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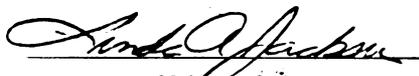
Physical Attractiveness and Attachment Style

presented by

Carole Nhu'y Hodge

has been accepted towards fulfillment
of the requirements for

M. A. degree in Psychology



Major professor

Linda A. Jackson

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PHYSICAL ATTRACTIVENESS AND ATTACHMENT STYLE

By

Carole Nhu'y Hodge

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ABSTRACT

PHYSICAL ATTRACTIVENESS AND ATTACHMENT STYLE

By

Carole Nhu'y Hodge

The purpose of this study was to examine the relationship between physical attractiveness and attachment style. It was predicted that Caregiver, Self, and Strangers would rate secure individuals higher in physical attractiveness than both anxious/ambivalent and avoidant individuals. Two hundred-seventy (135 females, 135 males) White psychology undergraduates participated. Hazan and Shaver's (1987) Adult Attachment Style Measure was utilized to assess participants' attachment style. Three rater types (Caregivers, Self, and Strangers) rated physical attractiveness on a 7 point Likert scale at infancy and adulthood. Strangers rated secure people significantly higher on physical attractiveness than anxious/ambivalent people. Secure individuals received the highest ratings of physical attractiveness from Self and Strangers, had higher self-esteem and had more friends than both avoidant and anxious-ambivalent individuals. There is a relationship between physical attractiveness and attachment style, but the casual mechanisms remain to be uncovered.

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TABLE OF CONTENTS

LIST OF TABLES	viii
CHAPTER I: INTRODUCTION	1
Physical Attractiveness	1
Other's Perception of Adult Physical Attractiveness	2
Other's Perception of Childhood Physical Attractiveness	3
Self-Perceptions and Attractiveness	4
Behaviors and Attractiveness in Adults and Children	4
Implications	6
Self-Fulfilling Prophecy	6
Perceptions of Infant Attractiveness	7
Attachment Theory	9
Measurement of Infant Attachment	14
Attachment in the Adult Years	15
Measurements of Adult Attachment	17
Physical Attractiveness and Attachment Style	19
Hypotheses	21

CHAPTER II: METHOD	23
Participants	23
Materials	24
Adult Attachment Style Measure	24
Styles of Adult Attachment	25
Adult Attachment Scale	25
Rosenberg Self-Esteem Scale	26
Demographic Questionnaire	26
Human Development Questionnaire	26
Procedure	27
Strangers' Rating Procedures	28
CHAPTER III: RESULTS	30
Reliability for Strangers' Ratings	30
Attachment Measures: Validity and Reliability	30
Comparison with Previous Research	30
Relationship among Attachment Style Measures	31
Tests of the Hypotheses	34
Additional Hypotheses	41
CHAPTER IV: DISCUSSION	43
Limitations	49
Future Research	50
Conclusion	52
REFERENCES	53
APPENDIX A: Close Relationship Questionnaire Part One (Adult Attachment Style Measure)	67
APPENDIX B: Close Relationship Questionnaire Part Two (Styles of Adult Attachment)	68

APPENDIX C: Adult Attachment Scale	69
APPENDIX D: Rosenberg's Self-Esteem Scale	70
APPENDIX E: Demographics Questionnaire	71
APPENDIX F: Cover Letter and the Human Development Questionnaire	73
APPENDIX G: Participant's Consent Form	77
APPENDIX H: Caregiver's Consent Form	78
APPENDIX I: Verbatim Script	79
APPENDIX J: Categorization of Hazan and Shaver Attachment Style compared to other studies	81
APPENDIX K: Validation of chosen Attachment Style: Selected Styles contrasted to Non-selected Styles	82
APPENDIX L: Crossvalidation of Hazan and Shaver Attachment Style with Bartholomew Attachment Style	83

LIST OF TABLES

1. Validation of chosen Attachment Style: Selected Styles contrasted to Non-selected Styles	32
2. Ratings of Infant Physical Attractiveness by Attachment Styles	35
3. Self-Esteem ratings of each Attachment Style	38
4. Self-Esteem: Correlations with Physical Attractiveness	40

CHAPTER I

INTRODUCTION

The purpose of this study was to investigate the relationship between physical attractiveness and attachment style. The literature on physical attractiveness and the literature on attachment style will be reviewed, followed by hypotheses about the relationship between attractiveness and attachment.

Physical Attractiveness

Social psychologists have been slow to accept the importance of physical attractiveness and its impact on people's lives (e.g., Bull & Rumsey, 1988; Jackson, 1992; Miller, 1970; Patzer, 1985). Aristotle was aware of its importance when he stated that "Beauty is a greater recommendation than any letter of introduction" (Berscheid & Walster, 1974 p.207). Initially, physical attractiveness was dismissed by social psychologists as insignificant, trivial, and elementary. They believed that people go beyond the "face value" of someone's attractiveness in making judgments about her or him. However, since the early study by Dion, Berscheid, & Walster (1972), research has

repeatedly demonstrated that a physical attractiveness stereotype exists, namely that "what is beautiful is good." Physical appearance has effects on other's perceptions of us, our self-perceptions, and behaviors directed toward us, across our lifespan.

Other's Perception of Adult Physical Attractiveness.

Most people use physical attractiveness as a basis for judging others (Adams, 1977a; Berscheid, 1981; Berscheid & Walster, 1974; Hatfield & Sprecher, 1986), and researchers have found that everyone from infants to adults prefers an attractive face to an unattractive one (e.g., Langlois, Roggman, & Rieser-Danner, 1990).

Feingold (1992), in his meta-analysis of the physical attractiveness research, found that physically attractive people were perceived by others to be more socially skilled and sociable than their unattractive counterparts. The meta-analysis conducted by Eagly and her colleagues (Eagly, Ashmore, Makhijani, and Longo, 1991) found that the "beauty-is-good" phenomenon is moderately low and variable across studies. Nevertheless, both reviews showed that overall, physically attractive people were perceived to be more socially competent, dominant, sexually warm, mentally healthy, intelligent, socially skilled, better adjusted, less lonely, less socially anxious, more popular and more sexually experienced than their unattractive counterparts (Eagly et al., 1991; Feingold, 1992). These results simply

confirm the pioneering work of Dion and her colleagues (1972) and Berscheid and Walster (1974) who discovered that physically attractive people were perceived to possess many positive and desirable characteristics, such as intelligence, happiness, self-confidence, self-esteem, social skills and were believed to be masters of their own fate.

Other's Perception of Childhood Physical

Attractiveness. The findings on attractiveness are by no means restricted to adults. Across a variety of raters, attractive children are perceived in a more positive light than are the unattractive. They are expected to behave more prosocially and less antisocially than unattractive children (Dion, 1973; Styczynski & Langlois, 1977; Trnavsky & Bakeman, 1976). Parents rated attractive children as more popular, more likely to be elected to a class office, and to have more positive personal attitudes than less attractive children (Adams & LaVoie, 1975). Attractive children were liked more, perceived as smarter, higher on sharing and friendliness, and lower on meanness and hitting by other children. Older children rated more attractive children as smarter, friendlier, nicer, and less mean than unattractive children (Langlois & Stephan, 1977). Teachers have higher expectations of intelligence, progress in school, popularity with peers and more favorable perceptions of attractive

children (Adams & Cohen, 1976; Rich, 1975; Ross & Salvia, 1975).

Self-Perceptions and Attractiveness. The positive bias that physical attractiveness exerts on person perception is also evident in self-perceptions, among both children and adults. For instance, physically attractive individuals rate themselves as more socially competent than their less attractive counterparts (Adams & Read, 1983; Chaiken, 1979; Goldman & Lewis, 1977; Jackson & Houston, 1975; Reis, Nezlek, & Wheeler, 1980; Reis, Wheeler, Spiegel, Kernis, Nezlek, & Perri, 1982). More attractive individuals are higher in self-esteem (Brezezicki & Major, 1983; Hatfield & Sprecher, 1986; Lerner & Karabenick, 1974; Simmons & Rosenberg, 1975), assertiveness and self-confidence (Dion & Stein, 1978; Jackson & Huston, 1975) and are better adjusted (Umberson & Hughes, 1987) than unattractive people. Attractive children have been found to have better self-concepts (Hildebrandt, 1982; Salvia, Sheare, & Algozzine, 1975) and to be better adjusted (Lerner & Lerner, 1977; Maruyama & Miller, 1981) than their less attractive counterparts.

Behaviors and Attractiveness in Adults and Children.

Research has shown that physical attractive individuals are the beneficiary of biased behaviors. Often it is not clear from study designs whether the physical attractiveness elicited their behaviors or not. Often social skills may be

a mediating factor in the relationship between prosocial behavior and physical attractiveness. For example, attractive people receive more attention, more support, and more help from others and tend to be the recipients of more self-disclosure (Adams, 1977a; Alley & Hildebrandt, 1988; Berscheid & Walster, 1974; Brundage, Derlega, & Cash, 1977). Attractive people receive more assistance in general from others (Benson, Karabenick, & Lerner, 1976) and people are more likely to cooperate with them in conflict situations (Sigall, Page, & Brown (1971). Also, attractive males and females are more successful at persuasion with opposite-sex peers (Chaiken, 1979; Dion & Stein, 1978). The most controlled studies have been conducted in the area of jury research and here the findings show that behaviors are directed toward others as a function of their level of attractiveness. Mock jury research suggests that unattractive defendants are treated more harshly (e.g., given longer jail sentences) than are attractive defendants (Efran, 1974; Stewart, 1980). In one study, female subjects gave more intense punishments to unattractive looking girls than to attractive ones (Berkowitz & Frodi, 1979). Adult women were more lenient to attractive children than to unattractive children for the same transgressions (Dion, 1974). Other studies have shown that attractive children were preferred and chosen more often as friends than were unattractive children (Dion, 1973). Attractiveness has been

related to greater peer acceptance (Dion & Berscheid, 1974) and more attention from others (Dion, 1977). Physically unattractive children have also been shown to be more likely to be abused and receive fewer positive behaviors from parents than have attractive children (Klein & Stern, 1971).

