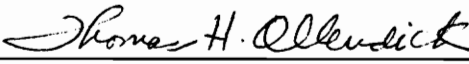Separation Anxiety and Adjustment to College: An

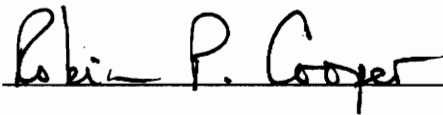Attachment-Theoretical Perspective

by

Cynthia A. Lease

Dissertation submitted to the faculty of

Virginia Polytechnic Institute and State University

in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Psychology

Approved:

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Thomas H. Ollendick, Ph.D., Chair

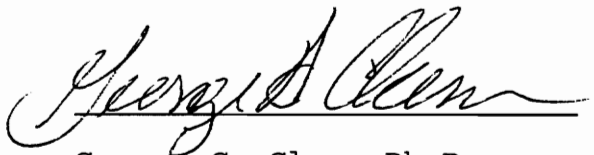_____   _____
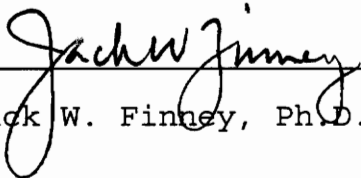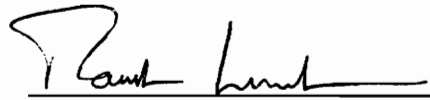
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November, 1994

Blacksburg, VA

SEPARATION ANXIETY AND ADJUSTMENT TO COLLEGE: AN
ATTACHMENT-THEORETICAL PERSPECTIVE

by

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ABSTRACT

The relationships between working models of attachment
and adjustment to college among first-year college students
was examined in a longitudinal study. The results of this
study indicated that when college students were classified
as secure, dismissing, or preoccupied by the Adult
Attachment Interview, significant differences emerged in
their experience of separation anxiety, self-perceived
competence, perceptions of relationships, and attachment-
related behaviors. Over half of the secure group reported
clinical levels of separation anxiety at the beginning of
the academic year, however, they showed a significant
decline in symptomatolgy over time indicating adaptive
resolution of the distress associated with the developmental
task of emancipating from home. All but one member of the
preoccupied group had clinical levels of separation anxiety
at the beginning of the year, and although they reported
some decline in symptomatology over time, decrease in the
number of symptoms did not reach statistical significance.
The preoccupied group reported having the most people upon

whom they could rely for support, and they went home more often than the other two groups. However, they were the least satisfied with the support they received. As predicted, separation anxiety was not prevalent in the dismissing group at any point in time. This group also reported the least number of people upon whom they could rely for support, but they perceived themselves as more socially competent than the secure or preoccupied groups. Finally, the dismissing group showed a significant increase in utilization of university health services across time. These findings lend support to the idea that working models of attachment are associated with differing approaches to affect regulation in situational and developmental contexts that elicit distress. Overall, the results of the present study provide evidence that attachment is associated with social-emotional adjustment during the course of the adolescent's emancipation from home and entry into college.

Acknowledgments

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I would also like to thank my committee members: George Clum, Robin Cooper, Jack Finney, and Bob Lickliter for their many contributions to my work. George, you have made academic discovery and debate a most enjoyable process. Your interest and curiosity in my research has been positively encouraging. Robin, I appreciate your knowledge of development and attachment theory. Your guidance and organizational skills helped me to systematically approach an extensive body of literature. Jack, your knowledge and planning abilities helped in keeping this study manageable. Also, your consistent encouragement and belief in my capabilities kept me grounded and motivated. Bob, I appreciate your scholarship in developmental psychology. You helped lay the groundwork for this study by providing me with pertinent literature, stimulating discussions, and clarity of ideas. Your

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Introduction

Attachment theory, as formulated by John Bowlby (1958, 1969/1982a; 1973, 1980), was originally developed as an alternative to psychoanalytic theories of object relations (1982b) in order to explain (a) childhood separation anxiety; (b) the similarities between childhood and adult grieving and mourning; and (c) defensive processes (selective exclusion of signals that would normally activate attachment behavior). The impetus for Bowlby's work emerged from observations demonstrating the pathological effects of institutionalization and hospitalization on infants and young children (e.g., Goldfarb, 1943; Spitz, 1946) which could not be explained in terms of the prevailing secondary drive theories of that time. Through an integration of principles from ethology, control systems theory, and cognitive science, attachment theory eventuated in a developmental conceptualization of the affectional bond that begins with the relationships between infants and their primary caregiver(s) and remains active across the life cycle.

Attachment theory began with an ethological-evolutionary explanation of infant behavior vis-a-vis primary caregivers (Bowlby, 1969). The focus was on attributing a survival-promoting function to infant behaviors that elicited proximity, care, and protection from the attachment figure. With the elaboration of the theory,

however, the central concern has been with the psychological aspect of attachment (Bowlby, 1973, 1980).

The introduction to this dissertation includes four main sections. In the first section, an overview of attachment theory is provided. The second section consists of a review of attachment research on infants and toddlers. In the third section, the ontogeny of attachment is explained. Finally, in the fourth section, the role of attachment in adolescent development is examined, and the basis for the present research study is provided.

Attachment Theory

In this overview, the ethological and cybernetic foundations of attachment theory will first be discussed. This will be followed by an explanation of the cognitive/affective schema that Bowlby referred to as the "internal working model." It is on this cognitive component that much of the contemporary attachment research has been focused.

The Ethological-Evolutionary Theory of Attachment

Bowlby (1982a) observed that, at birth, infants are capable of a variety of behaviors that elicit caregiving and other social responses from adults. Initially, these behaviors are simply emitted, rather than being directed toward one specific person. However, over the course of the first few months, infants begin to discriminate one person from another and to direct their bids for care toward

specific caregivers. During the second half of the first year of life, the infant's tendency to seek proximity and interaction become integrated into a coherent behavioral-motivation system, organized around one or more particular figures who perform the role of secure base or haven (Bretherton, 1987). The term "attachment" as formulated by Bowlby (1982) and Ainsworth (1973) refers to the "preferential activation of this proximity- and security-regulating system with respect to a small hierarchy of caregiving figures and its resistance to 'refocusing' [i.e., resistance to directing attachment behaviors toward other potential caregivers]" (Bretherton, 1987, p. 1063).

The assertion that the baby's attachment behaviors come to be organized into a goal-corrected system of proximity and security regulation, directed at specific caregivers is based on the observation of separation distress displayed by infants at around 6 months of age. A number of developmental changes occur more or less simultaneously at this time including the onset of locomotion and directed reaching and grasping which enable proximity-keeping behavior to become more active and effective (Ainsworth, 1989). In addition, with the emergence of object permanence, the baby, having achieved some capacity for understanding that the caregiver exits even when not present to perception, forms her first inner representation of the primary caregiver. With this ability, comes the onset of

separation distress when the caregiver leaves the infant. At this point, the baby is considered to be capable of attachment, and is very likely to have become attached to her primary caregiver, as well as to a few other familiar persons (Ainsworth, 1989). Bowlby (1969, 1973) suggested that the fact that onset of separation distress coincided with the development of locomotion made evolutionary sense. "A motivational-behavioral system that prevents the infant from straying too far from a protective caregiver during exploratory forays into an unfamiliar physical or social world and that activates search behavior when the protective figure is absent has obvious survival value" (Bretherton, 1987, p. 1063).

The term "attachment system" (Bretherton, 1985) refers to Bowlby's conceptualization of a regulatory system which is hypothesized to exist within a person. The attachment system includes not only an inner organization, but also a set of overt behaviors. Seen from an outsider's perspective, the set-goal of the attachment system is to regulate behaviors that maintain proximity to and contact with the attachment figures. From the psychological viewpoint of the attached person, however, the systems's set-goal is felt security (Bischof, 1975; Bretherton, 1985; Sroufe & Waters, 1977a), and this may involve proximity and contact in some situations and lack of proximity in other situations (Sroufe & Waters, 1977a).

Several important features of the attachment system should be noted. First, the function of the attachment system at all developmental levels is to maintain a sense of security, that is, to effectively and efficiently modulate affective arousal and promote mastery of the inanimate and social world (Ainsworth, 1989; Sroufe & Waters, 1977a). The particular manner in which this is achieved, will obviously differ across developmental and situational contexts.

Second, Bowlby hypothesized that the <u>attachment system</u> exists within the individual, and that it is organized around specific partners. The <u>attachment relationship</u>, on the other hand, exists dyadically between two individuals and is conceptualized as the joint functioning of a filial and parental attachment system (Bretherton, 1987).

The filial attachment system continuously monitors and processes two types of information: signs of physical and/or psychological danger and the physical and psychological accessibility of an attachment figure. When no clues to danger are perceived, and the attachment figure is accessible, the child feels safe and secure and may explore at some distance from the attachment figure. When, however, the child perceives the environment as mildly alarming, the attachment system will activate proximity-seeking behavior.

In sum, the child's propensity for exploration and social interaction with others often takes her away from the

attachment figure, whereas fear and stress experiences take the child toward the attachment figure. Exploratory behaviors and attachment behaviors, although antithetical, are both a part of the attachment system. The attachment figure is used as a secure base for exploration (i.e., mastery) and as a haven of safety when danger threatens (i.e., modulation of affective arousal).

Attachment behavior is most likely to occur when the attached individual is frightened, fatigued, or sick and is assuaged when the attachment figure provides protection, comfort, and assistance (Bretherton, 1985). During infancy, it is important that the attachment figure be physically close and emotionally available. Later, however, "the mere knowledge that the attachment figure is available and responsive provides a strong and pervasive feeling of security, and so encourages the person to value and continue the relationship" (Bowlby, 1982b, p. 668). Although attachment behavior is most pronounced during infancy and early childhood, it can occur throughout the life cycle, especially in stressful situations (Bowlby, 1969). In adulthood, however, attachment relationships tend to be mutual rather than asymmetrical, with both partners in a relationship providing security for each other (Bretherton, 1987).

Attachment theory proposes that all infants become attached to their caregiver(s), even if the caregiver is not

optimally available and attentive (Bretherton, 1987).
However, individual differences in the quality of the infant-
caregiver interactions will result in different patterns of
relationship. Over the course of the first year of life,
the infant gradually develops expectations of regularities
in what happens to her. During the early months, the
caregiver's availability and responsiveness may be
particularly influential in patterning the relationships,
however, by the end of the first year, both partners are
probably contributing to the stability of individual
differences in the relationship (Bretherton, 1987). It has
been asserted that this is due to the fact that the infant
has begun to construct "internal working models" of the
physical environment, attachment figures, and herself
(Ainsworth, 1989). These representations are used by the
infant in understanding, planning, and guiding behavior vis-
a-vis the caregiver (Bretherton, 1987).

Working Models: The Internalization of Attachment Relations

The concept of internal working models originated with
Craik (1943) who stated, "By a model we thus mean any
physical or chemical system which has a similar relation-
structure to that of the process it imitates" (p.61).
Maintaining a cognitive memory structure of external reality
and one's own possible actions presumably contributes to the
efficiency of functioning by enabling an organism to "try
out various alternatives, conclude which is the best of

them, react to future situations before they arise, utilize the knowledge of past events in dealing with the present and future, and in every way to react in a much fuller, safer, and more competent manner to the emergencies which face it" (Craik, 1943, p. 61).

Based on this notion, Bowlby (1969) suggested that through the process of interacting with the physical and social world, an individual constructs internal working models of important aspects of the world. With the assistance of working models, the individual perceives and interprets events, makes inferences about the future, and constructs plans. In order to fulfill their functional role, internal working models need not be fully accurate nor extremely detailed, but to be useful, it is important that the relation-structure of working models be consistent with the reality they represent (Bretherton, 1987).

Of particular salience within the working model of the world, are working models of the self and attachment figures. A primary feature of the working model of self is the idea of how acceptable one believes her self to be in the eyes of that attachment figure (Bowlby, 1973). The critical feature of the working model of the attachment figure is the attachment figures accessibility and emotional availability and supportiveness.

The data used to construct the internal working model

is derived from multiple sources including the child's day-to-day interactions with the caregivers, statements made to her by the caregivers, and information coming from others. These models are reflected by the child's degree of confidence in caregiver availability which is built up slowly during the years of infancy, childhood, and adolescence (Bowlby, 1973). If, for example, a child experiences, and thus represents, attachment figures as emotionally available and supportive, she will be likely to form a complementary model of the self as competent and lovable. In other words, this child will come to expect not only that the caregiver is available, but that she is effective in eliciting care. On the other hand, a child who experiences parental figures as rejecting will probably develop a working model of self as incompetent and unlovable; and her expectations will consist of doubting the caregiver's availability and her own effectiveness in eliciting care (Bretherton, 1987). In short, internal working models can be understood as a complimentary set of expectations and beliefs, which are based on actual experiences about obtaining and receiving emotional support and care.

The actual construction of complimentary internal working models of self and attachment figures is a continuous process (Bretherton, 1987). With developmental as well as contextual changes, working models may become

modified and revised. With development, the child becomes increasingly more capable of independent thought and behavior, and is generally more competent. This, in turn, influences changes in how the attachment figure can respond to the child. Moreover, it has been shown that the affective quality of the relationships may change as a result of changes in the caregiving environment (Greenberg & Speltz, 1988; Lamb et al., 1984). For instance the primary attachment figure may experience changes in life stress and/or social support; or the child may experience changes in physical and/or mental health status.

Bowlby (1973, 1988a) acknowledged that working models of self and attachment figures can change; nevertheless, he cautioned against thinking of them as fluid. Over time, ways of thinking and interacting tend to become more habitual and automatic, and they become less accessible to awareness. This leads to relative stability in how the individual construes her interpersonal world (Bretherton, 1987). Although, as mentioned earlier, working models presumably increase efficiency, this is not without the cost of overgeneralization and potential distortion. It seems that there is an ever-present pull toward the familiar (i.e., assimilation), and when working models change, it is only when the lack of fit between actual transactions and the corresponding internal working models become so great that the model is no longer useful. At this point, the

individual may begin the process of accommodating the model to reality (Bretherton, 1987).

As is frequently the case, however, individuals are equally as likely to attempt to change reality to fit the internal working model and thereby hinder the adaptive accommodation of internal working models. Bowlby referred to this process as an example of defense mechanisms, and understood it as a particular case of selective exclusion of information that individuals constantly perform when processing input (Bretherton, 1987). According to Bowlby (1973, 1980), defensive exclusion tends to occur in response to intolerable psychological pain or conflict. For instance, clinical cases reveal such conflict when an attachment figure humiliates and rejects a child's security-seeking behaviors, denies the child's angry, anxious, or loving feelings toward her, or reinterprets rejection of the child as actually being generated by parental love. In these situations, the child may be incapable of tolerating ambivalent feelings toward the parent and exclude defensively from awareness the working model of the negative, unloving parent, in order to retain conscious access of the loving parent. Although this defensive process brings psychological relief by mitigating the experience of unbearable anxiety, confusion, or conflict, it may also make accommodation of internal working models to reality problematic. The maintenance of an idealized but

unmodifiable working model is likely to interfere with effective coping and optimal development (Bretherton, 1987).

The distinction between episodic and semantic memory (Tulving, 1972, 1983) was considered by Bowlby to be important in the process of defensive exclusion. Tulving (1972, 1983) proposed that specific life events are stored in autobiographical memory, whereas general knowledge is stored in semantic memory. Bowlby (1980) suggested that autobiographical memory derives from personal experience, and semantic memory may be based on information supplied by others. If these two sources of stored information are highly contradictory (i.e., memories of communications from others invalidates memories of actual experience), severe psychological conflict may arise. In this situation, an individual may selectively exclude episodically stored memories derived from actual experience as a defensive means of avoiding the conflict.

In concluding this overview of attachment theory, a final point regarding the intergenerational transmission of attachment patterns (Bowlby 1973) must be made. Bowlby suggested that individuals who grow up to become relatively stable and self-reliant tend to have parents who are supportive when called upon, but who also permit and encourage autonomy. To quote Bowlby (1988b), these parents adequately perform the role of attachment figure as "one of being available, ready to respond when called upon to

encourage and perhaps assist, but to intervene actively only when clearly necessary" (p. 11). Such parents tend to engage in open communication about their own thoughts, feelings, and plans, and about the feelings, thoughts, and plans of their children and others; but they also indicate to the child that all of these are open to questioning and revision. Bowlby (1969) suggested that:

> Because in all these respects children tend unwittingly to identify with parents and therefore to adopt, when they become parents, the same patterns of behavior towards children that they themselves have experienced during their own childhood, patterns of interaction are transmitted, more or less faithfully, from one generation to another. Thus the inheritance of mental health or of mental ill health through the medium of family microculture is certainly no less important, and may well be far more important, than is their inheritance through the medium of genes (p. 323).

To date, there is a burgeoning body of longitudinal research to support these claims. (For a summary of these studies, see: Cicchetti, Toth, & Lynch, 1994; Main & Goldwyn, 1984; and Ricks, 1985.)

It must be kept in mind, that Bowlby, who was a clinical psychiatrist, was interested in explaining psychopathology, and he formulated attachment theory for use in the diagnosis and treatment of emotionally disturbed

patients and families (Bowlby, 1988a). As a result of his collaboration with Mary Ainsworth, however, the focus of research became centered on normative populations, and attachment theory has been mainly used to promote research in developmental psychology. In the following section, the research initiated by Ainsworth and her colleagues will be reviewed. As will be seen, although attachment is considered to be active across the life span, most of the early research took place with infants and toddlers.

Attachment Research with Infants and Toddlers

Attachment research has primarily been focused on studying the attachment process in infancy and on the developmental sequelae related to the quality of the attachment (Ainsworth Blehar, Waters & Wall, 1978; Sroufe, 1983, 1988). Attachment quality in infancy has generally been assessed by the Strange Situation (Ainsworth & Wittig, 1969), a 21-minute structured laboratory procedure designed to produce a low level of infant stress but of sufficient magnitude to activate the infant's attachment system (Bretherton, 1987). The Strange Situation was originally developed to investigate the infant's exploration behavior in the mother's presence and absence (Ainsworth & Wittig, 1969), but resulted in assessment of attachment as defined by the infant's behavioral responses to separation from and reunion with her mother. The Strange Situation involves observations of parents and infants in a series of

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separation/reunion episodes. During a brief introductory
episode, the baby is given an opportunity to explore
attractive toys and is introduced to a stranger in the
presence of the parent. Subsequently, the parent twice
leaves the room (separations: leaving the baby once with
the stranger and once alone) and twice returns to it
(reunions). Observations of this procedure have revealed
marked individual differences in infant response to
reunion. When the parent returns, some infants
unambivalently seek proximity and physical contact, are
readily comforted if they have been upset, and then slowly
and comfortably return to play (Group B). Some infants
respond to maternal reunions with a lack of either proximity-
seeking or positive affect, actively ignoring and overtly
avoiding the parent by turning or moving away (Group A).
Other children are distressed by separation and seek
proximity to their mothers upon reunion; however they are
unable to be comforted by the contact they receive from
their mothers, and they tend to manifest angry, resistant
behavior toward the parent, alternating with proximity
seeking and passive behavior (Group C) (Main, Kaplan, &
Cassidy, 1985). It has been noted that the reunion patterns
of the A and C groups resemble reunion patterns typically
observed in children after longer or more traumatic
separations (Main et al., 1985).

    These individual differences in Strange Situation

behavior provide the basis for the classification of infant attachment. Studies conducted with normative samples reveal that approximately 70 percent of infants are coded as secure (Group B), 20 percent are coded as insecure-avoidant (Group A), and 10 percent are coded as insecure-ambivalent (Group C). The attachment categories established through investigations with the Strange Situation are best conceptualized as assessment of coherent organized strategies for relating to the caregiver in times of stress, weariness, or illness (Sroufe & Waters, 1977a). It is believed that the quality of the infant's attachment relationship with her caregiver is a function of the history of the infant's interactions with that particular caregiver over the course of the first year of life, especially those interactions in which the infant's needs are expressed (Ainsworth et al., 1978).

The different patterns of reunion behavior during the Strange Situations procedure were predictable from maternal behavior during the early months of the infant's life. Specifically, secure attachments were linked with a history of maternal warmth and sensitive responsivity. Anxious - avoidant attachments were associated with parental rejection and emotional unavailability. The anxious-ambivalent attachments were related to histories of inconsistent caregiving (Ainsworth et al., 1978; Bretherton, 1987).

Although it is suggested, that by 12 months of age, the

infant is likely to be contributing to the quality of her
attachment relationships with the caregiver, studies to
assess infant contributions have yielded equivocal results.
Some studies have shown effects of infant temperament while
others have not (Bretherton, 1985; Sroufe 1985). Ainsworth
(1983) suggested that an infant's influence on the mother
may be masked by maternal sensitivity. The nature of
maternal interactive behavior is strongly influenced by
individual characteristics of the infant. That is, maternal
sensitive behavior toward an initially irritable baby will
differ from sensitive behavior toward an initially well-
modulated infant. However, despite the variability in
maternal behavior, both infants have a good chance of
becoming securely attached. This notion has been supported
by correlations of maternal responsiveness in the first
quarter with less crying in the fourth quarters (Bell &
Ainsworth, 1972). Additional studies have shown that an
initially difficult infant may become an easier infant
through dyadic experiences with a sensitive mother
(Bretherton, 1987). The type of interactions most salient
to the patterning of attachment behavior is communication
regarding the infant's feelings of distress.

