INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

Bell & Howell Information and Learning
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA

UMI
800-521-0600
RELATIONS BETWEEN ATTACHMENT REPRESENTATIONS
AND MORAL JUDGMENT

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Lance C. Garmon, M. A.

* * * * *

The Ohio State University

1999

Dissertation Committee:
Professor John Gibbs, Advisor
Professor Philip Clark
Professor Ellen Hock

Approved by
Professor John Gibbs, Advisor
Psychology Graduate Program
Copyright by
Lance Chadwick Garmon
1999
ABSTRACT

As early as 1944 Bowlby proposed a possible relationship between emotional attachment histories and the immoral behavior of “juvenile thieves,” but little empirical research has subsequently examined the relationship between attachment and morality. One notable exception is a study by Van IJzendoorn and Zwart-Woudstra (1995) which examined relations between parental attachment and both the developmental maturity level of moral judgment and Moral Type B ethical ideality, a moral judgment variable conceptualized as encompassing basic and universalized interpersonal and societal ideals (Kohlberg, 1984). These researchers found that dichotomous representations of secure or insecure attachment were related to Type B ideality but not to overall moral judgment maturity. The present study attempted to remedy methodological limitations inherent to Van IJzendoorn and Zwart-Woudstra’s study and included a measure of social perspective-taking to assess its’ possible mediating influence. More differentiated attachment measures were also used to examine relationships to mothers, fathers, peers, and romantic partners, as well as to assess both dichotomous categories of attachment.
Findings in the present study supported the existence of a relationship between representations of attachment and expressions of moral judgment. These relationships were most likely to involve representations of attachment to mothers or peers, rather than fathers or romantic partners, and to involve Type B ideality, rather than moral judgment maturity. Some support was also found for the contention that social perspective-taking abilities mediate the relationship between attachment representations and moral judgment maturity. In general, continuous measures of attachment dimensions were more likely to provide significant relationships than were dichotomous expression of secure/insecure attachment. Finally, new directions for future research were suggested, including an examination of the mediating influence autonomy and alienation may exert on the relationship between attachment and moral judgment, the relative influence that representations of attachment to mothers and fathers may exert throughout the life span, and the possibility that attachment and Type B ideality may exert a combined influence on moral behavior.
Dedicated to Jennifer and Wednesday

Without you to come home to at night, I doubt any of this would have been worth it.
ACKNOWLEDGMENTS

First or all, I wish to thank Dr. John Gibbs. Your patience and guidance during the trials of the last several years has certainly been noticed and appreciated.

I would also like to thank Dr. Philip Clark and Dr. Ellen Hock for their patience and expertise throughout this project, but especially during its development and completion.

Finally, I would like to thank Jennifer Shultz, whose professional expertise and advice has often been as important to me as her personal encouragement and support.
VITA

December 23, 1967

Born - Hugoton, Kansas

1990

B.A. Psychology, Washburn University

1994

M.A. Psychology, The Ohio State University


Graduate Teaching Associate
The Ohio State University

1997 - 1998

Research Supervisor, Survey Research Unit
The Ohio State University

1998

Adjunct Faculty Instructor
Columbus State Community College

1999 - present

Assistant Professor
The Ohio State University-Newark

PUBLICATIONS


FIELDS OF STUDY

Major Field: Psychology
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>ii</td>
</tr>
<tr>
<td>Dedication</td>
<td>iv</td>
</tr>
<tr>
<td>Acknowledgments</td>
<td>V</td>
</tr>
<tr>
<td>Vita</td>
<td>vi</td>
</tr>
<tr>
<td>List of Tables</td>
<td>xi</td>
</tr>
<tr>
<td>Chapters:</td>
<td></td>
</tr>
<tr>
<td>1. Overview and Background</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Attachment Theory</td>
<td>2</td>
</tr>
<tr>
<td>1.1.1 Origins in Infancy</td>
<td>2</td>
</tr>
<tr>
<td>1.1.2 Adult Attachment</td>
<td>5</td>
</tr>
<tr>
<td>1.1.3 Two Research Traditions in Adult Attachment</td>
<td>9</td>
</tr>
<tr>
<td>1.1.4 Adult Attachment Questionnaires</td>
<td>15</td>
</tr>
<tr>
<td>1.2 Moral Development Theory</td>
<td>21</td>
</tr>
<tr>
<td>1.2.1 Kohlberg’s Original Model and its Critics</td>
<td>21</td>
</tr>
<tr>
<td>1.2.2 Gibbs’ Neo-Kohlbergian Revision</td>
<td>25</td>
</tr>
<tr>
<td>1.2.3 Social Role-Taking Opportunities</td>
<td>27</td>
</tr>
<tr>
<td>1.3 Relations Between Attachment and Moral Judgment</td>
<td>28</td>
</tr>
<tr>
<td>1.3.1 Autonomy</td>
<td>30</td>
</tr>
<tr>
<td>1.3.2 Perspective-taking</td>
<td>32</td>
</tr>
<tr>
<td>1.3.3 van Uzendoorn and Zwart-Woudstra’s (1995) Study</td>
<td>33</td>
</tr>
<tr>
<td>1.4 The Present Study</td>
<td>34</td>
</tr>
<tr>
<td>1.4.1 Methodological Changes</td>
<td>35</td>
</tr>
<tr>
<td>1.4.2 Aims</td>
<td>37</td>
</tr>
</tbody>
</table>
2. Methods .......................................................................................................... 38
   2.1 Subjects ........................................................................................................ 38
       2.1.1 University Sample ........................................................................... 38
       2.1.2 Criminal Offender Sample ............................................................... 38
   2.2 Procedures .................................................................................................. 39
       2.2.1 University Sample ........................................................................... 39
       2.2.2 Criminal Offender Sample ............................................................... 39
   2.3 Measures ..................................................................................................... 39
       2.3.1 Sociomoral Reflection Measure–Short Form (SRM–SF) ................... 39
       2.3.2 Adult Attachment Scale (AAS) ......................................................... 44
       2.3.3 Inventory of Parent and Peer Attachment (IPPA) .............................. 47
       2.3.4 Perspective-Taking: Post-Childhood Opportunities for Role-Taking (PC-ORT) ................................................................. 50

3. Results ............................................................................................................ 51
   3.1 1) Interrelationship Among Variables ........................................................ 52
       3.1.1 1a) Attachment Variables ................................................................. 52
       3.1.2 1b) Moral Judgment Variables ......................................................... 58
   3.2 2a) Gender Differences ............................................................................. 60
   3.3 2b) Role-Taking Opportunities ................................................................. 60
   3.4 3-5) Relationships Between Attachment and Moral Judgment ............... 62
       3.4.1 Attachment Categories and Moral Judgment ..................................... 64
       3.4.2 Overall Attachment Security and Moral Judgment ............................ 66
       3.4.3 Attachment Dimensions and Moral Judgment .................................... 67
       3.4.4 Sociomoral Aspects ........................................................................... 72
   3.5 7) Criminal Offender Subsample ............................................................... 75
   3.6 Summary ..................................................................................................... 75

4. Discussion ...................................................................................................... 79
   4.1 Relations Between Attachment and Moral Judgment ............................... 80
   4.2 Mediating Influences of Social Perspective-Taking .................................... 81
   4.3 Theories of Attachment and Moral Judgment .......................................... 83
   4.4 Summary ..................................................................................................... 88

List of References .................................................................................................... 90
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Attachment Behavior Categories from Ainsworth’s Strange Situation Research</td>
</tr>
<tr>
<td>1.2</td>
<td>Kohlberg’s Stages of Moral Development</td>
</tr>
<tr>
<td>2.1</td>
<td>Comparison of Global Sociomoral Stage Distributions</td>
</tr>
<tr>
<td>3.1</td>
<td>Agreement in Attachment Security Classification Categories</td>
</tr>
<tr>
<td>3.2</td>
<td>Relationships between Attachment Dimensions</td>
</tr>
<tr>
<td>3.3</td>
<td>Relationships between Continuous Overall Attachment and Attachment Dimensions</td>
</tr>
<tr>
<td>3.4</td>
<td>ANOVA F Values for Continuous Attachment by Attachment Categories</td>
</tr>
<tr>
<td>3.5</td>
<td>Moral Judgment Maturity Means by Moral Ideality Categories</td>
</tr>
<tr>
<td>3.6</td>
<td>Continuous Scores for Gender Categories</td>
</tr>
<tr>
<td>3.7</td>
<td>Role-Taking Opportunity Means for Dichotomous Categories</td>
</tr>
<tr>
<td>3.8</td>
<td>SRMS and Continuous Type B Means for Attachment Categories</td>
</tr>
<tr>
<td>3.9</td>
<td>Overall Attachment Security Means for Moral Ideality Categories</td>
</tr>
<tr>
<td>3.10</td>
<td>Attachment Dimension Means for Moral Ideality Categories</td>
</tr>
<tr>
<td>4.1</td>
<td>Findings on the Relationship between Attachment Representations and Expression of Moral Judgment</td>
</tr>
</tbody>
</table>
Chapter 1
Overview and Background

In recent years, attachment research has extended beyond caretaker-infant relations to study the life span implications of attachment relationships. This recent research has included studying the impact of infant attachment relationships on subsequent child cognitive and socioemotional development, as well as explaining the evolving meaning of the attachment relationship during adolescence and adulthood. Of particular interest to the present study is a recent study (van IJzendoorn and Zwart-Woudstra, 1995) examining the relations between representations of parental attachment and expressions of moral judgment among adolescents and young adults. Van IJzendoorn and Zwart-Woudstra’s conceptualizations of attachment and moral judgment are derived from the theoretical traditions of John Bowlby (1969) and Lawrence Kohlberg (1984), respectively. Relevant aspects of these theories, as well as subsequent revisions of the two theories, are reviewed below. Finally, a replication and extension of van IJzendoorn and Zwart-Woudstra’s work is described and discussed in regard to current theories.
Attachment Theory

Origins in Infancy. According to Bowlby’s (1982, 1988) evolutionary-ethological approach to attachment relationships, an infant’s early experiences with others, especially the primary care-giver, result in an internal representation, or “internal working model” of emotional attachment that shapes the growing child’s approach to, and psychological interpretation of, subsequent socioemotional relationships. In particular, the timeliness and sensitivity of the parent’s responses over numerous exchanges with the child result in the child forming expectations as to the future availability and responsiveness of the parent. In addition to representing a child’s expectations relating to the availability of care and access to trustworthy and helpful others (Armsden and Greenberg, 1987), these internal working models are thought to lead the child to form judgments about the self as worthy or unworthy of love, care, or attention (Armsden and Greenberg, 1987; Sroufe, 1988; Collins and Read, 1990; Bartholomew, Cobb, and Poole, 1997). A final key component of Bowlby’s attachment theory is the concept of

a secure base from which a child or an adolescent can make sorties into the outside world and to which he can return knowing for sure that he will be welcomed when he gets there, nourished physically and emotionally, comforted if distressed, reassured if frightened.

(Bowlby, 1988, p. 11)

Subsequent work by a number of researchers has expanded upon the concepts posited in Bowlby’s original theory of attachment. The work by Mary Ainsworth and her colleagues (Ainsworth, Blehar, Waters, and Wall, 1978) might be the most
influential. Ainsworth's work has made substantial theoretical contributions to attachment theory, but perhaps her most significant contribution was the development of a classification scheme to distinguish between different internal working models of attachment based on infant behaviors. Her original findings were validated through both laboratory and home observations (Ainsworth et al., 1978; Bowlby, 1982; Bretherton, 1995), but her method commonly used by other researchers is the "controlled laboratory procedure" (p. xi) known as the Strange-Situation.

Ainsworth et al. (1978) detailed both the attachment classification scoring procedures and the actual infant interaction process comprising the strange-situation. Scoring criteria for Ainsworth's strange-situation relates to six behavioral variables the infant may or may not perform: Proximity and Contact Seeking, Contact Maintaining, Resistance, Avoidance, Search, and Distance Interaction. The infant participates in eight episodes incorporating variables such as entering a novel environment, interacting with a stranger, being left alone, and perhaps most critically, being reunited with a caregiver. Based upon the eight infant behavior criteria, Ainsworth's research revealed three distinct styles or categories of interaction (see Table 1.1).

Ainsworth et al. (1978) posits that each of the three behavioral categories reflect a distinct internal working model of attachment. Rothbard and Shaver (1994) summarized the basic attachment behavior categories, noting that infants classified as securely attached experience distress when separated from their primary care-giver, seek comfort when the care-giver returns, and freely explore their environment when
Group A: [Avoidant]
—Conspicuous avoidance of proximity to or interaction with the mother in the reunion episodes. Either the baby ignores his mother on her return, greeting her casually if at all, or, if there is approach and/or a less casual greeting, the baby tends to mingle his welcome with avoidance responses—turning away, moving past, averting the gaze, and the like.
—Little or no tendency to seek proximity to or interaction or contact with the mother, even in the reunion episodes.
—If picked up, little or no tendency to cling or to resist being released.
—On the other hand, little or no tendency toward active resistance to contact or interaction with the mother, except for probable squirming to get down if indeed the baby is picked up.
—Tendency to treat the stranger much as the mother is treated, although perhaps with less avoidance.
—Either the baby is not distressed during separation, or the distress seems to be due to being left alone rather than to his mother’s absence. For most, distress does not occur when the stranger is present, and any distress upon being left alone tends to be alleviated when the stranger returns...

Group B: [Secure]
—The baby wants either proximity and contact with his mother or interaction with her, and he actively seeks it, especially in the reunion episodes.
—If he achieves contact, he seeks to maintain it, and either resists release or at least protests of he is put down.
—The baby responds to his mother’s return in the reunion episodes with more than a casual greeting—either with a smile or a cry or a tendency to approach.
—Little or no tendency to resist contact or interaction with his mother.
—Little or no tendency to avoid his mother in the reunion episodes.
—He may or may not be friendly with the stranger, but he is clearly more interested in interaction and/or contact with his mother than with the stranger.
—He may or may not be distressed during the separation episodes, but if he is distressed this is clearly related to his mother’s absence and not merely to being alone. He may be somewhat comforted by the stranger, but it is clear that he wants his mother.

Group C: [Anxious/Ambivalent]
—The baby displays conspicuous contact- and interaction-resisting behavior, perhaps especially in Episode 8.
—He also shows moderate-to-strong seeking of proximity and contact and seeking to maintain contact once gained, so that he gives the impression of being ambivalent to his mother.
—He shows little or no tendency to ignore his mother in the reunion episodes, or to turn or move away from her, or to avert his gaze.
—He may display generally “maladaptive” behavior in the strange situation. Either he tends to be more angry than infants in other groups, or he may be conspicuously passive.


Table 1.1: Attachment Behavior Categories from Ainsworth’s Strange-Situation Research
the care-giver is present. Insecure categories for infants can take two forms. First, an infant classified as anxiously or ambivalently attached also experiences distress when the primary care-giver leaves but is extremely difficult to reassure when the care-giver returns. Second, an infant classified as avoidantly attached experiences little or no distress when the primary care-giver leaves and does not seek direct contact upon the return of the care-giver.

Of the three categories, secure attachment relationships are thought to be the most advantageous. Research consistently indicates secure attachment relationships are associated with "healthy human development" (Garbarino, 1998, p. 29), exhibited in both socioemotional (Oppenheim, Sagi, and Lamb, 1988) and cognitive variables (Jacobsen, Edelstein, and Hofmann, 1994; Meins, 1997). Specific advantages include the areas of visual self-recognition (Schneider-Rosen and Cicchetti, 1984), empathy (Kestenbaum, Farber, and Sroufe, 1989), intelligence (van IJzendoorn, Dijkstra, and Bus, 1995), ego strength (Meins, 1997) and—most relevant to the present study—autonomy (Meins, 1997) and social perspective-taking (Bowlby, 1982; 1988).