Implications. Overall then, being physically attractive has many positive connotations while being physically unattractive has many negative connotations. This is true for people at every age level. Adams (1977b) found moderate results suggesting that physical attractiveness is stable across time. The implications of this are overwhelming. Stability of attractiveness across time facilitates the increase of self-esteem, self-concept, and other positive personality variables in physically attractive people through various psychological processes such as Self-fulfilling prophecies and Reinforcement Theory.

Self-Fulfilling Prophecy. The notion that one can internalize and act on the expectations of others is referred to as the Self-Fulfilling Prophecy. According to Snyder (1984) the Self-Fulfilling Prophecy refers to the process by which an individual's stereotyped beliefs about another may exert an influence on interactions. Interpreting this theory in the area of physical attractiveness would mean that perceiving an individual as physically attractive will lead one to treat that person as possessing positive traits (e.g., competence, social

skills). Thus, one would subsequently behave toward that person in such a way as to bring out and develop these positive traits in that person (Jussim, 1990).

Perceptions of Infant Attractiveness. Lorenz (1943) stated that physical characteristics of the young of a species are powerful determinants of adult affective and caregiving responses. Certain infant characteristics have been found to elicit approach from others (Eibl-Eibesfeldt, 1970) and physical attractiveness seems to be one such characteristic. High attractive babies have been rated as being smart-like and creating fewer problems (Stephan & Langlois, 1984). They receive more positive evaluations from others (Adams & Cohen, 1974; Clifford, 1975; Dion, 1972, 1974; Kehle, Bramble, & Mason, 1974), and Hildebrandt and Fitzgerald (1983) found that cute babies are picked up to a greater extent and receive more attention from others than do less cute babies.

Perhaps of most importance here is the research indicating that an infant's physical attractiveness influences the caregiver's attitude and behavior toward him or her (e.g., Berscheid & Walster, 1974; Bowlby, 1969; Corter, Trehub, Boukydis, Ford, Celhoffer, & Minde, 1978). The mother's perception of her infant's physical attractiveness is important because this perception influences her interaction with the infant. Moreover, the mother's perception has been found to be somewhat objective.

Hildebrandt & Fitzgerald (1981) found that there was a positive relationship between mother ratings of infant physical attractiveness and strangers' ratings of the same infant. Although mothers rated their own infants as cuter when compared to the ratings of strangers, the differences were not significant. This indicates that mother's can provide reliable perceptions of their infant's level of attractiveness.

Perceptions of the behaviors of physically attractive and unattractive infants occur right after birth. Langlois (1986) found more touching and positive maternal behaviors (e.g., kissing, cooing, playing) toward attractive infants. Caregivers attribute positive traits such as "easy" and "nice" to physically attractive infants (e.g., kissing, cooing, playing) (Langlois, 1986), while mothers of children born with cleft palate report less positive affect toward the child, both for themselves and for the fathers, than do mothers of normal children (Brantley & Clifford, 1980).

At a particular disadvantage are premature babies. Premature infants, perceived as less attractive compared to their full-term counterparts, have been found to receive less nonmedical attention from nurses and less attention from parents (Corter et al., 1978). Premature infants do not possess the fully developed features of full-term infants (protruding cheeks, plumb body), which cause them to be less physically attractive when compared to their

full-term counterparts. Some researchers have stated that the shock of seeing the appearance of premature infants can affect the mothering process (Cortner et al., 1978).

Premature infants are more likely to be abused and receive fewer positive behaviors from parents than full-term infants (Klein & Stern, 1971). Even in nonabusive families, parents of premature infants are less likely to pay attention to them compared to full term infants (Bidder, Crowe, & Gray, 1974).

The major premise of this paper, based on the research presented, is that the physical attractiveness of the infant can affect the caretaker's interaction with the infant, specifically in the development of the infant's attachment style.

Attachment Theory

Attachment theory addresses the processes by which affectional bonds are forged and broken between infant and caregiver (Bowlby, 1969, 1973, 1979). Attachment theory can be summarized in terms of three propositions. First, when an individual is confident that an attachment figure will be available whenever desired, that person will be much less prone to chronic fear than will an individual who, for whatever reason, lacks such confidence. The second proposition concerns the sensitive period during which such

confidence develops. It postulates that confidence in the availability of attachment figures is built up slowly during the years of immaturity -- infancy, childhood, and adolescence -- and that whatever expectations are developed during those years tend to persist relatively unchanged throughout the rest of life. The third proposition concerns the role of experience. It postulates that the varied expectations of the accessibility and responsiveness of attachment figures that individuals develop during the years of immaturity are reflections of the experiences those individuals have had (Bowlby, 1973, p. 235).

While working for the World Health Organization in 1950, Bowlby observed and reported that inadequate maternal care during early childhood had negative influences on personality development. The effects on children of separation from their caregiver(s) had profound effects on their response to their caregivers when reunion took place. With this important finding, Bowlby wanted to develop a theory of personality development that started at the core of personality development and followed it through its natural course.

Inspired by field and laboratory studies, Bowlby began his observations of infants and young children who were separated from their mothers (i.e., their primary caregivers). He noticed that infants went through a predictable series of emotional reactions. The first phase

of this reaction is called protest, which included crying, active searching for the caregiver, and resistance to the soothing efforts of others. The second phase is called despair, which included helpless cries. The third phase, detachment, was identified as an active, seemingly defensive disregard for, and avoidance of, the mother if she returns. It includes a state of passivity and obvious sadness (Bowlby, 1969, 1973, 1979). The three criteria for infant-caregiver attachment, according to Bowlby, are the association of the attachment figure with feelings of security, the greater likelihood of attachment behavior when the infant is in a situation of apparent threat, and the tendency of infants to attempt to ward off separation from an attachment figure by calling or crying.

Attachment theory has extracted ideas and concepts from many theories and areas (e.g., object-relations theory, evolution theory, and ethology). Bowlby wanted to define a theory of relationships between infant-caregiver without regard to feeding or food as a factor (Bowlby, 1988; Bretherton, 1992). Bowlby found that Lorenz's work with ducklings and gosling on Imprinting supported his concept. In that work, Lorenz found that enduring relationships developed between young and parents without food being the connecting link because the young can feed themselves (Lorenz, 1943). These infant-parent bonds later developed into bonds between mated individuals. Bowlby found further

support of the aversive effects of maternal deprivation from Harlow's studies on the effects of maternal deprivation among rhesus monkeys. Harlow and Zimmermann (1959) found strong support for behavioral attachment in rhesus macaque infants who showed a preference for a soft dummy "mother" who did not provide food to a hard dummy "mother" who did provide food. These bonds are formed with parents at infancy where parents are looked to for protection, comfort, and support. During adolescence and adulthood, these bonds persist and are complemented with new bonds. These new bonds are commonly of a heterosexual nature supporting Lorenz's work on Imprinting.

Ainsworth, Blehar, Waters, & Walls (1978) made a major contribution to attachment theory by identifying three different types of attachment patterns that an infant can have with its primary caregiver. The three attachment styles identified were secure, anxious/ambivalent, and avoidant. Secure Attachment develops when an individual is confident that his or her parent (caregiver) will be available, responsive, and helpful, should he or she encounter adverse or frightening situations. With this assurance, he or she feels bold in his or her exploration of the world. Anxious-Ambivalent Attachment develops when an individual is uncertain whether his or her parent will be available or responsive or helpful when called upon. Because of this uncertainty, he or she is always prone to

separation anxiety and tends to be clinging and is anxious about exploring the world. Avoidant Attachment develops when an individual lacks the confidence that should they seek care, they will receive a helpful response. Rather, they expect to be rebuffed. Such an individual attempts to live life without the love and support of others. He or she tries to become emotionally self-sufficient.

The Secure pattern of attachment is promoted by a parent (caregiver) being readily available, sensitive to their child's signals, and lovingly responsive when he or she seeks protection and comfort. The Anxious/Ambivalent pattern of attachment is promoted by a parent (caregiver) being available only on some occasions but not others. The caregiver uses threats of abandonment as a means of control, and conflict is present. The Avoidant pattern of attachment results from the individual's mother constantly rejecting him or her when he or she approaches her for comfort or protection. Conflict is present but is hidden in this pattern.

Ainsworth et al. (1978) found that 56% of infants had a secure attachment style, 19% had an anxious/ambivalent attachment style, and 21% had an avoidant attachment style. Ainsworth and her colleagues (1978) and Egeland & Farber (1984) have remarked that the three styles stated above seem closely associated with differences in caregiver warmth and responsiveness. The behaviors identified in each attachment

style were similar to behaviors Bowlby labeled protest, despair, and detached, respectively. The anxious/ambivalent infants frequently exhibited the behaviors that Bowlby called protest. Infants in all attachment styles exhibited the behavior that Bowlby called despair. The avoidant infants' behaviors fit what Bowlby called detached.

