunnel vision" = A**

- o Someone who is narrow minded or singular thinking without considering other perspectives or side effects/consequences.

Rule 6: **Limited communication ability/slang**

Give the benefit of the doubt if a slang type phrase is used and give credit as an abstract or concrete construct based on previously stated criteria. Do the same if it's apparent the person has limited communication skills but the phrase is interpretable.

Examples of slang or limited communication/grasp of English language

- **"Always asks how you are doing" = A**
  - o Alludes to someone caring, approachable, person-centered, and thinking about others and their thoughts or feelings.
- **"Gives good advice" = A**
  - o Describes a characteristic of the person (i.e. being wise, knowledgeable).
- **"Good" = A**
  - o This could refer to morals, virtues, or skill level. However, often refers to someone who is virtuous, honest, maybe clean cut, genuine, etc.
- **"It's hard for her to find good things to talk about" = A**
  - o Indicative of a chronic, pervasive attitude that is negative, cynical, or pessimistic, or perhaps that the person is depressed.
- **"Not in trouble" = A**
  - o Someone upstanding who strives to follow laws and rules. This is perhaps someone who stands out as clean cut and who stays clear of activities that might result in legal or supervisor's reprimands, in comparison to others.
- **"Thinks about his kids" = A**
  - o This may not seem pertinent to care giving, but it gives a sense about the kind of person this is -- someone who takes into consideration his children's needs or feelings and is cued toward others. It also implies this is someone perhaps dedicated to his children.
- **"Works too much" = A**
  - o The person has a work ethic or personal drive. Give benefit of doubt.
- **"Asks questions" = C**
  - o This person likely is inquisitive. Give benefit of doubt.
- **"Giving freely" = A**
  - o Interpreted as someone who tends to be generous.
- **"Good morning to anybody if she knows them or not" = A**
  - o Interpreted as the person is "friendly" or "outgoing" in general.
- **"I don't because she always piket (picky) about her bath. Wash your hand every time you hold something…." = A**
  - o "Piket" was unanimously interpreted by three raters as "picky," meaning the person was "particular" or "obsessive" about things like baths and washing to avoid germs.
- **"Tells everything it sees or hears" = A**
  - o Interpreted that the person gossips or otherwise discloses much to others.
- **"Hoodratish" or "hood" = A**

- o Implies a person dresses, acts, speaks, as if they live in hood. They lie, steal, use drugs, and any other things that are characteristic of dangerous neighborhoods.

Rule 7: **Personal statements**
Personal statements about what people should do or about the subjects' own feelings toward the person are irrelevant and not scored as constructs unless they are specifically tied to characteristics of the person being described. For example, statements like "People should be humble," "No one likes people who are selfish," "Nobody is perfect," or "I would like him as a roommate" (as opposed to "He would make a good roommate") say nothing about the criteria the subject has used in evaluating the person. Additionally, statements about the person in relation to self only (e.g., "We have fun together", "He helps me when I need it", etc.) are not generally included in the differentiation score. These entries describe the participant's interaction with the described person, rather than psychological traits about the described person. If there is an explicitness about the person described, however, defer to the description (e.g., "is a smoker like me" – smoker counts, so score = C). Lastly, if the participant uses a word or phrase that appears to be a personal judgment (e.g., bitch, jerk, etc.) but that implies a description as well, give the benefit of the doubt and count. Name calling that indicates judgment without an implication of trait description should not be counted.

Examples NOT counted:
- **"We have fun together" = IRR**
- **"Is my best friend" = IRR**
- **"Sucks" = IRR**
- **"Worthless" = IRR**
- **"Magnificent" = IRR**
- **"Awesome" = IRR**
- **"Always likes the same things I do" = IRR**
- **"I like her so much because we have a good time" = IRR**
- **"Always helping me when I have a problem" = IRR**
- **"…She show her love to me and I care for her too" = IRR**
- **"She always smile when she see me in the hallway…" = IRR**
- **"When (I) put (her) in bed, she always gives kiss in my lips and hug me..." = IRR**
- **"When she invites me over, she only invites me, not my husband or son" = IRR**
- **"I dislike the fact that she is always calling late at night when she knows I have a son and have to get up early" = IRR**

Examples of exceptions counted:
- **"He would make a good roommate" = A**
  - o Implies this is someone who would be responsible or fun or has other socially desirable qualities.
- **"Fun to be around" = A**
  - o Includes the writer, but also implies this is someone who is fun or has other socially desirable qualities.
- **"Bitch" = A**
- **"Jerk" = A**

Decisional rules for common entry types:

Following are several general rules for scoring common problematic entry types.