Adult Attachment. Research focusing on the positive outcomes of secure attachment relationships in childhood is more common than research examining the influence of attachment throughout the life span (Allen and Hauser, 1996), but the internal working models of attachment relationships which originate in infancy are thought to remain influential throughout the life span (Armsden and Greenberg, 1987; Main, 1995; Collins, 1996; Stein, Jacobs, Ferguson, Allen, and Fonagy, 1998; van
Uzendoom and Bakermans-Kranenburg, 1997). Accordingly, recent emphasis in attachment research has expanded to include adult representations of attachment relationships (Main and Goldwyn, 1994; Collins and Read, 1990; Hazen and Shaver, 1987; Armsden and Greenberg, 1987; Sperling and Berman, 1994; Parkes, Stevenson-Hinde, and Marris, 1991). Consistent with the concept of a secure base as described by Bowlby, Berman and Sperling (1994) define adult attachment as “the stable tendency of an individual 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).

By adulthood, attachment research has become more complex. Some of this apparent complexity arises out of the changing dynamic in preexisting relationships. For many individuals, parents continue to provide that “safety and security” throughout the individual’s entire life, but the strength and quality of the attachment relationships to parents also continue to evolve throughout adolescence and adulthood. For example, recent research (Mickelson, Kessler, and Shaver, 1997) on the relative importance of attachment relationships to each parent indicate that while relationships with mothers are more important than relationships with fathers for college students, relationships to both parents have equal importance for older adults.

There is also usually an increase in the number and type of attachment relationships as a person ages. In contrast to the strong reliance on parental and/or caretaking relationships inherent to childhood, relationships in adolescence and
adulthood are “often directed toward non-parental figures” (Armsden and Greenberg, 1987, p. 429). While parents continue to act as important attachment figures during adolescence and young adulthood (Cooper, Shaver, and Collins, 1998; Mickelson et al., 1997), "other adults may come to assume an importance equal to or greater than that of the parents" (Bowlby, 1982, p. 207). These other adults can include either authority figures such as teachers or peer attachment figures such as friends (Armsden and Greenberg, 1987) and romantic partners (Bowlby, 1982; Hazen and Shaver, 1987; Sperling, Foelsch, and Grace, 1996).

As the number of attachment relationships expands, the possibility arises for the existence of multiple internal working models (Eagle, 1995, p. 127). Bowlby always acknowledged the possibility that during infancy, internal working models may vary for different caregivers, particularly between relationships with mother and with father (Bowlby, 1988). A different developmental pathway is thought to exist for each model (Bowlby, 1988; Bartholomew and Shaver, 1998). Hence, as the individual ages and develops more relationships, the number of developmental pathways increases as well. It is conceivable that within the same individual these different pathways could lead to secure attachment representations in some relationships and insecure attachment representations in others. This possibility is supported by Allen and Hauser’s (1996) proposition that insecure attachment representations can be “arrived at via at least several independent routes (including psychopathology and several indices of
problematic adolescent-parent interactions)" (p. 808), where these insecure routes may exist in the development of some relationships but not others.

These possibilities are not presented to suggest that a completely unique attachment representation has to develop for each relationship a person has during that person's life, but rather to propose that for some individuals, both secure and insecure representations of attachment can develop and coexist. It is assumed that many relationships will be strongly influenced by previous relationships, and that the attachment representations developed in infancy are carried forward and imposed on subsequent relationships (Bowlby, 1988). In addition, all the relationships a person develops will not necessarily involve different attachment representations since not all relationships in adolescence and adulthood are thought to be significant enough to function as an attachment relationship. Based on Bowlby's descriptions of secure attachment relationships, Trinkle and Bartholomew (1997) maintain that a person must satisfy some component need in a person's life before they act as an attachment figure—components such "as a safe haven in times of distress...[or] a secure base from which to venture out" (p. 604)—and not every relationship satisfies such a need. For the collection of individuals satisfying a person's attachment needs, an attachment hierarchy can be determined, which Trinkle and Bartholomew (1997) define as a "collection of others arranged according to whom the individual prefers to orient toward for various components of attachment" (p. 604).
Trinkle and Bartholomew's (1997) study exhibits the complexity inherent to adult attachment relationships noted above. They found that it was not uncommon for subjects to report ten significant relationships, of which on average five could be classified as attachment relationships. The hierarchical ordering of the attachment relationships was consistent: mothers first, then fathers, siblings, and finally best friends. The only variation occurred when the individual reported an attachment relationship with a romantic partner and then that relationship ranked highest in the hierarchy. The relative order of relationships with mothers, fathers, siblings, and friends was consistent for those subjects with and without an attachment relationship to a romantic partner. Interestingly, although mothers were always rated as the highest attachment relationship and peers as the lowest, when the function of each attachment relationship was examined, results indicated “college students tend to orient toward peers more readily for safe haven than for secure base functions and toward parents in the opposite manner” (p. 619).

**Two Research Traditions in Adult Attachment.** As researchers attempt to assess the complex nature of adult attachment relationships, two broad traditions of theory and research have emerged (Bartholomew and Shaver, 1998; Simpson and Rholes, 1998; Crowell, Treboux, and Waters, 1999). Both traditions agree the internal working models of attachment developed during infancy continue to influence attachment relationships into adulthood, but each approaches the construct of attachment differently. These differences include both the type of relationship dyad
being examined and the methodology used to assess it. Bartholomew and Shaver (1998) note that the first approach is based on an adult interview developed by Mary Main and her colleagues, is based in psychodynamic theory, and continues Ainsworth’s focus on parental relationships during childhood. The second tradition originates from Hazen and Shaver’s (1987) work with a simple attachment questionnaire, relies heavily on personality and social psychology, and includes other attachment relationships besides those with parents, such as relationships to peers and romantic partners.

Crowell, Treboux, and Waters (1999) note that it is often developmental psychologists who use the former measure, and social psychologists who use the latter.

Although both traditions do rely on Bowlby’s original attachment theory, the first tradition relies more heavily on Ainsworth’s work than does the second tradition. In fact, Main’s Adult Attachment Interview (AAI; 1995) measure “was developed expressly to predict [Ainsworth’s] Strange Situation behavior” in the infants of parents assessed via the AAI (Simpson and Rholes, 1998, p. 4). The AAI focuses solely on childhood representations of attachment, but assesses those representations during adulthood via an interview rather than during childhood as Ainsworth’s methods do. The adult interview assesses indirect revelations of unconscious attachment representations produced during a stressful interview by examining childhood relationship situations; an encounter which is intended to mirror the stressful nature of Ainsworth’s Strange Situation procedure with infants. Main (1995) describes the process as:
a structured, hour-long, semiclinical interview focusing on early experiences and their effects. Subjects are asked for five adjectives to describe their relationship to each parent during childhood and are then asked for memories that support each adjective. They are asked whether they felt closer to one parent and why; whether they had ever felt rejected; whether parents had been threatening or abusive; why parents may have behaved as they did; and how these experiences may have affected the development of their personality. Subjects are also asked about any major loss experiences...For purposes of analysis, each interview is transcribed verbatim, and judges seeking to determine the speaker’s “state of mind with respect to attachment” rely entirely on the discourse transcript.

Matches are made between the interview transcripts and one of four attachment style classifications possible via the AAI. While Ainsworth's strange-situation results identified three behavioral classifications, four classification styles are identified by the adult interview: Secure-Autonomous, Dismissing, Preoccupied, and Unresolved/Disorganized. Van IJzendoorn and Zwart-Woudstra (1995) note that the new adult attachment representation terms developed by Main and her colleagues are designed to indicate the strategies an individual may use to “deal with past attachment experiences” (p. 362).

Van IJzendoorn and Zwart-Woudstra (1995) also summarize the three strategies that correspond most directly with Ainsworth strange-situation categories. A secure-autonomous individual values past “relationships and view[s] these relationships as having been influential in their development [and is] able to describe their childhood experiences and emotions in an objective and plausible manner—whether these experiences were positive or negative” (p. 362). In a less objective manner, dismissing
(i.e., avoidant) individuals “tend to idealize their parents and to deny negative experiences and emotions, [in particular to] dismiss attachment relationships as having little influence or value when they acknowledge having experienced negative childhood events” (p. 362). Preoccupied (i.e., anxious) individuals “demonstrate a continuing involvement or preoccupation with past and current attachment relationships” (p. 362), almost to the point of reliving negative childhood events.

Most researchers agree that the AAI is "uniquely revealing" (Brennan, Clark, Shaver, 1998, p. 46) and an "important tool in the study of adult attachment" (Crowell et al., 1999, p. 14), but they also acknowledge practical concerns related to its expense and complexity, both to administer and to score (Feeney, Noller, and Hanrahan, 1994; van IJzendoorn and Bakermans-Kranenburg, 1997; Simpson and Rholes, 1998; Crowell et al., 1999). These concerns limit its accessibility and usefulness (Feeney et al., 1994; Crowell et al., 1999) and, some feel, make its use "impractical for most researchers" (Brennan, Clark, Shaver, 1998, p. 46). These concerns that have led to the proliferation and popularity of the second tradition of adult attachment research which primarily uses questionnaires to assess representations of attachment. In contrast to the first research tradition which utilizes Main’s methodology almost exclusively and attempts to assess unconscious representations of attachment relationships via stressful interviews, the second tradition currently utilizes a variety of self-report measures, all of which focus on feelings and behaviors in close relationships of which a person is aware and can accurately describe.
As noted above, the second tradition of research in adult attachment is usually traced back to Hazen and Shaver's (1987) introduction of a simple "but surprisingly effective" (p. 521) attachment questionnaire. Ironically, although Main's AAI is more directly linked theoretically to Ainsworth's theory and continues to examine parental relationships as Ainsworth did, the terminology described above that Main utilizes to classify attachment categories is different from Ainsworth's. Hazen and Shaver retain Ainsworth's infant attachment terms—secure, anxious, and avoidant—when studying non-parental attachment relationships in adulthood. However, Hazen and Shaver's (1987) definitions of these attachment categories vary significantly from Ainsworth's, primarily because they are designed to reflect romantic love and relationships as "a process of becoming attached" (p. 511) rather than parental attachment relationships.

Hazen and Shaver's (1987) definitions of adult attachment are embedded in their measure itself, in which each subject is asked:

Which of the following best describes your feelings?
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 it relatively easy to get close to others and am comfortable depending on them and having them depend on me. I don't often worry about being abandoned or about someone getting too close to me.
C) 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 merge completely with another person, and this desire sometimes scares people away.

(p. 515)
In Hazen and Shaver's (1987) research model, an individual's identification with one of the three options reflects both their internal working model of romantic attachment relationship and their general view of love. An individual with a secure attachment representation identifies with option B, reflecting an internal working model of love relationships "characterized by trust, friendship, and positive emotions" (p. 513) and indicating an individual who truly believes in enduring love. Individuals with an avoidant representation identify with option A, indicating an internal model "marked by a fear of closeness and lack of trust" (p. 513) and reflecting an individual who doubts the existence of romantic love. Finally, individuals identifying with option C are classified as having an anxious representation of attachment, "experience love as a preoccupying, almost painfully exciting struggle to merge with another person “ (p. 513), and often fall in love frequently and easily but have difficulty finding true love.

Hazen and Shaver's (1987) acknowledge that their questionnaire may be too simplistic for extensive use, but their examination of an attachment relationship beyond the original parental relationship first studied by Ainsworth has served as the genesis for a proliferation of attachment research in adulthood. Bartholomew and Shaver (1998) note that this second tradition of adult attachment research now includes the assessment of a variety of adult social relationships, including romantic relationships both within marriages and without (Collins and Read, 1990), friendships with peers (Armsden and Greenberg, 1987), and adult representations of current relationships with parents (Armsden and Greenberg, 1987). Although diverse, the measures employed
throughout this tradition are designed to assess the same underlying attachment representation that Bowlby proposed originate in infancy. These measures, however, are designed to assess the adult permutations of the internal working models first developed in childhood, not the childhood models themselves.

**Adult Attachment Questionnaires.** Although the ease of administration and scoring for the questionnaires in the second tradition of adult attachment research have resulted in their increased popularity to researchers, the validity of these questionnaires continues to be debated. A number of critics have argued against the use of any attachment questionnaire (see Crowell and Treboux, 1995; De Haas, Bakermans-Kranenburg, and van IJzendoorn, 1994; Wampler, Shi, and Nelson, 1997; Stein et al., 1998), although these criticisms usually rely on comparisons between the questionnaires and the AAI rather than a direct examination of the questionnaire’s effectiveness. On the positive side, some of these critics do concede that while "the questionnaires developed thus far lack satisfying convergent validity and cannot be used as an alternative for the AAI" (van IJzendoorn and Bakermans-Kranenburg, 1997, p. 149), this does not "invalidate any of the measures" (Stein et al., 1998, p. 73) nor does it "imply that each assessment [method] is not useful, only that they are not interchangeable" (Crowell et al., 1999, p. 15).

Questions have also recently been raised regarding the manner in which the critical comparisons of interview and questionnaire measures of adult attachment were conducted. While acknowledging that comparisons between the two traditions of adult
attachment research typically “conclude that the two kinds of measures fail to correspond” (p. 28), Bartholomew and Shaver (1998) question the comparison studies themselves rather than the measures, maintaining that “direct comparison between the AAI and the Hazen and Shaver measure are misleading” (p. 38). They raise a number of theoretical and methodological concerns they do not feel are adequately addressed by previous researchers comparing the two methods (e. g., van IJzendoorn and Bakermans-Kranenburg, 1997; Crowell et al., 1999). One concern is an apparent lack of power analyses before performing statistical tests, and subsequently the use of samples too small to support any conclusion other than the acceptance of the null hypothesis (i.e., the assertion that the two measures are not related). Although the complexity of the AAI makes it difficult to collect large samples when comparing the two methodologies, small samples practically guarantee the subsequent rejection of any significant convergence between the measures because of low statistical power. Bartholomew and Shaver also note that Main’s AAI measure results in four categories of attachment, whereas self-report measures often only allow for three scorable categories, further reducing the likelihood “that the two kinds of measure will converge strongly” (p. 29). Perhaps most compelling of Bartholomew and Shaver’s concerns is the fact that the two traditions of research are attempting to assess different domains of attachment (i.e., parental vs romantic peer relationships), which would only allow for an expectation of “modest associations, at best” (p. 30). Nonetheless, Bartholomew and Shaver conclude “that when appropriate comparisons are drawn, one finds considerable
evidence for convergence across various measure of adult attachment" (p. 38). While these arguments do not justify the inclusion of questionnaires in all attachment research, they do, along with the practical arguments against the use of the time-consuming interview and scoring processes of the AAI, raise questions about the automatic reaction against attachment questionnaires that has become common in developmental psychology articles (e.g., van IJzendoorn and Bakermans-Kranenburg, 1997; Crowell et al., 1999).

A positive aspect of attachment questionnaires is their sensitivity to certain continuous dimensions of attachment relationships that are thought to underlie the discrete behavioral attachment categories. Although Ainsworth did develop both continuous and discrete scoring systems with the Strange Situation, most researchers have focused only on the three discrete attachment categories of securely, avoidantly, and anxiously attached, and have even reduced the categories further into a dichotomous secure vs insecure variable (Main, 1995). Ainsworth et al (1978) maintained that "the categories are [useful] tools, not ‘absolutes’" (p. 56) and welcomed the prospect of additional dimensions being revealed by future researchers. Main's interview is primarily used to classify subjects into discrete categories, but she also proposes that the classifications should be viewed as necessary first step that "represent provisional, albeit nonarbitrary approximations" (p. 422).