Measurement of Infant Attachment

The three patterns of attachment are measured using a paradigm called "The Strange Situation". The Strange Situation was created by Ainsworth, Bell, & Stayton (1971) and Ainsworth et al. (1978) to assess infant behavior when the infant is separated from and then reunited with the caregiver. The session takes place in a laboratory and is 20 minutes long. The entire session contains a total of eight episodes. The infant and caregiver are first placed in the laboratory. A stranger then joins them and the infant is left with the stranger while the caregiver leaves the room briefly. A second infant-caregiver separation takes place where both the caregiver and the stranger leave the infant alone in the room. Soon afterward, both the caregiver and the stranger return to the room with the infant. Infant behavior and reactions are measured when the caregiver leaves the room and when the caregiver returns. The behavior and reactions demonstrate what attachment style

the infant manifests (for more information on this paradigm, see Ainsworth et al., 1978).

Attachment in the Adult Years

Attachment styles similar to those seen in children also can be identified in adults. Weiss (1991) stated that adult attachment meets the criteria specified as infant attachment but also differs in several important ways. Adult attachment occurs with peer and/or significant others instead of with the caregiver. The attachment system in adulthood is not manifested to the same degree as it was in infancy. Whereas if a child was separated from its mother, it cannot concentrate on anything else. Adults can continue to perform their everyday functions when separated from their attachment figure. And finally, adults usually form attachment to someone with whom they have a sexual relationship, though other attachments are also possible.

Weiss (1991) summarized the attachment role from childhood to young adulthood. Under appropriate circumstances, children do display attachment behaviors to their caregiver. They protest when they are to be separated from their caregiver and cannot concentrate on anything. As children grow up and become adolescents, there is a need for independence from their caregiver. There is less protest when separation occurs. Caregivers/parents are now perceived

as regular people with no special power, but there is still a need for adolescents to feel that their parents are committed to them. In late adolescence and young adulthood, many people move away from home and the intervals between interactions with parents become longer and longer. During this time, typical young adults develop an attachment bond to a new attachment figure, usually a peer of either the same or opposite sex. In this new relationship, all criteria of attachment bonding can be observed.

Previous research on attachment lends some support to the continuation of patterns of attachment across the life span while others do not support this notion. Bowlby (1979, p.129) maintained that "attachment behavior characterizes human beings from cradle to grave". This notion has also been supported by other researchers (Main and Cassidy, 1988; Wartner, 1986). Main, Kaplan, and Cassidy (1985) have developed several procedures to measure attachment both in children and adults with the final goal being to extent attachment findings across the lifespan (see Adult Attachment Measures for Main et al.'s procedures). Several other studies indicate that there are similar findings between attachment style in infancy and adulthood. The infant-caretaker relationship predicts or directs the infant to possess a certain attachment style that influences them throughout their life. Research has shown that, especially with white middle-class individuals, there is stability of

attachment styles across the lifespan in the absence of stressful life events (Waters, 1978).

Measurements of Adult Attachment

Several measures have been developed to assess adult attachment. The first measure was developed by George, Kaplan, and Main (1984) and is called the Adult Attachment Interview. This measure uses an interview format to assess the quality of an adult's current internal representation of the childhood attachment relationships with his or her parents. From this measure, three patterns of adult attachment can be derived: secure, preoccupied, and dismissing. These three patterns correspond to infant attachment patterns of secure, anxious/ambivalent, and avoidant, respectively described by Ainsworth and her colleagues (1978). While these interviews produce very detailed and informative findings, they are also very time consuming.

In 1987, Hazan and Shaver developed the Adult Attachment Style Measure. This scale is both simple and self-administered. Hazan & Shaver developed the scale to measure adult attachment pattern following Ainsworth and her colleagues' classification of the three attachment patterns of childhood. They found that the three attachment styles found in infants exist in adults, and that these styles can

have significant impact for adult romantic relationships. In their scale, a person selects one style, out of three, that best fits them in a relationship context. The styles are named "secure", "anxious-ambivalent", and "avoidant" corresponding with Ainsworth et al.'s three patterns of infant attachment. This scale has been used as a basis for the development of subsequent adult attachment scales (e.g., Collins and Read, 1990; Feeney and Noller, 1990; Simpson, 1990). Test-retest reliabilities of the three attachment-style ratings are reported as follows: secure, $\alpha = .56$; avoidant, $\alpha = .68$; and anxious/ambivalent, $\alpha = .56$; with the average being .60. Hazan and Shaver argued that, for a single-item measure, this attachment scale had reliabilities that were quite high. Pistole (1989) found adequate test-retest reliability (.59) for this attachment scale over a one week period.

In 1990, Bartholomew developed the Styles of Adult Attachment scale. This scale measures adult attachment style but is different from Hazan and Shaver's measure in that Bartholomew's differentiates the avoidant style into two separate styles (dismissing and fearful). Corresponding to Hazan and Shaver's scale, Bartholomew had subjects select one style out of four that best fit them. Brennan, Shaver, and Tobey (1991) found that this measure was highly related with Hazan and Shaver's (1987) scale, ($\chi^2 (6) = 370.31$,

$p < .0001$. (Also see Bartholomew and Horowitz (1991) for scale reliabilities and validity.)

Simpson (1990) developed the Adult Attachment scale. Following Hazan & Shaver, Simpson utilized Ainsworth et al.'s three patterns of attachment and divided these three patterns into 13 sentences. Subjects rate each sentence on a 7 point Likert-type scale (1 = strongly disagree to 7 = strongly agree). Simpson reports moderate to high reliabilities for the styles in the scale (secure, $\alpha = .51$; anxious/ambivalent, $\alpha = .79$; and avoidant, $\alpha = .59$). (For more information on reliabilities and validities see Simpson (1990).)

Collins and Read (1990) also developed an adult attachment scale based on Hazan and Shaver's (1987) adult attachment measure to assess self/other representations of adult attachment. There are 21 items total and subjects are requested to rate their feelings on each statement on a 5 point Likert-typed scale (1: not all characteristic to 5: very characteristic).

Physical Attractiveness and Attachment Style

Securely attached people have been found to be happier, more trusting of others, more reliable, provide more social support for others, have more positive views about the world, and perceive relationships as predictable and lasting

(Arend, Gove, and Sroufe, 1979; Collins and Read, 1990; George et al., 1984; Kobak and Sceery, 1988). Physically attractive people are more socially competent, self-confident, better adjusted, and less socially anxious than their unattractive counterparts (Eagly et al., 1991; Feingold, 1992). The social reality of the securely attached and the physically attractive appear to be parallel. It is argued here that this is not a random coincidence. Rather, the physically attractive infant promotes the development of a secure attachment style because his or her attractiveness elicits positive perceptions and behaviors from others, with the primary agent of influence being the caretaker. The caregiver would then perceive and behave positively (e.g., interacting to a greater extent) toward the infant.

As part of their research on infant traits and the mother-infant relationship, the relationship between physical attractiveness and attachment style was investigated by Rieser-Danner, Roggman, & Langlois in 1987. Their null results led to the conclusion that it is not clear what role infant attractiveness plays in the development of attachment style. They did, however, offer a number of explanations for their null finding. First, they had outside judges rate the infant's physical attractiveness instead of the mothers. The critical rating of infant attractiveness may be the mother's, since an infant would be

most likely to develop attachment bonds with her. Second, they claimed that attractiveness may not have been added appreciably to the amount of variance accounted for because the measurement of infant attractiveness was restricted in range. Third, their total sample size was 23, thus they may not have had the power to detect any difference. It is argued here that methodological restrictions in the Rieser-Danner study may have masked the support of a theoretically meaningful hypothesis.

Hypotheses

It was proposed in this study that being physically attractive at infancy would promote a secure attachment style with the caregiver. There is support for attachment styles being stable across the lifespan (Main & Cassidy, 1988; Waters, 1978) therefore, the secure attachment style displayed in infancy also should be evident in adulthood thus leading to hypothesis 1.

Hypothesis 1. Caregiver's ratings of infant physical attractiveness will be related to adult attachment style such that secure individuals will receive higher ratings of infant physical attractiveness from their caregivers than the other two attachment styles (anxious/ambivalent and avoidant).

Because attachment style has been shown to be stable across the lifespan and physical attractiveness has also been shown to be stable across the lifespan (Adams, 1977b), a securely attached physically attractive adult should have been a securely attached physically attractive infant and if so this should be evident to all observers.

Hypothesis 2. Caregiver, self, and stranger ratings of adult physical attractiveness will be related to adult attachment style such that secure people will receive higher ratings of adult physical attractiveness than the other two attachment styles from caregivers, self, and strangers.

It was expected from previous research that secure individuals and physically attractive individuals should be higher on self-esteem.

Hypothesis 3. Attachment style will be related to self-esteem such that securely attached people will have the highest self-esteem.

Hypothesis 4. Physical attractiveness will be positively related to self-esteem.

CHAPTER II

METHOD

Participants

Over 1,000 undergraduate psychology students participated in the pilot test by completing the Close Relationship Questionnaire, which consisted of Hazan & Shaver's (1987) Adult Attachment Scale and Bartholomew's (1990) Styles of Adult Attachment, in their Introductory Psychology class. The two scales (Adult Attachment Scale and Styles of Adult Attachment) were counterbalanced. From the pilot test, 907 White/Caucasian (550 females, 357 males) were selected for the study. Only White/Caucasian participants were selected to avoid potential problems of cross-cultural biases in ratings of physical attractiveness by Strangers. Thus participants, caregivers, and strangers were all the same race. Participants ranged in age from 17 to 27 years with a median age of 18.