In a series of studies conducted by the Grossmanns
(Escher-Graeub & Grossmann, 1983; Grossmann & Grossmann,
1984; Grossmann & Grossmann, 1991), the particular
characteristic of emotional expressiveness between infants

and their caregivers was examined. Similar conclusions were drawn from all three studies. The manner in which caregivers do or do not respond to their infant's communications modifies the patterning of emotional expressiveness in the developing relationship, and therefore its quality. In particular, continued mutual emotional availability (Emde, 1983) seems to require that the parents not selectively discount signals of distress (Bretherton, 1987).

In a more recent refinement of the attachment classification system, Main and her colleagues (Main & Hess, 1990; Main & Solomon, 1986; Main et al., 1985) identified a new attachment pattern known as disorganized/disoriented (Group D). Infants in this category are characterized by fear or wariness of their attachment figure, dazed and disoriented facial expressions, and contradictory attachment behavior belonging to mutually exclusive attachment categories (i.e., behavior similar to A or C babies). Approximately 10-15 percent of nonclinical samples of middle-class and lower-class infants whose behavior does not fit the Group A, B, or C classifications fit into the Group D pattern. Among samples of maltreated infants, recent investigations have shown that a high rate of abused and neglected infants are classified as disorganized/ disoriented with regard to attachment (Cicchetti et al., 1994).

In sum, reliable and valid patterns of individual differences in attachment during infancy have been identified. Moreover, concurrent assessment of attachment behavior at home has demonstrated the transcontextual validity of the three major patterns (Speltz, Greenberg, & Deklyen, 1990). Appendix C-1 contains a description of the major classifications of infant attachment.

Attachment theorists maintain that infant attachment relationships are the foundation for social-emotional development (Ainsworth et al., 1978), and research has demonstrated support for this claim. Numerous studies have assessed the relationships between the quality of attachment and competence in other areas. In general, infant attachment has been positively related to parent-child interaction, interactions with other adults and peers, and desired preschool behavior. It has been shown that, as rated by teachers, preschool children who were classified as securely attached in infancy demonstrated more positive affect (Sroufe et al., 1984), were more empathic and compliant (LaFrenier & Sroufe, 1985; Londerville & Maine, 1981; Main & Weston, 1981; Waters, Wippman, & Sroufe, 1979), and were more likely to have mothers who gave commands in warmer tones (Bretherton, 1987) than preschoolers with insecure attachment histories. Examining differences among the two groups classified as insecure during infancy, Sroufe (1983) found that infants classified as ambivalent (Group C)

demonstrated ineptness in transactions with their peers and a tendency to be constantly near or oriented toward their teacher. On the other hand, the avoidant group (Group A) tended to be hostile and distant with peers, and did not seek the assistance of their teacher when injured, disappointed, or otherwise stressed.

Regarding individual behavior, Matas, Arend, and Sroufe (1978) found that relative to securely attachment infants, insecurely attachment infants were less cooperative, enthusiastic, persistent, and generally less competent on a problem-solving task performed when they were 2 years of age. These same children were reassessed when they were 4-1/2 years old, and it was found that the secure group was more competent and more curious than their insecure counterparts. Moreover, the children from the ambivalent group were impulsive (i.e., undercontrolled), those from the avoidant group were restrained (e.g., overcontrolled), and those from the secure group showed moderate behavioral control (Matas et al., 1978).

In more recent studies, long-term outcomes of infant attachment quality have been reported. For example, Urban and her colleagues (Urban, Carlson, Egeland, & Sroufe, 1991) followed a group of 47 children of low socioeconomic status from infancy through preadolescence. Children were assessed for the developmental consequences of attachment security. They were intensely observed for four weeks at a summer

daycamp when they were 10 to 11 years of age. Relative to children with histories of secure attachment, those who were insecurely attached in infancy were rated as more dependent, less socially competent, less ego resilient, and more likely to interact with camp counselors. Moreover, when compared to children with insecure-avoidant (Group A) attachment histories, children with insecure-ambivalent (Group C) histories were more frequently the recipients of adult-initiated nurturant and supportive interactions.

Friendship patterns of these same preadolescents were examined by Elicker and his colleagues (Elicker, Egeland, & Sroufe, 1992). These researchers found that children with histories of secure attachment were more likely to form a friendship while at camp. Furthermore, the friendships that developed during camp were likely to develop along the lines of children's attachment histories with secure-secure pairs being the most common pattern.

In a recent study, Sroufe, Carlson, and Schulman (1993) assessed a sub-sample of these 47 pre-adolescents at a reunion camp that was held when the attendees were between 14 and 15 years of age. It was revealed that adolescents with histories of secure attachment were rated as being emotionally healthier, higher in self-esteem and ego-resilience, and more socially competent with peers.

As a result of focusing on stage salient developmental issues in the pre-adolescent and adolescent periods (e.g.,

peer relations), these longitudinal studies (Elicker et al., 1992; Sroufe et al., 1993; Urban et al., 1991) demonstrated a remarkable coherence in individual adaptation over time. It is important to note, however, that the interpretation of these findings do not infer behavioral continuity, rather these authors suggest that early patterns of adaptation influence later adaptation in terms of how they equip the individual to face subsequent development issues. Individual adaptation is conceived of as a transactional process in which children's developmental histories and their internal working models bring about styles of engaging the environment and relating socially which encourage perpetuating feedback from the environment (Cicchetti et al., 1994).

This section has highlighted attachment as a stage-salient development issue during infancy, and has entailed a review of the literature that examines links between the quality of attachment in infancy and the child's continuing development. Attachment, however, has been conceptualized as remaining active throughout the life cycle (Ainsworth, 1989; Bretherton, 1985) and as is the case with other major developmental tasks, "it continues to differentiate beyond its period of developmental ascendancy" (Cicchetti et al., 1994, p. 4). In the following section, the developmental process involved in attachment relationships and internal working models will be explicated.

The Ontogeny of Attachment

Once an attachment is formed, it continues to undergo transformations and integrations with the subsequent accomplishments of both the child and her attachment figure. For instance, the child's development of autonomy, language, perspective taking, and peer relationships as well as the caregiver's ability to adjust her own responsiveness to fit the changing needs of the child will have a significant impact on the attachment relationship. Bowlby (1973) proposed that the developmental goal of attachment is the achievement of a "goal-corrected partnership," which is usually first evidenced between the child's third and fourth year of life. The manner in which this goal is achieved was first explained by Bowlby's four-phase development model which focuses on the normal ontogeny of separation anxiety. Contemporary developmental paradigms, however, have necessitated expansions and modifications of Bowlby's original model. Both models will be presented in the pages that follow.

Bowlby's Four-Phase Development Theory

During the first two phases, which span about six months, the infant moves from indiscriminate responding to others toward increasing differentiation of specific caregivers (See Sroufe, 1989 for subphases). During Phase III, which begins at about the second half of the first year and lasts until around the third year, the infant starts to

evidence object permanency, intentionality, and the ability to differentiate means and ends (Greenberg & Speltz, 1988). If the caregiving environment is suitable (i.e., consists of the stable presence of one or more particular caregivers), the infant develops a "set-goal" which is a specified degree of proximity with particular attachment figures. It is during this phase that separation anxiety and stranger wariness begins; in addition, the child develops numerous behavior plans to achieve the set-goal of proximity.

During Phase III, the child usually shows a propensity to explore the environment away from the caregivers. It is generally assumed that the manner in which the child balances separation (i.e., exploration) and reunion with the caregiver is indicative of the quality of trust (i.e., a reflection of the internal working model) she or he has in the accessibility of the attachment figure. If she has been provided with sensitive and responsive caregiving, the child is capable of balancing the desire to explore and fear of novelty by intermittently directing attachment behavior toward her "secure base" (i.e., attachment figure). However, if the child anticipates nonresponsiveness on the part of the caregiver, she may take more than optimal responsibility for maintaining proximity (Bretherton, 1985, 1987), and thus her capacity to balance exploration and attachment behaviors may be decreased. This often results in clingy behavior, which rather than signifying a strong

attachment, indicates that a child is anxious about receiving insufficient security and support (Bretherton, 1985, 1987).

Whereas separation anxiety is first observed at the beginning of the third phase, it is during Phase IV that it's decline commences. The hallmark of Phase IV, which begins sometime after the third birthday, is the development of a new level of dyadic relationship called the "goal-corrected partnership." It is during this phase that the child begins to realize that her mother (or other primary caretaker) is an independent individual with set goals of her own that sometimes are in conflict with the child's set goal. Once the child recognizes the mother's feelings and motives are separate from her own, the pair may develop a more complex relationship with one another, one that Bowlby (1969) referred to as a "true" partnership. As the partnership evolves, the child and mother become increasingly able to construct and maintain joint plans for regulating proximity and their relationship through the use of communicative and other symbolic processes (i.e., language, social inference) as well as by behavioral interactions. If the parent and child share jointly in making plans to regulate separations and reunions, the child comes to realize that her relationship with the parent continues even when they are separated; this in turn promotes the child's feelings of security and confidence,

and reduces her anxiety upon separation.

The quality of the goal-corrected-partnership is considered to be the result of interactions during the preceding phases (Greenberg & Speltz, 1988; Marvin, 1977). Bowlby suggested that the nature of the child's ability to engage in joint planning is influenced by her working model of the attachment relationship. This implies that the partnership is affected by earlier experiences with the caregiver as well as earlier modes of defense in response to separation (Greenberg & Speltz, 1988).

Research has shown that some of the conditions related to an increase in the intensity of separation anxiety during Phase III are having experienced parental threats of abandonment or loss of love (Bowlby, 1973), frightening experiences during previous separations (Bowlby, 1973), mother leaving the child without warning or instruction (Weinraub & Lewis, 1977), inaccessibility to the mother (Goldberg & Lewis, 1969), and an insecure parent-child attachment relationship (Ainsworth et al., 1978).

Conversely, conditions shown to promote exploration and to mitigate the intensity of separation anxiety include the companionship of a familiar other child (Bowlby, 1973; Jones & Leach, 1972; McGrew, 1972; Rutter, 1981), familiar possessions (Robertson & Robertson, 1971), being above 2-1/2 years of age (Jones & Leach, 1972; Marvin & Greenberg, 1982), mothering from a skilled and familiar substitute

mother (Bowlby, 1973; Robertson & Robertson, 1971), a maternal departure style that includes explanations and explicit instructions (Weinraub & Lewis, 1977), accessibility of the mother (Rheingold & Eckerman, 1970), and a secure parent-child attachment relationship (Ainsworth et al., 1978).

Much less research has been directed toward Phase IV of relationship development. Marvin (1977), however, developed an operational definition of the goal-corrected partnership and examined parent-child negotiation strategies in a separation-reunion episode. He found that the child's age was directly related to her ability to construct or agree to a plan regarding separation; 25% of 3-year olds and 75% of 4-year olds attempted to engage in planning, whereas none of the 2-year olds did. Moreover, children who were able to reach a joint plan prior to separation responded to the mother's departure and return with relaxed, sociable patterns and did not seek physical proximity to her. Conversely, children who did not reach a joint plan tended to protest separation and were distressed and controlling toward their mothers upon reunion (see also Marvin & Greenberg, 1982). This research introduces important possibilities for studying separation anxiety and the changing structure in attachment relationships among older children and adolescents, an issue that was explored in the present study.

Bowlby's developmental paradigm provides a valuable outline of the normative sequences involved in the evolving course of attachment and separation anxiety. His model, however, fails to incorporate adequate process-oriented transactional explanations for both adaptive and maladaptive development. With the emergence of new developmental theories (Gottlieb, 1991; Lerner, Hess, & Nitz, 1990;) and the field of developmental psychopathology (Cicchetti, 1984; 1989; Cicchetti & Toth, 1991; Hay and Angold, 1993; Lewis & Miller, 1991; Rutter & Garmezy, 1983; Sroufe & Rutter, 1984), contemporary attachment theorists have expanded Bowlby's ideas to explain the mechanisms and processes by which attachment relationships are transformed and internalized as the individual matures (Diamond & Blatt, 1994). The following subsection will present first, a view on factors involved in the development of attachment relationships, and second, a perspective on the development of internal working models.

A Transactional-Developmental Model

Development of attachment relationships. The contemporary view of attachment suggests that attachment is not a static trait, and that although earlier developmental adaptation affects later functioning, this process is not based on isomorphic continuity of behavior, but rather on how it equips the individual to deal with future developmental issues. Moreover, attachment is seen as a

life-span issue, whereby individuals are constantly re-negotiating the balance between being connected to others and being autonomous as they encounter each new developmental phase (Blatt & Blass, 1990; Kegan, 1982). Throughout the life cycle, transitions and periods of re-organization provide individuals with opportunities to revise and update internal working models through the acquisition of new strengths, but also through development of new vulnerabilities.

Because the goal-corrected partnership is the basis for all mature forms of attachment relationships (Cicchetti et al., 1994), and because it is the development of this partnership that promotes comfortable separation from the attachment figures, two major aspects must be considered. Fist, the evolution of the goal-corrected partnership and how it occasions changes in the involved individuals must be explained. Second, the manner in which developmental changes in the individual attachment figure and the child contribute to changes in their relationship must be understood. These two aspects of the attachment relationship will be the foci of the following discussion.

The transition in the attachment relationship from being characterized by the set-goal of proximity toward a goal-corrected partnership initially produces perturbation. This, of course, implies challenges for both the parent(s) and the child to achieve new levels of competence in their

relationship. An important goal of the attachment relationship during this transition is the development of strategies that assist both the child and parent in: (a) promoting autonomy; and (b) moving toward more mutual and reciprocal regulation of their relationship (Greenberg & Speltz, 1988). Through this process, the child's autonomy is supported by assisting the child in achieving greater awareness of self and other and by increasing the use of communication strategies to develop joint goals and plans (Greenberg & Speltz, 1988).

A new structural level emerges in the attachment relationship when the child achieves the ability to differentiate her own plans, goals, and feelings from those of others, and when she is able to infer and anticipate the behavior of others. When the child can recognize the degree of similarity between her own desires and plans, and those of the caregivers, both partners can then begin to intentionally construct mutually agreed upon plans for coaction (Greenberg & Speltz, 1988). As mentioned earlier, Bowlby (1969) stated that the hallmark of the goal-corrected partnership is the developmental achievement of joint planning between parent and child. Thus, the quality of attachment and the child's sense of security should be reflected by the willingness, ability, and manner in which the dyad develops joint plans for separation and reunion (Marvin, 1977).

It has been suggested that this new structural level in the attachment relationship results from interactions during the preceding years. Marvin (1977) proposed that the goal-directed-partnership was preceded by an "emergent partnership." Within the emergent partnership, the parent teaches the child the use and structure of dyadic planning by: (a) initially supplying the plans for both her self and the child, and (b) making explicit her internal state as well as that of the child. This process enables the child to recognize salient cues of the need for planning. As the child develops the ability to take over these skills, mutual regulation begins to occur; moreover, this process allows the child a gradual increase in control and a sense of effectiveness. For example, in the emergent partnership, rather than negotiating the ability to separate, the parent may complete the child's plan by providing information about the separation and reunion, give the child instructions on what to do in the interim, and discuss what the pair may do upon the parent's return. The parent may also ask for the child's input where appropriate. Throughout this process, the parent adds order and predictability to the child's experience of separation, while simultaneously giving the child some control over the course of their interaction (Greenberg & Speltz, 1988).

An important aspect of this process is the parent's activity of labeling internal states. It has been suggested

that when the parent labels feelings and inner states for the child, she brings them into a region of social communication, where they can be shared and understood (Pine, 1983). In the process of learning to articulate and understand her own emotions, the child develops affect tolerance and self control, and learns new ways of coping with her needs and desires (Greenberg & Speltz, 1988).

The child's advances in social-cognitive and communication skills, and the parent's adaptation to the possibilities they present enables the attachment relationship to move to a more complex level of intimacy. The goal-corrected partnership can be understood as a dyadic structuralization, the function of which is to regulate the needs/gratifications between the parent(s) and child as separate selves. The process of joint planning facilitates the child's coping skills, and thereby, reduces her anxiety about separation by providing a cognitive/affective schema about the present circumstances regarding her attachment relationship. "In this way, it assists in the control of anxiety during separations and increases the child's autonomy by providing a reality-based subjective plan of action" (Greenberg & Speltz, 1988, p. 203).

It can be hypothesized that if the dyad is unable to develop and maintain joint plans, and the processes by which they negotiate separations are not mutually regulated, there may be decreased control of anxiety during separations and

inhibition of autonomy and exploration. In other words, to the extent that the dyad is unable to adapt within a reasonable period of time and maintains outmoded patterns of interaction (e.g., parent continues to supply plans for the child after she has become capable of contributing on her own, or perhaps the child will not cooperate in the process), the relationship becomes disturbed and behavioral difficulties become apparent (Emde & Sameroff, 1989). Before speculating further on deviations from this adaptive process, however, discussion of the impact of individual development on the goal-corrected partnership will be resumed.

Changes in the child. Before the child can enter into a goal-corrected partnership, she must first be able to differentiate self as separate from other. This is generally accomplished during the second year and can often be observed in the toddler's increasing desire for self-determination and control. The child's acquisition of locomotion skills, increased interest in exploration, the beginnings of symbolic play and representation, the use of language, and the recognition of self all play important roles in the achievement of a sense of separateness from the attachment figure (Greenberg & Speltz, 1988). Both this accomplishment beginning in the second year, and the changes in the child's conceptions of self and other occurring as she or he moves into the school age years, facilitate the

child's ability for increasing participation in the goal-corrected partnership.

When children enter school, they begin to acquire the ability to see themselves from another's perspective. During this time, children also begin to define themselves less in terms of objective attributes (e.g., appearance, possessions, activities), and more in terms of their psychological attributes - being smart, being a "good person," being a worrier - (Maccoby, 1984). Further, this developmental advance enables the child to express emotions and control her behavior. Simultaneously, children also develop the ability to adopt the perspective of other persons (Maccoby, 1984). They gain an increasing knowledge about the agendas, expectations, and probable reactions of others. Children who have acquired this level of social understanding are more competent in communicative interchanges and utilizing mature negotiating strategies not only in separation experiences with parent(s) (Marvin & Greenberg, 1982) but also in cooperative/task encounters with peers (Selman, 1983).

Additional changes during the school-age years include increases in cognitive/representational abilities and language development, each of which also has a major impact upon changes in the attachment relationship (Maccoby, 1984; Marvin, 1977; Marvin & Greenberg, 1982). In problem-solving tasks, there is a regular increase with age in the extent to

which children adopt a goal or plan for their activity. In addition, children become more efficient in utilizing working memory capacity at their disposal (Maccoby, 1984). Finally, throughout childhood and adolescence, children become increasingly able to monitor their own state of knowledge and their progress toward goals (Flavell, cited in Maccoby, 1984), and thus are better able to know what information they need in order to execute a plan. With these cognitive advances, children are gradually able to anticipate and plan longer and more complex sequences of behavior, and thus able to negotiate and manage increasingly longer periods of separation from their attachment figure(s). As the child grows into adolescence, she becomes capable of tolerating weeks or even months away from caregivers.

Although there is a tremendous spurt in language competence between ages 2 and 4, the acquisition of language continues to develop beyond the school-age years into adolescence (Maccoby, 1984). The more the child can understand language, the more the parent can use verbal guidance, explanation, and reasoning in place of physical contact and gestures. As the child gradually becomes able to speak more intelligibly and think more abstractly, for example, by communicating and understanding her feelings, attitudes, and desires, the parent has the opportunity to respond more efficiently to the child's bids for attention

or help (Greenberg & Speltz, 1988; Maccoby, 1984). During
the prelinguistic period, the child is very much tied to her
relationship with familiar caregivers, because it is with
them that she has developed a mutually understood signal
system of shared interactions. Moreover, these interactions
may be fairly unique to a given child-caregiver pair. With
the acquisition, of language, however, the child begins to
participate in the signal system of the larger society and
thus is enabled to function more efficiently outside the
family (Maccoby, 1984). Advances in linguistic ability
enables the child to represent the external world
symbolically, discuss and consider nonpresent events, and
utilize internal talk as a means of controlling impulses
(Greenberg & Marvin, 1979; Greenberg & Speltz, 1988).

Maccoby (1984) suggested that within broad limits,
these developmental advances are surprisingly independent of
the way in which parents treat their children, however, the
parents may facilitate or inhibit these changes in varying
degrees. It is, therefore, important to note that although
these changes are localized in the child, they precipitate
changes in the behavior of both child and caregiver in their
interactions with one another (Hartup, 1986).

Changes in the Parent. The role of attachment figures
during infancy is primarily characterized by sensitivity and
nurturance mediated by close physical contact. During the
preschool years, however, parental sensitivity involves not

only warmth and affection, but appropriate limit-setting and simultaneous support of the child's growing sense of independence and autonomous action (Greenberg & Speltz, 1988). During these years, the parent is confronted with willfulness and impulsiveness on the part of her child, characteristics that need to be both accepted and guided. The quality of optimal parenting during this time, involves allowing the child to express her emotions fully while socializing her by providing salient norms for behavior and setting appropriate limits when necessary (Greenberg & Speltz, 1988).

During the preschool years, sensitive and responsive caregiving involves doing a great deal of monitoring of the child's moment-to-moment activities and providing much direction and feedback; but given the child's advanced cognitive development during the school-age years, parents can drop some of their directing activities and permit the child more self-control. At this time, sensitivity and responsiveness may be defined by the caregiver's ability and willingness to mesh her own needs and plans with those of the child, which requires giving the child increasing opportunity to be included in the decision-making processes regarding their relationship. Thus, in negotiating separations, the parent need no longer fill in the child's plan for her by telling the child what to do during the interim of separation and reunion or by stating what they

will do upon reunion. Rather, the child can begin to make some of these decisions for herself, or at least have independent input in the planning process. In this way, the process can become one that is truly mutually regulated.