Research utilizing the discrete categories, especially those utilizing a secure/insecure dichotomy distinction, is not immaterial—as noted earlier, a well-
supported relationship exists between security of attachment to parents and a variety
of positive developmental outcomes—but researchers have begun to question the
exclusive use of categorical distinctions in attachment research when additional variables
are now available (Brennan, Clark, and Shaver, 1998; Collins and Read, 1990, Fraley
and Waller, 1998; Simpson and Rholes, 1998). Collins and Read (1990) echo a common
position of many researchers when they propose that measures designed to assess
continuous dimensions underlying the three discrete categories provide “a more
sensitive measure of adult attachment” (p. 650), which “would provide a better
understanding and more precise definition...clarify[ing] what we mean when we say
that someone has a secure or anxious style of attachment in adulthood” (p. 647).
Conceptually, the use of discrete attachment categories assumes that individuals
develop internal working models of attachment that are exclusively secure, exclusively
avoidant, or exclusively anxious and do “not indicate the extent to which each
attachment category [is] characteristic of a given individual” (Simpson and Rholes, p.
10). In contrast, continuous scores on attachment dimensions reflect the extent to
which each of these various relationship dimensions—such as trust, dependency, or
alienation—are represented within each individual’s internal working model of
attachment (Fraley and Waller, 1998). Simpson and Rholes also note that discrete
attachment variables limit a researcher’s possible range of data-analytic options to
those statistical procedures that analyze categorical variables, excluding procedures
such as most forms of regression analysis. A final conceptual issue with discrete
categories noted by Hazen and Shaver as early as 1987 is a tendency to "vacillate between using the terms secure, avoidant, and anxious/ambivalent to describe relationships and using them to categorize people" (p. 522).

One compromise developers of adult attachment questionnaires have reached is to include scoring procedures for both discrete and continuous indices of attachment. Two measures that represent this compromise are Collins and Read's (1990) Adult Attachment Scale (AAS) and Armsden and Greenberg's (1987) Inventory of Parent and Peer Attachment (IPPA). The AAS is partially based on Hazen and Shaver's (1987) measure and reflects an individual's expectations of romantic relationships, particularly the manner in which the "self" in represented in a romantic relationship. Consistent with the concept of continuous measures of attachment, the AAS provides scores for three attachment dimension. The first dimension score, identified as Close attachment, reflects "the extent to which subjects were comfortable with closeness and intimacy" (p. 646). The second dimension score, labeled Depend attachment, reflects "the extent to which subjects could trust others and depend on them to be available when needed" (p. 646). The final dimension score, Anxiety attachment, reflects "anxiety in relationships, such as fear of being abandoned and not being loved" (p. 646). The dimension scores are obtained by summation, with higher scores on a dimension suggesting the subject's internal representations of attachment is more characteristic of that dimension. Attachment style categories of secure, avoidant, and anxious attachment are also obtained using a cluster analysis based on the subject's respective
Instead of assessing romantic attachment relationships, the IPPA (Armsden and Greenberg, 1987) measures an adolescent’s attachment relationships to both parents and peers using the attachment dimensions of Trust, Communication, and Alienation. These three dimensions were determined via factor analysis of 60 original items, where the Trust dimension items suggested “themes of...understanding and respect, and mutual trust” (p. 433), the Communication dimension items “related to the extent and quality of verbal communication” (p. 433), and the Alienation dimensions items “suggested feelings of alienation and isolation” (p. 433). Separate sections within the measure contain items specific to relationships with Mothers, Fathers, or Peers (defined in the questionnaire as their “closest friends”). Nine summary dimension scores result, one for each attachment dimension in each relationship dyad (Mother Trust, Mother Communication, Mother Alienation, Father Trust, etc). In addition, overall security of attachment scores for each relationship (Mother, Father, and Peer) can be calculated, with higher scores representing higher security of attachment. Finally, a dichotomous security of attachment variable is calculated for each attachment relationship dyad according to a series of procedures outlined by Armsden and Greenberg (1987). This dichotomous score reflects either secure or insecure attachment, rather than allowing for the three attachment categories available in other measures. (see Methods Sections for a more detailed explanation of this measure)
To summarize, no matter what form the attachment outcome variables take, the theory behind the measures is intended to be consistent with Bowlby’s (1988) original attachment theory. An infant’s early experiences in a relationship involving a primary caregiver creates an internal working model by which all subsequent relationships are filtered and interpreted. In adulthood, it is thought that all strong emotional relationships will reflect that early representation of an attachment relationship developed in infancy, whether the adult relationship is with parents, peers, or romantic partners, although the different developmental pathways for each relationship may result in different representations of attachment specific to each relationship. Controversy exists regarding the most appropriate method to assess adult attachment, arguments can be made for the use of comprehensive attachment questionnaires that produce attachment scores reflecting both discrete categories of attachment and continuous dimensions of attachment underlying those discrete categories.

**Moral Developmental Theory**

**Kohlberg’s Original Model and its Critics.** In contrast to attachment theory’s emphasis on a typological classification established early in childhood, Lawrence Kohlberg’s (1984; 1973/1994) theory of moral development posits a series of sequential stages of development from immature to mature moral judgment. Kohlberg’s theory is largely derived from Piaget’s cognitive-developmental stage model, which posited a two-step distinction between heteronomous and autonomous morality. Kohlberg “found that Piaget’s two dimensions were insufficient to categorize all the
types of moral reasoning found in his dissertation study” (Devries, 1991, p. 8). Both Piaget and Kohlberg maintained that moral judgment stage progression involves the “construction” of progressively mature moral meaning. Upward progression occurs as individuals determine that their current stage of moral reasoning strategy is inadequate for resolving a current moral dilemma and develop a more complex—i.e., more cognitively mature—strategy to resolve the dilemma. Kohlberg concluded that this constructive process results in a cross-culturally standard sequence of six hierarchically ordered moral judgment stages across 3 levels (see Table 1.2).

Kohlberg’s theory has been criticized (see Gilligan, 1977; 1982/1993; Gibbs, 1977; 1979; Gibbs, Basinger, and Fuller, 1992) and modified, both by Kohlberg (1984; 1990) and others. Many of these critics (Gibbs et al., 1992; Habermas, 1990; Puka, 1990) have argued that Kohlberg’s stage typology must be re-examined, especially in light of studies indicating the rarity of Kohlberg’s highest, postconventional stages. Kohlberg’s first four stages are consistently evidenced in longitudinal studies (e.g., Colby, Kohlberg, Gibbs, and Lieberman, 1983; Page, 1981; and Walker, 1989), are "represented in a wide range of groups" (Snarey, 1985, p. 218) across diverse culture, and appear to follow a stage sequence consistent with Piaget’s cognitive-developmental theory (Gibbs, 1977; Habermas, 1990).

The same cannot be said of the postconventional stages (Gibbs, 1977; Kohlberg, 1984; Habermas, 1990). Incidence of stage 6 moral reasoners is extremely rare (Locke, 1994; Gibbs et al., 1992); so rare that in 1984 Kohlberg acknowledged “Stage 6 has
I. Preconventional level: At this level the child is responsive to cultural rules and labels of good and bad, right or wrong, but interprets these labels either in terms of the physical or the hedonistic consequences of action (punishment, reward, exchange of favors) or in terms of the physical power of those who enunciate the rules and labels. The level is divided into the following two stages:

Stage 1: *The punishment-and-obedience orientation.* The physical consequences of action determine its goodness or badness regardless of the human meaning or value of these consequences. Avoidance of punishment and unquestioning deference to power are valued in their own right, not in terms of respect for an underlying moral order supported by punishment and authority ...

Stage 2: *The instrumental-relativist orientation.* Right action consists of that which instrumentally satisfies one's own needs and occasionally the needs of others. Human relations are viewed in terms like those of the market place. Elements of fairness, of reciprocity, and of equal sharing are present, but they are always interpreted in a physical pragmatic way. Reciprocity is a matter of "you scratch my back and I'll scratch yours," not of loyalty, gratitude, or justice.

II. Conventional level: At this level, maintaining the expectations of the individual's family, group, or nation is perceived as valuable in its own right, regardless of immediate and obvious consequences. The attitude is not only one of conformity to personal expectations and social order, but of loyalty to it, of actively maintaining, supporting, and justifying the order, and of identifying the persons or group involved in it. At this level, there are the following two stages:

Stage 3: *The interpersonal concordance or "good boy---nice girl" orientation.* Good behavior is that which pleases or helps others and is approved by them. There is much conformity to stereotypical images of what is majority or "natural" behavior. Behavior is frequently judged by intention—"he means well" becomes important for the first time. One earns approval by being "nice."

Stage 4: *The "law and order" orientation.* These is orientation toward authority, fixed rules, and the maintenance of the social order. Right behavior consists of doing one's duty, showing respect for authority, and maintaining the given social order for its own sake.

III. Postconventional, autonomous, or principled level: At this level, there is a clear effort to define moral values and principles that have validity and application apart from the authority of the groups or persons holding these principles and apart from the individual's own identification with these groups. This level again has two stages:

Stage 5: *The social-contract legalistic orientation,* generally with utilitarian overtones. Right action tends to be defined in terms of general individual rights, and standards which have been critically examined and agreed upon by the whole society. There is a clear awareness of the relativism of personal values and opinions and a corresponding emphasis upon procedural rules for reaching consensus ...

Stage 6: *The universal-ethical-principle orientation.* Right is defined by the decision of conscience in accord with self-chosen ethical principles appealing to logical comprehensiveness, universality, and consistency. These principles are abstract and ethical (the Golden Rule, the categorical imperative); they are not concrete moral rules like the Ten Commandments. At heart, these are universal principles of justice, of the reciprocity and equality of human rights, and of respect for the dignity of human beings as individual persons.


Table 1.2: Kohlberg's Stages of Moral Development
disappeared as a commonly identifiable form of moral reasoning” (p. 270), at least until “further philosophical refinement and psychological clarification” could be completed (Kohlberg et al., 1990, p. 151-2). Stage 6 scoring procedures were removed completely from the most recent scoring procedures (Colby et al., 1983), and stage 5 is extremely uncommon in these same scoring procedures (Colby et al., 1983; Markoulis, 1989; Gibbs et al., 1992).

In addition to empirically based arguments against the existence of these postconventional stages, theoretical arguments exist as well. Stage 6 is often criticized for being an arbitrary, non-universalizable endpoint in the development of “adequate” levels of moral reasoning (Puka, 1990), as well as being unique to western civilizations (Puka, 1990) and potentially discriminatory against women in its emphasis on justice-based morality (Gilligan, 1977; 1982/1993). Theoretical arguments discounting the existence of stage 5 are most often based on Gibbs’ (1979) proposition that they do not satisfy the requirements necessary to be identified as a “natural” stage in Piaget’s cognitive developmental framework (Habermas, 1990; Markoulis, 1989) and that they “constitute ethical and/or political philosophies rather than standard stages” of development (Mason and Gibbs, 1993, p. 111). Although detractors to Gibbs’ views exist (see Kohlberg et al., 1990; Kohlberg, 1973/1994; Markoulis, 1989), Habermas reexamined the question of whether stage 5 constitutes a natural stage and concluded that “substantial variation in structure and content in postconventional responses to
moral dilemmas and the various moral philosophical approaches cannot be attributed to natural stages” (p. 227-8).

Such concerns have led some researchers to propose the existence of a different form of moral development in adulthood, beyond those stages consistent with Piaget’s theory of cognitive development (Murphy and Gilligan, 1980). Even Kohlberg (1984) speculated that these “different formulations of adult developmental change...[might involve] ‘soft,’ ’post-Piagetian’ levels” (p. 213). This could include a variety of moral endpoints in development, depending upon individual experiences (Puka, 1990). Gibbs (1979) proposes that such a solution is as simple as “a two-phase view [of moral judgment development] which emphasizes the distinction between standard (child) and existential (adult) development” (p. 109). In this proposal, Kohlberg’s first four stages are retained, and postconventional moral judgments are seen as separate forms of moral development not directly relevant to Piaget’s and Kohlberg’s models.

**Gibbs’ Neo-Kohlbergian Revision.** In Gibbs et al.’s (1992) re-examination of the development of moral judgment, moral maturity is reassessed as already evident in stages Kohlberg had characterized as merely "conventional," namely, stages 3 and 4. In Gibbs et al.’s neo-Kohlbergian typology, maturity characterizes the emergent understanding of mutual trust as the basis of interpersonal relationships (stage 3) and societal systems (stage 4). Gibbs et al. argue that in his latter years Kohlberg was moving toward a theoretical acknowledgement of the maturity of stages 3 and 4 through his recognition that ethical ideality, or moral "Type B," could be identified at these
stages. Analogous to Piaget’s original heteronomous/autonomous dimensions of morality (Devries, 1991), Type A/Type B classifications were originally developed to account for an apparent regression of moral stage levels in Kohlberg’s original sample (Kohlberg, 1984; Gibbs et al., 1992), where the original definitions for stages 3 and 4 now describe stage 3A and 4A (Gibbs, 1979) and “the material that was formally scored as Stage 6 is now scored as substage B” (Kohlberg, 1984, p. 270). Longitudinal analysis revealed that individuals retain their substage status throughout, such that development occurs from stage 3B to 4B, rather than 3B to 4A (Kohlberg, 1984).

Central to stage 3 and 4 Type B moral ideality is the characterization of balance in social perspective-taking and decision-making:

A 3A decides in terms of What does a good husband do? What does a wife expect? A 3B decides in terms of What does a good husband who is a partner in a good mutual relationship do? What does each spouse expect of the other? Both sides of the equation are balanced; this is fairness. At 4A, the subject decides in terms of the question, What does the system demand? At 4B the subject asks, What does the individual in the system demand as well as the system, and what is a solution that strikes a balance? . . . Because of this balance, B’s are more prescriptive or internal [autonomous], centering more on their judgments of what ought to be. They are also more universalistic, that is, more willing to carry the boundaries of values categories, like the value of life, to their logical conclusion.

(Kohlberg, 1984, p. 185)

The absence of Type B is Type A, or moral judgment embedded in and limited to "existing social arrangement[s]" (Rest, 1983, p. 610). Gibbs and his colleagues (Gibbs, Clark, Joseph, Green, Goodrick, and Makowski, 1986), based on findings that Type B is related both to field independence and to morally courageous actions in a
high school sample, concluded that the balanced and autonomous ideality indicated by Type B moral judgment "fosters discernment of the implicit ethical significance in a complex social situation" (p. 191). The autonomous (or "conscience") component implies that the prescriptive discernment of Type B individuals relate intimately to their self-definitions as moral selves. Type B moral ideality, as well as the revised conception of moral judgment stage and maturity, are operationalized in Gibbs et al.'s (1992) assessment measure, the Sociomoral Reflection Measure—Short Form (SRM–SF; see Methods).

**Social Role-Taking Opportunities.** Beyond the specific role of balanced perspective-taking in Type B ethical ideality, basic and general social perspective-taking is accorded central status in moral development by Kohlberg (1984) under the rubric of "role-taking opportunities":

If moral development is fundamentally a process of the restructuring of modes of role-taking, then the fundamental social inputs stimulating moral development may be termed "role-taking opportunities." . . . Participating in various groups . . . [stimulates] development. . . . The child lives in a social world in which perceptions of the law, of the peer group, and of parental teaching all influence one another. . . . Various people and groups . . . [stimulate] general moral development. . . . The more the social stimulation, the faster the rate of moral development.

(pp. 74, 78)

Stimulation of social participation and perspective-taking, then, are hypothesized as having a mediating effect on overall moral judgment stage development (Piaget, 1932/1965; Kohlberg, 1984; Kohlberg et al., 1990; Kohlberg, 1973/1994; Markoulis, 1989), given a sufficient level of cognitive development (Walker, 1986). It is
theorized that "experiences in taking the roles or perspectives of others—especially perspectives that differ from one's own—may play a critical role in stimulating the subject to 'construct' more mature moral judgment" (Mason and Gibbs, 1993a, p. 110). This original hypothesis has gained empirical support with various methodologies (Enright and Satterfield, 1989; Harris, Mussen, and Rutherford, 1976; Keasey, 1971; Mason and Gibbs, 1993a, 1993b; Sedikides, 1989; Walker, 1989).