Four hundred sixty-eight students completed the actual study. From these, 374 caregivers returned all information requested thus yielding a return rate of 80%.

To create equal cell sizes for more reliable results, 45 females and 45 males were randomly selected from each attachment style (secure, anxious/ambivalent, and avoidant).

Forty-five participants were selected from each cell because there were only 45 Anxious/Ambivalent males with completed questionnaires and pictures. The total number of participants for the final study was 270 (135 females and 135 males).

Materials

The following materials were included in each participant's questionnaire packet:

Adult Attachment Style Measure (Hazan & Shaver, 1987).

This is a single item measure of adult attachment derived from Ainsworth and her colleagues's (1978) description of infants' style of attachment. Each attachment style (secure, anxious-ambivalent, avoidant) is described in a single paragraph. Subjects were asked to indicate which paragraph of the three attachment styles best described them and to rate each attachment style on a 7-point Likert-typed scale (1-not at all like me to 7-very much like me).

Brennan and Shaver (under review) found stabilities for this measure. In their study, seventy-one percent of the subjects proved to have the same attachment style at two points in time. Reliabilities and validity were described earlier in the Adult Attachment Style Measure section. (See Appendix A)

Styles of Adult Attachment (Bartholomew, 1990). This also is a single item measure of adult attachment. This four style adult attachment scale is an expanded version of the original three styles of adult attachment based on Ainsworth and colleagues's (1978) description of infants' style of attachment. Each attachment style (secure, preoccupied, dismissing, fearful) was described in a single paragraph. Subjects were asked to indicate which paragraph of the four attachment styles best described them and to rate also each attachment style on a 7-point Likert scale (1-not very much like me to 7-very much like me). Reliabilities and validity were described earlier in the Adult Attachment Measure section. (See Appendix B)

Adult Attachment Scale (Simpson, 1990). This is a likert-type version of Hazan & Shaver's (1987) measure of the three attachment styles. The three attachment paragraphs originally created by Hazan & Shaver (1987) were decomposed into 13 individual sentences, each of which was answered on a 7-point Likert-typed scale (1 = strongly disagree to 7 = strongly agree). To control for acquiescence response bias, three sentences were worded in a negative direction. Participants rated the items according to how they typically felt toward romantic partners in general. Reliabilities and validity were described earlier in the Adult Attachment Measure section. (See Appendix C)

The Rosenberg Self-Esteem Scale (Rosenberg, 1965). This is a 10-item measure of global self-evaluation and self-worth. Ratings are made on 4-point scales and scored so that higher values indicate higher self-esteem. The reliability and validity of the scale are well established (Rosenberg, 1979). (See Appendix D)

A Demographic Questionnaire asked participants to indicate their age, sex, race, college major, family income, number of friends, and primary caregiver's name (the person who raised them), the caregiver's relation to them, whether or not the person is still alive, the caregiver's address and phone number. Participants were requested to rate, on a 7 point Likert-typed scale (1 = very unattractive to 7 = very attractive), the following items: 1) How physically attractive were you as an infant compared to the average infant?; 2) How cute were you as an infant compared to the average infant?; 3) How physically attractive do you think you are now compared to the average college student?. (See Appendix E)

The Human Development Questionnaire was developed by the author to measure the primary caregiver's perception of the participant. The caregiver was asked to rate the participant's activity level, physical attractiveness (at infancy, at age 8 or 9, and at present time), cuteness level, size relative to peers (at infancy and present time),

mental alertness, fussiness, demanding levels (for infancy only) and birthweight. (See Appendix F)

Procedure

After the pilot test, which was utilized to select subjects, participants were offered extra credit points for participating in the study. At the session participants were then told that this study was the experimenter's Master's Thesis. That the study was about human development across the life span and that the experimenter was interested in examining whether certain personality characteristics and physical appearance were stable across the life span. There would be two parts to the study. The participants would complete part one and their caregiver would complete part two. Participants were then asked to complete a packet of questionnaires containing the Simpson Adult Attachment Scale (1990), the Rosenberg Self-Esteem scale (1965), Demographics and another consent form. These measures are described below and are presented in the Appendix (see Appendices A, B, C, D, E, and G). Afterward, participants were asked to complete appropriate parts of their caregiver's packet. Before leaving the experiment, participants were debriefed and escorted to another room where the experimenter took their picture. (For the verbatim script, see Appendix I).

Each participant's caregiver was mailed a packet containing a cover letter, a consent form, and the Human Development Questionnaire (see Appendices F and H). Each caregiver was asked to send two pictures of their child (the participant) -- one at 9-12 months old and one at age 8 or 9 along with the questionnaire and the consent form by the due date (listed on each packet) in the stamped envelop. Mothers made up 99% of the caregivers. From this group, 374 caregivers returned the questionnaire, consent form, and the two pictures (infancy and school age) -- this was an 80% return rate for the completed questionnaire and two pictures.

Strangers' Rating Procedures

Thirteen psychology graduate students (8 females, 5 males) rated each participant's photo on a 7 point Likert-typed scale of physical attractiveness (1 = very unattractive to 7 = very attractive) at the three time periods (infancy, school age, and adulthood). The pictures were presented to the raters at three different time phases (each phase was three weeks apart). The reason for this was because caregivers were requested to return the questionnaire and the pictures to the experimenter at different dates (depending on when their child participated in the study). The infancy and school age pictures had to

be returned to the participant within 2-3 weeks of the receiving date.

There was a total of four albums for each time period (Infancy albums No. 1-4, School-age albums No. 1-4, and Adult albums No. 1-4). Each album contained one-fourth of the participants for that time period. After each rater was finished with an album, he or she took the pictures out of the album and randomly mixed the pictures before placing them back in the album. This was performed to avoid order effects.

In phase one, raters were requested to rate pictures from Infancy albums No. 1-2 and School-age albums No. 1-2. In phase two, raters were requested to rate pictures from Infancy albums No. 3-4 and School-age albums No. 3-4. In phase three, raters were requested to rate Adult albums No. 1-4. The adult (college) pictures were taken by the experimenter and had to be developed and placed into photo albums.

CHAPTER III

RESULTS

Reliability for Strangers' Ratings

Reliabilities for Strangers' ratings of all three time periods are as follows. For Infancy pictures, Cronbach's alpha was .83 ($N = 13$) for all raters; .65 ($N = 5$) for male raters; and .74 ($N = 8$) for female raters. For School-age pictures, Cronbach's alpha was .87 ($N = 13$) for all raters; .74 ($N = 5$) for male raters; and .82 ($N = 8$) for female raters. For Adult pictures, Cronbach's alpha was .92 ($N = 13$) for all raters; .83 ($N = 5$) for male raters; and .86 ($N = 8$) for female raters.

Attachment Measures: Validity and Reliability

Comparison with Previous Research. Results from the present study corresponded well with previous results. Nine hundred, seven (550 females, 357 males) participated in the pilot test; 523 (58%) placed into the Secure attachment style, 159 (17%) placed into the Anxious/Ambivalent attachment style, and 225 (25%) placed into the Avoidant attachment style. (For this and other pilot test results see Appendices J, K, & L).

Relationships among Attachment Style Measures. Next, validity of the Hazan and Shaver scale was examined by comparing self-ratings on each of the three categories. A series of t-tests was conducted comparing each category with the other two. Those who categorized themselves as Secure rated themselves significantly higher on Secure than on Anxious/Ambivalent ($t(88) = 20.29, p < .001$) and Avoidant ($t(89) = 21.76, p < .001$). Participants who categorized themselves as Avoidant rated themselves significantly higher on Avoidant than Secure ($t(89) = 15.01, p < .001$) and Anxious/Ambivalent ($t(89) = 21.61, p < .001$). Participants who categorized themselves as Anxious/Ambivalent rated themselves significantly higher on Anxious/Ambivalent than Secure ($t(87) = 17.21, p < .01$) and Avoidant ($t(87) = 16.77, p < .01$). These results support the notion that each attachment style is significantly different from the others. The means for these analyses are presented in Table 1.

Table 1

Validation of chosen Attachment Style: Selected Styles
contrasted to Non-selected Styles

Attachment Style	Mean	SD	t
Avoidant	5.46		
Secure	3.00	1.55	15.01***
Anxious/Ambivalent	2.50	1.30	21.61***
Anxious/Ambivalent	5.71		
Secure	3.28	1.32	17.21***
Avoidant	2.86	1.59	16.77***
Secure	5.88		
Anxious/Ambivalent	2.69	1.48	20.29***
Avoidant	2.12	1.64	21.76***

Note. *** = $p < .001$. N = 270 (90 per style)

Df: Avoidant = 89/89; Df: Anxious/Ambivalent = 87/87;

Df: Secure = 88/89

Chi-square analyses were conducted to examine how different attachment measures compared with each other. These two attachment measures, Bartholomew's and Hazan & Shaver's, were highly related to each other ($\chi^2 (4) = 136.15, p < .001$). Seventy (77.8%) of Hazan & Shaver's Secure individuals placed themselves into Bartholomew's Secure style. For Hazan & Shaver's Anxious/Ambivalent individuals, 32 (35.6%) placed themselves into Bartholomew's Preoccupied style. For Hazan & Shaver's Avoidant individuals, 72 (80%) placed themselves into Bartholomew's two avoidant styles (Fearful and Dismissing). These findings support previous studies (Brennan, Shaver, & Tobey, 1991).