Additional changes in the child's conception of self and others permit the parent to modify her interactions with the child. Increased perspective-taking skills should mean that parents will find other-oriented induction to be increasingly effective in influencing the child's decisions and behavior; that is, within the age range of 7-11, thinking about the consequences of their behavior for others becomes a more powerful deterrent to "selfish" behavior for older children than younger ones who tend to be more egocentric. Moreover, the child's growing understanding of how one looks in the eyes of the other may upgrade her responses to reminders by parents that important other persons will or will not think well of them if they behave in certain ways (Maccoby, 1984).

In summary, advances in the child's conceptions of self and other, understanding of language, ability to construct plans and to engage in self-monitoring, give the parent opportunities to update their interaction patterns with the child. They can replace the use of simple requests (or demands) for compliance with reasoning and explanations, engage in joint planning with the child, and they can increasingly "let go" of monitoring and directing the

child's moment-to moment activities.

Because development does not occur in discrete steps, there is always overlap. This means that parenting includes various roles and behaviors that may appear to be conflicting or incompatible. Maccoby (1984) suggested that the parent-child relationship is always a contrapuntal one because the child's strivings for autonomy characterizes all stages of social development. Thus there is always dynamic tension between individuality and relationship that characterizes the dialectic of development across the life span (Kegan, 1982). To illustrate this dynamic tension, Kegan (1982) suggested that at each state of development, there exists an "embededness culture" which is defined as the social environment and/or aspects of self with which one is currently fused; subject-object distinctions have not yet been achieved. Three functions served by the embededness culture are holding on, letting go, and remaining in place.

The attachment relationship can be conceptualized as an embededness culture. Thus caregivers provide the holding on function in supplying the nurturance, warmth, and stimulation that is necessary for self-growth. The letting-go function is the process of encouraging the child (or person of any age) to further differentiate herself in both cognitive and affective domains. The development of the goal-corrected partnership is an example of adaptive function in this process, whereas the development of a

symbiotic relationship during toddlerhood would be a
dysfunction in this process (Greenberg & Speltz, 1988).
Third, the attachment figure "remains in place" or "stays
with" the child during periods of transition (i.e., provides
a secure base), when it is necessary for the child to
relinquish earlier ways of behaving and interacting and
reach a new level of equilibrium. In early childhood years,
an example of difficulty in this function is when parents
are unable to control their own own affect or irritability
when the child attempts to achieve her needs in primitive
ways such as by being demanding, selfish, and/or
uncooperative.

These functions indicate the complexity of parenting
from toddlerhood on through adolescence. The ability of an
attachment figure to adjust to her child's growth and to
tolerate her expressions of ambivalence and anger while
"remaining in place" require qualities that may not be so
critical during infancy (Greenberg & Speltz, 1988). It is
probably the case that the parent's own level of individual
development (i.e., their ability to tolerate ambivalence and
separation) is related to: (a) their ability to tolerate
their child's struggle for autonomy and separateness; (b)
their interest in and ability to appropriately express and
label both their own and their child's emotions (Greenberg &
Speltz, 1988); and (c) their capability to engage in a
mutually regulated partnership with their child. Moreover,

all of these factors should be related to the parents' own attachment experiences throughout the course of their development (Belsky, 1984).

The transition from late adolescence and early adulthood ushers in significant developmental demands for both the adolescent and her attachment figures. Attachment issues become particularly salient as the adolescent begins to separate emotionally from primary caregivers and assume increasingly greater degrees of personal responsibility. In general, as individuals in Western culture approach early adulthood at around 18 years of age, they are expected to begin the process of emancipating from their families of origin. This task involves establishing one's own identity in terms of a self in the world as well as in relationship. During this time, career planning begins, and gender roles, sexual preferences, and intimacy issues are negotiated. At the same time, relationships with attachment figures and family are transformed based on the adolescent's emerging emotional and often physical separation and independence. Nevertheless, according to attachment theory, it remains important that connections with attachment figures remain in place (i.e., the secure base is maintained) in order to support adaptive functioning during this difficult transition.

Historically, very little research has been directed toward examining attachment during adolescence and early

adulthood. This paucity is due, in part, to the fact that initial definitions of attachment organization relied on descriptions of the organization of the infant's nonverbal behavior toward a particular parent in the Strange Situation (Ainsworth et al., 1978; Sroufe & Waters, 1977a). Moreover, most investigators have traditionally sought to connect individual differences in security of attachment at 1 year either to differences in infant-parents interaction patterns during the preceding year or to later differences in general functioning in behavior (Main et al., 1985). Adherence to this conceptualization of attachment and the corresponding line of research has been a major limitation to the field of attachment research.

Within the last decade, attachment theory has been integrated with research and theories on psychopathology, and studies have shown that individuals are neither inoculated against future problems by having experienced positive early caregiving nor doomed to develop maladaptively by having received negative early caregiving experience (Cicchetti et al., 1994). It has therefore become apparent that linear main effects models do not account for links between attachment and later functioning (Cummings & Cicchetti, 1990; Sroufe, 1983). Rather, it is now suggested that if early attachment relationships affect later development, it is probably because the individual's developmental history and her expectations of attachment

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figures and self-representations have brought about styles of engaging the environment and relating socially that encourage perpetuating feedback from the environment (Cicchetti et al., 1994). It has, therefore, become necessary to expand the definition of attachment to account for the notion that the internal working model may result in different behavior manifestations depending on both the development level and the situational context of the individual (Cicchettiet al., 1994).

Development of internal working models. Main and her colleagues (Main et al., 1985) redefined the internal working model of attachment as "a set of conscious and/or unconscious rules for the organization of information relevant to attachment and for obtaining or limiting access to that information, that is, to information regarding attachment-related experiences, feeling, and ideations" (p. 66-67). Thus, as the child matures, attachment moves from being represented in behavior vis-a-vis the attachment figure to a level of mental representation. Individual differences in working models will therefore be related not only to individual differences in patterns of nonverbal behavior but also to patterns of language and structures of mind. This reconceptualization of individual differences in attachment organization as individual differences in mental representations of the self in relationship to attachment permits research on attachment not only in infants but also

in older children and adults and leads to a new focus on representation and language (Main et al., 1985).

According to Bowlby (1973), early experiences with the attachment figure are central in the formation of working models of self, others, and dyadic relationships. These models allow children to form expectations about the availability and probable actions of others with complementary models of how worthy and competent the self is. Bretherton (1990) has conceptualized working models as being hierarchically organized in terms of event schemas. According to this view, the child's memory is seen as being guided by general event schemata that organize experience in terms of reactions, goal paths, attempts, and outcomes (Mandler, cited in Main et al., 1985). A child's knowledge of relationships will be organized schematically by actions and action outcomes. Therefore, the internal working model of the infant-parent relationships will be formed from a history of the infant's actions, infant-parent interactions, and the outcome of the infant's efforts and intentions to regain the parent even in the parent's absence. The working model of the relationships to the attachment figure is said to reflect not an objective picture of "the parent," but rather the history of the caregiver's responses to the infant's actions or intended actions with/toward the attachment figure. For instance the hierarchy proposed by Bretherton (1990) would include low-level interactional

schemas (e.g., "When I am sick, my mother comforts and takes care of me") and more general schemas (e.g., "My mother is usually there for me when I need her"). At the top of the hierarchy would be overarching schemas such as "My mother is a loving person" and "I am loved and worthy of love."

Internal working models provide rules and rule systems for directing behavior, and for appraisal of experience. They also provide rules for the direction and organization of attachment and memory, rules that permit or limit the individual's access to certain forms of knowledge about the self, the attachment figure, and the attachment relationship. These rules are reflected in the organization of thought and language as it relates directly and indirectly to attachment. Moreover, many of these rules will become automatic (Main et al., 1985). These rules tend to organize strategies for regulating distress in situations that normatively elicit attachment behavior and may be linked to different styles of affect regulation in a variety of settings (see Ainsworth, Bell & Stayton, 1971; Arend, Grove, & Sroufe, 1979; Matas et al., 1978; Sroufe, 1983) and across time (Main et al., 1985).

For instance, secure attachment would be organized by rules permitting acknowledgment of distress and seeking support from others, avoidant attachment would be organized as rules that restrict acknowledgment of distress and the related attempts to seek comfort and support from others;

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rules organizing ambivalent attachment would direct attention toward distress and attachment figures in a hypervigilant manner that inhibits the development of autonomy and self-confidence.

Although internal working models show a strong propensity for stability, they are not thought of as templates. Rather, they are best understood as structured processes serving to obtain or to limit access to information. During childhood, internal working models of relationships can possibly be altered only in response to changes in concrete experience. With the onset of formal operations, however, it is possible that internal working models of particular relationships established earlier can be altered. This is because these operations may permit the individual to think about thought itself, that is, to step outside a given relationship system and to see it operating (Piaget, cited in Main et al., 1985).

With this expanded conceptualization of internal working models, and the growing interest in processes involved in linking the quality of early attachment with later development, advances in measurement have emerged. Assessment procedures and scales have been developed to assess attachment in 3- to 4-year-olds (Cassidy & Marvin, 1989; 1992), 5- to 7-year-olds (Main & Cassidy, 1988; Cassidy, 1990), 7- to 13-year olds (Wellborne & Connell 1987), and adolescents and adults (George, Kaplan & Main,

1985; Kobak, Sudler & Bamble, 1991; Kobak & Cole, in press). Please see Cicchetti et al. (1994) for a full review of these measures.

Given the development of these new instruments, it is now possible to direct attention to learning more about how current representations of attachment affect current functioning during adolescence and adulthood. In the following section, the role of attachment in the young adult's task of emancipating from home will be explored, and the basis for the present research study will be provided.

The Role of Attachment in Adolescent Development

As was mentioned earlier, the function of attachment relationships at all developmental levels is to maintain a sense of security, that is, to effectively and efficiently modulate affective arousal and to promote mastery of the inanimate and social world (Ainsworth, 1989; Sroufe & Waters, 1977a). Mastery of developmental tasks that promote social and emotional development during adolescence and early adulthood involve both emotional and physical separation from attachment figures and home.

Leaving home and separating from parents is a critical developmental task that confronts nearly all adolescents and young adults. Resolution of this task requires the successful maintenance of connectedness to family relationships, and at the same time, development of independent functioning. It has been suggested that the

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process of achieving autonomy involves shedding family dependencies and loosening the type of parental bonds that characterize infancy and early childhood (Blos, 1979) while simultaneously establishing a sense of self that is distinct and individuated with respect to parental object representations.

Resolution of this important task of separation-individuation seems to be crucial for healthy psychological functioning. In fact, impairment of psychological separation among adolescents has been linked to narcissistic (Lapsley & Rice, 1988) and borderline personality disorders (Coonerty, 1987; Noam, 1988) and to suicidal ideation (Wade, 1987). Some researchers assert that failure to achieve psychological separation may underlie the emotional problems that are frequently encountered in college counseling centers (Hoffman & Weiss, 1987). According to Blos (1978, p. 146), "...acting out, learning disorders, lack of purpose, procrastination, moodiness, and negativism are frequently symptomatic signs of crisis or failure in the disengagement from infantile objects and consequently, they represent a derailment of the individuation process itself."

For many adolescents, attendance at college is one of the first major life transitions. Moving away from home and living apart from parents and friends, adjusting to the academic regimen, assuming responsibility for the tasks of daily living, and developing a new network of social

relationships with peers and faculty confront the college student with adaptational challenges (Henton, Lamke, Murphy, & Haynes, 1980). In one study on college students, Hoffman (1984) reported a significant relationship between psychological separation from parents and personal and academic adjustment. Similarly, Lapsley, Rice, & Shadid (1989) found a pervasive relationship between psychological separation from parents and college adjustment. These authors concluded that the concept of psychological separation is important in understanding late adolescent adaptations, and that mental representations of parents provide the basis for the adolescent's ability to master such adaptational tasks. Despite the implications of this research, relatively few well designed studies have actually examined the association between attachment and adolescent adjustment.

In one study of first-year college students, Kobak and Sceery (1988) tested the hypothesis that different working models of attachment would be related to differences in affect regulations and representations of self and others. Using the Adult Attachment Interview (AAI: George, Kaplan, & Main, 1985), they classified first-year college students as secure with respect to attachment, dismissing of attachment, or as preoccupied with attachment. These classifications correspond with the secure, insecure-avoidant, and insecure-ambivalent categories from the Strange Situation (Ainsworth

et al., 1978) respectively. The Adult Attachment Interview is comprised of 15 questions that require the individual to describe and evaluate significant attachment-related experiences and their impact upon the person's development. Interview questions probe adults' verbal descriptions of early attachment relationships and experiences, supportive and contradictory memories, and current evaluations of early attachment relationships and experiences. Classifications are based on the coherence with which the individual verbally represents these memories and experiences. (This instrument will be described in greater detail in the Methods section of this paper.) Results of the Kobak and Sceery (1988) study showed that on the basis of peer ratings and self-reports, students classified as secure were the most well adjusted. More specifically, they were significantly lower on anxiety, reported fewer symptoms of distress, and greater social competence when compared to students in the two insecure groups. Relevant to students in the dismissing group, the secure group reported higher levels of support from family, a finding that suggests that this group views attachment figures as available and supportive during times of distress (Kobak & Sceery, 1988).

The dismissing group was rated by peers as more hostile than either the secure or preoccupied groups and more anxious than the secure group. They also self-reported more loneliness and less social support from family. Overall,

this group's perception of relationships was distant and unsupportive. Interestingly, although the dismissing group was judged by peers as less socially competent and more anxious than the secure group, their self-reports on these dimensions did not distinguish them from the secure group. This incongruence with peer ratings and other measures of social interactions may indicate that students in this group had a bias toward not acknowledging distress on measures related to perceptions of self, a pattern that fits well with Bowlby's (1973) notion of "compulsive self-reliance" (Kobak & Sceery, 1988).

The preoccupied group was distinguished from both the secure and dismissing groups on peer ratings of manifest anxiety. Students in this group also self-reported lower social competence and higher levels of distress symptoms than the secure group. In comparison with the dismissing group, they viewed their families as supportive, and the interview ratings suggest that they were often "preoccupied" with attachment relationships. Although the strategies used for coping with anxiety by the preoccupied group were unclear, the authors suggested the possibility that although these individuals perceive others as sources of support, their high level of anxiety may lead to dependent or clingy relationships that are unsuccessful in alleviating anxiety (Kobak and Sceery, 1988).

The interpretation of the results of this study are

certainly equivocal; however, the significant differences on various dimensions of perceptions of self and relationships that emerged among the three attachment groups suggests that they may indeed employ different strategies for regulating or coping with distress.

A second study conducted by Dozier and Kobak (1992) found that college students who were classified as dismissing on the AAI produced stronger skin conductance responses during the interview when providing the kinds of answers thought of as defensive distortions or denials (e.g., reporting that parents were wonderful, but also reporting actual memories of being neglected or abused). This combination of autonomic arousal and denial of distress is reminiscent of Sroufe and Waters's (1977b) demonstration that avoidant infants in the Strange Situation are aroused (i.e., have a high heart rate) while acting behaviorally as if they are not bothered at all by their mothers' departure from the test room.

Theoretically, what one obtains from attachment relationships is a particular style of regulating distress (i.e., coping with anxiety) especially during transitions that require separating from familiar people and places (e.g., attachment figures and home) and confronting a novel environment or situation. This style of affect regulation is part of the internal working model that supposedly guides one's behavior (i.e., strategies) and experience during

these transitional periods.

Like all developmental transitions, the task of emancipating from home involves perturbations in behavior. The process of separating from parents and attending college is a challenge that is likely to be characterized by some degree of struggle and negative affect. One's ability to achieve competence in the new environment may be closely related to her strategies for coping with and regulating separation distress.

In light of these ideas, and with the recent interest in attachment as a life-span developmental issue, it has become important to distinguish the meaning of attachment in infancy and childhood from the meaning of attachment in adolescence and adulthood. Berman and Sperling (1994) have offered the following working definition of "adult attachment:" "Adult attachment is the stable tendency of an individual to make substantial efforts to seek and maintain proximity to and contact with one or a few specific individuals who provide the subjective potential for physical and/or psychological safety and security" (p. 8).

Clarification of this definition shows that adult attachment provides the potential for relationship security rather than relationship security per se (Berman & Sperling, 1994). In addition, attachment is manifested, but not defined by, a limited set of characteristics that emerge when distance from or accessibility of the attachment

figures exceeds some individually defined limit. These characteristics involve emotional reactions, cognitive activity, and overt behaviors, which may be either transsituational or specific to certain circumstances (Berman & Sperling, 1994). Finally, adult attachment is regulated by internal working models which include mental representations of self, the attachment figure, situational invariants for attachment interactions, and the affects that connect the two figures. Internal working models are based on the history of the individual with her attachment figures plus current interactions between the self and the attachment figures when the attachment behavioral system is activated. In addition, internal working models define the rules by which two individuals interact, including thoughts, feelings, and behaviors, and these rules allow the individual to anticipate and plan what the attachment figure will do given a preceding set of actions.

One way of understanding attachment is as a state-based syndrome or set of distressing symptoms that emerge when the attachment figure is unavailable (Berman & Sperling, 1994). Bowlby's earliest research on infant attachment emphasized the common responses of infants to separation from attachment figures (Bowlby, 1973). These responses were summarized into phases of "protest," "despair," and "detachment" (Bowlby, 1973). In the earliest phase of protest, typical infant behaviors included attempts to re-

establish contact with the attachment figure by calling, crying, seeking, and making physical contact. When these efforts were not successful infants entered the phases of despair during which they exhibited lethargy, tearfulness, passivity, and withdrawal, which eventually resulted in detachment. Similarly, early studies of adult attachment examined common reactions of adults to disruptions in attachment bonds through loss (e.g., through death or marital separation) of attachment figures (Glick, Weiss & Parkes, 1974; Parkes, 1972; Weiss, 1975). These studies showed that adults exhibit consistent patterns of responses comparable to those of infants and children who are separated from their attachment figures including stages of protest, despair, and detachment/reintegration. In addition to studies of loss through traumatic events, two recent studies have investigated attachment distress resulting from normative separation experiences such as the transition from home to college (Berman & Sperling, 1991; Kenny, 1987). Results from these two studies showed that college students in general maintain continued attachment to their parents, and that this attachment influences their adjustment and emotional distress during the college years (Berman & Sperling, 1994).

Another way of conceptualizing attachment is as a trait-based tendency to form particular types of attachment relationships and to respond to these relationships

similarly (Berman & Sperling, 1994). Attachment as a trait has been the most common conceptualization of adult attachment in recent studies. "Attachment style" refers to particular internal working models of attachment that purportedly determine an individual's affective and behavioral responses to separation and reunion from attachment figures. This concept is evident in attachment classifications derived from the AAI. The major difference between the state and trait conceptualizations of attachment is the emphasis on universal emotional reactions to separation and losses (i.e., state) versus stable individual differences in emotional experience (e.g., trait) (Berman & Sperling, 1994).

In the present study, adult attachment as both a state and a trait were examined. More specifically, the way in which particular attachment styles affect individual responses to attachment distress during the course of a developmentally normative separation experience was tested. Based on the theoretical assumptions, working models of secure attachment relationships were expected to greatly assist the adolescent in making an adaptive transition from home to college. Conversely, working models based on insecure attachment relationships were expected to interfere with successful adaptation during this transition.

The AAI was used to classify attachment status among first-year college student. The adaptiveness of transition

was assessed longitudinally over the course of the academic year with measures of separation anxiety disorder (SAD: American Psychiatric Association, 1987), general distress, self-perceptions of competence, perception of relationships, attachment behavior, and academic performance.

It has been noted that one function of attachment is to effectively and efficiently modulate affective arousal (Ainsworth, 1989; Sroufe & Waters, 1977a). From this viewpoint, different attachment styles can be understood in terms of rules that guide individuals' affective and behavioral responses to separation from attachment figures. For example, secure adult attachment would be organized by rules that permit acknowledgment of distress and turning to others for support, dismissing adult attachment by rules that limit acknowledgment of distress and the associated attachment attempts to seek comfort and support, and preoccupied adult attachment by rules that direct attention toward distress and attachment figures in a hypervigilant manner that inhibits development of self-confidence and autonomy.

On this theoretical basis, it was hypothesized that relative to students classified as dismissing on the AAI, those who were classified as secure and preoccupied would be significantly more likely to report SAD and symptoms of general distress during the first few months of college. However, it was expected that the secure group would resolve

their separation distress and the presence of SAD and general distress would decline over the course of the first and second semesters. Secure individuals acknowledge distress, but are also competent at seeking support from others. Developing an adequate support system in a new environment, however, generally takes a few months. Conversely, it is expected that the preoccupied group would maintain SAD and other distress symptoms throughout their first year at college. Preoccupied individuals not only acknowledge distress, but are more likely to direct their attention to it and toward attachment figures in a hypervigilant manner that would inhibit them from developing and obtaining support from a new network of friends at school. Separation anxiety disorder and symptoms of general distress were not expected to be prevalent in the dismissing group, because these individuals tend to restrict acknowledgment of distress.