Kohlberg suggested that development beyond the third stage (i.e., beyond interpersonally mature moral judgment) might require exposure to "enlarged" (p. 428) or expanded perspectives, such as those of entire cultural or political groups and institutions in a complex society. He further suggested that such experiences are especially likely in college and occupational settings (Kohlberg, 1984). A measure designed to assess these types of post-childhood role-taking opportunities was developed by Mason and Gibbs (1993a, 1993b; PC–ORT; see Methods) and was found to predict more mature levels of moral reasoning within a college sample.

**Relationship Between Attachment and Moral Judgment**

Although relationships between Kohlberg's theory of moral development and psychological variables such as role-taking have been examined, research and theory regarding a possible relationship of moral development to representations of attachment is sparse. This is somewhat ironic when it is noted that some of Bowlby's early work (1944) in attachment theory related insecure attachment to the immoral behavior of "juvenile thieves." Arguments proposing a relationship between the two theories
usually take the form of theoretical suggestions (Kohlberg and Diessner, 1991; Gilligan, 1990; 1993) or research in areas only tangentially related to moral development. Some of this research includes examinations of relationships between attachment representations and infant compliance (Kochanska, 1995), moral orientations (Salzman, 1990), problem behaviors in childhood (Greenberg and Speltz, 1988), or criminal behavior (Bowlby, 1944; van IJzendoorn, 1997). Although this research is enlightening, it fails to address a core issue of moral judgment theory, namely the developmental nature of moral reasoning. The present study examines the possibility that different internal working models of attachment may result in different pathways for the development of moral judgment.

Although no research has directly examined the developmental nature of a relationship between attachment representations and moral judgment, van IJzendoorn (1997) posits that internal working models of attachment influence both the type and level of moral reasoning development in three ways.

First, parents with securely attached children are better teachers than parents with insecurely attached children...[allowing them to] create an emotional atmosphere in which children explore the limits of their abilities without anxiety about failing...Second, secure children have experienced role-taking as a vehicle for communicating about emotions...Third, principled moral reasoning (type B) is relatively independent of existing conventions and group pressure, [and] might be displayed by those who are emotionally autonomous, those able to rely on attachment figures in times of stress, and also capable of being alone and disconnected from a group if necessary.

(p. 713)
Taken together, van IJzendoorn's arguments present a compelling justification for the assumption of a relationship between attachment and moral judgment. The present project focuses on two of the primary variables mentioned by van IJzendoorn, namely autonomy and perspective-taking. Van IJzendoorn and Zwart-Woudstra (1995) maintain that the "balanced" perspective-taking and ethical autonomy entailed in mature expressions of moral reasoning, especially Type B ideality, are fostered through the social interactions encouraged in a securely-attached parent-child relationship.

**Autonomy.** In attachment theory, autonomy is thought to develop when parents provide the appropriate response to the daily, trial-and-error behaviors of children. Securely attached children tend to trust their parents as a supportive base from which they will explore, learn, and grow through interactions with others and the world; the parental base is seen as an available refuge to which to return and recover following overly stressful interactions (Bowlby, 1969). Securely attached children "are able both to rely on attachment figures in times of stress and to be alone and disconnected from a group if necessary" (van IJzendoorn and Zwart-Woudstra, 1995, p. 365). Furthermore, parents in secure dyads "create an emotional atmosphere in which the children explore the limits of their abilities without anxiety" (p. 364). In contrast, insecure attachment relationships "hamper moral development because the basic trust in others and in one's own abilities is lacking" (p. 365).

Others concur with van IJzendoorn and his colleagues' view on the issue of attachment and autonomy, especially as it applies to life span development. Stein et al
(1998) maintain that in a secure relationship, “the child is likely to explore his or her environment, with the knowledge that the attachment figure is there should a need arise. In adulthood, this person is confident that others will help in times of trouble. He or she is able to seek their support in an appropriate manner and then continue on with relative autonomy” (p. 35). This interaction between the parental attachment relationships and autonomy is thought to be especially important in adolescence, where “one of the primary tasks of this relationship is establishing autonomy while maintaining relatedness in interacting with parents” (Allen and Hauser, 1996, p. 794).

Batgos and Leadbeater (1994) suggest that in adolescence “autonomy is not facilitated by detachment, but rather by attachment to parents” (p. 163).

Consistent with van IJzendoorn’s third argument, if the facilitation of autonomy via secure attachment relationships is related to the development of moral reasoning, such a relationship would therefore be expected to be more evident in a relationship between security of attachment and Type B ideality, rather than attachment and moral maturity. As noted above, Piaget (1932/1965) was one of the first to make a distinction between the heteronomous reasoning of children’s moral judgment and the more autonomous nature of moral judgments in adulthood. In Gibbs et al.’s (1992) current revision of moral development theory, mature moral reasoning can entail either heteronomous Type A moral judgments or autonomous Type B morality. Therefore, since mature moral development can reflect either autonomous or heteronomous reasoning, moral maturity would not be as likely to exhibit a relationship
to autonomous representations of attachment as would autonomous (i.e., Type B) moral reasoning.

**Perspective Taking.** In addition to the development of autonomy, the role of social perspective-taking may also provide a bridge between theories of attachment and moral judgment (van IJzendoorn, 1997). Bowlby notes the importance of “conceptional perspective-taking” (1982, p. 368) in the development of secure attachment representations, maintaining that “harmonious relationships require the ability to be aware of other’s point-of-view” (Bowlby, 1988, p. 131). The securely attached child’s motivation to explore the world includes an openness to the perspectives of others, including a "balance" vis à vis the perspectives of one’s parents:

In a “goal-directed partnership” (Bowlby, 1969), children learn to take their parents wishes and goals into account to strike a balance between the justified emotional needs of partners in the attachment relationship. Insecure-ambivalent children emphasize their own goals, whereas insecure-avoidant children emphasize parental goals at the expense of their own (van IJzendoorn, 1997, p. 713).

Consistent with these findings specific to attachment in childhood, research addressing areas of parental attachment and moral orientations in adolescent girls suggest that problematic attachment groups (i.e., insecure individuals) do not seem as adept at envisioning a morality that includes both self and other, and that their definitions of morality usually include only the self or only others (Salzman, 1990).

Contrary to hypotheses related to moral autonomy, which is expressed most often only in Type B ideality, role-taking ability is thought to be a necessary component to the development of all mature expressions of moral judgment. If insecure
representations of attachment hinder the development of a balanced role-taking ability, it is reasonable to assume they would also hinder the development of mature expressions of moral judgment. Hence, although the relationship between secure attachment and autonomy may only express itself in a relationship to Type B moral ideality, the relationship between secure attachment and role-taking abilities should be evident both in overall moral maturity and Type B ideality.

van IJzendoorn and Zwart-Woudstra’s (1995) Study. Although the promise of a relationship between attachment representations and moral reasoning development would appear to be strong, to date, very little research has directly addressed the potential relationship. The one notable exception to this dearth of research is a recent study by van IJzendoorn and Zwart-Woudstra (1995) which examined relations between parental attachment representations and moral judgments in a sample of college students from the University of California at Berkeley. The 47 subjects were between the ages of 18 and 22 and included approximately equal numbers of male and female students. Measures involved in this study included Main’s (1995) AAI to assess secure/autonomous, dismissing, and preoccupied representations of adult attachment categories, and Gibbs et al.’s (1992) SRM–SF to assess stages of sociomoral maturity and Type B ethical ideality.

Van IJzendoorn and Zwart-Woudstra (1997) found that attachment and moral development were related in “a complicated way” (p. 369). Chi square analysis between the dichotomous variables reflecting secure or insecure categories of
attachment and presence or absence of Type B moral ideality revealed differences which approached significant levels ($p = .054$). An ANOVA conducted with a continuous expression of Type B moral ideality as the dependent variable and the same dichotomous expressions of attachment revealed a significant $F$ value, $F(1, 45) = 9.01$, $p = .004$. In terms of moral maturity, the expected relationship to security of attachment was not found. Van IJzendoorn and Zwart-Woudstra suggested that this absence of a relationship between attachment and moral judgment maturity may be explained by a restriction of range in their sample’s sociomoral development stage scores; all of their respondents were classified “at Stage 3 or Stage 4, and the majority of the students were categorized in the closely linked transition Stages 3(4) and 4(3)” (p. 369). It is possible that the expected relationship between moral maturity and attachment security would be found with a more diverse sample.

The Present Study

The present study was a replication and extension of van IJzendoorn and Zwart-Woudstra’s (1995) study. Consequently, a number of methodological modifications were made from van IJzendoorn and Zwart-Woudstra’s study in an attempt to remedy the restriction of range concerns in that study and to allow for a more detailed exploration of the possible direct relationship between attachment representations and moral judgment. The present study also included a measure of social perspective-taking in order to examine van IJzendoorn and Zwart-Woudstra
contention that it serves as a mediator between attachment and moral development; a contention not directly examined in their study.

**Methodological Changes.** One methodological change in the present study from van IJzendoorn and Zwart-Woudstra’s relates to sample size. The present study’s sample size is more than four times that of van IJzendoorn and Zwart-Woudstra’s (1995; \( N = 47 \)). Such an increase should yield greater power and sensitivity in data analysis (Keppel, 1982). Consistent with the above discussion regarding the procedural drawbacks inherent to the AAI, the most practical means of accomplishing this increase in sample size for the present study was through the use of attachment questionnaires rather than the AAI administered by van IJzendoorn and Zwart-Woudstra.

To further explore possible effects of restricted range in moral judgment scores, a small subsample of comparably aged criminal offenders were included. Inclusion of offenders should provide instances of lower moral judgment scores because offenders and others with antisocial behavior problems are typically found to evidence developmental delay in moral judgment (e.g., Gregg, Gibbs, and Basinger, 1994). These subjects should also expand the range of attachment representations insofar as they can be expected to evidence a much lower percentage of secure attachment representations (van IJzendoorn and Zwart-Woudstra, 1995).

Another methodological change in the present study involves the manner in which the moral judgment measure is scored. The full range of moral judgment variables that can be investigated using the SRM-SF measure were not explored by van
IJzendoorn and Zwart-Woudstra (1995). In addition to yielding scores for moral stage maturity and moral ideality, each moral judgment score also entails a pattern of facets or "aspects" (see Methods). If, as van IJzendoorn and Zwart-Woudstra propose, parental attachment and moral judgment are related only in a "complicated way," such a relationship may only be manifested in terms of specific aspect patterns. Similar subtle relationships have been found in earlier research addressing moral judgment and gender differences and juvenile delinquency (cf. Garmon, Basinger, Gregg, and Gibbs, 1996; Gregg et al., 1994).

A final methodological change in the present study relates to the diverse attachment measures utilized. Consistent with the above discussion regarding discrete categories and continuous dimensions of attachment, all attachment measures in the present study assess both dichotomous categories of attachment and continuous attachment dimensions, rather than only the three discrete categories assessed in van IJzendoorn and Zwart-Woudstra study. Finally, in an attempt to further delineate the type of attachment patterns most directly relevant to the development of moral reasoning, separate attachment questionnaires were utilized to assess relationships with mothers, fathers, peers, and romantic partners. As noted above, differences have been found in previous research when these different attachment relationships are assessed, especially between mother and father or parents and peers. Of particular relevance here is Allen and Hauser's 1996 finding of a relationship between the promotion of autonomy and relatedness for maternal attachment, but not for fraternal attachment.
**Aims.** The primary aims of the present study can be represented in terms of three main hypotheses:

1) Secure attachment representations should be associated with Type B moral ideality.

2) Secure attachment representations should be positively related to moral judgment maturity.

3) Perspective-taking experiences should mediate the relationship between representations of secure/autonomous parental attachment and moral judgment maturity.

In addition to empirically assessing these *a priori* hypotheses, we also explored the relationship between the various expressions of moral judgment and the underlying dimensions of attachment assessable via attachment questionnaires. Possible relationships involving moral judgment aspects within stages of moral development maturity (see methods) were also explored.
Chapter 2

Methods

Subjects

University Sample. University students were recruited from introductory psychology courses at a large Midwestern university, where participation in psychological research is a class requirement. The original university sample included a total of 226 subjects, but 20, or 8.8% failed to complete the questionnaires, and were not included in the data analyses. A final sample of 206 subjects was analyzed, 106 females and 100 males. Ages ranged from 18 through 47 years, with approximately 90% of the subjects between ages of 18 and 22 years.

Criminal Offender Sample. This subsample originally consisted of 25 male felony offenders from a Midwestern treatment facility for young men involved in the criminal justice system. Five subjects, or 20%, failed to complete the questionnaires. A final 20 male offenders, ranging in age between 17 and 23, were included in the data analyses. Offenses that subjects at this facility have committed include drug trafficking, drug abuse, grand theft, felonious assault and robbery; the facility does not accept predatory sex offenders or arsonists. In terms of DSM-IV diagnosis, all subjects are...
administered the Personality Assessment Inventory (PAI; Morey, 1991). The dominant clinical feature is Antisocial Personality Disorder; approximately 70% of the subjects at this facility are diagnosed with this disorder. The average reading level of the subjects is at the sixth/seventh grade level. Analyses involving the criminal offender subjects involved identifying a comparison sample of subjects from the University sample that were matched in terms of gender and age.

**Procedures**

**University Sample.** University students were administered a single battery of questionnaires in large groups outside of class.

**Criminal Offender Sample.** The collection of data for this subsample was part of a larger investigation concerning the evaluation of a multi-component group treatment program for antisocial youth (Liau, 1999). All measures involved in the present study were administered during a single testing process as part of an overall battery of measures.

**Measures**

**Sociomoral Reflection Measure-Short Form (SRM-SF).** The SRM-SF (see Appendix A) is a group-administrable, pencil-and-paper production task designed to assess the developmental status of moral judgment (Gibbs et al., 1992). The SRM-SF is an adapted and shortened version of the Sociomoral Reflection Measure (SRM; see Gibbs and Widaman, 1982; Gibbs, Widaman, and Colby, 1982), which is in turn derived
from the Moral Judgment Interview (MJI; Colby et al., 1983). Completion time for the
SRM-SF is approximately 20 minutes.

The SRM-SF contains 11 items addressing sociomoral values. Items 1 through 4
address the values of contract and truth. Items 5 and 6 pertain to the values of
affiliation, items 7 and 8 to life, items 9 and 10 to property and law, and item 11 to legal
justice. Each item entails a two-fold question: Subjects are asked to (1) evaluate and (2)
justify the importance of each value (see Appendix A). Questionnaires yielding fewer
than 7 scorable item responses because of unanswered questions, illegible writing, or
other more subtle scoring difficulties (such as tautologies) do not result in reliable
protocol scores, and are discarded from analysis as unusable.

Subjects' justifications are matched with stage-indicative justifications found in
the SRM-SF scoring manual (Gibbs et al., 1992). Stage 1 justifications “represent a
morality of unilateral authority, especially the authority of physically powerful
persons” (p. 21). In Stage 2, justifications reflect “perspectives that arise through one’s
interaction with others...[especially] as a matter of pragmatic deals or exchanges” (p.
23). Stage 3 justifications are seen “to construct the intrinsic mutualities or
interpersonal expectations of prosocial feeling, caring, and conduct” (p. 26). Finally,
Stage 4 justifications “extend to a complex social system the maturity accomplished at
Stage 3 in the interpersonal sphere” (p. 29).

Comprising each moral judgment stage is a collection of five to seven facets or
"aspects." For example, one of the six aspects indicative of a Stage 3 response that
seems especially appropriate to the present study is described by Gibbs et al. (1992) as follows:

**Relationships:** This aspect consists of appeals to the mutual sentiments that emerge once the individual has attained an understanding of the psychological meaning of interpersonal relationships. Keeping promises is important for the sake of “a good relationship,” because a friend “becomes a part of you,” or so that the other person won’t “lose faith in you.” In contrast to the Stage 2 concern with the consequences for oneself of benefit or harm to another person, Stage 3 takes into account consequences to another person (especially, another person’s feelings) as a consideration in its own right for determining how one should act toward others. An ideal form of reciprocity is affected by determining the moral status of an act by the criterion of how one would feel if one were the recipient of that act. For example, not stealing is important because “how would you feel if someone stole something of yours?” Helping a friend is important because “you would expect your friend to help you.”