Hazan & Shaver's continuous measures were compared to other attachment scales' continuous measures with the expectation that there would be high positive correlations among the similar styles. The Hazan & Shaver attachment styles were highly correlated with Bartholomew's attachment styles and Simpson's attachment styles. Styles that were supposed to be correlated with each other were. Hazan & Shaver's Secure classification correlated highly with both Bartholomew's Secure style ($r = .58, p < .001$) and Simpson's Secure style ($r = .43, p < .001$). Hazan & Shaver's Avoidant style was positively correlated with Bartholomew's Fearful style ($r = .43, p < .001$) but was negatively correlated with Bartholomew's Dismissing style ($r = -.22, p < .001$). Hazan & Shaver's Avoidant style was highly correlated with Simpson's

Avoidant style ($r = .52, p < .001$). Hazan & Shaver's Anxious/Ambivalent classification correlated with both Bartholomew's Preoccupied and Simpson's Anxious.

Tests of the Hypotheses

To test hypothesis 1 that the securely attached group would receive higher ratings of infant physical attractiveness from their caregivers compared to the other two attachment style groups (avoidant and anxious/ambivalent), a Oneway ANOVA was performed on Caregiver rating of physical attractiveness with Attachment Style as the independent variable. There was no effect of attachment style on Caregiver's rating of infant physical attractiveness ($F(2, 267) = 2.58, p = n.s.$) contrary to Hypothesis 1. In fact, securely attached participants received the lowest rating on infant physical attractiveness from their Caregivers but the differences are not significant, as can be seen in Table 2.

Table 2

Ratings of Infant Physical Attractiveness by Attachment Style

Attachment Style	Caregivers		Self		Stranger	
	Mean	SD	Mean	SD	Mean	SD
Infancy						
Avoidant	5.77	1.19	4.82	1.02	3.85	0.75
Anx/Amb	5.42	1.28	4.67	1.04	3.89	0.66
Secure	5.37	1.36	4.70	0.91	3.81	0.73
Adulthood						
Avoidant	5.91	1.12	4.49	1.07	3.86 ^{ab}	0.90
Anx/Amb	5.80	1.02	4.33	0.87	3.77 ^b	0.67
Secure	5.63	1.14	4.60	0.87	4.09 ^a	0.94

Note. Means with different superscripts indicate that they are significantly different from each other. All the means reported are different from each other.

Anx/Amb = Anxious/Ambivalent

To test hypothesis 2 that all three rater types (Self, Caregivers, and Strangers) will rate securely attached participants higher on physical attractiveness than participants in the other two attachment style groups (avoidant and anxious/ambivalent), Oneway ANOVAs were performed on all three rater types for ratings of physical attractiveness with Attachment Style as the independent variable.

There was no relationship between attachment style and Self-rating of adult physical attractiveness ($F(2,267) = 0.62, p=n.s.$). Yet, the secure attachment group received the highest rating on adult physical attractiveness from Self. Although the hypothesis was not supported, the results were in the predicted direction.

There was no association between attachment style and Caregivers' ratings of adult physical attractiveness ($F(2,266) = 1.51, p=n.s.$). There was a significant association between attachment style and Strangers' ratings of adult physical attractiveness ($F(2,267) = 3.36, p<.05$). As predicted in hypothesis 2, securely attached participants received the highest ratings of adult physical attractiveness from Strangers. The effect was such that Anxious-Ambivalent participants were rated as significantly less attractive than Secure participants (Table 2).

To test Hypothesis 3 that securely attached people would have the highest self-esteem, a Oneway ANOVA was

performed on Self-Esteem by Attachment Style. There was a significant association of attachment style with Self-Esteem ($F(2,267) = 6.79, p < .001$) such that anxious/ambivalent participants were significantly lower in self-esteem than were securely attached participants and avoidant participants. Also, securely attached participants were highest in self-esteem. The means from the analyses are presented in Table 3.

Table 3

Self-Esteem ratings for each Attachment Style

Attachment Style	N	Mean	SD
Avoidant	90	32.73 ^a	4.78
Anxious/Ambivalent	90	31.09 ^b	4.58
Secure	90	33.43 ^a	3.71

Note. $F(2,267) = 6.79, p < .001$

Means with different superscripts indicate that they are different from each other.

To test Hypothesis 4 that physical attractiveness and self-esteem would be positively correlated, correlations were performed between physical attractiveness and Self-Esteem. As can be seen in Table 4, there was a significant relationship between Self ratings and self-esteem at both Infancy ($\underline{r} = .17, \underline{p} < .01$) and Adulthood ($\underline{r} = .34, \underline{p} < .001$).

Table 4

Self-Esteem: Correlations with Physical Attractiveness and Attachment Style

	Self-Esteem	
	<u>r</u>	<u>n</u>
Infant Attractiveness		
Caregiver rating	.08	270
Stranger rating	-.01	270
Self rating	.17**	270
Adult Attractiveness		
Caregiver rating	-.02	269
Stranger rating	.07	270
Self rating	.34***	270

Note. ** = $p < .01$, *** = $p < .001$.

Additional Analyses

To test that physical attractiveness levels of the participants as rated by Self, Caregivers, and Strangers would be intercorrelated, attractiveness ratings for all three rater types were correlated, for both infant and adult pictures. There were positive and significant relationships for adult attractiveness ratings but not for infancy ratings (Self and Caregiver ratings on adult physical attractiveness, $r = .20$, $p < .001$; Self and Stranger ratings on adult physical attractiveness, $r = .22$, $p < .001$; Caregiver and Stranger ratings on adult physical attractiveness, $r = .25$, $p < .001$). There was a marginally significant relationship between Caregiver rating and Stranger rating on infant physical attractiveness ($r = .12$, $p = .055$). There were no relationships for caregiver rating and self rating on infant physical attractiveness ($r = .11$, $p = .07$) and self rating and stranger rating on infant physical attractiveness ($r = -.04$, $p = .54$).

Mean ratings of attractiveness remained stable over time. To test that ratings of participants at infancy by Self, Caregivers, and Strangers would be correlated with the respective ratings at adulthood, correlations were computed between ratings at Infancy and ratings at Adulthood for all

three raters: Caregivers ($r = .53$, $p < .001$); Self ($r = .19$, $p < .001$); Strangers ($r = .22$, $p < .001$). As these correlates show, there were significant relationships between ratings at infancy and adulthood for all three rater types. This supports Adams' (1975) finding that physical attractiveness is perceived to be stable across the lifespan.

Number of friends was positively correlated with the self-rating of security (secure group), ($r = .18$, $p < .005$). The secure group also had the highest number of friends among the three groups: secure ($M = 8.48$); anxious/ambivalent ($M = 6.54$); avoidant ($M = 6.32$).

CHAPTER IV

DISCUSSION

Although the overall results showed that physical attractiveness and attachment style were related, hypothesis 1, stating that secure people would receive significantly higher ratings of infant physical attractiveness from their caregivers, was not supported. This finding suggests that maternal perception of child's infant physical attractiveness was not related to the child's adult attachment style.

A relationship did exist between stranger ratings of current physical attractiveness and attachment style. Stranger ratings of adult physical attractiveness were significantly related to attachment style. Strangers rated the secure individuals as highest in adult physical attractiveness compared to both avoidant and anxious-ambivalent individuals. Moreover, the results were in the predicted direction for self ratings. Although not significant, securely attached participants gave themselves the highest ratings on physical attractiveness. Stranger ratings may be the most accurate because they were not contaminated by factors that can influence self or caregiver ratings. They perceived the participants on only one factor and that was physical attractiveness. Strangers could not

have been biased by participants' personality or by familiarity issues. The higher ratings of physical attractiveness given to secure individuals provides support for the argument that the three attachment styles differ on levels of attractiveness.

There are a number of possible explanations for the lack of support for the main hypothesis. First, previous research comparing attractive and unattractive infants has used infants with facial deformities (i.e., minor/major facial/cranial deformities, cleft lip or palate) as their unattractive subjects (Barden, Ford, Jensen, Rogers-Salyer, & Salver, 1989). In this study, none of the participants were extremely unattractive or had facial deformities. Infants tended to be within the average range of physical attractiveness and perhaps a restricted range on this variable reduced the ability to detect differences, although they grew into adults who could be differentiated on the basis of a photograph.

Second, studies have shown that attractiveness made a difference in both the type and amount of interaction that the mother had with her infant (Hildebrandt & Fitzgerald, 1981, 1983; Langlois, 1986; Ritter & Langlois, 1988). However, most studies examining this issue have been conducted on mothers with newborns (e.g., Parke & Sawin, 1975). Parke & Sawin (1975) found that mothers of attractive infants maintained more eye contact and more

frequently kissed infants compared to mothers of unattractive infants. A newborn's attractiveness level made a difference in the type of treatment and amount of attention received from mothers due to the "first impressions" factor. It is argued here that attractiveness can and does create a difference in the mother's perception of her child and that these differences are in operation very early in the infant's life. But as the infant develops (by the end of the first year), the infant can contribute more to the interactions thus making the mother-infant relationship more shared and complex. By the ninth month, physical attractiveness may not play such an important role in the mother-infant relationship as it previously had. Responsiveness to the mother, temperament, and the infant's developing personality are just a few of the factors that can come into the picture thus diminishing the role of attractiveness and/or changing the mother's perception of her infant. This hypothesis may not have been supported because the infants were too old.

The present study was not conducted on observations of mothers and newborns but on mothers' retrospective ratings of infants' physical attractiveness ranging in age from 9 months to 12 months. Eighteen years of interaction may bias memory. Thus, the timing and/or method of this study may not only explain the discrepancies between the present

findings and the findings of past research but also may explain the lack of support for the hypothesis.