Psychological Traits

Love and affection
Concrete examples
- Hugs people
- Pet lover

Abstract examples
- Huggable, loveable, easy to love, loving, affectionate, contagious smile contagious laugh, loveable
- Loves life, loves his kids
  Rationale: Implies caring/nurturing type mentality – or a warm, approachable

General Attitudes or Beliefs

Politics
Concrete examples
- Democrat, Republican, activist, etc.

Abstract examples
- Staunch Republican, political extremist, conservative, liberal, political
  Rationale: Generally, political affiliations are social categories that typically embrace sets of ideals. Many times used as a stereotype, an intensifier indicates further thought about this in regard to the subject being described.

Religion
Concrete examples
- Goes to church, a church goer, Christian (or any specific faith)

Abstract examples
- Religious, a person of faith, faith based, spiritual, believes in God, a believer, prayerful, never misses a Sunday, can pray in any situation.
  Rationale Generally, religious affiliations are used as social categories that may embrace sets of ideals. Many times used as a stereotype, an intensifier indicates further thought about this in regard to the subject being described.

Social Roles, Specific Abilities or Demographics

Demographics
Concrete examples
- Mother, father, had her kids taken away, bartender, unemployed, accountant

Abstract examples
- Good mother, attentive father, loving dad, deadbeat parent, absent father,

thinks about his kids first, neglectful mom, typical bartender, astute accountant

> ***Rationale:*** *Generally social roles although intensified strength implies a more psychological orientation.*

Skills and abilities

Concrete examples

- Artist, singer, dancer, musician, writer

Abstract examples

- Athletic, musical, creative writer, dynamic singer, talented photographer, good dancer, etc.

> ***Rationale:*** *Generally occupational roles although intensified strength implies a more psychological orientation.*

General or Isolated Behaviors:

Hobbies and interests

Concrete examples

- Reader, golfer, shopper, dancer, likes to gamble, skates, rollerblades on Fridays

Abstract examples

- Avid reader, amateur golfer, shopping fanatic, good rollerblader

> ***Rationale:*** *Based on behavior but increased degree of strength implies a more psychological orientation.*

Habits

Concrete examples

- Smokes, smoker, bites nails, chocoholic, etc.

Abstract examples

- Smokes like a chimney, chain smoker, hooked on gambling, anorexic,

> ***Rationale:*** *Follows Kunkel's rules and requires an intensifier to raise descriptors to level of abstract constructs.*

Substance use

Concrete examples

- Drinks, does drugs, drug user, smokes dope, druggy, gets high, stoner, pothead, boozer, drunkard, alcoholic, hangs at the bar

Abstract examples

- Heavy drinker, tipsy, typical pothead

> ***Rationale:*** *Follows Kunkel's rules of requiring an intensifier to raise descriptors to level of abstract constructs.*

Immoral (or moral) behavior

Concrete examples

- Lies, steals, thief, slut, whore, out every night, has lots of kids with lots of women, con artist, liar

Abstract examples

- Loose, has good morals, a prude, prudish
- Deceptive, his whole life is a lie, greedy, she can't tell the truth

Rationale: Follows Kunkel's rules of requiring an intensifier to raise descriptors to level of abstract constructs.

Physical Appearance

Personal self care

Concrete examples

- Fat, obese, likes to exercise, wears glasses, balding, beautiful, wears clothes too big for her

Abstract examples

- **Dress style:** good dresser, flashy dresser, dresses neatly, fashionable, in vogue,
- **Hygiene:** doesn't bathe, unkempt, stinks, slob, big fat slob, dirty
  Rationale: Implies how the person carries or feels about self.