(p. 27)

The primary SRM-SF protocol score is the Sociomoral Reflection Maturity Score (SRMS), which is a continuous score reflecting the mean of the item ratings multiplied by 100. Item ratings reflect the moral aspect stage level the subjects used to justify their importance rating for that item. The SRMS ranges from 100 (a questionnaire yielding exclusively Stage 1 ratings) to 400 (a questionnaire yielding exclusively Stage 4 ratings). SRM-SF data may also be represented by ten Global Stage levels reflecting the developmental vicinity in which a SRMS is located (see Gibbs et al., 1992), or as a dichotomous variable reflecting immature (Stages 1 and 2) vs mature (Stages 3 and 4) moral maturity.
A procedure is also provided for categorizing Moral Type B and Type A
distinctions (Gibbs et al., 1992). Type B, or Moral Ideality, is conceptualized as
encompassing basic and universalized interpersonal or societal ideals (see Kohlberg,
1984), whereas Type A indicates an "embedding' of the stages' ethical ideality in social
conventions, or an assimilation of basic, universalizable interpersonal and societal ideals
to existing social arrangements" (Gibbs et al., p. 25). The three components of Type B
reasoning are defined by Gibbs et al. as follows:

**Balancing** - According to Kohlberg Moral Type B is more
balanced in perspective. Whereas Moral Type A emphasizes given
expectations in an interpersonal relationships (Stage 3) or society (Stage
4), Moral Type B designates an orientation to the ideal *mutuality* of the
interpersonal or societal expectations. For example, a father should not
expect to be respected if he has not tried to treat his child fairly, that is,
if he has not earned his child's respect. In a broader realm, although
society legitimately expects a judge to apply legal sanctions consistently,
the judge should apply the law flexibly or equitably when there are
extenuating circumstances in particular cases.

**Fundamental Valuing** - Moral Type B thinking is also
universalistic, that is it extends or generalizes values such as life to all
humanity, and not just to those in particular given relationships or
societies, as Moral Type A would. For example, a stranger's life should
be values because all life is "precious" or "sacred," or people shouldn't
just care about those in given relationships but about "all humanity." The
possible basis of Fundamental Valuing in Balancing is suggested by the
reasoning often associated with appeals to intrinsic values such as life:
"How would you feel, if you were the stranger and no one cared enough
to save your life?"

**Conscience** - Finally, Kohlberg describes Moral Type B as more
prescriptive and internal than Type A. In other words, the ideals of
mature morality are felt "from within" (Piaget, 1932/1965), or are integral
to the self-definition of Type B individuals (cf. Blasi, 1984). Hence, a
failure to live up to the ethics of Balancing and Fundamental Valuing
results in an adverse self-judgment or "pangs of conscience." Once
experiences either a global self-disapproval (Stage 3) or a loss of self-respect for having violated one’s standards of integrity (Stage 4).

(pp. 25-26)

Ethical Type B morality can be represented in two ways. The more common method is a dichotomous score reflecting the presence or absence of at least two of the three components. In addition, a continuous Type B score ranging from zero to three can be computed to reflect the number of Type B components the subject expressed when answering all protocol items.

The SRM-SF has been shown to evidence acceptable levels of test-retest reliability and internal consistency for 4th through 12th graders, university students, and a delinquent male sample (Basinger, 1990; Basinger, Gibbs, and Fuller, 1991). In addition, the SRM-SF evidenced acceptable concurrent validity with the MJI and convergent validity with age, verbal intelligence, and SES for these samples. This measure has been shown to discriminate between nondelinquent and delinquent males on levels of moral judgment (Basinger, 1990; Basinger et al., 1991; Gibbs et al., 1992). Through factor analysis, the 11 items of the SRM-SF have been shown to represent one factor (Basinger et al., 1991).

Interrater reliability was determined through comparisons between myself and another graduate student, both of us having completed self-training procedures outlined by Gibbs et al. (1992) and having attained acceptable interrater reliability with the second author of the measure in the past. The current interrater agreement was based on eighteen randomly selected offender protocols and was well within the minimal standards.
determined by Gibbs et al. (p. 57). The overall SRMS correlation was $r(18) = .99$, $p < .001$. The mean absolute discrepancy in SRMS scores was .07, with one-third of the protocols evidencing exact SRMS score agreement. Global Stage agreement within one interval [e.g., stage 3 vs transitional stage 3(4)] was 100% and exact Global Stage agreement was 61%.

One of the major concerns with the present study was an attempt to overcome Van IJzendoom and Zwart-Woudstra’s (1995) possible restriction of range in their sample’s sociomoral judgment stage maturity scores. Whereas Van IJzendoom and Zwart-Woudstra’s 47 subject’s sociomoral maturity (SRMS) scores ranged from 305 to 386, reflecting sociomoral stages 3 and 4, the current sample of 206 subjects evidenced SRMS scores ranging from 206 to 377, reflecting stages 2 through 4. In terms of global stage scores, scores from the present study provide not only a wider range of scores, but also a more normal distribution of scores than did Van IJzendoom and Zwart-Woudstra’s (1995) sample (see Table 2.1).

**Adult Attachment Scale (AAS).** The AAS (Collins and Read, 1990; see Appendix B) is a group-administrable, forced-choice measure designed to test attachment style. The AAS “was developed based on Hazen and Shaver’s (1987) measure and additional characteristics of the three attachment styles as described in the developmental literature” (Collins and Read, 1990, p. 646). An individual’s expectations of Romantic relationships and self-in-relationship are measured by the AAS and provides three attachment dimension scores that were originally determined via factor analyses (Collins and Read,
<table>
<thead>
<tr>
<th>Global Stage&lt;sup&gt;a&lt;/sup&gt;</th>
<th>van IJzendoorn &amp; Zwart-Woudstra</th>
<th>Present Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2(3)</td>
<td>1.5% (N = 3)</td>
<td></td>
</tr>
<tr>
<td>3(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>12.1% (N = 25)</td>
<td></td>
</tr>
<tr>
<td>3(4)</td>
<td>14.9% (N = 7)</td>
<td>61.2% (N = 126)</td>
</tr>
<tr>
<td>4(3)</td>
<td>42.6% (N = 20)</td>
<td>16.0% (N = 33)</td>
</tr>
<tr>
<td>4</td>
<td>40.4% (N = 19)</td>
<td>6.3% (N = 13)</td>
</tr>
<tr>
<td></td>
<td>2.1% (N = 1)</td>
<td>0.5% (N = 1)</td>
</tr>
<tr>
<td>Total N</td>
<td>47</td>
<td>208</td>
</tr>
</tbody>
</table>

<sup>a</sup>Note. Global stage scores include transitional stages such as Transitional Stage 1(2), Transitional Stage 2(1), etc.

Table 2.1: Comparison of Global Sociomoral Stage Distributions
The first dimension, Close attachment, reflects "the extent to which subjects were comfortable with closeness and intimacy" (p. 646). Depend dimension attachment scores reflect "the extent to which subjects could trust others and depend on them to be available when needed" (p. 646). The final dimensions, Anxiety, reflects "anxiety in relationships, such as fear of being abandoned and not being loved" (p. 646).

The AAS is an 18-item measure with six items for each attachment dimension. Each question is answered using a five-point Likert-type scale ranging from "not at all characteristic of me" to "very characteristic of me" (see Appendix B). For this study, both AAS dimensions and additional attachment style categories were utilized. The dimension scores are obtained by summation, with higher scores on a dimension suggesting the subject's internal representations of attachment is more characteristic of that dimension. Attachment style categories of secure, avoidant, and anxious attachment are also obtained using a cluster analysis based on the subject's respective dimension scores (cf. Collins and Read, 1990). As this cluster analyses procedure assumes an underlying normal distribution, the procedure was not performed with the offender subsample (chosen specifically to represent atypical development); the subsequent attachment scores were therefore not obtained for this subsample.

The AAS has been shown to evidence acceptable levels of test-retest reliability and internal consistency for college-age samples (Collins and Read, 1990). These AAS styles have demonstrated adequate validity using Hazen and Shaver's (1987) attachment measure, suggesting that the AAS does indeed tap attachment concepts. Validity for the
measure’s ability to assess mental representations of the self, world, and relationships
was demonstrated using a variety of measures related to self-awareness, including the
Rosenberg Self-Esteem Scale (Rosenberg, 1965), the Texas Social Behavior Inventory
(Helmreich and Stapp, 1974), the Opener Scale (Miller, Berg, and Archer, 1983), the
Rotter Trust Scale, (Rotter, 1967), the Wrightsman’s Philosophies of Human Nature
Scale (Wrightsman, 1964), and the Love Attitudes Scale (Hendrick and Hendrick, 1986).
Cronbach’ alphas are reported by the authors to range from .78 to .85.

Inventory of Parent and Peer Attachment (IPPA). The IPPA (Armsden and
Greenberg, 1987; see Appendix C) is an additional attachment measure designed to assess
a variety of relationships experienced by older adolescents. Using the attachment
dimensions of Trust, Communication, and Alienation, the IPPA measures an adolescent’s
attachment relationships to both parents and peers. These three dimensions were
determined via factor analysis of 60 original items, where the Trust dimension items
suggested “themes of...understanding and respect, and mutual trust” (p. 433), the
Communication dimension items “related to the extent and quality of verbal
communication” (p. 433), and the Alienation dimensions items “suggested feelings of
alienation and isolation” (p. 433).

The IPPA has three 25-item sections, one for each parent and a third for peers.
Mother and father questions are substantially identical (with minor gender pronoun
differences), and both sections ask about the subject’s feelings about their parent, or the
person who has acted as their parent. Subjects were asked to think about their closest
friendships when answering the peer items. Although parent items generally have a corresponding peer item, "exceptions included items with obvious family context or general alienation items" (Armsden and Greenberg, 1987, p. 433). Validity for the measure's ability to assess relationship quality was demonstrated using a variety of measures related to psychological well-being, including the Tennessee Self-Concept Test (Fitts, 1965), the Affective States Index (Bachman, 1970), and Moos' (1974) Family Environment Scale (Armsden and Greenberg; 1982).

Answers are given on a five-point, Likert scale, ranging from "almost never or never true" to "almost always or always true." The two extreme responses are scored as 1 or 5, depending on whether an item was positively or negatively worded (see Appendix C). Nine summary scores are calculated for each attachment dimension for each relationship (Mother Trust, Mother Communication, Mother Alienation, Father Trust, etc). In addition, overall security of attachment scores for each relationship are "computed by summing Trust and Communication raw scores, and subtracting from this sum the Alienation raw score" (Armsden and Greenberg, 1987, p. 438), with higher scores representing higher security of attachment and lower scores representing lower security of attachment.

Consistent with the secure/insecure distinction common in attachment research, a dichotomous security variable is also derived for each attachment relationship according to a procedure outlined by Armsden and Greenberg (1987). For this variable, "the score distribution of each IPPA subscale (Trust, Communication, Alienation) was divided into
lowest, middle and highest third” (p. 442), with separate divisions for females and males
performed for any subscale exhibiting gender differences. In the present study, this
additional step was therefore performed on the Communication subscale for relationship
with mother, and all three subscales for relationship with peer.

Each subject was then given a rating of “low,” “medium” or “high”
for each of the three subscales according to where her/his score fell. A set
of logical rules defined attachment group assignment:

1. Individuals were assigned to the High Security (HS) group if their Alienation
scores were not high, and if their Trust or Communication scores were at
least medium level. Because of the theoretical importance given by Bowlby
to the element of trust in the attachment relationship, in cases where Trust
scores were only medium level but Alienation scores were also medium
level, HS group assignment was not made.
2. Individuals were assigned to the Low Security (LS) group if their Trust and
Communication scores were both low, and if their Alienation scores were
medium or high level. In cases where the Trust or Communication score
was medium level but the other was low, LS group placement was made if
the Alienation score was high.

The number of subjects involved in data analyses for each relationship varies.
Several subjects indicated that they did not have someone they felt fulfilled the each
relationship role (12 indicated no father, 5 no mother, and 2 no close friends). Analyses
involving IPPA dimensions included a sample of 201 for relationship to mother variables,
194 for relationship to father variables, and 204 for relationship with peer variables.
Additional Subjects were also excluded from specific categorical analyses during the
dichotomizing procedure outlined above. A significant percentage of subjects do not fall
into either a High or Low Security classification and are therefore excluded from any
analysis involving dichotomous IPPA variables. In the present study, 142 subjects were placed into dichotomous categories reflecting attachment security to Mother, 131 into dichotomous categories reflecting attachment to Father, and 130 into dichotomous categories reflecting attachment to Peers.

**Perspective-Taking: Post-Childhood Opportunities for Role-Taking (PC-ORT).**

The PC-ORT (Mason and Gibbs, 1993a; 1993b; Appendix D) is designed to relate specifically to role-taking opportunities, as described by Kohlberg (1984), in the socially complex adult world. This measure has undergone a number of revision since its inception, but the version used in the present study is comprised of 52 items, 13 of which are similarly worded distractor items, and two of which is included to break a response set by instructing the respondent to “circle 0 please.” Each of the 37 scorable items on the PC-ORT is evaluated in terms of the subject’s current or past experience as follows: 0 = not true or rarely true, 1 = somewhat true or sometimes true, 2 = very often true or often true. The PC-ORT is scored such that higher scores reflect increased opportunities for role taking. The PC-ORT total score allows a range of 0-200, which reflects the mean of all items multiplied by 100.

The PC-ORT draws support from the reliability and validity of the childhood Opportunities for Role-Taking measure (Schnell, 1987) on which it is based. The test-retest reliability of the PC-ORT based on a subsample of 57 undergraduates (tested with a two-week interval) was $r(57) = .85, p < .0001$. 

50
Chapter 3

Results

The data analyses for the current study were directed toward six general questions.

1) Is there a significant level of interrelationship among a) attachment representation constructs and b) moral judgment constructs?

2) Are attachment representations and/or expressions of moral judgment directly related to a) gender and b) role-taking opportunities?

3) Do relationships exist between attachment representations and moral judgment?

4) Do these relationships differ as a function of dichotomous versus continuous variables?

5) For those relationships that exist between attachment and moral judgment, does the relationship continue to exist after controlling for the influence of gender and role-taking opportunities?

6) Are the relationships evident in the criminal offender subsample significantly different from those of a comparably aged subsample from the main sample?
1) Interrelationships Among Variables

1a) Attachment Variables. As a variety of attachment variables was assessed in the present study, analyses were first performed to determine possible relationships between the different representations of attachment. Measures utilized in the present study provide both continuous and dichotomous expressions of attachment relationships (see Methods Chapter). Chi Square analyses revealed significant relationships between all dichotomous categories of attachment. Dichotomous categories representing Romantic Partner attachment were significantly related to dichotomous categories for Mother, Father, and Peer attachment, \( \chi^2(1, N = 14) = 10.80, p < .005 \), \( \chi^2(1, N = 131) = 5.02, p < .05 \), and \( \chi^2(1, N = 130) = 7.29, p < .01 \), respectively (see Table 3.1). Significant relationships were also found between dichotomous Mother and Father categories, \( \chi^2(1, N = 94) = 31.07, p < .00001 \), Mother and Peer categories, \( \chi^2(1, N = 93) = 27.88, p < .00001 \), and Father and Peer categories \( \chi^2(1, N = 89) = 8.01, p < .005 \) (see Table 3.1).