The findings from this study showed that there was a relationship between adult attachment style and concurrent physical attractiveness only, and this was most evident among stranger ratings. This evidence, in conjunction with the lack of support for hypothesis 1, suggests that the relationship between attachment style and physical appearance may be an iterative one with physical attractiveness playing a role in the development of a secure attachment style and a secure attachment style playing a role in the development of physical attractiveness. It may be the case that physical attractiveness plays a role in the development of a secure attachment style through the mechanisms hypothesized, but not supported. It also may be the case that a secure attachment style plays a role in the development of physical attractiveness such that individuals who believe the social world to be predictable and safe and comforting may smile more, or groom themselves better or somehow reflect, through appearance, their positive outlook on social relationships. While this study has not explained the mechanisms behind the relationship between attachment style and physical attractiveness, it has nevertheless established the existence of the relationship between attachment style and physical attractiveness.

There was a significant relationship between attachment style and self-esteem supporting hypothesis 3. Anxious/ambivalent individuals were significant lower in self-esteem than both secure individuals and avoidant individuals. Securely attached individuals were highest on self-esteem. These findings support previous research (e.g., Feeney and Noller, 1990; Waters, Wippman, & Sroufe, 1979). In this study, secure people were also found to have significantly more friends than both the avoidants and the anxious/ambivalents. This is not surprising given that secure people have higher self-concept, more social skills, and more ego resilience and are rated as being more socially competent (Arend et al., 1979).

There was a significant relationship between Self-esteem and Self ratings of physical attractiveness at both Infancy and Adulthood supporting hypothesis 4. Other researchers have found a positive relationship between attractiveness and self-esteem both for self ratings and others' ratings of physical attractiveness (Adams, 1977a; Brezezicki & Major, 1983; Hatfield & Sprecher, 1986; Simmons & Rosenberg, 1975). So there emerges a pattern in which secure people perceive themselves as more attractive, higher in self-esteem, and have more friends. Secure people think highly of themselves on a number of dimensions.

There were significant positive relationships between Self, Caregiver, and Stranger ratings on adult physical

attractiveness. There was also a significant relationship between Caregiver and Stranger ratings of infant physical attractiveness. Although ratings were correlated, mean ratings showed that caregivers gave the highest ratings to participants across both time periods (infancy and adulthood) compared to both Self and Stranger ratings. These findings supported previous research by Hildebrandt and Fitzgerald (1979, 1981) on ratings of infant attractiveness, which found that mothers's ratings were higher but not significantly higher than those of college students. Patzer (1985) stated that people do agree on what is attractive even though there exists no objective answer and measure of physical attractiveness. Corter et al. (1978) found that familiarity raises attractiveness ratings among nurses working with premature infants. These nurses rated their charges higher in attractiveness than did nurses who were not familiar with the infants. Caregivers' familiarity with their own infants may lead to higher ratings. Moreover, parents might have a more positive perception of their child because they have invested time and love and would like their child to succeed. They want to see their child in a positive light.

Attractiveness ratings of participants at infancy by Self, Caregivers, and Strangers were correlated with the respective ratings at adulthood. Results showed that all three rater types were consistent over time. These results

support previous studies, which found physical attractiveness to be stable across time. Adams (1977b) found high correlations between ratings at adolescence to ratings at young adulthood. Langlois and Stephan (1977) also found a high correlation between ratings of infants at three months and at six months. The present results showed that physical attractiveness was stable across the life span, for three time periods (9-12 months, 8-9 years, and 17-21 years).

Limitations

The major limitation to this study was the fact that it was retrospective. Reliability for recall data (retrospective ratings of infant physical attractiveness) has, especially for single-item measures, been shown to be lower than current measures (recent or present-day ratings of adult physical attractiveness) (Yarrow, Campbell, & Burton, 1970). How a mother perceives her child presently does affect and bias her recall of the child. Such bias could occur from familiarity with the child or a desire to portray the child as "having turned out well". A way to remedy this limitation would be to have mothers rate their infant on physical attractiveness during infancy.

Another limitation to this study rests, of course, with the sample. This sample was comprised of White college

students and as such the results are limited in their generalizability. This research needs to be replicated and extended to other samples of the population.

Future Research

Future research should assess the physical appearance and developing attachment style of newborns. Differential treatments have been found between attractive and unattractive newborns and infants by mothers, which argues that the main hypothesis might be supported if a longitudinal study was to be conducted starting at birth and continuing until the infants are over one year of age. Observational data could be collected for caregiver behavior/responsiveness to the infant, and caregiver and stranger ratings could be collected for infant physical attractiveness at different points in time. The mother's appearance and attachment style as well as other variables that may mediate the infant-mother attachment bond also could be measured as they occurred, or developed, in the infant, the caregiver, and in the infant-caregiver relationship. Such variable might include infant temperament, activity level, birth order, and caregiver temperament. This would allow researchers to follow and observe the role of infant physical attractiveness in the mother-infant relationship and the

development of infant's attachment style from newborn to one year of age. At the end of the first year of life, a majority of infants would have developed an attachment style. Researchers could examine if a relationship exists between caregivers' ratings of infant physical attractiveness at birth and infant attachment style at one year of age.

Another future study could examine the relationship between physical attractiveness and attachment style with close friends or significant others being requested to participate instead of primary caregivers. Close friends would rate participants on adult physical attractiveness and adult attachment style. Participants also would rate themselves on physical attractiveness and attachment style in adulthood. Close friends may play a more important role in the participant's present life than caregivers. It would be predicted that secure people would receive the highest ratings of physical attractiveness from their friends because secure individuals behave in a more positive manner and possess more desirable attributes (e.g., friendly, outgoing, positive outlook on life) than do the other attachment styles. These behaviors may lead others to perceive the individuals in a positive light and perhaps influence their attractiveness ratings in an upward direction.

Even though this study presented stability for physical attractiveness ratings across three stages of life (9-12 months, 8-9 years, and 17-21 years) there is still a need for further research to replicate and extend the issue of physical attractiveness stability across the life span.

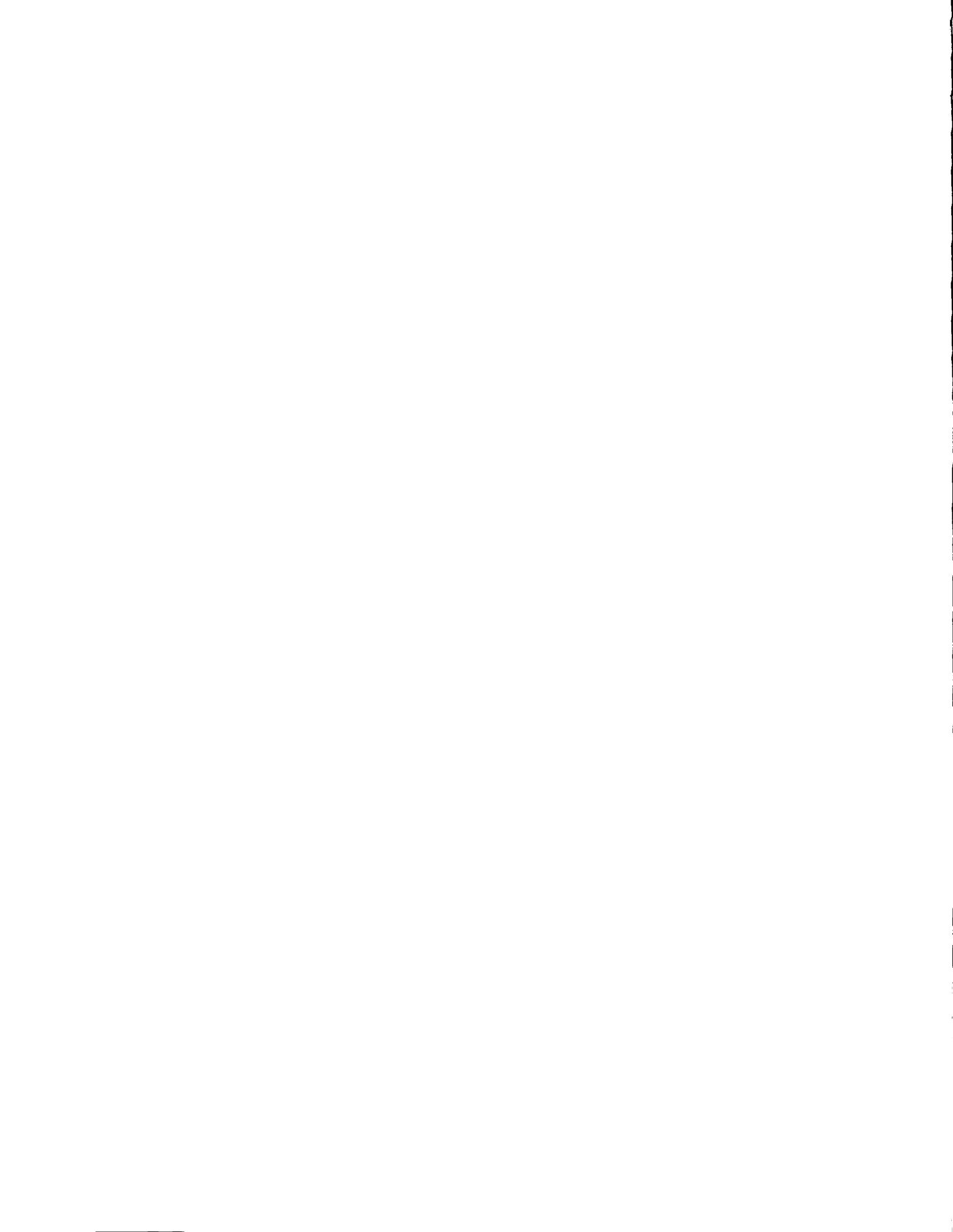
Conclusion

There is a relationship between physical attractiveness and attachment styles, but the causal mechanisms remain to be uncovered in future research. The relationship was not found among caregivers but this may have been due to methodological issues. With other methods and measurements, research could assess this relationship at infancy. Because of this null result, an open question remains. Which comes first? Does attractiveness lead to security or does security lead to attractiveness? Does each influence the other or does some other factor cause the relationship between them? Besides establishing a relationship between attractiveness and attachment, this study supports previous studies on the percentage of people in each attachment style and extends the attachment theory into the physical attractiveness area.