Over time, the dismissing group was expected to report lower perceived support from others than either the secure or preoccupied group. Because dismissing individuals tend to restrict acknowledgment of distress, they are, therefore, expected to restrict attempts to seek comfort and support from others. On the other hand, the preoccupied individuals were expected to seek more support from others, but obtain lower levels of satisfaction from support. In correspondence with infants classified as insecure-

ambivalent, although adults classified as preoccupied tend to approach others for help when they are distressed, they are unable to be comforted by the contact they receive from supportive individuals.

Attachment behavior was measured by the frequency of contact students made with their parents and with the university student health center. It was hypothesized that the preoccupied group would exhibit the highest rate of attachment behavior across time. Because they have difficulty with internally experiencing comfort and support, their attachment needs remain unsatisfied, and the needs, and therefore the behavior, remain activated. Relative to the other two groups, the secure group was expected to demonstrate a moderately higher frequency of contact with parents and other adult caretakers in the beginning of the academic year, and this frequency of contact was expected to decline. The dismissing group was expected to have the lowest frequency of contact with parents and other caregivers at all points in time.

Theoretically, the function of attachment is not limited to affect regulation but is also influential in promoting mastery of the environment and autonomous functioning. Attachment is viewed as an enduring affective bond that can promote autonomous functioning and not as a tie that is synonymous with dependency (Ainsworth, 1989). The adaptive value of early attachment has been illuminated

in studies examining the relationships between attachment during infancy and indices of social and intellectual competence during early childhood (Ainsworth & Bell, 1974; Arend et al., 1979; Main, 1983; Waters et al., 1979). Recent studies have explored the relationships between attachment style and loneliness and social competence in college students, and have found that students who were rated as securely attached were more socially competent and less lonely than those rated as insecurely attached (Kenny, 1987; Kobak & Sceery, 1988). The present study examined the relationships between attachment style and indices of social competence, self-esteem, and academic achievement.

Assertiveness and dating competence were selected as indices of social competence, because they are considered to be adaptive development tasks of college students. According to Ainsworth's and Bell's theory (1974), secure attachment facilitates self-confidence in expressing needs and feelings with the expectations that one will influence and be accepted by others. Assertiveness and dating competence are important for the college student who is faced with the challenge of establishing new friendships and developing intimacy outside her family of origin (Kenny, 1987).

It was expected that the secure group would report a greater degree of social competence than either of the insecure groups. Secure individuals tend to value

interpersonal relationships and are likely to be more confident and competent in social interactions than are dismissing individuals. Although preoccupied individuals value relationships, they are likely to be less confident, more clingy and dependent, and thus less interpersonally competent.

An index of self-esteem was also selected in order to test Bowlby's notion regarding the internal working model of self as complimentary to one's internal working model of the attachment figure. According to Bowlby (1979), an individual whose parents are available and supportive (i.e., create a secure base) will construct a representational model of self as able to cope but also as worthy of help and love. Conversely, an individual whose parents are consistently lacking in responsiveness, who abandon or threaten to abandon the child will tend to build a representational model of self as unworthy and unlovable (Ricks, 1985). Self-esteem, which is conceptualized as the evaluative component of self-concept, was expected to be related to attachment style; specifically, those who were classified as secure on the AAI were expected to have fewer problems with self-esteem than those classified as dismissing or preoccupied.

Finally, mastery in a college environment must include academic achievement. Academic performance was measured by students' grade point averages (GPA) at the end of each

semester. It was predicted that relative to the other two groups the preoccupied group would obtain the highest GPAs, because getting good grades would be construed by this group as a way of pleasing their parents. Those classified as preoccupied with attachment tend to report histories with parents who often criticize the child's accomplishments as a way of persuading the child to please rather than turning the child away towards independence (Main & Goldwyn, 1991). Moreover, a study examining adult's orientation toward work (Hazen & Shaver, 1990) suggested that the main motivation at work for adults who reported attachment histories characterized as insecure-ambivalent was to gain respect and admiration from others.

No differences on GPAs between the secure and dismissing groups were expected. Because individuals classified as secure were expected to value equally the social and academic aspects of college, they would probably not let academic aspirations interfere with the development of new relationships and social activities at school. It was, therefore, expected that they would have average GPAs that were, however, lower than the GPAs of the preoccupied group.

Average academic performance was also expected to be evidenced by the dismissing group. Although the motivations underlying academic performance were not analyzed in this study, theoretical implications suggest that dismissing

subjects may use academic tasks as a way of avoiding social interactions, so their involvement in work would allow them to achieve average GPAs; on the other hand, they are not particularly interested in pleasing others or self with high levels of performance, thus their GPAs were expected to be somewhat lower than those of the preoccupied group.

Method

<u>Subjects</u>

Subjects were 54 first-year college students who were selected from an original pool of 338 students during the eighth week of the first college semester (October, 1992). Of the 54 participants, 37 were females and 17 were males ranging in age from 17 to 19 years ($\underline{M}$ = 17.98, $\underline{SD}$ = .412). The majority of subjects were Caucasians ($\underline{n}$ = 49, 90.7%) from intact, two-parent families ($\underline{n}$ =44 ,81.5%) who were in the upper-middle socioeconomic range on the Hollingshead two-factor index ($\underline{M}$ = 24.4, $\underline{SD}$ = 12.9, Hollingshead, 1975). All subjects were attending their first semester of college.

<u>Procedure</u>

Data were collected at three points in time during the college year. A study entitled "Parent-Child Relationships and Adjustment to College" was posted in the Psychology Department at Virginia Polytechnic Institute and State University in September, 1992 with a request for participation by first-year college students. In October, 1992, 338 students attended one of several initial questionnaire sessions which were conducted in groups of approximately 50. The questionnaires administered included self-report measures designed to assess for the presence of DSM-III-R anxiety disorders, general psychopathology and distress, self-perception (social competence and self-esteem), and perception of relationships (social support).

Also included was an assessment form designed to obtain samples of current attachment behaviors. The questionnaires were assembled in random order, and they required approximately one hour to complete. All students were awarded research credit for their participation.

Among the original group of 338 students, 32 (9.46%) met diagnostic criteria for SAD. Those who met criteria for SAD, and a control group (n = 32) matched on age and gender were selected to participate as subjects in the study. Telephone contact was made to each of the 64 students during which the details of the study were explained, and 54 students agreed to participate. The students were then scheduled to participate in an individual interview and two follow-up questionnaire sessions. Schedules were mailed to each student with dates and times of their interview and follow-up sessions.

These 54 students were later grouped according to classifications on the Adult Attachment Interview (AAI: George et al., 1985). It is important to note that the subjects were actually grouped in two ways. Students were initially selected on the basis of separation anxiety disorder (SAD), because it was hypothesized that students with SAD would be more likely to be classified as preoccupied on the Adult Attachment interview. In the literature on adult attachment, there has been a notoriously lower number of individuals classified as preoccupied, and

thus the original selection on the basis of SAD was performed as an effort to maximize the numbers in this group. (Despite this effort, however, only 19.2% of students with SAD were later classified as preoccupied, whereas 69.2% were classified as secure, and 11.6% as dismissing.)

The individual interviews took place during the first academic semester of 1992 and required approximately 1-1/2 hours to complete, for which participants were awarded research credits. During this session, the Adult Attachment Interview (AAI; George et al., 1985), and the Anxiety Disorders Interview Schedule for Children-Revised (ADIS-C-R; Silverman & Nelles, 1988) were administered as well as the self-report measure used to assess for SAD in the questionnaire session. The interviews were conducted by the author and three graduate students in clinical psychology. All interviews were audiotaped, and the author and four undergraduate research assistants who earned academic credit for directed research experience, transcribed the AAI recordings.

The follow-up questionnaire sessions took place during the first week of December, 1992 and the second week of March, 1993. The self-report measures completed during these two times were identical to those completed at Time 1, and students were awarded research credits for participation in each of the sessions.

Interview Forms

Adult Attachment Interview. The AAI (George et al.,
1985) is a semi-structured interview that inquires about
childhood relationships of distress, separation, loss
abusive treatment, and other attachment relevant
experiences. The interview is comprised of 15 questions
that query for adults' verbal descriptions of early
attachment relationships and experiences, supportive and
contradictory memories, and current evaluations of early
attachment relationships and experiences. Subjects are
repeatedly asked to evaluate the effects of their
experiences on their individual development. Verbatim
transcripts were coded according to the system described by
Main and Goldwyn (1991, version 5.0, unpublished) on three
primary scales: (a) the individual's probable childhood
experiences with each major attachment figure; and (b) the
adult's current state of mind with respect to parents (or
other attachment figures); and (c) the subject's overall
state of mind regarding attachment.

According to interpretation procedures, probable
experiences are rated as the extent to which each attachment
figure could be regarded as loving, rejecting of attachment,
involving/role-reversing, neglecting, and exerting pressure
to achieve. States of mind with respect to attachment
figures are assessed as the extent to which the subject is

angrily preoccupied, idealizing, or derogating of attachment figures. The final rating is based on the individual's overall state of mind with respect to attachment, which is determined by the coherence of attachment related speech. In general, coherence is defined as the subject's ability to verbally present and assess her or his past and its influences in an integrated and logical fashion.

Coherence of mind is rated by considering the subject's linguistic form, that is, how easily speech flowed, whether questions by the interviewer were answered directly, and whether the relationship characteristics described by the subject were supported by specific memories. For instance, a transcript rated as low on coherency would include idealization of the parent in which generally positive statement about parents are not corroborated by specific memories (i.e., subject recalls abusive experiences but states that the parent was wonderful); lack of memory for childhood experiences; or anger at the parent that is so salient that the individual attempts to enlist the interviewer's agreement. Incoherency can also arise if the individual is unresolved about the loss of a parent. In this situation, individuals may use vague or poor linguistic form, and they often make bizarre or inadvertent slips of the tongue, such as talking about a dead parent as if she or he were alive, or confusing the dead person and the self (e.g., "My mother was 14 when I died.") (Main & Goldwyn,

1991).

On the other hand, a coherent transcript is one that contains a "unified, free-flowing picture of the subject's experiences, feelings, and viewpoints within the interview." In addition, coherency is present when the subject is able to easily point to the principle and rationale behind her responses, seems at ease in thinking about her past and its influences, and seems able to examine and explore the evidence in the context of the interview (Main & Goldwyn, 1991, p. 39) The individual's state of mind with regard to attachment is established by an overall classification of the narratives into one of three primary attachment categories: secure/autonomous with respect to attachment, dismissing of attachment, and preoccupied with or by past attachments. The internal representational models in these three different adult attachment patterns involve both the organization of memories of differential early parent-child relational experiences as well as the individuals' current state of mind regarding attachment relationships.

Adults classified as secure/autonomous demonstrate a good memory for childhood, and describe their early relationships and experiences in a coherent manner; that is, they tend to have ready access to attachment related information, and the ability to integrate affect and cognition regarding attachment experiences (Cicchetti et al., 1994; Zenah et al., 1993). These subjects convey a

sense of valuing relationships and a clear acknowledgment of their effects. Narratives of secure adults show balanced descriptions of the individual's own role in relationship difficulties and their ability to tolerate imperfections in themselves and others. When they describe negative experiences of parenting, secure subjects are neither derogatory toward the parent nor angrily preoccupied with the parent's failings. Rather they demonstrate a natural or an earned autonomy that is often characterized by thoughtfulness and forgiveness.

Those individuals classified as dismissing lack these qualities and tend to dismiss the importance of relationship experiences or to devalue relationships in general. Narratives of dismissing individuals include idealized descriptions of childhood, however they lack the support of specific memories for the idealized view and frequently involve childhood experiences of parental rejection. These subjects attempt to minimize the significance of the effects of negative experiences through an implicit claim of normalacy, strength, and self-sufficiency. Attachment-related information tends to be excluded from awareness and processed without integrating affect (Cicchetti et al., 1994; Zenah et al., 1993).

Individuals classified as preoccupied present narratives which tend to be confusing or contradictory, and are characterized by their overall lack of coherency. These

subjects tend to report childhood experiences involving pare-
child role-reversal, guilt, and inconsistency. They are
especially entangled with their early relationships and
families of origin, and their reports do not project a well-
defined sense of personal identity. Although they tend to
be open in their focus upon their parents and attachment-
related experiences, they have difficulty organizing
specific memories into a coherent overview of their
childhood experiences. Their focus tends to be neither
fruitful, objective, nor incisive in that they have a
seeming inability to metabolize information about their
experiences to create an opinion or conclusion about the
effects of relationship experiences. Affect and cognition
are poorly integrated, and ambivalence is prominent in
processing attachment-related experiences (Cicchetti et al.,
1994; Main & Goldwyn, 1991; Zenah et al., 1993).

These attachment classifications were designed to
assess an individual's state of mind with respect to
attachment (i.e., the subject's current construction of
childhood experiences). After rating the transcripts, a
single classification was assigned to each of the 54
participants in the sample. (The author attended a 2-week
workshop in June, 1991 to learn the system of interpretation
for the AAI. Interrater reliability was subsequently
established by rating and classifying ten interview
transcripts from the Adult Attachment Institute. Agreement

on the main categories was 70%. The investigator, who was blind to other data, coded all 54 transcripts.)

The psychometric properties of the AAI have been recently investigated (Bakermans-Kranenburg & Van-IJzendoorn, 1993). Adequate test-retest reliability was demonstrated over time (78% over a two month period; kappa = .63) and across interviewers. Discriminate validity was also tested, and it was shown that the AAI classifications were independent of non-attachment-related memory, verbal and performance intelligence, and social desirability.

Anxiety Disorders Schedule for Children-Revised. The ADIS-C-R (Silverman & Nelles, 1988) is a structured diagnostic interview which involves assessment of the childhood anxiety disorders presented in the Diagnostic and Statistical Manual of Mental Disorder (DSM-III-R; APA, 1987). The ADIS-C-R was designed to evaluate the presence of symptoms in children and adolescents between the ages of 6 and 18 years old. Overall test-retest reliability for diagnoses reported was .76 for child interviews and .67 for parent interviews. Due to the low frequency of SAD in their sample, Silverman and Nelles (1988) did not compute a separate Kappa coefficient for the SAD diagnosis; however, the Kappa coefficient for the number of SAD symptoms was .75 (Silverman & Eisen, 1992).

In the present study, the ADIS-C-R was used to assess the reliability of the SAD diagnosis obtained from the Adult

Functioning Questionnaire (see below).

Self-Report Measures

Psychopathology and Distress. Two measures were chosen to assess subject's level of psychological distress. The **Adult Functioning Questionnaire** (AFQ) was used to determine whether subjects were suffering from anxiety specifically related to separation from parents and home. The AFQ was modeled after an instrument developed by Last, Phillips, and Statfeld (1987) by the author and was designed to obtain information consistent with DSM-III-R diagnoses of childhood anxiety and depressive disorders (separation anxiety disorder, avoidant disorder, overanxious disorder, simple phobia, and major depression). For example, the AFQ includes items assessing the nine symptom criteria for separation anxiety disorder in the DSM-III-R (see Appendix C-2). The AFQ was constructed so that the symptom criteria for childhood anxiety disorders were rephrased to be appropriate for adulthood. On this questionnaire, students were asked to report whether or not they were currently experiencing symptoms of SAD, and if so, for how long. Subjects were assigned a diagnosis of SAD if they reported experiencing 3 or more symptoms for 2 or more consecutive weeks. In this manner, a current measure of SAD was obtained for young adulthood. Kappa coefficients were computed for the number of SAD symptoms and SAD diagnosis obtained from AFQ and the ADIS-C-R (Silverman & Nelles,

1988), both of which were administered at the interview session. There was 82% agreement (Kappa = .40) on the number of SAD symptoms, and 80% agreement (Kappa = .16) on the SAD diagnosis. (The low Kappa coefficient here was due to the low number of positive SAD diagnoses reported at the time of the interview.)

The **Brief Symptom Inventory** (Derogatis, 1992) is a 53-item self-report measure developed to assess psychopathology and distress in an adult population. The items describe symptoms most commonly identified by psychiatric and medical patients (e.g., "How much are you distressed by: feeling lonely?; thoughts of ending your life?; never feeling close to another person?"), and the subjects indicate how much they have recently been bothered by each symptom ("Not at all" [0] to "Extremely" [4]). There are nine primary symptom dimensions and three global indices. In the present study, the General Severity Index (GSI) was used as a measure of general distress. The GSI combines information on the numbers of symptoms and the intensity of perceived distress; and of the three global scores, it is considered to be the best indicator of current distress levels (Derogatis & Milisaratos, 1983). The GSI is obtained by summing scores for all 53 items and obtaining a mean score (range = 0 to 4). Test-retest reliability for the scale has been reported as .90, and the Cronbach's alpha internal consistency coefficients range from .71-.85 across the nine

symptom dimensions. In addition, several validity studies have demonstrated good evidence of convergent validity, construct validity, and criterion-related validity (Derogatis & Melisaratos, 1983).

Perception of Self. Self perception was assessed on two dimension: social competence and self-esteem. The **Dating and Assertiveness Questionnaire** (DAQ; Levenson & Gottman, 1978) is a measure of perceived social competence in dating and assertion situations developed specifically for college students. It contains a list of 9 specific behaviors (e.g., "Stand up for your rights," "Maintain a long conversation with a member of the opposite sex") and 9 vignettes frequently encountered by college students (e.g., "Your roommate has several obnoxious traits that upset you very much. So far, you have mentioned them once or twice but no noticeable changes have occurred. You still have 3 months to live together. You decide to say something."). Subjects indicate how frequently they exhibit the specific behaviors on a 4-point scale ("I never do this" [1] to "I do this almost always" [4]). The vignettes are rated on how the individual would feel in such a situation from "I would be so uncomfortable and so unable to handle this situation that I would avoid it if possible" (1) to "I would feel very comfortable and would be able to handle this situation very well" (5). Ratings are summed and mean scores (range = 1 to 9) are obtained for the dating and assertion subscales.

Psychometric properties reported for the DAQ include test-retest reliability of .71 over a 2-week period for both subscales, and internal consistency alphas of .92 and .85 for the dating and assertion subscales respectively. (Levenson & Gottman, 1978). The validity of these subscales is supported by known-groups validity where significantly different scores were found (a) between clinical and non-clinical samples of college students, and (b) between college students identified as having problems with dating and assertiveness compared to a sample of students who did not have such problem. In addition, both subscales have been shown to be sensitive to measuring change resulting from social skills training (Corcoran & Fischer, 1987).

The **Index of Self-Esteem** (ISE; Hudson, 1982) is a 25-item scale designed to measure problems with self-esteem, which is considered to be the evaluative component of self-concept. The items are statements that assess how individuals see themselves (e.g., "I feel that I am a very competent person," "I feel ugly") and how they think others feel about them (e.g., "I think my friends find me interesting," "I feel that people would not like me if they really knew me well"); statements are rated on a 1- to 5-point scale ("Rarely or none of the time" [1] to ""Most or all of the time" [5]). The scoring procedure creates a 100-point scale with higher scores indicating greater problems with self esteem. The ISE has a cutting score of 30 ($\pm$ 5)

with scores greater than 30 indicating clinically
significant problems with self-esteem. Test-retest
reliability was reported as .92 over a 2-week period, and
the mean alpha of .93 shows good internal consistency. The
ISE is considered to have good known-groups validity and
good construct validity correlating positively with measures
of depression and negatively with measures of happiness and
sense of identity (Corcoran & Fischer, 1987).

Perception of Relationships. The **Social Support
Questionnaire** (SSQ; Sarason, Levine, Basham, & Sarason,
1983) consists of 27 items, each of which requires a two-
part response. Subjects must (a) list the people they can
count on for support in a specified set of circumstances
(e.g., "Whom do you feel would help if a good friend of
yours had been in a car accident and was hospitalized in
serious condition?" or "Who helps you feel that you truly
have something positive to contribute to others?"), and (b)
indicate their overall level of satisfaction with these
supports on a 6-point scale ("very dissatisfied" [1] to
"very satisfied" [6]). The SSQ yields two scores: the
number (N) score for each item is the number of support
persons listed, which is summed across all items and then
divided by the total number of items (27) to obtain a mean N
score; the satisfaction (S) score for each item is summed
and divided by the total number of items to obtain a mean S
score. Based on a normative sample of 602 undergraduate

college students, alpha coefficients for the N and S subscales were reported as .97 and .94 respectively; test-retest correlations were .90 for N and .83 for S suggesting that the SSQ is a very stable instrument with high internal consistency. Validity data were based on several comparisons between the SSQ and other rating scales. For instance, it was reported that students who scored high on the SSQ had less emotional discomfort and fewer recollections of separation anxiety in childhood (Sarason et al., 1983).

Behavioral assessment and academic performance. An assessment scale entitled the General Information Questionnaire (GIQ) was designed by the author to examine the frequency and extent to which students have actual contact with parents, home, and with student health services at school. Students were asked to report how frequently they called and/or wrote home, how often they actually went home, and how frequently their parents called, wrote to, and/or visited them at school. They were also asked to indicate their frequency of contact with the student health center and/or the university counseling center.

Finally, in order to assess academic performance, subjects gave their permission for the investigator to obtain their grade point averages (GPA) from the university registrar. GPA's were obtained for both fall and spring semesters for the 1992-93 academic year.

Results

Results are organized into five major sections. First, the relationship between attachment status and SAD is presented. In the second through fifth sections, longitudinal analyses are presented. For these analyses, mixed 2-factor (attachment group x time) designs specifying three a priori group contrasts were employed. The Duncan multiple-range test (significance level = $p < .05$) was performed to assess contrasts between the three attachment groups: secure versus dismissing, secure versus preoccupied, and dismissing versus preoccupied. In the second section, the relationships between attachment status and symptoms of separation anxiety and general psychological distress are discussed. In the third and fourth sections, the relationship between attachment status and self-concept and the relationship between attachment status and concept of relationships are examined respectively. In the final section, the relationships between attachment status and attachment behavior and academic performance are discussed.