In addition to the dichotomous attachment category scores available for each relationship dyad, continuous Overall scores representing security of attachment to Mother, Father, and Peers are available via the IPPA (although no corresponding continuous overall score is possible for security of attachment to Romantic Partners via the AAS). The interrelationship of these three Overall scores was significant between
<table>
<thead>
<tr>
<th>Attachment Categories</th>
<th>Father Security</th>
<th>Peer Security</th>
<th>Partner Security</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td><strong>Mother Security</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>50</td>
<td>6</td>
<td>47</td>
</tr>
<tr>
<td>(53.2%)</td>
<td>(6.4%)</td>
<td>(11.8%)</td>
<td>(31.7%)</td>
</tr>
<tr>
<td>Low</td>
<td>13</td>
<td>25</td>
<td>9</td>
</tr>
<tr>
<td>(13.8%)</td>
<td>(26.6%)</td>
<td>(9.7%)</td>
<td>(28.0%)</td>
</tr>
<tr>
<td><strong>Father Security</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
<td></td>
<td>39</td>
</tr>
<tr>
<td>(43.8%)</td>
<td>(13.5%)</td>
<td>(31.3%)</td>
<td>(23.7%)</td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>(43.8%)</td>
<td>(22.5%)</td>
<td>(16.8%)</td>
<td>(28.2%)</td>
</tr>
<tr>
<td><strong>Peer Security</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>(34.6%)</td>
<td>(23.8%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>(14.6%)</td>
<td>(26.9%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note.** Chi square analysis revealed significant interactions for categories representing attachment security to Mother & Father (p < .00001), Mother & Peers (p < .00001), Mother & Romantic Partner (p < .005), Father & Peers (p < .005), Father and Romantic Partner (p < .05), and Peers and Romantic Partner (p < .01).

Table 3.1: Agreement in Attachment Security Classification Categories
Overall Mother and Father scores, \( r(191) = .35, p < .001 \), Mother and Peer scores, \( r(200) = .36, p < .001 \), and Father and Peer scores, \( r(193) = .20, p < .005 \).

Similar significant relationships existed between almost all of the continuous dimension scores assessed for each attachment relationship dyad. Representations of attachment to Romantic Partners include Close, Depend, and Anxiety dimensions, while representations of attachment to Mother, Fathers, or Peers involve Trust, Communication, and Alienation dimensions. The only relationship evidencing a nonsignificant relationship was between Father Communication and Peer Trust dimensions (see table 3.2). Finally, Pearson correlations involving the three Overall attachment variables and each of the twelve attachment dimension scores revealed significant relationships in each case (see Table 3.3).

A series of one-way ANOVAs was also conducted to calculate all possible relationships between dichotomous and continuous attachment variables. ANOVAS involving dichotomous attachment categories and with each of the three Overall IPPA scores as dependent variables revealed significant \( F \) values for every relationship except between Overall Father and dichotomous Romantic Partners attachment (see Table 3.4). In addition, most of the ANOVAs involving the four dichotomous attachment categories and with each of the twelve continuous representations of attachment dimensions as dependent variables revealed significant \( F \) values (see Table 3.4). The only exceptions involved the relationships between dichotomous Romantic Partner categories and both the Trust and Communication dimensions of both Father and Peer attachment.
<table>
<thead>
<tr>
<th>Attachment Dimensions</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mother</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Trust</td>
<td>.76****a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Communication</td>
<td>.82<strong><strong>a, -72</strong></strong>a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Alienation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Father</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Trust</td>
<td>.35<strong><strong>b, .26</strong><em>b, -29</em></strong>*b</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Communication</td>
<td>.22<strong><strong>b, .30*****b, -25</strong></strong>b, .73****c</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Alienation</td>
<td>-.30<strong><strong>b, -29</strong></strong>b, .43<strong><strong>b, -.77</strong></strong>c, -.66****c</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Peer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Trust</td>
<td>.32<strong><strong>d, .31</strong></strong>d, -26<strong><strong>d, .19</strong></strong>e, .09<strong><strong>e, -20</strong></strong>e</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Communication</td>
<td>.24<strong><strong>d, .33</strong></strong>d, -21<strong><strong>d, .15</strong></strong>e, .15<strong><strong>e, -14</strong></strong>e, .81****f</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Alienation</td>
<td>-.31<strong><strong>d, -30</strong></strong>d, .39<strong><strong>d, -.19</strong></strong>e, -.16<strong><strong>e, .31</strong></strong>e, -.70<strong><strong>f, -.54</strong></strong>f</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Partner</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Close</td>
<td>.13<strong><strong>a, .21</strong></strong>a, -22<strong><strong>a, .18</strong></strong>c, .15<strong><strong>c, -26</strong></strong>c, .29<strong><strong>f, .29</strong></strong>f, -32****f</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Depend</td>
<td>.25<strong><strong>a, .31</strong></strong>a, -36<strong><strong>a, .25</strong></strong>c, .22<strong><strong>c, -.33</strong></strong>c, .35<strong><strong>f, .31</strong></strong>f, -.42<strong><strong>f, .56</strong></strong>g</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Anxiety</td>
<td>-.35<strong><strong>a, -31</strong></strong>a, .39<strong><strong>a, -.17</strong></strong>c, -.12<strong><strong>c, -.28</strong></strong>c, -.23<strong><strong>f, -.18</strong></strong>f, .37<strong><strong>f, -.31</strong></strong>g, -.31****g</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05. **p < .01. ***p < .005. ****p < .001.

*n = 201. b*n = 191. c*n = 194. d*n = 200. e*n = 193. f*n = 203. g*n = 206.

**Note:** All analyses involved one-tailed Pearson correlations.

Table 3.2: Relations Between Attachment Dimensions
### Table 3.3: Relations Between Continuous Overall Attachment and Attachment Dimensions

<table>
<thead>
<tr>
<th>Attachment Dimensions</th>
<th>Overall Attachment Security</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mother</td>
</tr>
<tr>
<td><strong>Mother</strong></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>.94****&lt;sub&gt;e&lt;/sub&gt;</td>
</tr>
<tr>
<td>Communication</td>
<td>.92****&lt;sub&gt;e&lt;/sub&gt;</td>
</tr>
<tr>
<td>Alienation</td>
<td>-.89****&lt;sub&gt;e&lt;/sub&gt;</td>
</tr>
<tr>
<td><strong>Father</strong></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>.33****&lt;sub&gt;a&lt;/sub&gt;</td>
</tr>
<tr>
<td>Communication</td>
<td>.28****&lt;sub&gt;a&lt;/sub&gt;</td>
</tr>
<tr>
<td>Alienation</td>
<td>-.35****&lt;sub&gt;a&lt;/sub&gt;</td>
</tr>
<tr>
<td><strong>Peer</strong></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>.33****&lt;sub&gt;b&lt;/sub&gt;</td>
</tr>
<tr>
<td>Communication</td>
<td>.29****&lt;sub&gt;b&lt;/sub&gt;</td>
</tr>
<tr>
<td>Alienation</td>
<td>-.35****&lt;sub&gt;b&lt;/sub&gt;</td>
</tr>
<tr>
<td><strong>Romantic Partner</strong></td>
<td></td>
</tr>
<tr>
<td>Close</td>
<td>.20****&lt;sub&gt;e&lt;/sub&gt;</td>
</tr>
<tr>
<td>Depend</td>
<td>.33****&lt;sub&gt;e&lt;/sub&gt;</td>
</tr>
<tr>
<td>Anxiety</td>
<td>-.37****&lt;sub&gt;e&lt;/sub&gt;</td>
</tr>
</tbody>
</table>

*<sup>p</sup> < .05. **<sup>p</sup> < .01. ***<sup>p</sup> < .005. ****<sup>p</sup> < .001.

<sup>a</sup>N = 191. <sup>b</sup>N = 200. <sup>c</sup>N = 203. <sup>d</sup>N = 194. <sup>e</sup>N = 201.

Note. All analyses involve one-tailed Pearson correlations.
# Attachment Scores Dichotomous Attachment Categories

<table>
<thead>
<tr>
<th>Overall Security</th>
<th>Mother</th>
<th>Father</th>
<th>Peers</th>
<th>Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mothers</td>
<td>548.67****&lt;sub&gt;f&lt;/sub&gt;</td>
<td>30.92****&lt;sub&gt;g&lt;/sub&gt;</td>
<td>23.86****&lt;sub&gt;j&lt;/sub&gt;</td>
<td>15.37***&lt;sub&gt;b&lt;/sub&gt;</td>
</tr>
<tr>
<td>Fathers</td>
<td>24.09****&lt;sub&gt;c&lt;/sub&gt;</td>
<td>473.10****&lt;sub&gt;a&lt;/sub&gt;</td>
<td>7.11**&lt;sub&gt;d&lt;/sub&gt;</td>
<td>1.16&lt;sub&gt;e&lt;/sub&gt;</td>
</tr>
<tr>
<td>Peers</td>
<td>29.55****&lt;sub&gt;f&lt;/sub&gt;</td>
<td>9.29**&lt;sub&gt;s&lt;/sub&gt;</td>
<td>348.25****&lt;sub&gt;g&lt;/sub&gt;</td>
<td>5.97*&lt;sub&gt;h&lt;/sub&gt;</td>
</tr>
</tbody>
</table>

| Mother Dimensions | | | |
|-------------------| | | |
| Trust             | 375.43****<sub>f</sub> | 22.71****<sub>g</sub> | 17.15***<sub>j</sub> | 11.79***<sub>b</sub> |
| Communication     | 329.91****<sub>f</sub> | 23.40****<sub>g</sub> | 18.27****<sub>j</sub> | 12.76***<sub>b</sub> |
| Alienation        | 425.58****<sub>f</sub> | 32.33****<sub>g</sub> | 23.91****<sub>j</sub> | 14.79****<sub>b</sub> |

| Father Dimensions | | | |
|-------------------| | | |
| Trust             | 23.86****<sub>c</sub> | 314.43****<sub>a</sub> | 5.46*<sub>d</sub> | .53<sub>e</sub> |
| Communication     | 11.14**<sub>c</sub> | 289.79****<sub>a</sub> | 4.45*<sub>d</sub> | .04<sub>e</sub> |
| Alienation        | 32.22****<sub>c</sub> | 326.36****<sub>a</sub> | 9.38**<sub>d</sub> | 7.63**<sub>e</sub> |

| Peer Dimensions   | | | |
|-------------------| | | |
| Trust             | 24.88****<sub>f</sub> | 7.80*<sub>a</sub> | 275.83****<sub>g</sub> | 3.64<sub>h</sub> |
| Communication     | 14.34****<sub>f</sub> | 4.96*<sub>a</sub> | 217.00****<sub>g</sub> | 1.88<sub>h</sub> |
| Alienation        | 34.07****<sub>f</sub> | 10.97*<sub>a</sub> | 205.79****<sub>g</sub> | 13.03***<sub>b</sub> |

| Partner Dimensions | | | |
|-------------------| | | |
| Close             | 8.70**<sub>f</sub> | 7.10*<sub>a</sub> | 29.15****<sub>g</sub> | 35.47****<sub>i</sub> |
| Depend            | 16.95****<sub>f</sub> | 15.73****<sub>a</sub> | 24.58****<sub>g</sub> | 9.07****<sub>i</sub> |
| Anxiety           | 23.40****<sub>f</sub> | 13.67****<sub>a</sub> | 14.59****<sub>g</sub> | 313.15****<sub>i</sub> |

*<sub>p</sub> < .05. **<sub>p</sub> < .01. ***<sub>p</sub> < .001. ****<sub>p</sub> < .0001.

<sub>a</sub><sub>n</sub> = 130. <sub>b</sub><sub>n</sub> = 200. <sub>c</sub><sub>n</sub> = 132. <sub>d</sub><sub>n</sub> = 120. <sub>e</sub><sub>n</sub> = 193. <sub>f</sub><sub>n</sub> = 141. <sub>g</sub><sub>n</sub> = 129. <sub>h</sub><sub>n</sub> = 202. <sub>i</sub><sub>n</sub> = 205. <sub>j</sub><sub>n</sub> = 128.

Table 3.4: ANOVA F Values for Continuous Attachment Scores by Attachment Categories
1b) Moral Judgment Variables. While sociomoral maturity level is represented as a continuous variable reflecting the mean stage level of a subject’s responses (SRMS), Type B ideality can be represented as either a continuous variable reflecting the number of Type B components utilized by the subject or as a dichotomous reflecting the use of at least two out of the three Type B components (see Methods Chapter). Consistent with earlier research (see Garmon et al., 1996; Gibbs et al., 1982), mature sociomoral development was found to be related to Type B moral ideality. An one-way ANOVA involving dichotomous Type B and with SRMS as the dependent variable was significant, $F(1, 204) = 7.63, p < .01$ (see Table 3.5). An additional one-way ANOVA with SRMS as the dependent variable and involving the four levels of Type B ideality—representing the number of components used: 0 components, 1 component, 2 components, or 3 components—was also significant, $F(3, 202) = 6.26, p < .0005$ (see Table 3.5).

As Type B morality is actually a reflection of three separate moral components, additional analyses were performed involving the three dichotomous variables indicating the presence or absence of the Balancing, Fundamental Valuing, and Conscience components. In three one-way ANOVAs involving the three dichotomous components and with SRMS as the dependent variable, significant $F$ values were found for the Conscience and Fundamental Valuing components, $F(1, 204) = 6.58, p < .05$ and $F(1, 204) = 6.58, p < .05$, respectively, but not for the Balancing component.
<table>
<thead>
<tr>
<th>Moral Ideality</th>
<th>SRMS</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>N</td>
<td>p</td>
</tr>
<tr>
<td>Type A</td>
<td>299.43</td>
<td>30.13</td>
<td>130</td>
<td>.01</td>
</tr>
<tr>
<td>Type B</td>
<td>311.31</td>
<td>29.16</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>Zero Components</td>
<td>294.48</td>
<td>32.72</td>
<td>37</td>
<td>.0005</td>
</tr>
<tr>
<td>One Component</td>
<td>301.40</td>
<td>28.98</td>
<td>93</td>
<td></td>
</tr>
<tr>
<td>Two Components</td>
<td>306.45</td>
<td>27.42</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Three Components</td>
<td>332.81</td>
<td>27.7</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.5: Moral Judgment Maturity Means by Moral Ideality Categories
2a) **Gender Differences**

Chi square analyses failed to find significant differences between gender and the four dichotomous representations of attachment or gender and dichotomous Type B ideality. A series of one-way ANOVAs involving the dichotomous gender variable and with each of the continuous attachment variables as the dependent variables revealed five significant F values (see Table 3.6). These significant findings were for Overall Peer attachment, F(1, 201) = 21.39, p < .0001, Mother Communication dimension, F(1, 199) = 6.70, p < .05, and the three Peer attachment dimensions of Trust, Communication, and Alienation, F(1, 201) = 11.15, p < .005, F(1, 201) = 31.32, p < .0001, and F(1, 201) = 11.30, p < .001, respectively. Similar ANOVAs involving the dichotomous gender variables and with either continuous SRMS or continuous Type B ideality as the dependent variable did not produce significant F values (see Table 3.6).