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APPENDICES

APPENDIX A

CLOSE RELATIONSHIPS QUESTIONNAIRE, PART ONE

This questionnaire is concerned with your experiences in romantic love relationships. Take a moment to think about these experiences and answer the following questions with them in mind.

1) Read each of the three self-descriptions below (A, B, and C) and then place a checkmark next to the single alternative that best describes how you feel in romantic relationships or is nearest to the way you are. (Note: The term "close" and "intimate" refer to psychological or emotional closeness, not necessarily to sexual intimacy.)

_____ A. I am somewhat uncomfortable being close to others; I find it difficult to trust them completely, difficult to allow myself to depend on them. I am nervous when anyone gets too close, and often, love partners want me to be more intimate than I feel comfortable being.

_____ B. I find that others are reluctant to get as close as I would like. I often worry that my partner doesn't really love me or won't want to stay with me. I want to get very close to my partner, and this sometimes scares people away.

_____ C. I find it relatively easy to get close to others and am comfortable depending on them. I don't often worry about being abandoned or about someone getting too close to me.

2) Now please rate each of the relationship styles above according to the extent to which you think each description corresponds to your general relationship style.

	Not at all like me			Somewhat like me		Very much like me	
Style A.	1	2	3	4	5	6	7
Style B.	1	2	3	4	5	6	7
Style C.	1	2	3	4	5	6	7

APPENDIX B

CLOSE RELATIONSHIPS QUESTIONNAIRE, PART TWO

This questionnaire is similar to the previous one, but it has been changed in various ways. A fourth relationship style has been added and the other three descriptions are now worded differently and are presented in a new order. This questionnaire applies to all emotionally close relationships, not just romantic ones.

1) Following are descriptions of four general relationship styles that people often report. Please place a checkmark next to the letter corresponding to the style that best describes you or is closest to the way you are.

_____ A. It is easy for me to become emotionally close to others. I am comfortable depending on others and having others depend on me. I don't worry about being alone or having others not accept me.

_____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend them. I worry that I will be hurt if I allow myself to become too close to others.

_____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

_____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

2). Now please rate each of the relationship styles above according to the extent to which you think each description corresponds to your general relationship style.

	Not at all like me		Somewhat like me			Very much like me	
Style A.	1	2	3	4	5	6	7
Style B.	1	2	3	4	5	6	7
Style C.	1	2	3	4	5	6	7
Style D.	1	2	3	4	5	6	7

APPENDIX C

Answer each statement on a 1 to 7 rating scale

1 -----7
strongly disagree strongly agree

- ___ (a) "I find it relatively easy to get close to others"
- ___ (b) "I'm not very comfortable having to depend on other people"
- ___ (c) "I'm comfortable having others depend on me"
- ___ (d) "I rarely worry about being abandoned by others"
- ___ (e) "I don't like people getting too close to me"
- ___ (f) "I'm somewhat uncomfortable being too close to others"
- ___ (g) "I find it difficult to trust others completely"
- ___ (h) "I'm nervous whenever anyone gets too close to me"
- ___ (i) "Others often want me to be more intimate than I feel comfortable being"
- ___ (j) "Others often are reluctant to get as close as I would like"
- ___ (k) "I often worry that my partner(s) don't really love me"
- ___ (l) "I rarely worry about my partner(s) leaving me"
- ___ (m) "I often want to merge completely with others, and this desire sometimes scares them away"

Note: Items a-e are taken from Hazan and Shaver's "secure" vignette description. Item f-i and j-m are taken from the "avoidant" and the "anxious-ambivalent" paragraphs, respectively.

APPENDIX D

Rosenberg Scale

Please rate yourself on the following items by writing a number in the blank before each statement, where

1 = Strongly Agree

2 = Agree

3 = Disagree

4 = Strongly Disagree

- _____ 1) I feel that I'm a person of worth, at least on any equal base with others.
- _____ 2) I feel that I have a number of good qualities.
- _____ 3) All in all, I am inclined to think that I am a failure.
- _____ 4) I am able to do things as well as other people.
- _____ 5) I feel I do not have much to be proud of.
- _____ 6) I take a positive attitude towards myself.
- _____ 7) On the whole, I am satisfied with myself.
- _____ 8) I wish I could have more respect for myself.
- _____ 9) I certainly feel useless at times.
- _____ 10) At times I think I am no good at all.

APPENDIX E

Demographics

- 1) How old are you? _____
- 2) What is your sex? ___ Male ___ Female
- 3) What is your major? _____
- 4) What is your race? (Check one)

White/Caucasian _____
 Black/African American _____
 Native American _____
 Hispanic/Mexican American _____
 Asian/Pacific Islander _____

- 5) What is the total income of your Family? (give your best guess)

less than \$19,999 ___
 \$20,000-\$39,999 ___
 \$40,000-\$59,999 ___
 \$60,000-\$79,999 ___
 \$80,000 and over ___

- 6) How **PHYSICALLY ATTRACTIVE** were you as an infant compared to the average infant?

1	2	3	4	5	6	7
Less attractive than other infants			Same			More attractive than other infants

- 7) How **Cute** were you as an infant compared to the average infant ?

1	2	3	4	5	6	7
Very Cute						Not very Cute

- 8) How **PHYSICALLY ATTRACTIVE** do you think you are now compared to the average college student?

1	2	3	4	5	6	7
Very Unattractive			Average			Very Attractive

9) Who was your primary caregiver (the main person who raised you) from birth until about 4 years of age? (this can be your mother, father, grandmother, aunt, etc.) (please only write down one person)

Their relation to you? _____

10) Is this person still alive? ____Yes ____No
If Yes,

The person's name: _____

Their mailing address:

Their phone number: (____) _____

(This information is needed because your caregiver will be requested to complete the second part of this questionnaire).

APPENDIX F
(For female participants)

Date, 1992

Dear :

(Name of participant) is currently participating in a study of Human Development at Michigan State University. The purpose of the study is to examine developmental changes along a number of dimensions, from infancy to young adulthood. For instance, many people who are active as adults were also active as infants. On the other hand, some people who were not particularly attractive as infants later "bloomed" into being very attractive adults. Thus, some characteristics of a person change over time and some do not.

In this study we are examining such relationships from the perspective of both the young adult and the person who reared them. (Name) has completed the first part of the study and has given us your name and address as the person who reared her. Your participation would involve completing a short questionnaire about (Name) as an infant and as a young adult. Your ratings will remain confidential.

We would very much appreciate you taking the time to complete this questionnaire. Should you decide to participate please complete the enclosed consent form and questionnaire. Please return these forms and the two pictures of (Name) (at 9-12 months old and at 8-9 years old), to us in the enclosed envelope by _____, 1992.

Thank you for your time and consideration.

Carole N. Hodge
Graduate Student

Linda A. Jackson, Ph.D.
Faculty Supervisor

PERCEPTIONS OF INFANCY

Please get your favorite infant picture (from 9-12 months old) of _____. Then read the following questions and rate _____ compared to other infants at that time. There are no right or wrong answers, it is your opinion that counts. Answer quickly and honestly, as your first impression is the best.

Circle the number that best represents your opinion. For instance, if you think that _____ was somewhat active as an infant you may circle a 2. If you remember her as being a bit more active than the average child you may circle a 5.

1. How **ACTIVE** would you say your infant was compared to other infants?

1	2	3	4	5	6	7
Not at all Active						Extremely Active

2. How **PHYSICALLY ATTRACTIVE** would you say your infant was compared to other infants?

1	2	3	4	5	6	7
More attractive than other infants			Same			Less attractive than other infants

3. How **CUTE** would you say your infant was compared to other infants?

1	2	3	4	5	6	7
Not very Cute						Very Cute

4. How **BIG/SMALL** would you say she was?

1	2	3	4	5	6	7
Bigger than other infants			Average Size			Smaller than other infants

5. How **MENTALLY ALERT** would you say she was?

1	2	3	4	5	6	7
Not at all Alert						Extremely Alert

PERCEPTIONS OF YOUNG ADULTHOOD

Please think about _____ as she is now. Then read the following questions and rate _____ compared to other people of his age. There are no right or wrong answers, it is your opinion that counts. Answer quickly and honestly, as your first impression is the best opinion.

Circle the number that best represents your opinion. For instance, if you think that _____ is somewhat active you may circle a 2. If you think of her as being a bit more active than the average young adult you may circle a 5.