Based on the analysis of the AAI, 61% ($\underline{n}$ = 33) of the subjects were rated as secure, 28% ($\underline{n}$ = 15) were rated as dismissing, and 11% ($\underline{n}$ = 6) were rated as preoccupied. This is roughly comparable to the distribution of adult attachment classifications in other samples of college students (Kobak & Sceery, 1988) and middle class adults (Crowell & Feldman, 1988; Zenah et al., 1993), although the

percentage of preoccupied subjects in the present study is lower than is typical. It is recognized that the three groups were of unequal numbers and that the preoccupied group was comprised of only 6 subjects; nevertheless, analyses were conducted to explore differences among groups. Table 1 summarizes the demographic characteristics of the attachment groups. The three groups were statistically similar on age ($\underline{M}$ = 17.98, $\underline{SD}$ = .412) and socioeconomic status ($\underline{M}$ = 24.4, $\underline{SD}$ = 12.9, Hollingshead, 1975). Chi-square analyses also showed no significant group differences for gender (X^2 = 4.73, p = ns), race (X^2 = 3.51, p = ns), or family status (X^2 = 0.17, p = ns). Despite statistical similarity, it is interesting to note that both the secure and preoccupied attachment groups consisted primarily of females (75% and 83% respectively), whereas, the dismissing group was more mixed (47% female). In addition, although there were only 5 non-Caucasian subjects (Asian: $\underline{n}$ = 1; Indian: $\underline{n}$ = 3; African-American: $\underline{n}$ = 1), all were classified as secure on the AAI.

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Insert Table 1 About Here

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Attachment Status and Separation Anxiety Disorder

Using the SAD diagnosis obtained from the AFQ in October, a 2 x 3 (SAD diagnosis x attachment status) chi-square analysis was performed. As shown on Table 2, 54.5%

(n = 18) of the secure group, 20.0% (n = 3) of the
dismissing group, and 83.3% (n = 5) of the preoccupied group
qualified for a diagnosis of SAD. The complex chi-square
was significant (X^2 = 8.28, p < .02) indicating a
significant relationship between attachment status and SAD.

Insert Table 2 About Here

Simple chi-square tests revealed that relative to the
dismissing group, the secure group was more likely to
qualify for SAD (X^2 = 5.0, p < .02) as was the preoccupied
group (X^2 = 7.29, p < .01). The secure and preoccupied
groups were, however, statistically similar with regard to
SAD (X^2 = 1.79, p = ns). Fisher's exact tests (Siegel,
1956) confirmed these findings.

Longitudinal Analysis of Distress for Each Attachment Group

Two measures of distress, the number of SAD symptoms
(range = 0 - 9) and the General Severity Index (GSI: range =
0 - 4)) score from the BSI reported at each point in time
were entered as dependent variables in a repeated measures
MANOVA analysis. The MANOVA resulted in significant Wilks'
Lambda F-tests for attachment status (F = 10.36, df = 4,168,
p < .0001), time (F = 7.26, df = 4,168, p < .0001), and
attachment status-by-time interaction (F = 2.36, df = 8,168,
p < .02).

The univariate analyses performed on the number of SAD

symptoms showed significant effects for attachment status (F = 16.66, df = 2, p < .0001), time (F = 15.78, df = 2, p < .0001), and the attachment status-by-time interaction (F = 3.78, df = 4, p < .01). As can be seen in Table 3, when SAD symptoms for each attachment group were summed across time, the preoccupied group maintained a significantly greater number of symptoms than either the secure or dismissing groups. Furthermore, the secure group reported significantly more symptoms than the dismissing group.

Insert Table 3 About Here

Taking each time separately, the preoccupied group reported more SAD symptoms than either the secure or dismissing groups in October, but by December and March, the number of symptoms reported by each group were statistically similar. Group difference in December did, however, approach statistical significance (F = 2.92, df = 2, p < .06) with the preoccupied group continuing to report the greatest number of SAD symptoms, followed by the secure and dismissing groups.

The significant interaction effect indicates that the reduction in SAD symptoms occurred at different rates and/or in different degrees for attachment groups. Table 3 shows that this interaction can be accounted for by the consistently low number of, and relatively minor changes in,

symptoms reported by the dismissing group, the significant reduction in symptoms shown by the secure group, and the consistent decrease in symptoms shown by the preoccupied group across time. Figure 1 depicts a graphical representation of this interaction.

The univariate analyses performed on the GSI indicated significant effects for attachment status ($F = 4.47$, $p < .01$) and time ($F = 3.77$, $p < .05$). As shown in Table 4,

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Insert Table 4 About Here

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when scores for each attachment group were summed across time, the secure group had significantly higher GSI scores than the preoccupied group. Taken together, GSI scores for all groups significantly decreased between October ($\underline{M} = 0.79$) and December ($\underline{M} = 0.57$), although it should be noted that mean scores for all groups were below 1.00, indicating little or no distress. The fact that GSI scores were so low suggests that group differences may be relatively meaningless.

In summary, there was a significant effect of attachment status on the degree of separation anxiety experienced over the course of the first year of college. Relative to their counterparts, the secure group reported a moderate degree of separation anxiety but showed a significant decline in symptomatology over the course of

seven months. The dismissing group reported the lowest degree of separation anxiety, and their relative lack of symptomatology remained stable over the seven-month period. When compared to the other two groups, those classified as preoccupied maintained the highest degree of separation anxiety, and although to a lesser extent than the secure group, their symptomatology tended to decline over time. Unlike the relationship between attachment status and distress manifested specifically as separation anxiety, a global sense of distress (albeit a low level of distress) occurred to a similar extent among all three groups over the course of the academic year.

Longitudinal Analysis of Self-Perception for
each Attachment Group

Scores for self-perception of social competence in dating situations, in situations requiring assertiveness, and problems with self-esteem from the DAQ (range = 0 - 9) and ISE (range = 0 - 100) respectively, were entered as dependent variables in a repeated measures MANOVA analysis that resulted in a significant Wilks' Lambda F-test for attachment status (F = 19.38, p < .0001). Neither the effects of time, nor the interaction of attachment status-by-time were statistically significant. Table 5 charts the main effects for each of these variables.

The univariate analyses performed on the DAQ-Dating scores revealed a significant effect for attachment status.

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Insert Table 5 About Here

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As can be seen in Table 5, overall the secure group reported
significantly <u>lower</u> self-perceived competence in dating
situations than either the preoccupied or dismissing
groups. Of the later two groups, those classified as
preoccupied saw themselves as less competent in dating
situations than did those classified as dismissing.

Significant effects of attachment status on self-
perceived assertiveness were obtained when DAQ-Assertion
scores were summed across time. Results of this analysis
indicate that the secure and preoccupied groups perceived
themselves as significantly <u>less</u> assertive than the
dismissing group.

A significant main effect of attachment status on
problems with self esteem showed that, relative to the
dismissing group, the secure and preoccupied groups reported
significantly <u>lower</u> self-esteem. The secure and preoccupied
groups did not statistically differ from each other on this
dimension.

In summary, relative to the dismissing group, the
secure and preoccupied groups reported significantly lower
self-perceived social competence and significantly lower
self-esteem. Moreover, these patterns were fairly stable,
as there were neither statistically significant changes on

these dimensions over time nor significant group-by-time interaction effects.

<u>Longitudinal Analysis of Perceptions of Relationships</u>

<u>for each Attachment Group</u>

The two factors from the SSQ (Sarason et al., 1983) which assess (a) the number of people one can count on for support and (b) overall satisfaction with support (range = 1 - 6) were entered as dependent variables in a repeated measures MANOVA analysis. The MANOVA resulted in a significant effect for attachment status (F = 6.99 p < .0001). Neither the effects of time nor the attachment status-by-time interaction were significant.

As Table 6 shows, there were significant differences on the number of social support persons reported by each attachment group indicating that the preoccupied group reported a significantly greater number of people they could count on for support than either the secure or dismissing groups; and the secure group reported having significantly more social support persons than the dismissing group.

Insert Table 6 About Here

There was also significant group effect on satisfaction with social support indicating that the preoccupied group reported significantly less satisfaction than the dismissing group. Ratings for the secure group

were statistically similar to the other two groups.

In summary, when scores for the SSQ were summed across time, although the preoccupied group reported having a greater number of people they could count on for support, they were the least satisfied with their support. Conversely, although the dismissing group reported having the least number of support persons, they reported being the most satisfied with their support.

Longitudinal Analysis of Attachment Behavior and Academic Performance for each Attachment Group

Data from behavioral measures were analyzed with two-factor (group x time) ANOVAs with repeated measures. Table 7 shows the mean scores for each attachment group on self-reported weekly contact with parents (i.e., phone calls and mail), monthly visits to home, and monthly visits to the student health center. Significant effects were not

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Insert Table 7 About Here

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obtained for either attachment status or time on students' weekly phone and mail contact with parents.

There was, however, a significant attachment group effect for student's monthly visits home ($F = 3.07$, $p < .05$). As can be seen on Table 7, this difference was accounted for by the significantly greater number of visits home reported by the preoccupied group relative to the

dismissing group in October and March. It is notable that the preoccupied group went home more often than the other 2 groups at all points in time, and the dismissing group went home the least at all points in time. The frequency with which each group went home, however, remained statistically similar across time.

Although main effects of attachment status or time on monthly visits to the student health center were not obtained, there was a significant group-by-time interaction (F = 3.25, df = 4, p < .02). As is evident from Table 7, this effect was due to the significant increase in frequency of visits reported by the dismissing group (F = 18.76, df = 2, p < .001), the relatively consistent number of visits reported by the secure group, and to some extent, the trend for a decrease in visits reported by the preoccupied group (F = 3.175, df = 2, p < .10). Figure 2 depicts a graphical representation of this interaction.

In summary, although weekly telephone and written contact with parents was similar for all groups, the preoccupied group tended to visit home more frequently, particularly when compared to the dismissing group who made the least visits home. With regard to visits to the student health center, the preoccupied group went to student health more frequently than the other two groups in the beginning of the semester, but went consistently less over time, whereas the dismissing group showed the exact opposite

pattern.

<u>Academic Performance</u>

Table 8 shows mean GPAs for each group at the end of each semester. Although the Preoccupied group had the highest mean GPA for both semesters, mean GPAs for each

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Insert Table 8 About Here

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group were statistically similar for both semesters. Group differences did, however, approach significance during the second semester ($F(2,48) = 2.46$, $p < .09$), and this trend was accounted for by the difference between the preoccupied and dismissing groups.

Discussion

The results of this study indicate that when college students were classified as secure, dismissing, or preoccupied on the AAI, significant differences between these groups emerged on their experience of separation anxiety, general distress, self-perceptions of competence, perceptions of relationships, and attachment-related behaviors. Relative to the dismissing group, both the preoccupied and secure groups were more likely to experience clinical levels of separation anxiety (SAD) during the beginning of their first year of college. As predicted, those who were classified as secure resolved their separation distress over the course of the academic year. As also predicted, separation anxiety was not prevalent in the dismissing group at any point in time. Finally, the degree of separation anxiety was expectably the most severe for the preoccupied group, and although they reported a decline in symptomatology over time, decrease in the number of symptoms did not reach statistical significance.

Unlike the relationships between attachment status and distress manifested specifically as separation anxiety, self-reports of global distress were comparably low for all three groups. Mean scores for all groups were less than 1.00 indicating that perceived distress, if present at all, occurred at low levels. Nevertheless, relative to their counterparts, the secure group reported slightly more

distress particularly when compared to the preoccupied group.

Theoretical predictions were supported with regard to subjects' perceptions of relationships. In terms of social support, the preoccupied group reported having the greatest number of people they could rely on for support, but were the least satisfied with the support they received. On the other hand, the dismissing group reported having the fewest number of support persons, but greater satisfaction, particularly when compared to the preoccupied group. Although, when compared to the dismissing group, the secure group reported having more people upon whom they could rely, they were equally satisfied with the overall support they received.

Each of the three groups contacted their parents via phone calls and letters equally as frequently over the course of the study (a mean rate of approximately 3 to 4 times per week). The preoccupied group went home the most frequently, at a mean rate of twice per month, in contrast to the dismissing group who went home on average of once per month. These findings were evident in October and March but not December. The absence of group differences in December could have been due to the final examination period occurring in the second week of that month, and the long winter vacation beginning after exams.

In addition, both the secure and preoccupied groups

visited the student health center with greater frequency than did the dismissing group at the beginning of the academic year. Nevertheless, as visits by these two groups declined over time, visits by the dismissing group increased. By the end of the year, the dismissing group utilized student health services with the greatest frequency, particularly when compared to the preoccupied group.

Unexpectedly, the dismissing group perceived themselves as more competent than the secure and preoccupied groups. This finding was borne out in reports of self-esteem, as well as perceptions of social competence particular to dating situations and situations requiring assertive behavior.

Finally, although academic performance was statistically similar for all attachment groups, there was a tendency for the secure group to have higher GPAs at the end of each semester.

These findings parallel the Kobak and Sceery (1988) study along some dimensions and diverge along others. For instance, in both studies, secure adult attachment was associated with ability to constructively modulate negative feelings. In the present study, this conclusion was made on the basis of the successful resolution of separation anxiety demonstrated by the secure group. Kobak & Sceery (1988) came to a similar conclusion on the basis of peer ratings of

the secure groups as the least hostile and anxious in problem-solving situations. As in the present study, Kobak and Sceery (1988) found students classified as preoccupied to be the least capable of adaptively regulating negative affect. In addition, similar results regarding students' perceptions of social support were found. In both studies, the dismissing groups reported the least social support, whereas, the secure and preoccupied groups reported similar degrees of social support.

On the other hand, there are striking contrasts between the two studies on student's self-perceived social competence and global distress. Kobak and Sceery (1988) found that college students rated as secure reported the least global distress and the greatest degree of self-perceived social competence; however, secure students in the present study reported the most global distress and less social competence than the dismissing group. Overall, in both studies, the preoccupied groups reported the least self-perceived social competence.

As with the present research, the Kobak and Sceery (1988) study was intended to explore the association between attachment classification and social-emotional variables among first-year college students. To date, these are the only two studies that have employed the AAI in research with college students. The similarities and differences between these two studies suggest, however, that although this is a

viable area of research, adolescent attachment must be more clearly defined. Kobak and Sceery (1988) defined attachment in terms of affect regulation, however, they did not measure affect specifically related to attachment.

In the present study, adult attachment was first defined as "the stable tendency of an individual to make substantial efforts to seek and maintain proximity to and contact with one or a few specific individuals who provide the subjective potential for physical and/or psychological safety and security" (Berman & Sperling, 1994, p. 8). Second, adult attachment was examined along two dimensions: (a) as a state-based syndrome which is consistent with Bowlby's notion of the attachment system; and (b) as a trait or style which is based on the internal working model.

As a state, attachment was defined by the presence of separation anxiety disorder as described by the Diagnostic and Statistical Manual of Psychiatric Disorders (DSM-III-R: American Psychiatric Association, 1987). Separation anxiety consists of cognitive, affective, and behavioral responses to being separated from attachment figures. Symptomatic responses include persistent worries and/or nightmares about being permanently separated from attachment figures, emotional distress upon actual or anticipated departure from attachment figures, and reluctance and/or avoidance to being physically apart from attachment figures (see Appendix C-2).

The idea of attachment as a trait was defined by

attachment classifications based on the Adult Attachment Interview. Adults classified as secure on the AAI are characterized as individuals that value attachment relationships and regard attachment related experiences as influential; however, they are relatively independent and objective regarding any particular experience or relationships. These individuals typically represent parents as loving and available during distressing events. Moreover, they demonstrate good memory for attachment experiences, absence of idealization, and coherent verbal presentations. In sum, representations of parents as available and supportive seem to be associated with the ability to recall and integrate distressing experiences in a coherent explanation of the parent-child relationship. In contrast, adults classified as dismissing on the AAI typically report considerable rejection and lack of love from parents, and they have difficulty recalling distressing experiences from childhood. This failure to remember has been viewed as an attempt to deny or minimize distress-related affect that is associated with the experience of neglect or rejection (Kobak & Sceery, 1988). Finally, those classified as preoccupied on the AAI tend to represent parents as loving but role-reversing (i.e., the parent makes herself an object of the child's attention, involving the child in her physical or psychological care, or making clear that the child's presence is necessary for maintenance of

her own sense of well being). Although they typically do not idealize parents, nor do they have trouble recalling childhood experiences, their presentations are marked by a lack of coherence and objectivity. Thus, rather than cutting off distressing affect, these individuals tend to become overwhelmed with and confused by anxiety and remain mentally entangled with their families and/or past experiences. In addition, they frequently display continued efforts to gain support from parents.

It was noted that state and trait conceptualizations of attachment are distinguished by the emphasis on universal emotional reactions to separation and losses versus stable individual differences in emotional experience (Berman & Sperling, 1994). Results of the present study revealed a significant interaction between these two dimensions such that different attachment styles or working models were related to different ways of modulating attachment distress.

The link between affect regulation and working models of attachment was apparent on subjects' differential reports of separation anxiety during their first year at college. All three groups responded in ways that were theoretically predictable. The secure group reported being more separation anxious than the dismissing group, but less than the preoccupied group. Just over half of the secure group met criteria for separation anxiety disorder during their first six weeks at college. However, this group experienced

a significant decline in symptoms of separation anxiety between October and December, and a continued decrease in symptomatology between December and March. This finding suggests that individuals classified as secure acknowledged distress but were able to effectively modulate and eventually resolve their separation anxiety. One way of coping with separation anxiety is to turn to others for support. The secure group did in fact report having a greater number of people upon whom they could rely for support than the dismissing group, and although this group did not differ from their counterparts on frequency of contact with their parents, the secure group reported calling or writing home an average about 4 times per week. In addition, they also reported going home about once a month over the course of the academic year. This consistent contact with their parents suggests that the secure group viewed attachment figures as available during times of distress and felt comfortable relying on them for support. For these individuals, negative affect was probably not subjectively threatening in that their experience of security was not based on the denial of anxiety, but on the ability to temporarily tolerate negative affects in order to achieve mastery over a novel and possible frustrating situation (Cassidy & Kobak, 1988).

The dismissing group reported significantly less separation anxiety than either the secure or preoccupied

groups. Moreover, their self-reported low level of distress remained consistent across the academic year. This finding supports the hypothesis that in situations in which high activation of the attachment system is normally expected, dismissing adults like avoidant infants show a marked absence of distressed affects and behavior; such individuals can be viewed as cutting off or defensively excluding information relevant to affective responses from conscious processing. Rather than using their emotions as signals to seek comfort and support from others, dismissing individuals attempt to control their affective state by using an avoidant strategy. In fact, similar to results reported by Kobak and Sceery (1988), the dismissing individuals in this study reported having significantly fewer people they could rely on for support than either the secure or preoccupied groups. However, unlike the dismissing students assessed by Kobak and Sceery (1988) who reported more loneliness, the dismissing students in the present study were as satisfied with social support as the secure group, and more satisfied than the preoccupied group. Although this finding was not initially predicted, it can be explained according to attachment theory as idealization. Working models of preoccupied individuals are characterized on the AAI by marked idealization of attachment figures. Previous studies have suggested that avoidant children and dismissing adults tend to idealize the self and use denial as a strategy for

coping with stress (Cassidy, 1988; Cassidy & Kobak, 1988).

As long as self and others are viewed as free of problems or distress, the attachment system is not activated; activation of the attachment system is, in fact, considered not relevant (Cassidy and Kobak, 1988).

Despite the relative absence of separation anxiety among the dismissing group, the frequency with which they contacted parents was not significantly different from the secure group. This finding suggests that in adolescents and adults, attachment may be manifested more clearly in emotional and cognitive responses rather than in overt behavior. It is suggested that working models of attachment are based on a history of experiences within parent-child relationships. According to Bowlby (1980), the activation of attachment behavior that is not met with comfort or support arouses anger and/or anxiety. This arousal, however, can be prevented if input that would normally activate attachment behavior is defensively excluded from conscious processing. Theoretically, avoidance may serve the function of preventing processing of information that would trigger attachment behavior (Ainsworth, 1984; Bowlby, 1980). It has also been suggested that avoidant behavior may serve the adaptive function of maintaining the attachment relationship (Main (1981). In the context of a history of rejection, attachment behavior may elicit punishing consequences for the child. If she overtly

expresses anger associated with rejected attachment behavior, the child might risk alienating the attachment figure. Moreover, if she makes further demands and becomes more clingy, the child might risk being rebuffed further. Avoidance reduces the infant's arousal level and thus prevents the direct expression of anger to the attachment figure. Avoidance thus, simultaneously protects the infant from the rebuff that often results from attempts to seek contact as well as from the painful fear of alienating the attachment figure upon whom she depends for survival (Cassidy & Kobak, 1988).

In studies of infants whose behaviors were examined in the Strange Situation, Escher-Graub and Grossmann (1983) found that in a mother-infant free-play situation, mothers of avoidant infants joined in play when the infant was content, but withdrew when the infant expressed negative affect. This pattern was reversed among mothers of securely attached infants who were more likely to join the play in a facilitative way when the infant expressed negative affect. In another study, Grossmann, Grossmann, and Schwan (1989) observed that the communication patterns of mother-infant dyads showed that avoidant infants communicated directly with their mothers only when they (the infants) were feeling well. When they were distressed, these infants tended neither to directly signal the mothers nor to not seek physical contact with her.