2b) **Role-Taking Opportunities**

For the continuous measure assessing Role-taking Opportunities (i.e., PC–ORT), analyses revealed a number of significant relationships to continuous measures of attachment and moral judgment. Significant relationships were found to exist between PC–ORT and all three Overall attachment security scores representing attachment to Mothers, Fathers, and Peers, r(201) = .14, p < .05, r(194) = .14, p < .05, and r(203) = .22, p < .005, respectively. In terms of attachment dimensions, PC–ORT was significantly related to the Communication dimension for both Mother or Father attachment, r(201) = .20, p < .005 and r(203) = .18, p < .01, respectively. For Peer
<table>
<thead>
<tr>
<th>Continuous Scores</th>
<th>Gender</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>p &lt;</td>
</tr>
<tr>
<td>Attachment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mothers</td>
<td>99</td>
<td>63.8</td>
<td>21.2</td>
<td>102</td>
<td>60.3</td>
<td>19.4</td>
<td>ns</td>
</tr>
<tr>
<td>Fathers</td>
<td>93</td>
<td>53.2</td>
<td>23.3</td>
<td>101</td>
<td>53.3</td>
<td>20.8</td>
<td>ns</td>
</tr>
<tr>
<td>Peers</td>
<td>99</td>
<td>60.9</td>
<td>12.8</td>
<td>104</td>
<td>51.6</td>
<td>15.5</td>
<td>.0001</td>
</tr>
<tr>
<td>Mother Dimensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>99</td>
<td>41.9</td>
<td>8.4</td>
<td>102</td>
<td>41.8</td>
<td>7.9</td>
<td>ns</td>
</tr>
<tr>
<td>Communication</td>
<td>99</td>
<td>35.5</td>
<td>9.4</td>
<td>102</td>
<td>32.3</td>
<td>8.1</td>
<td>.05</td>
</tr>
<tr>
<td>Alienation</td>
<td>99</td>
<td>13.6</td>
<td>5.4</td>
<td>102</td>
<td>13.7</td>
<td>4.9</td>
<td>ns</td>
</tr>
<tr>
<td>Father Dimensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>93</td>
<td>38.7</td>
<td>9.7</td>
<td>101</td>
<td>39.0</td>
<td>8.5</td>
<td>ns</td>
</tr>
<tr>
<td>Communication</td>
<td>93</td>
<td>29.3</td>
<td>10.7</td>
<td>101</td>
<td>29.4</td>
<td>8.7</td>
<td>ns</td>
</tr>
<tr>
<td>Alienation</td>
<td>93</td>
<td>14.8</td>
<td>5.7</td>
<td>101</td>
<td>15.0</td>
<td>5.4</td>
<td>ns</td>
</tr>
<tr>
<td>Peer Dimensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>99</td>
<td>40.4</td>
<td>5.5</td>
<td>104</td>
<td>37.5</td>
<td>6.8</td>
<td>.005</td>
</tr>
<tr>
<td>Communication</td>
<td>99</td>
<td>35.0</td>
<td>4.8</td>
<td>104</td>
<td>30.8</td>
<td>5.9</td>
<td>.0001</td>
</tr>
<tr>
<td>Alienation</td>
<td>99</td>
<td>14.5</td>
<td>4.4</td>
<td>104</td>
<td>16.6</td>
<td>4.7</td>
<td>.001</td>
</tr>
<tr>
<td>Partner Dimensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close</td>
<td>100</td>
<td>22.5</td>
<td>4.1</td>
<td>106</td>
<td>22.3</td>
<td>4.3</td>
<td>ns</td>
</tr>
<tr>
<td>Depend</td>
<td>100</td>
<td>19.8</td>
<td>4.6</td>
<td>106</td>
<td>19.8</td>
<td>4.8</td>
<td>ns</td>
</tr>
<tr>
<td>Anxiety</td>
<td>100</td>
<td>16.1</td>
<td>5.3</td>
<td>106</td>
<td>17.0</td>
<td>5.7</td>
<td>ns</td>
</tr>
<tr>
<td>Moral Judgment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moral Maturity</td>
<td>106</td>
<td>303.7</td>
<td>27.6</td>
<td>100</td>
<td>303.9</td>
<td>33.0</td>
<td>ns</td>
</tr>
<tr>
<td>Type B Ideality</td>
<td>106</td>
<td>1.25</td>
<td>.9</td>
<td>100</td>
<td>1.27</td>
<td>.8</td>
<td>ns</td>
</tr>
</tbody>
</table>

Table 3.6: Continuous Scores for Gender Categories
attachment dimensions, PC–ORT was significantly related to both Trust and Communication dimensions, \( r(201) = .21, p < .005 \) and \( r(201) = .31, p < .001 \), respectively. The two Romantic Partners dimensions of Close and Anxiety were also found to be significantly related to PC–ORT, \( r(206) = .30, p < .001 \) and \( r(206) = -.12, p < .05 \), respectively. Finally, PC–ORT was found to be significantly related to SRMS, \( r(206) = .17, p < .01 \), but not to Type B ideality.

A series of one-way ANOVAs was performed with PC–ORT as the dependent variable (see Table 3.7). In an one-way ANOVA involving gender and with PC–ORT as the dependent variable, the F was not significant. Significant F values were found for one-way ANOVAs involving dichotomous categories representing attachment to Mother, Father, and Peer, \( F(1, 140) = 4.81, p < .05 \), \( F(1, 129) = 6.03, p < .05 \), and \( F(1, 128) = 16.09, p < .0005 \), respectively, but not for dichotomous Romantic Partner. An one-way ANOVA performed with PC–ORT as the dependent variable and involving dichotomous Type B ideality was not significant.

3-5) Relationships Between Attachment and Moral Judgment

For the sake of clarity, the empirical evaluation related to general research questions three through five will be collapsed across this section. The relevant data analyses involve questions related to the existence of a relationship between attachment and moral judgment, the nature of the research variables evidencing relationships, the mediating influence of gender and role-taking opportunities, and the relative contribution
<table>
<thead>
<tr>
<th>Dichotomous Variables</th>
<th>Role-Taking Opportunities</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>p &lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Moral Ideality</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type A Morality</td>
<td></td>
<td>130</td>
<td>25.9</td>
<td>8.0</td>
<td>ns</td>
</tr>
<tr>
<td>Type B Morality</td>
<td></td>
<td>76</td>
<td>26.8</td>
<td>6.8</td>
<td></td>
</tr>
<tr>
<td><strong>Attachment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother Low Security</td>
<td></td>
<td>58</td>
<td>24.6</td>
<td>6.9</td>
<td>.05</td>
</tr>
<tr>
<td>Mother High Security</td>
<td></td>
<td>84</td>
<td>27.4</td>
<td>7.9</td>
<td></td>
</tr>
<tr>
<td>Father Low Security</td>
<td></td>
<td>59</td>
<td>25.5</td>
<td>7.7</td>
<td>.05</td>
</tr>
<tr>
<td>Father High Security</td>
<td></td>
<td>72</td>
<td>28.7</td>
<td>7.2</td>
<td></td>
</tr>
<tr>
<td>Peer Low Security</td>
<td></td>
<td>54</td>
<td>23.2</td>
<td>7.6</td>
<td>.0005</td>
</tr>
<tr>
<td>Peer High Security</td>
<td></td>
<td>76</td>
<td>28.5</td>
<td>7.3</td>
<td></td>
</tr>
<tr>
<td>Partner Insecure</td>
<td></td>
<td>112</td>
<td>25.4</td>
<td>7.7</td>
<td>ns</td>
</tr>
<tr>
<td>Partner Secure</td>
<td></td>
<td>94</td>
<td>27.2</td>
<td>7.3</td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>106</td>
<td>25.9</td>
<td>7.7</td>
<td>ns</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td>100</td>
<td>26.6</td>
<td>7.4</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.7: Role-Taking Opportunity Means for Dichotomous Categories
these variables contribute to moral judgment. Analyses in this section are grouped by the type of attachment variable that is being compared to moral judgment.

**Attachment Categories and Moral Judgment.** One-way ANOVAs with continuous SRMS as the dependent variable and involving the four dichotomous categories representing attachment to Mother, Father, Peers, and Romantic Partners failed to reveal any significant F values (see Table 3.8).

Dichotomous categories representing attachment to Mothers and Fathers were not related to Type B ideality, but dichotomous categories representing attachment to Peers and Romantic Partners were for some analyses. Chi squared analyses revealed a significant relationship for dichotomous Type B ideality and dichotomous categories of Peer attachment, $\chi^2(1, N = 130) = 4.92, p < .05$, but not for dichotomous attachment categories involving Mother, Father or Romantic Partner attachment. In separate one-way ANOVAs involving continuous Type B ideality as the dependent variable and involving each of the dichotomous attachment categories (see Table 3.8), only the analysis involving Romantic Partner categories was significant, $F(1, 204) = 3.21, p < .05$. After controlling for gender and PC–ORT, the Romantic Partner category group differences in continuous Type B ideality actually increased, $F(1, 203) = 4.71, p < .05$ and $F(1, 203) = 4.12, p < .05$, respectively. This suggests that the relationship between dichotomous Romantic Partner attachment categories and continuous Type B ideality is not influenced by either gender or PC–ORT.
<table>
<thead>
<tr>
<th>Dichotomous Attachment Variables</th>
<th>SRMS</th>
<th>Moral Ideality</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Mother Low Security</td>
<td>58</td>
<td>303.4</td>
<td>31.6</td>
</tr>
<tr>
<td>Mother High Security</td>
<td>84</td>
<td>308.1</td>
<td>27.8</td>
</tr>
<tr>
<td>Father Low Security</td>
<td>59</td>
<td>306.1</td>
<td>26.7</td>
</tr>
<tr>
<td>Father High Security</td>
<td>72</td>
<td>304.4</td>
<td>29.5</td>
</tr>
<tr>
<td>Peer Low Security</td>
<td>54</td>
<td>298.9</td>
<td>33.1</td>
</tr>
<tr>
<td>Peer High Security</td>
<td>76</td>
<td>304.6</td>
<td>25.7</td>
</tr>
<tr>
<td>Partner Insecure</td>
<td>112</td>
<td>301.7</td>
<td>31.4</td>
</tr>
<tr>
<td>Partner Secure</td>
<td>94</td>
<td>306.4</td>
<td>28.7</td>
</tr>
</tbody>
</table>

*p < .05.

Table 3.8: SRMS and Continuous Type B Means for Attachment Categories
Further analysis involving the three dichotomous Type B ideality components were conducted for the two dichotomous attachment variables found to be related to Type B ideality, namely dichotomous categories of Peer and Romantic Partner Attachment. Chi square analyses involving dichotomous Peer attachment failed to reveal significant relationships for dichotomous Balancing, Fundamental Valuing, or Conscience components. In contrast, Chi square involving dichotomous Romantic Partner attachment revealed a significant interaction for the Balancing component, $\chi^2(1, N = 206) = 4.25, p < .05$, but not for either Fundamental Valuing or Conscience components. This suggests the relationship between Peer attachment representations and Type B ideality is not reducible to any one moral component, but that the relationship between Type B ideality and Romantic Partner attachment might be reducible to the Balancing component.

**Overall Attachment Security and Moral Judgment.** Analyses involving the three continuous measure of overall attachment security indicate some significant relationships involving moral judgment variables and Overall Mother and Peer attachment, but these relationships did not involve either sociomoral maturity or the Overall Father attachment. These relationships involved only the dichotomous Type B expression of moral judgment. Pearson correlations did not reveal any significant relationships between the three overall attachment security scores and SRMS.

Pearson correlations involving continuous Type B ideality failed to revealed significant relationship to Overall Mother, Father, or Peer attachment. The $F$ value for
one-way ANOVAs involving dichotomous Type B ideality and with either Overall Mother or Peer attachment as the dependent variable were significant, \( F(1, 199) = 4.65, p < .05 \) and \( F(1, 201) = 5.64, p < .05 \), respectively, but the one-way ANOVA involving dichotomous Type B ideality and Overall Father attachment was not (see Table 3.9). After controlling for gender and PC-ORT, the dichotomous Type B ideality group differences in Overall Mother and Peer scores held, \( F(1, 200) = 4.16, p < .05 \) and \( F(1, 199) = 5.20, p < .05 \), respectively. This suggests that the relationship between dichotomous Type B ideality and either Overall Mother or Peer attachment is not influenced by either gender or PC-ORT.

**Attachment Dimension and Moral Judgment.** Additional analyses were conducted for the twelve continuous attachment dimensions, and, whereas Type B ideality variables were related to dimensions for attachment relationships to Mothers, Father, Peers, and Romantic Partners, sociomoral maturity variables were only related to Peer attachment. For Pearson correlations comparing the dimension scores and SRMS, the only significant relationship to emerge involved a negative correlation between SRMS and Peer Alienation, \( r(203) = -.13, p < .05 \).

Based on the strong relationships previously shown between gender and Peer Alienation and between PC-ORT and SRMS, a series of statistical procedures was performed to more closely examine the possible influence of gender and PC-ORT on the direct relationship between SRMS and Peer Alienation. In a partial correlation analysis controlling for PC-ORT, the relationship between SRMS and Peer Alienation was no
<table>
<thead>
<tr>
<th>Overall Attachment</th>
<th>Moral Ideality</th>
<th>Type A</th>
<th>Type B</th>
<th>( p &lt; )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mother</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>128</td>
<td>73</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>59.7</td>
<td>66.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>21.1</td>
<td>18.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Father</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>123</td>
<td>71</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>52.3</td>
<td>55.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>21.3</td>
<td>23.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Peer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>129</td>
<td>74</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>54.3</td>
<td>59.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>15.6</td>
<td>13.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3.9: Overall Attachment Security Means for Moral Ideality Categories
longer significant. On the other hand, in a partial correlation analysis controlling for
gender the relationship between SRMS and Peer Alienation remained significant,
\( r(187) = -0.12, p < .05 \). This would seem to indicate that the relationship between
SRMS and Peer Alienation may be mediated by PC–ORT, but not gender.

To further examine this possible mediating effect of PC–ORT, and based on the
same relationships noted above between gender and Peer Alienation and between
PC–ORT and SRMS, a multiple linear regression analysis was then conducted with Peer
Alienation, gender, and PC–ORT entered into the regression as one step and SRMS as
the dependent variable. This established that variance in these three variables together
accounted for 4.3% of the variance in SRMS, \( R^2 = 0.043, F(3, 199), p < .05 \). A stepwise
multiple regression was then conducted to explore the relative influence each variable
contributed to the SRMS. Gender, Peer Alienation, and PC–ORT were included in a
single block, with SRMS as the dependent variable. PC–ORT entered on the first step
and was found to account for 3.0% of the variance in SRMS, \( R^2 = 0.030, F(1, 201), p <
.05 \). At this point, the calculations ended, indicating neither gender or Peer Alienation
contributed significant uniqueness to SRMS after accounting for the variance of
PC–ORT.

Pearson correlations performed between continuous Type B ideality and
continuous representations of the twelve attachment dimensions revealed at least one
significant relationship for each relationship dyad: Mother Trust, \( r(201) = 0.13, p < .05 \),
Father Alienation, \( r(194) = -0.15, p < .05 \), Peer Trust \( r(203) = 0.12, p < .05 \), Peer
Based upon the strong relationships evidenced between the attachment dimensions and both gender and PC-ORT, a series of statistical procedures was performed to more closely examine the possible influence of gender and PC-ORT on the direct relationship between continuous Type B ideality and each of these five attachment dimensions.

First, in partial correlations controlling for the effect of PC-ORT, the relationship involving Peer Trust was the only one of the five to no longer evidence a significant relationship, $r(187) = .11, p = .070$. The relationships between continuous Type B ideality and the other four attachment dimensions were virtually unchanged: Mother trust, $r(187) = .12, p < .05$, Father Alienation $r(187) = -.15, p < .05$, Peer Alienation $r(187) = -.14, p < .05$, and Romantic Partner Anxiety $r(187) = -.14, p < .05$. Partial correlations controlling for the effect of gender revealed a similar trend. The relationship involving Peer Trust was the only one of the five to no longer evidence a significant relationship, $r(187) = .11, p = .054$. The relationships between continuous Type B ideality and the other four attachment dimensions were virtually unchanged: Mother Trust, $r(187) = .13, p < .05$, Father Alienation $r(187) = -.15, p < .05$, Peer Alienation $r(187) = -.15, p < .05$, and Romantic Partner Anxiety $r(187) = -.14, p < .05$. Since these analyses were similar for both gender and PC-ORT, they do not provide enough information to determine the relative influence gender or PC-ORT exert on the relationship between continuous Type B ideality and these five attachment dimensions.
To further examine this possible mediating effect of PC–ORT, and based on the same relationships noted above between attachment dimensions and gender and between attachment dimensions and PC–ORT, additional regression analyses were conducted. A multiple linear regression analysis was first performed with Mother Trust, Father Alienation, Peer Alienation, Peer Alienation, Romantic Partner Anxiety, gender, and PC–ORT entered into the regression as one step and continuous Type B ideality as the dependent variable. This model failed to account for a significant level of the variance in Type B ideality, $R^2 = .042, F(7, 182)$, ns. A stepwise multiple regression was then conducted to explore the relative influence each variable contributed to the Type B ideality. Mother Trust, Father Alienation, Peer Alienation, Peer Alienation, Romantic Partner Anxiety, gender, and PC–ORT were included in a single block, with Type B ideality as the dependent variable. Father Alienation entered on the first step and was found to account for 2.3% of the variance in Type B ideality, $R^2 = .023, F(1, 188), p < .05$. At this point, the calculations ended, indicating none of the remaining variables contributed significant uniqueness to SRMS after accounting for the variance of PC–ORT. Although this regression model did not significantly account for the variance in Type B ideality, there is at least a suggestion that of the attachment dimensions related to Type B ideality, Father Alienation is the most influential.