1. How **ACTIVE** would you say she is compare to her peers?

1	2	3	4	5	6	7
Not at all Active			Average			Extremely Active

2. How **PHYSICALLY ATTRACTIVE** would you say she is compared to her peers?

1	2	3	4	5	6	7
More attractive			Same			Less attractive

3. How **BIG/SMALL** would you say she is?

1	2	3	4	5	6	7
Smaller than others			Average Size			Bigger than others

4. How **MENTALLY ALERT** would you say she is?

1	2	3	4	5	6	7
Extremely Alert			Average			Not at all Alert

APPENDIX G

MICHIGAN STATE UNIVERSITY
 Department of Psychology
 DEPARTMENTAL RESEARCH CONSENT FORM

1. I have freely consented to take part in a scientific study being conducted by Carole N. Hodge under the supervision of Dr. Linda A. Jackson, Associate Professor.
2. I understand that I will be answering a questionnaire about myself.
3. I understand that I may be contacted later this term to participate in this study.
4. I understand that my participation today will take about 5 minutes. If I am selected to participate in the study, later on this term, it will take about 30 minutes.
5. I understand that the study involves answering some questions about myself and having my picture taken by an experimenter. Later, my appearance will be rated by graduate students.
6. I understand that I am free to discontinue my participation in the study at any time without penalty.
7. I understand that the results of the study will be treated in strict confidence and that I will remain anonymous. Within these restrictions, results of the study will be available to me at my request.
8. I understand that my participation in the study does not guarantee any beneficial results to me.
9. I understand that at my request, I can receive additional explanation of the study after my participation is completed.

Title of study: Human Development Across The Lifespan

Signed _____

Date: _____

(please print)

Name: _____

Sex: Male

Female

Phone number: _____

Age: _____

Race:

White/Caucasian _____

Black/African American _____

Native American _____

Hispanic/Mexican American _____

Asian/Pacific Islander _____

APPENDIX H

MICHIGAN STATE UNIVERSITY

Department of Psychology

DEPARTMENTAL RESEARCH CONSENT FORM

1. I have freely consented to take part in a scientific study being conducted by Carole N. Hodge under the supervision of Dr. Linda A. Jackson, Associate Professor.
2. My child has already participated in this study at Michigan State University. I understand that I will be answering a questionnaire about my child.
3. I understand that I am free to discontinue my participation in the study at any time without penalty.
4. I understand that the results of the study will be treated in strict confidence and that I will remain anonymous. Within these restrictions, results of the study will be available to me at my request.
5. I understand that my participation will take about 30 minutes and I am required to mail the questionnaire packet and two pictures of my child (at 9-12 months old and at 8-9 years old) back to the experimenter in the stamped, self-addressed envelop provided for me.
6. I understand that my child's appearance will be rated by graduate students and that the experimenter will return the pictures to my child within 2-3 weeks of receiving them.
7. I understand that my participation in the study does not guarantee any beneficial results to me.
8. I understand that at my request, I can receive additional explanation of the study after my participation in both part one and part two is completed.

Title of study: Human Development Across The Lifespan

Signed _____

Date: _____

APPENDIX I

Verbatim Script for the Study

Hi, my name is Carole Hodge and I am your experimenter. When I call out your name, please answer me so I can check your name off the sign-up sheet. The name of this study is Human Development across the lifespan. I would like to talk to you a little bit about the study. The study is about human development across the lifespan and it is my Master's Thesis. I am interested in examining if certain variables are stable across the lifespan. Some of the variables that I will be examining are personality characteristics, development and maintenance of close relationships, and physical appearance. This study is in two parts. You will be participating in part one - you will complete some questionnaires concerning your personality, your perceptions on relationships, and some demographics. In part two, I will be sending a questionnaire home to your primary caregiver. Your primary caregiver is the person who took care of you as a child and spend a lot of time with you. The questionnaire will be concerning you as an infant since your caregiver will remember more about you as an infant than you would. They will also be requested to send two pictures of you, one at 9-12 months and one at 8-9 years of age. You will also help me fill out some information to send to them. At the end of this study, you will have your picture taken by me in my office.

I will now pass out consent forms. Please read it and if you would like to participate in the study, sign it and pass it up to me. I will now pass out a short questionnaire which concerns close relationships and it will take you only a few minutes to complete it. The number on the top right hand corner is your subject number. This is so that your data will be completely anonymous - do not write your name anywhere on the questionnaire. (when everyone is done) ----

I will now pass out a packet of questionnaires containing for you to complete. Please write your subject number at the top right hand side of this packet. When you are done with the packet we can continue. (when Ss are done)

Here are the packets that I will be sending home to your caregiver. The packet contains a consent, a cover letter, a questionnaire, and a self-addressed, stamped return envelop. First please write your subject number at the top right hand corner of each page of the caregiver's packet. Please turn to page one of the questionnaire and write in your name in three blank spaces at the top of the page. Please turn to page three, write in your name in three blank spaces at the top of the page. On the cover letter, write in your caregiver's name at the top (where appropriate) and this date (deadline data) at the spaces provided at the bottom. Now, take the envelop that has my name and address at the top left hand corner and write in your caregiver's address at the appropriate place. Please leave everything on the table, I will collect them when you leave.

Please take out your extra credit card so I can stamp it for the extra credit points. Now, follow me into my office where I can take your picture. This will only take a minute afterward, you are free to leave. Write your name and your subject number on the paper before I take your picture. Thanks for your participation.

APPENDIX J

Categorization of Hazan and Shaver Attachment Style compared to other studies

Group	N	%	Standard
Pilot Test Participants	907		
Females	550		
Secure	330	60%	
Anxious/Ambivalent	82	15%	
Avoidant	138	25%	
Males	357		
Secure	193	54%	
Anxious/Ambivalent	77	22%	
Avoidant	87	24%	
Total	907		
Secure	523	58%	a 51-56% b 62% c 63% d 55%
Anxious/Ambivalent	159	17%	a 19-21% b 15% c 10% d 15%
Avoidant	225	25%	a 23-28% b 23% c 27% d 30%

Note. Standard^a = Hazan & Shaver (1987)

Standard^b = Campos, Barrett, Lamb, Goldsmith, & Sternberg (1983)

Standard^c = Collins & Read (1990)

Standard^d = Feeney & Noller (1990)

APPENDIX K

Validity of the Hazan and Shaver scale was examined by comparing the rating of one style against the rating of the other styles with the expectation that the rating for the attachment style chosen by the subject will be highest on a 1-7 scale compared to the other two styles. A series of t-tests were conducted comparing each style (7 point rating) with the other two.

From the pilot test participants (N = 907), study (N = 270). From the pilot test, those who categorized themselves as Secure rated themselves significantly higher on Secure on the 1-7 rating than on both the Anxious/Ambivalent style $t(517) = 47.55$, $p < .001$ and the Avoidant style $t(517) = 49.69$, $p < .001$. Participants who categorized themselves as Avoidant rated themselves significantly higher on Avoidant on the 1-7 rating than on both the Secure style $t(219) = 24.51$, $p < .001$ and the Anxious/Ambivalent style $t(220) = 30.64$, $p < .001$. Participants who categorized themselves as Anxious/Ambivalent rated themselves significantly higher on Anxious/Ambivalent on the 1-7 rating than on both the Secure style $t(156) = 21.58$, $p < .001$ and the Avoidant style $t(157) = 22.00$, $p < .001$. These results support the notion that each attachment style is significantly different from the others.

Validation of chosen Attachment Style: Selected Styles contrasted to Non-selected Styles

Attachment Style	Mean	Sd	t
Avoidant	5.55		
Secure	2.89	1.61	24.51***
Anxious/Ambivalent	2.65	1.41	30.64***
Anxious/Ambivalent	5.63		
Secure	3.34	1.33	21.58***
Avoidant	2.87	1.57	22.00***
Secure	5.89		
Anxious/Ambivalent	2.54	1.60	47.55***
Avoidant	2.22	1.68	49.69***

Note. *** = $p < .001$. N = 907
 Df: Avoidant = 219/220
 Df: Anxious/Ambivalent = 156/156
 Df: Secure = 516/517

APPENDIX L

Chi-squares were conducted on both the pilot test and the final sample participants between Hazan & Shaver's and Bartholomew's scales. Bartholomew's two avoidant styles (dismissing, fearful) were combined. The results show that the two measures were highly correlated, ($\chi^2(4) = 327.37$, $p < .001$). From the pilot test containing 907 participants (only 890 participants completed both scales), 380 (74.2%) of Hazan & Shaver's Secure individuals placed themselves into Bartholomew's Secure style. For Hazan & Shaver's Anxious/Ambivalent individuals, 55 (35.3%) placed themselves into Bartholomew's Preoccupied style. For Hazan & Shaver's Avoidant individuals, 159 (71.6%) placed themselves into Bartholomew's two avoidant styles (Fearful and Dismissing).

Crossvalidation of Hazan & Shaver Attachment Style with Bartholomew Attachment Style

	Hazan & Shaver			
	Avoidant	Anxious/ Ambivalent	Secure	Row total
Bartholomew				
Secure	44 9.6% 19.8%	33 7.2% 21.2%	380 83.2% 74.2%	457 51.3%
Preoccupied	19 18.1% 8.6%	55 52.4% 35.3%	31 29.5% 6.1%	105 11.8%
Fearful Dismissing	159 48.5% 71.6%	68 20.7% 43.6%	101 30.8% 19.7%	328 36.9%
Column total	222 24.9%	156 17.5%	512 57.5%	890 100.0%

Note. Cell entries are n's, row percentages, and column percentages.

($\chi^2(4) = 327.37$, $p < .001$).

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