Although continuity of attachment can not be presumed, based on the findings of the present study, the pattern of attachment behavior displayed by the dismissing group is remarkably similar to attachment patterns observed in avoidant infants. Perhaps these adolescents who were classified as dismissing of attachment could maintain relationships with their parents as long as they did not acknowledge or express negative affect associated with separation and transition. The expression of anxiety, which optimally functions to elicit support and reassurance from parents, might have been dysfunctional for these individuals. Instead, cutting off, repressing, or falsifying the expression of negative affect may have served to preserve the parent-child relationships.

Although the denial of negative affect might be adaptive in preserving the parent-child relationships of dismissing individuals, the inability to gain comfort from others or to use emotion to share and reflect upon experience may result in symptomatic behavior. When examining the frequency with which students visited the university health center, the dismissing group reported a consistently significant increase in visits over the course of the academic year, a pattern that was opposite to the preoccupied and secure groups. This finding suggests that when individuals are unable to acknowledge and receive comfort for emotional distress, they may have a greater

tendency to seek attention and care from medical professionals.

Relative to the secure and dismissing groups, the preoccupied group reported the greatest degree of separation anxiety. All but one member of this group met criteria for SAD in October. Moreover, they maintained a higher number of separation anxiety symptoms across time than either the secure or dismissing groups. This finding supports the theoretical prediction that preoccupied individuals acknowledge higher levels of separation anxiety than dismissing or secure individuals, and suggests that this may be due to their tendency to focus on attachment relationships in a hypervigilant manner and to experience a more urgent need for emotional closeness than the other two groups. This group was not expected to show a significant decrease in separation anxiety over time, and in fact, the differences in number of symptoms at each point in time were not statistically different. It would, however, be erroneous to use this absence of significant differences to support the hypothesis that the preoccupied group did not resolve their separation anxiety. In fact, there was a decrease in symptomatology for many members of this group, and the lack of statistical significance may have been due to the degree of variability within this group. Had there been more members in the preoccupied group, the variability for number of symptoms may have been smaller, and the

results of this analysis may have been more definitive. The
most logical interpretation of this finding is that
reduction in separation anxiety occurred within the
preoccupied group, but at a slower rate and with less
completeness than that observed within the secure group.
Thus, the preoccupied group can be viewed as regulating
affect somewhat less efficiently and effectively than their
secure counterparts.

Interestingly, relative to the secure and dismissing
groups, the preoccupied group reported having the greatest
number of people they could count on for support.
Although their contact with parents was not significantly
different from that of the secure group, the preoccupied
group tended to visit home more frequently (an average of
twice per month) over the course of the academic year, and
in October, they visited the student health center more
frequently than the secure or dismissing groups.
Nevertheless, they tended to report the least satisfactions
with social support, and significantly less satisfaction
than the dismissing group. These findings suggest that
although preoccupied individuals put forth effort to elicit
social and emotional support, they have somewhat more
difficulty receiving comfort from the support that they
have.

Taken together, these findings on the relationships
between adult attachment classification and the experience

of separation anxiety, attachment behavior, and perceptions of relationships are remarkably comparable to the patterns observed among infants and young children in studies of attachment and separation (Bretherton & Waters, 1985; Cassidy & Marvin, 1992). In the present study, adolescents classified as secure/autonomous on the AAI acknowledged their experience of separation anxiety but were able to effectively modulate and eventually resolve their distress. Conversely, those classified as dismissing reported a marked absence of distress during a transition that would normally elicit separation anxiety. Finally, the preoccupied group reported the highest rate of separation anxiety and were less capable of effectively and efficiently modulating this distress.

The findings on generalized distress were less distinct. On average, none of the groups reported more than a slight degree of global distress. Furthermore, the dismissing group did not differ from either the secure or preoccupied groups on this dimension; however, unexpectedly, the preoccupied group reported lower levels of general distress than did the secure group. General distress may not necessarily be related to separation per se, but to the experience of being in a new and challenging environment. This finding suggests that anxiety for the preoccupied group was mainly related to separation and less so to being in a novel environment; whereas, the secure

group may have experienced distress along both dimensions. This lends support to the idea that preoccupied individuals tend to focus on relationships, and thereby, may be more likely to interpret anxiety as being related to separation from attachment figures than to being in a new environment.

Theoretically, the function of attachment is not limited to affect regulation, but is also influential in promoting mastery of the environment and autonomous functioning. However, the measures of social competence, self-esteem, and academic success employed in this study were not related to attachment style in theoretically predicted ways. In fact, the two insecure groups saw themselves as more competent in dating situations than did the secure group. On dimensions of assertiveness and self-esteem, the dismissing group saw themselves as more competent and having fewer problems with self-esteem than did either the secure or preoccupied groups. Finally, there were no differences between the groups on academic achievement.

At least two interpretations of these findings are possible. First, Bowlby has proposed that working models of attachment figures are associated with complementary working models of the self (Bowlby, 1973; Sroufe & Fleeson, 1986). This raises the possibility that individuals classified as dismissing who tend to defensively idealize parents and who deny both negative affect and the importance of

relationships may be equally as likely to hold idealized views of the self. For these individuals, a dismissing attitude toward relationships and an idealized conception of self may have contributed to their greater self-reported social competence and self-esteem relative to individuals classified as preoccupied and secure. This does not, however, explain the finding that the preoccupied group saw themselves as more competent in dating situations than the secure group.

A second explanation for these findings is that perceived self-esteem and competence may have been negatively related to the magnitude of self-reported anxiety. Previous studies have in fact linked low self-esteem with feelings of anxiety (Epstein, 1976). Both the secure and preoccupied groups reported more separation anxiety than did the dismissing group, and the secure group reported more general anxiety than either of the other two groups. Thus, it may be the case that subjectively acknowledged anxiety reduced feelings of social competence and self-esteem among members of the secure and preoccupied groups.

Finally, students' GPAs, an objective measure of academic achievement, did not discriminate the attachment groups. This is contrary to the results of previous studies that have associated infant attachment classification to intellectual competence in young children (Arend et al.,

1979; Main, 1983; Waters et al., 1979). This negative finding may be due to the fact that the present sample was biased in favor of intellectual competence. It may also be the case that adult attachment has more to do with social and emotional characteristics than intellectual competencies. When taking into consideration that the problem-solving tasks used to assess intellectual competence in young children involves a consequential interpersonal component, this may actually be the case for attachment in young children as well.

Overall, the present study provides evidence that attachment style as assessed by the Adult Attachment Interview is associated with social-emotional adjustment during the course of the adolescent's emancipation from home. Specifically, attachment organization was shown to be associated in theoretically coherent ways with self-reported regulation of separation anxiety, perceptions of relationships, and to some extent, attachment-related behaviors. These findings lend support to the idea that working models, as an organizational construct, are associated with differing approaches to affect regulation in situational and developmental contexts that elicit distress. Moreover, individual differences in the affect regulation among young adults generally appear to be comparable to the adjustment correlates of the Strange Situation classifications identified by research with

infants and young children (Sroufe, 1973).

In addition to the theoretical implications generated by the results of the present study, clinical implications regarding separation anxiety disorder are also evident. In traditional clinical theories, SAD has been conceptualized as a property of the affected individual, and intervention strategies have generally targeted cognitions and behaviors of the symptomatic child (Lease & Strauss, 1993; Ollendick & Huntzinger, 1990). However, it has recently been argued that SAD is a relationship disorder existing within the parent-child dyad (Lease, 1991), and thus, intervention strategies should target this dyad rather than just the symptomatic individual. The significant association between SAD and attachment classification in the present study lends support to this argument and suggests that that assessment and treatment of attachment relationships in clinical settings may be beneficial in ameliorating SAD.

The findings of the present study are most useful in advancing knowledge about the secure and dismissing groups. The small number of subjects in the preoccupied group posed a major limitation for this study. This problem appears in much of the research on adult attachment, and therefore, future studies using the Adult Attachment Interview should include larger sample sizes. Another limitation was the failure to obtain interrater reliability on the interviews performed in the present study. The author's attempts to

enlist other researchers who are trained to work with the Adult Attachment Interview to participate in assessing reliability were met without success. Because the scoring and interpretation of the Adult Attachment Interview is extremely labor intensive, researchers working outside of laboratories in which more than one individual is trained to interpret the interview will be faced with this dilemma. In the future, it may be advantageous for researchers in this position to either contract with another researcher to perform reliability ratings prior to beginning a study, or to explore other assessment procedures for assessing adult attachment such as the Q-sort method developed by Kobak and his colleagues (Kobak & Cole, in press; Kobak, Sundler, & Gamble, 1991).

A further limitation was the absence of method variance due to the fact that subjects in the present study were relied on exclusively for the information obtained regarding both dependent and independent variables. In the Kobak and Sceery (1988) study, both self-report and objective data were collected on students. This method should be employed in future studies in order to assess the convergent validity of findings.

Finally, the present study assessed social, emotional, and behavioral responses of the students only, and did not include assessment of their parents. It was assumed that working models of attachment served to guide the

individual's thoughts, feelings, and behavior with respect to attachment figures and self. Embedded in this assumption is the implication of continuity of attachment; that is, individual differences in attachment result from variations in attachment-related interactions between parents and children, and are reinforced by a continuation of stable interaction patterns. It has been argued, however, that discontinuity of attachment is also possible, and several researchers have suggested that adolescence offers special opportunities for change and reorganization of working models (Main & Goldwyn, 1984; Main et al., 1985; Morris, 1980, 1981; Risks, 1985; Sroufe & Fleeson, 1986). Future studies could empirically test this possibility by first examining parental responses to their adolescent's departure from home; and second, by attempting to manipulate parent-child attachment responses, the potential for transforming working models of insecure attachment could be analyzed.

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Table 1

<u>Demographic Variables by Group</u>

	Attachment Group					
	Secure (n=33)		Dismissing (n=15)		Preoccupied (n=6)	
Demographic Variable	<u>M</u>		<u>M</u>		<u>M</u>	
Age	17.98		18.00		18.00	
Socioeconomic status	24.97		20.47		31.27	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
<u>Gender</u>						
Male	8	25%	8	53%	1	17%
Female	25	75%	7	47%	5	83%
<u>Race</u>						
Caucasian	28	85%	15	100%	6	100%
Other	5	15%	0		0	
<u>Family Status</u>						
2-parent, intact	27	82%	13	87%	5	83%
Single parent	6	18%	2	13%	1	17%

<u>Note</u>. Attachment groups were not significantly different on any of the demographic characteristics.

Table 2

Chi-Square Table Showing the Relationship Between

Attachment Status and Diagnositc Standing for SAD

in October

	Attachment Group		
	Secure (n=33)	Dismissing (n=15)	Preoccupied (n=6)
SAD (n=26)	$\underline{n}$ = 18 54.5%	$\underline{n}$ = 3 20.0%	$\underline{n}$ = 5 83.3%
No SAD (n=28)	$\underline{n}$ = 15 45.5%	$\underline{n}$ =12 80.0%	$\underline{n}$ = 1 16.7%

<u>Note</u>. Chi Square = 8.28, p < .02

Table 3

Analyses of Variance on SAD Symptoms Reported by each

Attachment Group on the AFQ

	Attachment Group				
Time	Secure (M)	Dismissing (M)	Preoccupied (M)	F	Contrast
Total (1992-93)	1.33 (1.73)	0.47 (1.10)	2.75 (2.89)	16.66*	P>S>D
October (1992)	2.24^A (2.18)	0.67 (1.40)	4.67 (2.80)	8.27*	P>S,D
December (1992)	1.03^{B1} (1.33)	0.40 (1.05)	2.20 (2.95)	2.92	
March (1993)	0.69^B (1.09)	0.33 (0.82)	1.00 (1.73)	0.88	

Note 1. Standard deviations are in parentheses.

* p < .001

Note 2. Pairwise comparisons were made using the Duncan multiple range test.

Note 3. Means with different superscripts indicate significant differences for time:

[1]F = 8.39, df = 2, p < .001.

Table 4

Analyses of Variance on General Distress (GSI Scores)

Reported by each Attachment Group on the BSI

	Attachment Group				
Time	Secure (M)	Dismissing (M)	Preoccupied (M)	F	Contrast
Total	0.67	0.57	0.55	4.47*	S>P
(1992-93)	(0.59)	(0.66)	(0.52)		
October	0.89^A	0.56	0.75	1.29	
(1992)	(0.70)	(0.53)	(0.46)		
December	0.59^{B1}	0.51	0.57	0.11	
(1992)	(0.49)	(0.65)	(0.74)		
March	0.51^B	0.63	0.24	0.70	
(1993)	(0.48)	(0.82)	(0.20)		

Note 1. Standard deviations are in parentheses.

*p < .01

Note 2. Pairwise comparisons were made using the Duncan multiple range test.

Note 3. Means with different superscripts indicate significant differences for time:

^{1}F = 3.83, df = 2, p < .02

Table 5

Analysis of Variance on Social Competence and Self-Esteem

for each Attachment Group

| | Attachment Group | | | | |
Scale	Secure (M)	Dismissing (M)	Preoccupied (M)	F	Contrast
Dating					
	5.81	6.65	6.16	47.77*	D>P>S
	(1.05)	(1.38)	(1.56)		
Assertivenes					
	6.05	6.93	5.96	33.25*	D>S,P
	(1.08)	(1.30)	(1.49)		
Problems with Self-Esteem					
	34.06	27.91	36.31	11.47*	D<S,P
	(16.73)	(20.20)	(26.86)		

Note 1. Standard deviations are in parentheses.

*p < .0001

Note 2. Pairwise comparisons were made using the Duncan
multiple-range test.

Table 6

Analysis of Variance on Perception of Relationships for each
Attachment Group

	Attachment Group			F	Contrast
Scale	Secure (M)	Dismissing (M)	Preoccupied (M)		
Number of Social Support Persons					
	4.24	3.79	4.83	7.46*	P>S>D
	(1.57)	(1.99)	(2.52)		
Rating of Satisfaction with Social Support					
	5.27	5.36	5.04	5.20*	D>P
	(0.80)	(0.76)	(1.25)		

Note 1. Standard deviations are in parentheses.

*p < .001

Note 2. Pairwise comparisons were made using the Duncan
multiple-range test.

Table 7

Self-Reported Behaviors for each Attachment Group at Three

Points in Time

	Attachment Group			Contrasts		
	Secure (M)	Dismissing (M)	Preoccupied (M)	Sec/ Dis.	Sec/ Pre.	Dis/ Pre.

Weekly Contact with Parents

October (1992)	5.94 (4.99)	3.47 (1.68)	4.33 (2.25)			
December (1992)	3.44 (2.59)	3.40 (2.90)	2.80 (1.30)			
March (1993)	3.59 (2.59)	3.47 (2.77)	3.00 (0.71)			

Monthly Visits Home

October (1992)	1.45 (1.06)	0.87 (0.91)	2.33 (1.75)			*
December (1992)	1.34 (0.86)	1.27 (0.59)	1.80 (1.78)			
March (1993)	1.34 (0.82)	1.13 (0.91)	2.20 (1.78)			*

Monthly Visits to Student Health Center:

October (1992)	0.51 (0.87)	0.33 [A1] (0.62) [B]	1.17 (1.17)		*	*
December (1992)	0.42 (0.84)	0.55 (0.83) [C]	0.80 (0.45)			
March (1993)	0.37 (0.61)	1.06 (1.22)	0.20 (0.45)		*	

Note 1. Standard deviations are in parentheses.
Note 2. Means with difference superscripts indicate
significant differences for time:

[1]$F = 18.76$, df = 2, $p < .001$.
*Pairwise comparisons were made using the Duncan multiple-
range test with a significance level of $p < .05$.

Table 8

Analysis of Variance on Grade Point Averages for each
Attachment Group for During the 1992-93 Academic Year

Scale	AAI Classification			F	Contrast
	Secure (M)	Dismissing (M)	Preoccupied (M)		
GPA-Fall Semester					
	2.63	2.52	3.09	1.55	
	(0.68)	(0.67)	(0.65)		
GPA-Spring Semester					
	2.68	2.40	3.20	2.46	
	(0.71)	(0.70)	(0.70)		

Note 1. Standard deviations are in parentheses.
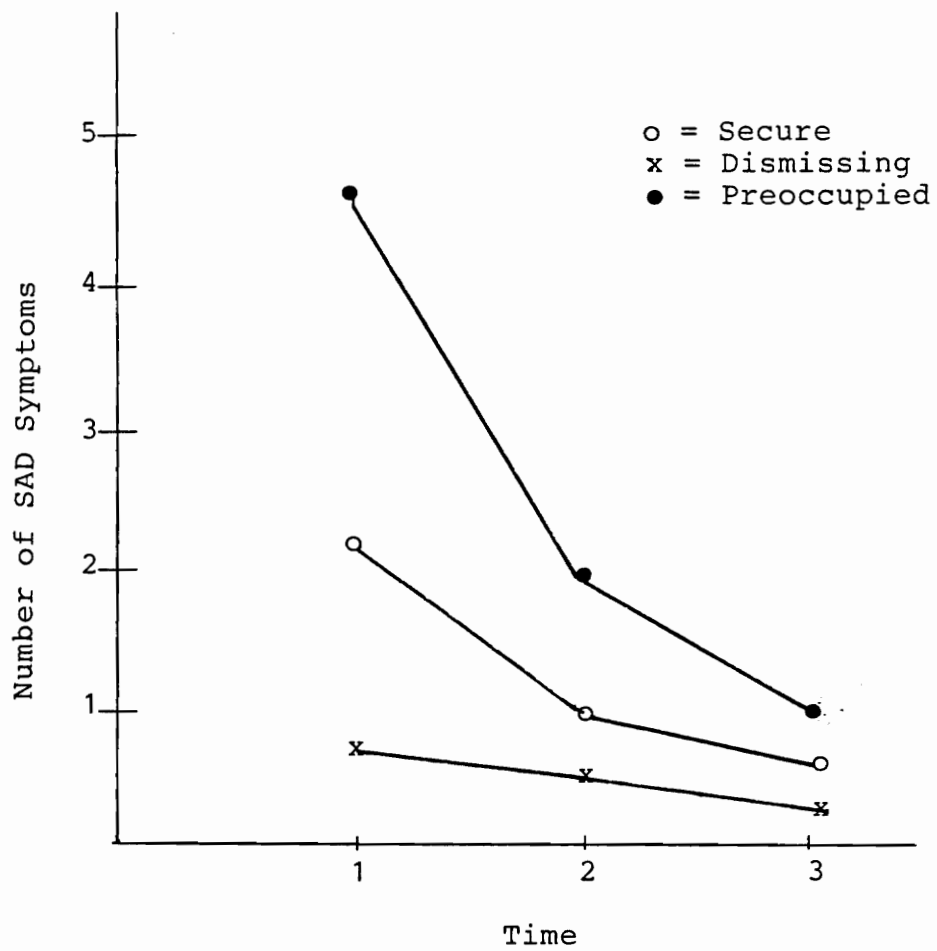
Figure 1. The change in SAD symptomatology reported by by each attachment group across time.
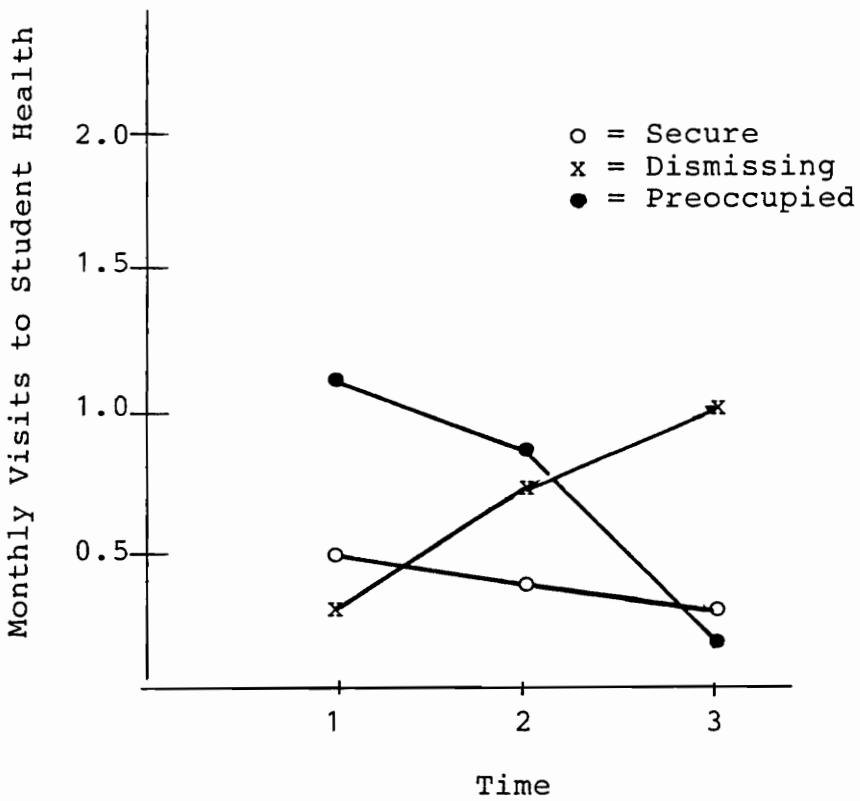
Figure 2. The change in frequency of contact with the
student health center reported by each attachment group
across time.

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Appendix A-1: Consent Form for Initial Interview Session

This is to certify that you agree to participate as a volunteer in a study being conducted by Cynthia A. Lease, M.A. and Thomas H. Ollendick, Ph.D. of Virginia Polytechnic Institute and State University. This first phase of the study will involve the completion of some questionnaires. You may be invited to participate in the second phase of the study to gain additional credit. The procedures used for this first phase are described below.

1. Completion of 4 standard psychological questionnaires regarding your current social, emotional, and academic functioning.
2. Completion of 2 questionnaires about current and past mental health history.
3. Completion of 3 questionnaire about your interactions with family, parents, and friends, as they pertain to your transition from home to college.
4. Approximately 3 hours will be needed to complete all the questionnaires. Thus, 3 hours of experimental credit will be earned for participation in the first phase of the study.
5. Information about your responses will remain confidential. You will use a subject identification number on all of your questionnaires, and your name will not appear on any research documents. Completed questionnaires will be retained in a locked file accessible only to the principal investigators of this study. You have the right to access any of your questionnaire results.
6. In the event that your answers on the various questionnaires, or any aspect of this study cause you to experience discomfort and/or indicate that you may benefit by psychological counseling, and if you wish to pursue such counseling, you will be provided with a referral.
7. You may withdraw from participation at any time without penalty or prejudice
8. On the reverse side of this form you are provided with information on how to contact the experimenter should you have questions any time after the study.
9. You may be contacted within a few weeks, and asked to participate in the second phase of the study for which you may obtain three (6) additional experimental credits (2 credits for each of the three follow-up sessions).

I have read and I understand the procedures outlined above, and agree to volunteer to participate.

Signature _____   Date _____

Print Name Clearly _____   Student ID Number _____

Note: This project has been approved by the Human Subjects
Research Committee of the Psychology Department of Virginia
Polytechnic Institute and State University.   Any questions
about the project should be directed to:

Cynthia A. Lease, M.A.   Thomas H. Ollendick, Ph.D.
Graduate Researcher   Professor
Office Phone: 231-8148   Office Phone: 231-6451

Joseph J. Franchina, Ph.D.   Janet M. Johnson, Ph.D.
Chairperson, Human Subjects   Institutional Review Board
Committee   Office Phone: 231-6077
Office Phone: 231-5664

Appendix A-2:   Consent Form for Interview Session

     This is to certify that you agree to participate as a
volunteer in a study being conducted by Cynthia A. Lease,
M.A. and Thomas H. Ollendick, Ph.D. of Virginia Polytechnic
Institute and State University. This second phase of the
study will involve participation in an individual interview
with the experimenter. The procedures used for this phase
of the study are described below. <u>You are also being asked
to participate in two follow-up questionnaire sessions; one
will be scheduled in December, 1992, the other will take
place in March, 1993</u>.

1.   Answering questions about your personal life history.
2.   Answering questions about current anxiety experiences.
3.   Completion of 1 questionnaires about current anxiety
     experiences.
4.   Signing a release of information for high school
     transcripts.
5.   Approximately 2 hours will be needed to complete all the
     questionnaires. Thus, 2 hours of experimental credit
     will be earned for participation in this second phase of
     the study.
6.   The interview will be audiotaped. All of your responses
     will remain confidential. We will use a subject
     identification number on the tapes and the forms used to
     record your responses to questions, and your name will
     not appear on any research documents. Tapes and
     completed interview forms will be retained in a locked
     file accessible only to the principal investigators of
     this study.
7.   Other than possible discomfort involved in self-
     disclosure, no risks from participation are
     anticipated. In the event that your answers to the
     interview questions, or to any aspect of this study
     cause you to experience discomfort and/or indicate that
     you may benefit by psychological counseling, and if you
     wish to pursue such counseling, you will be provided
     with a referral.
8.   You may withdraw from participation at any time without
     penalty or prejudice.
9.   You will be given the opportunity at the end of the
     interview to ask the experimenter any questions.
10. By signing this consent form, you also have agreed to
     participate in the two follow up questionnaire sessions
     to be scheduled for a date in December, 1992 and March,
     1993. You will receive 2 credits for participation in
     each of the follow-up sessions, thereby, a total of 4
     extra research credits.

I have read and I understand the procedures outlined above,
and agree to volunteer to participate.

Signature _____   Date _____

Print Name Clearly _____   Student ID Number _____

Note: This project has been approved by the Human Subjects
Research Committee of the Psychology Department of Virginia
Polytechnic Institute and State University. Any questions
about the project should be directed to:

Cynthia A. Lease, M.A.   Thomas H. Ollendick, Ph.D.
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Chairperson, Human Subjects   Institutional Review Board
Committee   Office Phone: 231-6077
Office Phone: 231-5664

Appendix A-3: Consent Form for Follow-Up
Questionnaire Sessions

This is to certify that you agree to participate as a volunteer in a study being conducted by Cynthia A. Lease, M.A. and Thomas H. Ollendick, Ph.D. of Virginia Polytechnic Institute and State University. This follow-up session will involve the completion of some questionnaires. The procedures used for this follow-up session are described below.

1. Completion of 4 standard psychological questionnaires regarding your current social, emotional, and academic functioning.
2. Completion of 2 questionnaires about current and past mental health history.
3. Completion of 3 questionnaire about your interactions with family, parents, and friends, as they pertain to your transition from home to college.
4. Approximately 3 hours will be needed to complete all the questionnaires. Thus, 3 hours of experimental credit will be earned for participation in the first phase of the study.
5. Information about your responses will remain confidential. You will use a subject identification number on all of your questionnaires, and your name will not appear on any research documents. Completed questionnaires will be retained in a locked file accessible only to the principal investigators of this study. You have the right to access any of your questionnaire results.
6. In the event that your answers on the various questionnaires, or any aspect of this study cause you to experience discomfort and/or indicate that you may benefit by psychological counseling, and if you wish to pursue such counseling, you will be provided with a referral.
7. You may withdraw from participation at any time without penalty or prejudice
8. On the reverse side of this form you are provided with information on how to contact the experimenter should you have questions any time after the study.

I have read, and I understand the procedures outlined above, and agree to participate.

_____   _____
Signature   Date

_____   _____
Print Name Clearly   Student ID Number

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Note: This project has been approved by the Human Subjects Research Committee of the Psychology Department of Virginia Polytechnic Institute and State University. Any questions about the project should be directed to:

Cynthia A. Lease, M.A.
Graduate Researcher
Office Phone: 231-8148

Thomas H. Ollendick, Ph.D.
Professor
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Chairperson, Human Subjects
Committee
Office Phone: 231-5664

Janet M. Johnson, Ph.D.
Institutional Review Board
Office Phone: 231-6077

Appendix B-1:   Adult Functioning Questionnaire

This questionnaire contains questions about different types of problems that young adults often experience after high school. Please blacken a 1 on your answer sheet for each item **that is true for you at THIS time**. If the item isn't true for you, please blacken a 0 on your answer sheet.

0 = NO
1 = YES

1. I worry a lot about something bad happening to my closest friend(s) and/or family members that they will leave and never return.

2. This worry has persisted for at least two weeks.

3. I worry a lot that some terrible event will cause a long-term separation between me and my closest friend(s) and/or family members (for example I would get killed, get stranded somewhere or get in an accident).

4. This worry has persisted for at least two weeks.

5. I was reluctant or refused to go away to school and wanted to live at home (or am currently living at home).

6. I often avoid being alone and am upset if I cannot be with my close friends or family members.

7. This has been true for at least two weeks.

8. I have repeated nightmares about being separated from my closest friend(s) and/or family members (for example about being away from my parents or friends, one of them going away and getting hurt, etc.).

9. I've had these kind of nightmares over the course of at least two weeks.

10. I often have physical symptoms (for example, headaches, stomachaches, nausea, vomiting, etc.) when returning to school after visiting my parents and/or close friends.

11. I feel very nervous or distressed when separated (or anticipating separation) from my closest friend(s) and/or family members.

12.   This feeling has gone on over the course of at least two weeks.

13.   When I am not with my closest friends or family members, I am socially withdrawn, apathetic, sad, or have difficulty concentrating on work or playful activities.

14.   This has been true for at least two weeks.

15.   If the above experiences (any items 1-14) are not currently true for you, have they ever been true for you in the past?

16.   How old were you when these experiences (any items 1-14) began?

      0 = do not and have never had this experience
      1 = 14 years old or younger
      2 = 15-16 years old
      3 = 17-18 years old
      4 = over 18 years old

Below is a list of problems people sometimes have. Please read each one carefully, and fill in the circle on the optscan form that best describes **HOW MUCH THAT PROBLEM HAS DISTRESSED OR BOTHERED YOU DURING THE PAST 7 DAYS INCLUDING TODAY.** Fill in only one number for each problem and do not skip any items. If you change your mind, erase your first mark carefully. If you have any questions, please ask about them.

Rate your responses as follows:

1 = not at all
2 = a little bit
3 = moderately
4 = quite a bit
5 = extremely

HOW MUCH WERE YOU DISTRESSED BY:

1. Nervousness or shakiness inside

2. Faintness or dizziness

3. The idea that some else can control your thoughts

4. Feeling others are to blame for most of your trouble

5. Trouble remembering things

6. Feeling easily annoyed or irritated

7. Pains in heart or chest

8. Feeling afraid in open spaces or on the streets

9. Thoughts of ending your life

10. Feeling that most people cannot be trusted

11. Poor appetite

12. Suddenly scared for no reason

13. Temper outbursts that you could not control

14. Feeling lonely even when you are with people

15. Feeling blocked in getting things done

16.   Feeling lonely

17.   Feeling blue

18.   Feeling no interest in things

19.   Feeling fearful

20.   Your feelings being easily hurt

21.   Feeling that people are unfriendly or dislike you

22.   Feeling inferior to others

23.   Nausea or upset stomach

24.   Feeling that you are watched or talked about by others

25.   Trouble falling asleep

26.   Having to check and double check what you do

27.   Difficulty making decisions

28.   Feeling afraid to travel on buses, subways, or trains

29.   Trouble getting your breath

30.   Hot or cold spells

31.   Having to avoid certain things, places, or activities
      because they frighten you

32.   Your mind going blank

33.   Numbness or tingling in parts of your body

34.   The idea that you should be punished for your sins

35.   Feeling hopeless about the future

36.   Trouble concentrating

37.   Feeling weak in parts of your body

38.   Feeling tense or keyed up

39.   Thoughts of death or dying

Appendix B-2: Brief Symptom Index

40. Having urges to beat, injure, or harm someone

41. Having urges to break or smash things

42. Feeling very self-conscious with others

43. Feeling uneasy in crowds, such as shopping or at a movie

44. Never feeling close to another person

45. Spells of terror or panic

46. Getting into frequent arguments

47. Feeling nervous when you are left alone

48. Others not giving you proper credit for your achievements

49. Feeling so restless you couldn't sit still

50. Feelings of worthlessness

51. Feeling that people will take advantage of you if you let them

52. Feelings of guilt

53. The idea that something is wrong with your mind

Appendix B-3: Dating and Assertion Questionnaire

     We are interested in finding out something about the
likelihood of your acting in certain ways. Below you will
find a list of specific behaviors you may or may not
exhibit. Use the following rating scale:

                    1 = I never do this
                    2 = I sometimes do this
                    3 = I often do this
                    4 = I do this almost always

     Fill in the circles under the numbers on your optscan
than best indicates the likelihood of your behavior in that
way. Be as objective as possible.

1.   Stand up for your rights

2.   Maintain a long conversation with a member of the
     opposite sex

3.   Be confident in your ability to succeed in a situation
     in which you have to demonstrate your competence

4.   Say "no" when you feel like it

5.   Get a second date with someone you have dated once

6.   Assume a role of leadership

7.   Be able to accurately sense how a member of the opposite
     sex feels about you

8.   Have an intimate emotional relationship with a member of
     the opposite sex

9.   Have an intimate physical relationships with a member of
     the opposite sex

     The following questions describe a variety of social
situations that you might encounter. In each situation you
may feel "put on the spot." Some situations may be familiar
to you, and others may not. We'd like you to read each
situation and try to imagine yourself actually in the
situation. The more vividly you get a mental picture and
place yourself in the situation, the better.

     After each situation fill in the circle below the numbers
from 1 to 5 which best describes you using the following
scale:

1 = I would be so uncomfortable and so unable to hand this
    situation that I would avoid it if possible.
2 = I would feel very uncomfortable and would have a lot of
    difficulty handling this situation.
3 = I would feel somewhat uncomfortable and would have some
    difficulty in handling this situation.
4 = I would feel quite comfortable and would be able to
    handle this situation fairly well.
5 = I would feel very comfortable and be able to hand this
    situation very well.

10. You're waiting patiently in line at the checkout when a
     couple of people cut right in front of you. You feel
     really annoyed and want to tell them to wait their turn
     at the back of the line. One of them say, "Look, you
     don't mind do you? But we're in a terrible hurry."

11. You have enjoyed this date and would like to see your
     date again. The evening is coming to a close and you
     decide to say something.

12. You are talking to a professor about dropping a class.
     You explain your situation, which you fabricate slightly
     for effect. Looking at his grade book, the professor
     comment that you are pretty far behind. You go into
     greater detail about why you are behind and why you'd
     like to be allowed to withdraw from his class. He then
     says, "I'm sorry, but it's against university policy to
     let you withdraw this late in the semester."

13. You meet someone you don't know very well but are
     attracted to. You want to ask him/her out for a date.

14. You meet someone of the opposite sex at lunch and have a
     very enjoyable conversation. You'd like to get together
     again and decide to say something.

15. Your roommate has several obnoxious traits that upset
     you very much. So far, you have mentioned them once or
     twice, but no noticeable changes have occurred. You
     still have three months left to live together. You
     decide to say something.

16. You're with a small group of people who you don't know
     too well. Most of them are expressing a point of view
     that you disagree with. You'd like to state your
     opinion even if it means you'll probably be in the

minority.

17. You go to a party where you don't know many people. Someone of the opposite sex approaches you and introduces him- or herself. You want to start a conversation and get to know him/her.

18. You are trying to make an appointment with the dean. You are talking with his secretary face-to-face. She asks you what division you are in and when you tell her, she starts asking you questions about the nature of your problem. You inquire as to why she is asking all these questions and she replies very snobbishly that she is the person who decides if your problem is important enough to warrant an audience with the dean. You decide to say something.

Appendix B-4: Index of Self-Esteem

This questionnaire is designed to measure how you see yourself. It is not a test, so there are no right or wrong answers. Please answer each item as carefully and accurately as you can by filling in the circle under the number on your optscan as follows:

1 = Rarely or none of the time
2 = A little of the time
3 = Some of the time
4 = A good part of the time
5 = Most or all of the time

1. I feel that people would not like me if they really knew me well.

2. I feel that others get along much better than I do.

3. I feel that I am a beautiful person.

4. When I am with other people I feel they are glad I am with them.

5. I feel that people really like to talk with me.

6. I feel that I am a very competent person.

7. I think I make a good impression on others.

8. I feel that I need more self-confidence.

9. When I am with strangers I am very nervous.

10. I think that I am a dull person.

11. I feel ugly.

12. I feel that others have more fun that I do.

13. I feel that I bore people.

14. I think my friends find me interesting.

15. I think I have a good sense of humor.

16. I feel very self-conscious when I am with strangers.

17. I feel that if I could be more like other people I would have it made.

18.   I feel that people have a good time when they are with me.

19.   I feel like a wall flower when I go out.

20.   I feel I get pushed around more than others.

21.   I think I am a rather nice person.

22.   I feel that people really like me very much.

23.   I feel that I am a likeable person.

24.   I am afraid I will appear foolish to others.

25.   My friends think very highly of me.

Instructions:

The following questions ask about people in your environment who provide you with help or support. Each question has two parts. For the first part, list all the people you know, excluding yourself, whom you can count on for help or support in the manner described. Give the person's initials and their relationship to you (see example). Do not list more than one person next to each of the letters beneath the question.

For the second part, circle how satisfied you are with the overall support you have.

If you have no support for a questions, check the words "No on," but still rate your level of satisfaction. Do not list more than nine persons per question.

Please answer all questions as best you can. All your responses will be kept confidential.

Example:

Ex) **Who do you know whom you can trust with information that could get you in trouble**?

No one 1) T.N. (brother) 4) T.N. (father) 7)
        2) L.M. (friend)   5) L.M. (employer 8)
        3) R.S. (friend)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

1. **Whom can you really count on to listen to you when you need to talk**?
No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

2. **Whom could you really count on to help you if a person whom you though was a good friend insulted you and told you that he/she didn't want to see you again**?

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

3. **Whose lives do you feel that you are an important part of**?

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

4. **Whom do you feel would help you if you were married and had just separated from your spouse**?

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

5. **Whom could you really count on to help you out in a crisis situation, even though they would have to go out of their way to do so**?

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?
6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

6. **Whom can you talk with frankly, without having to watch what you say?**

No one   1)   4)   7)
         2)   5)   8)
         3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

7. **Who helps you feel that you truly have something positive to contribute to others?**

No one   1)   4)   7)
         2)   5)   8)
         3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

8. **Whom can you really count on to distract you from your worries when you feel under stress?**

No one   1)   4)   7)
         2)   5)   8)
         3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

9. **Whom can you really count on to be dependable when you need help?**

No one   1)   4)   7)
         2)   5)   8)
         3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

10. **Whom could you really count on to help you out if you had just been fired from your job or expelled from school?**

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

11. **With whom can you be totally yourself?**

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

12. **Whom do you feel really appreciates you as a person?**

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

13. **Whom can you really count on to give you useful suggestions that help you to avoid making mistakes.**

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

14. **Whom can you count on to listen openly and uncritically to your innermost feelings**?

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

15. **Who will comport you when you need it by holding you in their arms**?

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

16. **Whom do you feel would help if a good friend of yours had been in a car accident and was hospitalized in serious condition**?

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

17. **Whom can you really count on to help you feel more relaxed when you are under pressure or tense**?

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

18. **Whom do you feel would help if a family member very close to you died?**

No one   1)   4)   7)
         2)   5)   8)
         3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

19. **Who accepts you totally, including both your worst and your best points?**

No one   1)   4)   7)
         2)   5)   8)
         3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

20. **Whom can you really count on to care about you, regardless of what is happening to you?**

No one   1)   4)   7)
         2)   5)   8)
         3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

21. **Whom can you really count on to listen to you when you are very angry at someone else?**

No one   1)   4)   7)
         2)   5)   8)
         3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

22. **Whom can you really count on to tell you, in a thoughtful manner, when you need to improve in some way**?

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

23. **Whom can you really count on to help you feel better when you are feeling generally down-in-the-dumps**?

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

24. **Whom do you feel truly loves you deeply**?

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

25. **Whom can you count on to console you when you are very upset**?

No one 1)   4)   7)
        2)   5)   8)
        3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

26. **Whom can you really count on to support you in major decisions you make?**

No one 1)   4)   7)
          2)   5)   8)
          3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

27. **Whom can you really count on to help you feel better when you are very irritable, ready to get angry at almost anything?**

No one 1)   4)   7)
          2)   5)   8)
          3)   6)   9)

How satisfied?

6-very satisfied   3-a little dissatisfied
5-fairly satisfied   2-fairly dissatisfied
4-a little satisfied   1-very dissatisfied

Please darken the circle on the answer sheet according to the key under each question.

1. How far is Virginia Tech from your parents' home?
    0 = less than 100 miles   3 = 500 to 800 miles
    1 = 100 to 300 miles   4 = greater than 800 miles
    2 = 300 to 500 miles

2. Over the past week (past 7 days), how frequently have you called your parents?
    0 = not at all   4 = four times
    1 = once   5 = five times
    2 = twice   6 = six times
    3 = three times   7 = seven times

3. Over the past week (past 7 days), how often have your parents called you?
    0 = not at all   4 = four times
    1 = once   5 = five times
    2 = twice   6 = six times
    3 = three times   7 = seven times

4. Over the past week (past 7 days), how many letters have you written to your parents?
    0 = none   4 = four
    1 = one   5 = five
    2 = two   6 = six
    3 = three   7 = seven

5. Over the past week (past 7 days), how many letters, (or packages) have you received from your parents?
    0 = none   4 = four
    1 = one   5 = five
    2 = two   6 = six
    3 = three   7 = seven

6. Over the past week (past 7 days), how often did you go home?
    0 = not at all   4 = four times
    1 = once   5 = five times
    2 = twice   6 = six times
    3 = three times   7 = seven times

7. Over the past month, how often did you go home?
    0 = not at all   3 = three times
    1 = once   4 = four times
    2 = twice   5 = more than four times

8. Over the past week (past 7 days), how often did your
    parents visit you at school?
    0 = not at all   4 = four times
    1 = once   5 = five times
    2 = twice   6 = six times
    3 = three times   7 = seven times

9. Over the past month, how often did your parents visit
    you at school?
    0 = not at all   3 = three times
    1 = once   4 = four times
    2 = twice   5 = more than four times

10. During the past week (past 7 days), how many times have
    you gone to the University Health Center or the
    University Counseling Center? (If you have used both
    services, add visits together.)
    0 = not at all   4 = four times
    1 = once   5 = five times
    2 = twice   6 = six times
    3 = three times   7 = seven times

11. During the past month, how many times have you gone to
    the University Health Center or the University
    Counseling Center?   (If you have used both services,
    add visits together.)
    0 = not at all   3 = three times
    1 = once   4 = four times
    2 = twice   5 = more than four times

Introduction:

    "We have started asking people about how they feel the
way they were raised has had an effect on them as people.   So
we'd like to ask you about your early relationship with your
family, and what you think about the way it might have
affected you.   I'll ask you mainly about your childhood."

1.   "Could you start by telling me about your early family
     situation, where you live and so on?   If you could, start
     out with where you were were born, whether you moved
     around much, and what your family did at various times
     for a living?"

     (a)   "Were brothers and sisters living the house, or
     anybody besides your parents.   Are they living nearby now
     or is your family pretty scattered?"

2.   "I'd like you to try to describe your relationships with
your parents as a young child...if you could start back as
far as you can remember."

3.   (Ask slowly)   "No, I'd like to ask you to choose 5
     adjectives that describe your childhood relationship with
     your mother (or describe how your mother was with you
     when you were a child).   I know this may take a bit of
     time, and you may never have thought about this before,
     so go ahead and think for a minute...then I'd like to ask
     you why you chose them."

     (a)   "Okay, now let me ask some questions about the words
     you chose.   You say that she was (you used the
     phrase) _____.   Are there any memories or stories
     that you can tell me that show why you picked that word?

4.   "Now I'd like you to choose five adjectives that
     describe your relationship with your father.   I'm going
     to ask you again why you chose them."   (Queries as
     above).

5.   "To which parent did you feel the closest, and why?   Why
isn't there this feeling with the other parent?"

6.   "When you were upset as a child, what would you do?"
     (If information is not offered spontaneously, query as
     follows:)

(a)   "When you were upset emotionally when you were little, what would you do? Can you explain with some specific examples? About how old were you at that time?"

(b)   "Can you remember what would happen when you hurt yourself a bit (physically)? Again, can you tell me about a time when this happened? About how old were you then?"

(c)   "Were you ever ill when you were little? Do you remember what would happen? How old were you then?"

7.   "What is the first time you remember being separated from your parents? (Do you remember any time at all when you were away from your parents when you were young?) What happened and how did both of you feel? Are there any separations that stand out in your mind?"

8.   "Did you ever feel rejected or like no one cared for you as a young child? Of course, looking back on it now, you may realize it was not <u>really</u> rejection, but what I'm trying to ask about here is whether you remember ever having felt rejected in childhood."

(a)   "How old were you when you first felt this way? What did you do?"

(b)   Why did you think your parent did those things...do you think s/he realized s/he was rejecting you?"

9.   "Were your parents ever threatening with you in any way?...maybe or discipline or maybe just jokingly?"

(a)   "Some students have told us for example that their parents would threaten to leave them or send them away..."

<u>If any hint of abuse, add</u>:

(b)   "A few of our students have memories of some kind of abuse. Did anything like this ever happen to you, or in your family?"

(c)   "How old were you at the time? Did it happen frequently?"

(d) "Do you feel this experience affects you now as an young adult?"

10. "How do you think these experiences with your parents have affected your adult personality (or who you are today)?"

11. "Was there anything about your childhood that you feel made it hard for you?"

12. "Why do you think your parents raised you the way they did?"

13. "Were you close to any other adults as a child? Or were there other adults that were very important to you, even though they were not your parents?"

    (a) "What was that relationship like for you?"

14. "While you were a young child, did anyone that was close to you pass away, either a parent, brother, sister, or close family member?"

    (a) Could you tell me what happened, and how old you were at the time?

    (b) "How did you react at that time? (What did you do?) Was this death sudden or was it expected?"

    (c) "Can you recall your feelings at the time?" Have your feelings changed about this death much over time?

    (d) (If not volunteered earlier, ask): "Were you allowed to go to the funeral, and what was that like for you?"

    (e) (If loss of parent or sibling, ask): "What would you say was the effect on your household? How did this change over the years?"

    (f) "Would you say this loss has had an effect on your adult personality (or on who you are today)?"

15. "Did you lose any other important people during your childhood?" (If so, use queries 14a-f).

16.   "Have you lost other close persons in your early
      adult years?" (If so, use queries 14a-f).

17.   "Have there been many changes in your relationship with
 your parents (or remaining parent) since childhood? (I
 mean from childhood until the present, have things
 changed or are they about the same?)"

18.   "What is your relationship with your parents like for
      you now, as a young adult?"

19.   "Could you describe what you though your parent'
      marriage was like while you were growing up?" (If
      subject has difficulty responding, ask the following):

      (a)   "how close were your parent to each other?"

      (b)   "How openly did they express emotion toward each
            other?"

      (c)   "How sensitive/understanding were your parents
            toward each other?"

      (d)   "Did your parents do much arguing or fighting?
            Were you around when this went on?"
20.   "How would you describe your relationships with your
      brothers and sisters. What were you like as a group?
      Was there any one of them with whom you had a special
      relationship?"

21.   "Is there anything else about your family or childhood
      that you feel is important that we haven't talked about
      yet?"

Appendix B-8: Anxiety Disorders Schedule for Children-
Revised (Section for Separation Anxiety Disorder)

Some college students worry a lot about being away from
their parents or from home.

1. Do you usually feel really bad or worried when you are
away from your parents, and often feel like you want to go
home or call them?

                YES_____   NO_____   OTHER_____

2. When you are away from your parents, or other people that
you are close to, do you worry a lot that something bad might
happen to them, like they might get sick or hurt and die, or
that they will leave and never come back?

                YES_____   NO_____   OTHER_____

IF YES, ASK:

        a).   What do you think might happen to them?
              When do you get these thoughts? (e.g., when
              returning to school after having been home; when
              under stress; during a period of time when you
              haven't talked to parents for a while).

        _____

3. Do you worry a lot that something bad might happen to
<u>you</u>, like getting in an accident, kidnapped or killed, or
stranded somewhere, so that you couldn't see your parents,
family, or someone else again?

                YES_____   NO_____   OTHER_____

IF YES, ASK:

        a.   What do you think might happen to you?
             When do you have these thoughts? _____

        _____

4. Do you even not want to go places, not because you are
nervous or scared of that place, but because you want to be
with your parents or at home? For instance, like not wanting
to return to school after being at home for a break or
weekend; or when at home visiting, not wanting to go out
somewhere without your parents.

                YES_____   NO_____   OTHER

5. (a.) When you are at home, do you often want to have
your mother or dad, or someone else, stay close to you when
its time to go to sleep at night? For example, do you like
to have one of your parents be in the house when its time to
go to bed at night?

YES_____   NO_____   OTHER_____

   (b.) When you are at home, do you refuse to an
invitation to sleep over at a friend's house because you do
not want to be away from your parent?

YES_____   NO_____   OTHER_____

[NOTE: YES to either (a.) or (b.) counts as a YES to item
5.]

6. Do you usually do everything you can to make sure you
won't be alone?

YES_____   NO_____   OTHER_____

7. Do you have a lot of bad dreams about being away from
your parent(s) or someone else you love?

YES_____   NO_____   OTHER_____

8. When you leave home to come to school or to go some place
else, do you usually feel sick. For instance, do you get
stomach aches, headaches, or feel like you are going to throw
up?

YES_____   NO_____   OTHER_____

9. (a.) When you are at home, do you plead with your
parents to say home with you when they are planning to go
somewhere else? In other words are you distressed when they
go out because you want to be with them?

YES_____   NO_____   OTHER_____

   (b.) When your parents leave you, or when you leave
them, (like when leaving to come to school), do you cry or
feel very badly because you miss them a lot? (have you felt
really homesick?)

YES_____   NO_____   OTHER_____

[NOTE: YES to <u>either</u> (9a.) or (9b.) counts as a YES for item 9.]

10. Has this experience of feeling bad when you are not with your parents, family, or other persons you are close to (e.g., homesickness) ever lasted for as long as two weeks? (You may want to reiterate or summarize the items that they answered yes to.)

  YES_____ NO_____ OTHER_____

11. Do you still feel this way now, (today) about being away from parents, family, or others that you love?

  YES_____ NO_____ OTHER_____

IF NO, ASK:

  When did it stop? _____

Table 1

Patterns of Children's Interactive Behavior with the
Caregiver in the Strange Situation Associated with the Four
Major Attachment Classifications

Patterns of Attachment	Interactive Behaviors
Type A: **Insecure-Avoidant**	**Independent Exploration** (e.g., readily separates to explore during separation; little affective sharing; affiliative to stranger) **Active avoidance upon reunion** (e.g., turning away, looking away, moving away, ignoring; no avoidance of stranger)
Type B: **Secure**	**Caregiver is a secure base for exploration** (e.g., readily separates to explore toys; affective sharing of play; affiliative to stranger in mother's presence; readily comforted when distressed) **Actively seeks contact or interaction upon reunion** (e.g., if distressed, actively seeks and maintains contact, and contact is effective in terminating distress; if not distressed, active greeting behavior and strong initiation of interaction)
Type C: **Insecure-Ambivalent**	**Poverty of exploration** (e.g., difficulty separating to explore; may need contact ever prior to separation; wary of novel situations and people) **Difficulty settling upon reunion** (e.g., may mix contact seeking with contact resistance such as hitting and kicking; may continue

Table 1 (cont.)

to cry and fuss; may show
noticeable passivity)

Type D:
Disorganized-
Disoriented

Sequential and/or simultaneous
displays of contradictory behavior
patterns; undirected and
incomplete movements and and
expressions; stereotypes;
asymmetrical movements; anomalous
postures; freezing, stilling and
dazing; apprehensions toward the
caregiver

Adapted from Ainsworth et al. (1978) and Main and Solomon
(1990)

Appendix C

Table 2

Separation Anxiety Disorder Symptom Clusters

Overt Behaviors:

Distress:

(1) recurrent signs or complaints of excessive distress in anticipation of separation from home or major attachment figures, e.g., when student goes home, cries or pleads with parents to stay with him/her when they have plans to go somewhere else, or feels distressed when parents leave because she wanted to be with them; when getting ready to return to school after being at home, cries, anticipates homesickness

(2) recurrent signs or complaints of excessive distress when separated from home or major attachment figures, e.g., while at school, wants to return home, needs to call parents frequently, wants to go home every weekend

(3) complaints of physical symptoms, e.g., headaches, stomachaches, nausea, or vomiting, when leaving home to go to school or on other occasions when anticipating separation from major attachment figures

Reluctance/Avoidance:

(4) persistent reluctance or refusal to go to school in order to stay with major attachment figures or at home, e.g., extending weekend visits, or insisting on commuting to school rather than to live on campus

(5) persistent reluctance or refusal to go to sleep without being near a major attachment figure or to go to sleep away from home; e.g., when student is at home, wants to have parent(s) in the house when its time to go to bed at night; or refusal to spend the night at a friend's because she doesn't want to be away from parents

(6) persistent avoidance of being alone, including "clinging" to and "shadowing" major attachment figures; e.g., student does everything with parents while at home, or at other times, does everything possible to make sure she isn't alone

Table 2 (cont.)

Internal Subjective Worries:

(7) unrealistic and persistent worry about possible harm befalling major attachment figures or fear that they will leave and not return;

(8) unrealistic and persistent worry that an untoward calamitous event will separate the individual from a major attachment figure, e.g., she will be, kidnapped, killed, or be the victim of an accident

(9) repeated nightmares involving the theme of separation

Adapted from the DSM-III-R (American Psychiatric Association, 1987).

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Lease, C. A. & Ollendick, T. H. (1993). Development and

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Developed a parent-child clinic to provide assessment and
treatment of the anxiety disorders and the disruptive
behavior disorders of childhood and adolescence
Supervisor: Robert Racusin, M.D.

<u>Pre-Doctoral Internship</u>
(APA Approved) July 1, 1993 - November 17, 1994
Dartmouth-Hitchcock Medical Center
Dartmouth Medical School, Hanover, NH

<u>Department of Psychiatry, Section of Child and Adolescent
Psychiatry</u>
Administered personality, projective, and intellectual
tests; Provided assessment and treatment to a general

clinical population of children and adults, including
children with anxiety disorders, mood disorders, and
disruptive behavior disorders. Conducted individual and
group parent-training, individual psychotherapy with
children adolescents, and adults, and marital and family
therapy.

Graduate Clinician
May, 1992 - August, 1993
Psychological Services Center, Virginia Polytechnic
Institute and State University, Blacksburg, VA

Maintained a case load of both child and adult clients;
assessed children for ADHD and learning disabilities;
designed a social skills group for ADHD children and a
parent-training group for their parents and supervised
first-year clinical students in running these groups.
Supervisors: Richard Eisler, Ph.D. and Jack Finney, Ph.D.

Staff Psychologist
October, 1992 - May, 1993
University Counseling Center, Virginia Polytechnic Institute
and State University, Blacksburg, VA

Provided assessment and treatment to a college student
population including individual psychotherapy and group
therapy.
Supervisors: Brian Warren, Ph.D. and Marshall Tessnear,
Ph.D.

Graduate Clinical Supervisor
August, 1991 - May, 1992
Psychological Services Center, Virginia Polytechnic
Institute and State University, Blacksburg, VA

Supervised first- and and second-year graduate students in
   assessment and treatment of a wide range of child and
   adult cases. Responsibilities also included maintaining
   a case load and modeling therapeutic skills such as
   case conceptualization and treatment implementation.
   Supervisors: George Clum, Ph.D. and Jack Finney, Ph.D.

School Psychology Intern
August, 1991 - May, 1992
Riner Elementary and Auburn Middle & High Schools,
Riner, VA

Provided weekly individual counseling services to
emotionally disturbed students and ongoing
consultations with their parents and teachers.
Supervisor: Thomas H. Ollendick, Ph.D.

Externship in Clinical Psychology
August, 1990 - May 1991
University Counseling Services, Virginia Polytechnic
Institute and State University, Blacksburg, VA

   Provided individual and group psychotherapy therapy to an
   undergraduate and graduate student population;
   responsibilities included treatment of psychiatric
   disorders, skills training, and co-leading support
   groups.
   Supervisors: Marshall D. Tessnear, Ph.D. and
   Jodi Hochschartner-Boyd, Ed.D.

Graduate Clinician
August, 1989 - May, 1990
Psychological Services Center, Virginia Polytechnic
Institute and State University, Blacksburg, VA

   Provided assessment and treatment of a wide range of child
   and adult cases, including school assessments of children
   with behavioral disorders, individual parent training with
   parents with parents of children with behavioral
   disorders, individual psychotherapy with children,
   adolescents, and adults, and marital and family
   therapy.
   Supervisors: Ross Greene, Ph.D.; Laura Clark, Ph.D.

Graduate Counselor
1988 and 1989
Summer Day Treatment Program, Western Psychiatric
Institute & Clinic, Department of Psychiatry, University
of Pittsburgh, School of Medicine. Pittsburgh, PA

   Responsible for the treatment of 12 children diagnosed
   with Attention Deficit Hyperactivity disorder and/or
   Conduct Disorder enrolled in a behavioral summer day-
   treatment program. Supervised four under-graduate
   counselors in their implementation of a token economy
   system, developed individual treatment plans, and
   conducted parent training groups.
   Supervisors: William E. Pelham, Ph.D.; Jason Walker,
   Ph.D. (1989); Debra A. Murphy, Ph.D. (1988).

Graduate Psychology Assistant
August, 1988 - May, 1989
Eastern State Hospital, Williamsburg, VA

   Responsible for psychological testing of newly admitted
   patients including personality assessment, neuro-
   psychological assessment, and intellectual assessment.
   Supervisors: Victoria Caminer, Psy.D.; Anthony DeProspero,
   Ph.D.

PROFESSIONAL PRESENTATIONS

Jaquess, D., Weist, M., Hamilton, D., Ollendick, T. H., Warren, M., Lease C. A., Mattis, S. (1992). <u>Depression in adolescents: a time course analysis</u>. Poster presented at the annual meeting of the Southeastern Psychological Association, March, 1992, Knoxville, TN.

Murphy, D. A., Lease, C. A., & Pelham, W. E. (1990). <u>Correlations between Adolescent and Parent Report of DSM-III-R Attention Deficit-Hyperactivity, Oppositional, and Conduct Disorder Symptoms</u>. Paper presented at the annual meeting of the Association for Advancement of Behavior Therapy, November, 1990, San Francisco, CA.

Lease, C. A. (August, 1989). <u>Precursors to agoraphobic anxiety and panic.</u> Poster presented at the annual meeting of the Southeastern Psychological Association, Washington, D.C.

RESEARCH EXPERIENCE

<u>Clinical Research Fellow</u>
January, 1990 - August, 1992
NIMH funded project for training in Clinical Child Psychology. Virginia Polytechnic Institute and State University, Blacksburg, VA
Administrator: Thomas H. Ollendick, Ph.D.

Responsibilities involve visiting various clinical facilities that provide psychiatric treatment to children in the state of Virginia, and with other members of a research team, conducting projects related to psychological issues of children.

<u>Research Associate</u>
August, 1986 - August, 1987
NIMH funded grant entitled "Anxiety Disorders of Childhood and Adolescence." Western Psychiatric Institute and Clinic, University of Pittsburgh School of Medicine, Pittsburgh, PA
Principal Investigators: Cynthia G. Last, Ph.D. and Michel Hersen, Ph.D.

Duties involved recruiting research participants, data management, data analysis, meeting project deadlines, and preparation of assessment materials and research papers.

Research Assistant
January, 1986 - May, 1986
Dissertation project entitled "Peer Relationships and Social
Skills Among Hyperactive Boys." University of Pittsburgh,
Pittsburgh, PA
Investigators: Anna Marie Breaux, M. S. and Susan Campbell,
Ph.D.

   Duties included administering the WISC-R to child
   participants and coding behavioral observations.

Research Assistant
August, 1985 - May, 1986
Grant funded project entitled "Social Adjustment in Anxious
Children," Western Psychiatric Institute and Clinic,
University of Pittsburgh School of Medicine, Pittsburgh, PA
Principal Investigators: Cyd C. Strauss, Ph.D.

   Duties involved developing a behavioral coding system,
   training and supervising one research assistant, and
   preparation of research papers.

TEACHING EXPERIENCE

Guest Lecturer
1994
Topic: Introduction to Growth and Development
(Graduate Level Medical School Course)
Dartmouth Medical School, Hanover, NH

Guest Lecturer
1993
Topic: Anxiety Disorders of Childhood and Adolescence
(Seminar Course for Psychiatry Medical Residents)
Dartmouth Medical School, Hanover, NH

Guest Lecturer
1994
Topic: Clinical Applications of Attachment
(Seminar Series for Child Psychiatry Fellows)
Dartmouth Medical School, Hanover, NH

Adjunct Instructor
October, 1992 - December, 1992
Child Development
(Undergraduate Level Psychology Course)
Radford University, Radford, Virginia

Graduate Instructor
August, 1992 - May, 1993
Child Development
(Undergraduate Level Psychology Course)
Virginia Polytechnic Institute & State University,
Blacksburg, VA

Graduate Teaching Assistant
August, 1989 - December, 1989
Introduction to Psychology
(Undergraduate Level Psychology Course)
Virginia Polytechnic Institute & State University,
Blacksburg, VA

Graduate Teaching Assistant
August, 1987 - May, 1988
Experimental Psychology
(Undergraduate Laboratory Course)
College of William & Mary, Williamsburg, VA

EMPLOYMENT

Pre-Doctoral Clinical Psychology Intern
July 1, 1993 - November 17, 1994
Dartmouth-Hitchcock Medical Center
Dartmouth Medical School, Hanover, NH

Adjunct Instructor
October, 1992 - December, 1993
Department of Psychology, Radford University, Radford, VA

Graduate Instructor
August, 1992 - May, 1993
Department of Psychology, Virginia Polytechnic Institute and
State University, Blacksburg, VA

Staff Psychologist
October, 1992 - May, 1993
University Counseling Center, Virginia Polytechnic Institute
and State University, Blacksburg, VA

Graduate Clinician
May, 1992 - August, 1992
Psychological Services Center, Virginia Polytechnic
Institute and State University, Blacksburg, VA

NIMH Fellow
January, 1990 - August, 1992
Clinical Child Psychology Training Grant
Virginia Polytechnic Institute and State University,
Blacksburg, VA

Graduate Teaching Assistant
August, 1989 - December, 1989
Virginia Polytechnic Institute and State University,
Blacksburg, VA

Graduate Counselor
June, 1988 - August, 1988
June, 1989 - August, 1989
Summer Treatment Program for Children with Attention
Deficit/Hyperactivity Disorder, Western Psychiatric
Institute and Clinic, Pittsburgh, PA

Graduate Assistant
August, 1988 - May, 1989
Eastern State Psychiatric Hospital, Admissions Department
Williamsburg, VA

Graduate Teaching Assistant
August, 1987 - May, 1988
College of William and Mary, Williamsburg, VA

Research Associate
August, 1986 - August, 1987
Child and Adolescent Anxiety Disorders Clinic, Western
Psychiatric Institute and Clinic, Pittsburgh, PA

PROFESSIONAL AFFILIATIONS

American Psychological Association
Southwestern Psychological Association
New Hampshire Psychological Organization, Inc.
C. G. Jung Education Center of Pittsburgh, PA

REFERENCES

Thomas, H. Ollendick, Ph.D.
Director of Clinical Training
Department of Psychology
Virginia Polytechnic Institute and State University
Blacksburg, VA 24061
703/231-6451

Jack Finney, Ph.D.
Director of Graduate Studies
Department of Psychology
Virginia Polytechnic Institute and State University
Blacksburg, VA 24061
703/231-8148

George C. Clum, Ph.D.
Professor
Department of Psychology
Virginia Polytechnic Institute and State University
Blacksburg, VA 24061
703/231-8148

Robert Racusin, M.D.
Director of Child and Adolescent Psychiatry
Dartmouth-Hitchcock Medical Center
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