In a series of one-way ANOVAs involving dichotomous Type B ideality and each continuous attachment dimension, four of the twelve possible attachment dimensions revealed significant $F$ values (see Table 3.10). Although none of the
ANOVA analyses involving Father and Romantic Partner dimensions were significant. Mother Trust, Mother Communication, Peer Trust, and Peer Alienation were, $F(1, 199) = 5.38, p < .05, F(1, 199) = 4.11, p < .05, F(1, 201) = 5.50, p < .05,$ and $F(1, 201) = 5.39, p < .05,$ respectively. After controlling for PC-ORT, the dichotomous Type B ideality group differences in three of four attachment dimension scores held. The $F$ values for analyses involving Mother Trust, Peer Trust, and Peer Alienation were significant, $F(1, 198) = 5.08, p < .05, F(1, 200) = 4.94, p < .05$ and $F(1, 200) = 5.09, p < .05,$ respectively. The $F$ values for analysis involving Mother Communication was no longer significant, $F(1, 198) = 3.63, p = .058.$ When similar analysis were conducted controlling for gender, the dichotomous Type B ideality group differences for all four attachment dimension scores held: Mother Trust, Mother Communication, Peer Trust, and Peer Alienation, $F(1, 198) = 5.34, p < .05, F(1, 200) = 4.00, p < .05, F(1, 200) = 5.75, p < .05$ and $F(1, 200) = 5.37, p < .05,$ respectively. This would seem to indicate that while PC-ORT functioned as a mediator between Mother Communication and dichotomous Type B ideality, the relationships between dichotomous Type B ideality and Mother Trust, Peer Trust, and Peer Alienation could not be attributed to either gender nor PC-ORT.

**Sociomoral Aspects.** Additional exploratory analyses were performed between all attachment variables and dichotomous sociomoral aspect variables reflecting the presence or absence or each aspect (see Methods Chapter and Gibbs et al., 1992 for descriptions). Chi-square analyses between the four dichotomous attachment categories
<table>
<thead>
<tr>
<th>Attachment Dimensions</th>
<th>Moral Ideality</th>
<th>Type A</th>
<th>Type B</th>
<th>p&lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>N</td>
</tr>
<tr>
<td><strong>Mother</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>128</td>
<td>40.9</td>
<td>8.7</td>
<td>73</td>
</tr>
<tr>
<td>Communication</td>
<td>128</td>
<td>32.9</td>
<td>8.5</td>
<td>73</td>
</tr>
<tr>
<td>Alienation</td>
<td>128</td>
<td>14.0</td>
<td>5.3</td>
<td>73</td>
</tr>
<tr>
<td><strong>Father</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>123</td>
<td>38.6</td>
<td>8.8</td>
<td>71</td>
</tr>
<tr>
<td>Communication</td>
<td>123</td>
<td>29.1</td>
<td>8.8</td>
<td>71</td>
</tr>
<tr>
<td>Alienation</td>
<td>123</td>
<td>15.4</td>
<td>5.5</td>
<td>71</td>
</tr>
<tr>
<td><strong>Peer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>129</td>
<td>38.1</td>
<td>6.7</td>
<td>74</td>
</tr>
<tr>
<td>Communication</td>
<td>129</td>
<td>32.3</td>
<td>6.0</td>
<td>74</td>
</tr>
<tr>
<td>Alienation</td>
<td>129</td>
<td>16.1</td>
<td>4.6</td>
<td>74</td>
</tr>
<tr>
<td><strong>Romantic Partner</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close</td>
<td>130</td>
<td>22.3</td>
<td>4.3</td>
<td>76</td>
</tr>
<tr>
<td>Depend</td>
<td>130</td>
<td>19.7</td>
<td>4.7</td>
<td>76</td>
</tr>
<tr>
<td>Anxiety</td>
<td>130</td>
<td>17.0</td>
<td>5.5</td>
<td>76</td>
</tr>
</tbody>
</table>

Table 3.10: Attachment Dimension Means for Moral Ideality Categories
and the 24 moral aspects revealed only three significant relationships. One significant relationship was between dichotomous Peer attachment and the Advantages aspect of Stage 2 sociomoral reasoning, $X^2(1, N = 130) = 4.53, p < .05$. The second significant relationship was between dichotomous Romantic Partner attachment and the Prosocial Intentions aspect of Stage 3 Sociomoral reasoning, $X^2(1, N = 206) = 5.06, p < .05$. The final significant relationship was between dichotomous Mother attachment and the Consistent Practice aspect of Stage 4 sociomoral reasoning, $X^2(1, N = 142) = 4.42, p < .05$.

A series of one-way ANOVAs was conducted involving the 24 dichotomous moral aspects and with each continuous representations of attachment as dependent variables. For the three ANOVAs conducted with Overall attachment representations to Mother, Father, and Peers as dependent variables, only the analysis involving Overall Father attachment revealed a significant $F$ value for any of the moral aspects, and it was for the Stage 2 aspect Equalities, $F(1, 192) = 6.10, p < .05$. For one-way ANOVAs involving the 24 dichotomous moral aspects and with each of the twelve attachment dimensions as dependent variables, only five interactions significant $F$ values were revealed. The Stage 1 Unilateral Authority aspect revealed a significant $F$ value with Father Alienation, $F(1, 192) = 3.91, p < .05$. The Stage 2 Exchanges aspect revealed a significant $F$ value with Romantic Partner Anxiety, $F(1, 204) = 4.53, p < .05$. Both of the Stage 3 aspects Empathic Role-Taking and Prosocial Intentions revealed significant
\( F \) values with Romantic Partner Close, \( F(1, 204) = 4.55, p < .05 \) and \( F(1, 204) = 4.03, p < .05 \), respectively. Finally, the Stage 4 Responsibility aspect revealed a significant \( F \) value with Romantic Partner Depend, \( F(1, 204) = 4.48, p < .05 \).

7) Criminal Offender Subsample

For data analysis involving the criminal offender subsample, the 20 offender subjects were matched with 20 non-offender subjects based on gender and age. The number of statistical comparisons it was possible to perform with these subsample was limited by the fact that dichotomous attachment variables could not be calculated for the delinquent subsample (see Methods section). Chi square analysis involving delinquent status and dichotomous Type B ideality was not significant. In a series of one-way ANOVAs involving delinquent status and with each of the continuous attachment or moral judgment variables as the dependant variable, the only \( F \) value to be significant was for continuous SRMS, \( F(1, 38) = 12.58, p < .005 \).

Summary

In general, the answer to each of the six questions posed in this chapter is a qualified yes.

1) Yes, a significant level of interrelationship was found to be evident among almost all a) attachment representation constructs, and b) moral judgment constructs.

2) Yes, gender and role-taking opportunities were related to various attachment and moral judgment variables. Specifically, 2a) although gender differences were not found for any of the moral judgment variables, gender differences were found for

75
several continuous attachment variables, especially those involving peer attachment, and 2b) role-taking opportunities were significantly related to a majority of the attachment variables, as well as moral maturity, but it was not related to Type B ideality.

3) Yes, findings in the present study do support the existence of a relationship between representations of attachment and expressions of moral judgment, although these relationships were most likely to involve representations of attachment to mothers or peers, rather than fathers or romantic partners, and to involve Type B ideality, rather than moral judgment maturity (see Table 3.11). Of particular interest is the fact that the only significant relationship to involve moral maturity was a negative relationship to the Peer Alienation dimension.

4) Although both dichotomous and continuous representations of attachment were related to expressions of moral judgment, relationships involving continuous attachment variables were slightly more common (see Table 3.11).

5) While role-taking opportunities did appear to mediate the relationship between attachment representations and moral judgment when examining moral maturity, it did not consistently mediate similar relationships when examining moral Type B ideality. Gender did not appear to play a strong mediating role.
<table>
<thead>
<tr>
<th>Attachment Variables</th>
<th>Moral Judgment Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dichotomous</td>
</tr>
<tr>
<td></td>
<td>Type B</td>
</tr>
<tr>
<td></td>
<td>Ideality</td>
</tr>
</tbody>
</table>

**Dichotomous Variables**
- Mother  ✓
- Father  
- Peer  ✓
- Romantic  ✓

**Continuous Variables**
- Overall Mother  ✓
- Overall Father  
- Overall Peer  ✓
- Mother Trust  ✓  ✓
- Mother Communication  ✓
- Mother Alienation  
- Father Trust  
- Father Communication  
- Father Alienation  ✓  
- Peer Trust  ✓
- Peer Communication  
- Peer Alienation  ✓  ✓  ✓
- Romantic Partner Depend  
- Romantic Partner Close  
- Romantic Partner Anxiety  ✓

**Note:** ✓ denotes a significant finding of at least $p < .05$.

Table 3.11: Findings on the Relationship between Attachment Representations and Moral Judgment
6) Although comparisons of juvenile offenders and non-offenders subsamples did produce significant differences in terms of moral judgment maturity, no such differences were found in terms of Type B ideality or any of the attachment variables.
Chapter 4
Discussion

The present research is based on—and extends from—a recent study (van IJzendoorn and Zwart-Woudstra, 1995) addressing the relationship between attachment and moral judgment. Van IJzendoorn and Zwart-Woudstra hypothesized that attachment security should be related to maturity and ideality (Type B) of moral judgment. They speculated that the attachment-maturity relationship should be mediated by social perspective-taking (which they did not measure). In relation to their study, the present research featured a larger mainstream sample (making restriction of range less of a problem); an additional, smaller sample of young adult offenders; and more differentiated measures of both attachment and moral judgment. Although the present results were complicated partly because the measures were more differentiated, they do in general support and expand upon the van IJzendoorn and Zwart-Woudstra results. Support was found for the relationship of young adults’ attachment representations not only to moral ideality but as well at least to some extent to moral judgment maturity. The relationship between secure attachment and moral judgment maturity was found to be mediated by social perspective-taking, although the attachment representation referred to peers rather
than to the previously proposed referents (the parents). The offender sample evidenced lower levels of moral judgment and social perspective-taking but not attachment security.

In expanding our understanding of the relationship between attachment representations and moral judgment, the present study also contributes to the general understanding of research and theory in attachment and moral judgment.

Relations Between Attachment and Moral Judgment

The present results, then, fine-tuned and extended van IJzendoorn and Zwart-Woudstra’s (1995) findings concerning attachment security and moral judgment. The present study found that maternal, peer, and romantic partner attachment security was related to moral ideality (Type B). Only indirectly (in terms of an inverse relationship with the Alienation dimension) did paternal attachment relate to moral judgment ideality.

That the relationship between attachment security and moral judgment was found mainly in terms of maternal attachment should not be surprising considering previous research. For example, Mickelson et al. (1997) found that college students place a higher importance on attachment relationships to mothers than to fathers. Mickelson et al., also found that the disparity decreases among older subjects, suggesting that the present findings specifying the mother may have validity mainly for young adult samples.

Only peer—not parental or partner—attachment security related to moral judgment maturity. Van IJzendoorn and Zwart-Woudstra (1995) also did not find a relationship for parental attachment (they did not measure peer attachment). Hence, the attachment-moral judgment relationship may not be robust even with a large sample and less restricted range
of moral judgment maturity levels. Nonetheless, future research should explore this question with samples that include not only college age students (as with both the previous study and ours) but as well students who are both younger and older than college age.

The present study also examined relationships of attachment to moral judgment in terms of moral “aspects” comprising each moral judgment stage (see Methods chapter). Moral judgment aspects were not examined at all in the van IJzendoorn and Zwart-Woudstra (1995) study. Although nine relationships did emerge during this exploratory analysis, they all involved significance levels between .01 and .05. Considering the large number of analyses conducted (24 aspects times four dichotomous variables and fifteen continuous variables resulting in 456 analyses), the likelihood is high that some or all of these “relationships” are artifacts of chance. Encouraging conceptual interpretation of the obtained relationships would be replication of them at a higher level of significance in future research.

Mediating Influence of Social Perspective-Taking

Van IJzendoorn and Zwart-Woudstra’s (1995) hypotheses were based on the mediating influence of social perspective-taking; an ability that appears to be fostered in a secure attachment relationship (Bowlby, 1969; 1988) and to be necessary for the development of mature levels of moral judgment (Kohlberg, 1984; Mason and Gibbs, 1993). In a closer examination of the theoretical link between perspective-taking and mature moral development, it is clear that it is the perspective-taking (i.e., role-taking)
opportunities that promote the development of mature moral judgments—such as those found in college and occupational settings (Kohlberg, 1984)—which are more likely to involve interactions with diverse peers than with parents. So while previous research appears to indicate that the parental attachment relationship is important to the development of early perspective-taking abilities, the present findings suggest that mature moral development requires the individual to expand upon those abilities in their subsequent interactions with peers. It is worth noting that the relationship between peer attachment and moral judgment maturity was found only in terms of a negative relationship to the Alienation dimension of attachment, supporting the hypothesis that individuals who are uncomfortable interacting with others in social settings may be the least likely to gain the role-taking experiences necessary for the development of mature moral judgments.

As noted above, van IJzendoom (1997) proposes that social perspective-taking mediates the relationship between attachment and moral judgment maturity insofar as it develops in a securely attached relationship between parent and infant and later promotes the development of mature levels of moral development. The variable used in the present study to assess perspective-taking did appear to perform a mediating role in the relationship between moral judgment and the attachment dimension of Peer Alienation, which assesses “feelings of alienation and isolation” (Armsden and Greenberg, 1987, p. 433). A possible explanation involving expanded peer interactions is provided above for why this was the only attachment variable to relate to moral judgment maturity, but it is
also interesting to note that the Alienation dimension was one of only three attachment dimensions never to exhibit a relationship with perspective-taking (the others being Depend and Trust). So, although perspective-taking was not directly related to Peer Alienation, the relationship between Peer Alienation and moral judgment maturity seems largely attributable to perspective-taking. Obviously there is some degree of interaction occurring between perspective-taking abilities and feelings of alienation, and future research needs to closely examine the relative influence of each variable. It is plausible that feelings of alienation may exert as strong a negative influence on the relationship between attachment and moral judgment maturity as perspective-taking exerts a positive influence.

The present study was able to directly examine the possible influence of perspective-taking abilities, but did not directly assess a variable also discussed by van IJzendoorn and Zwart-Woudstra (1995), namely, autonomy. Future research needs to directly examine the possible mediating influence autonomy may exert on the relationship between attachment and Type B ideality. It is also worth noting that gender was strongly related to several attachment variables, but it did not directly relate to either perspective-taking or moral judgment, nor did it appear to influence relationships between attachment and moral judgment.

**Theories of Attachment and Moral Judgment**

In addition to providing a more detailed examination of the relationship between attachment and moral judgment, the present study also revealed information relevant to current theory and research in these respective areas of development. In regards to
attachment theory, the present study adds to the literature (see Bartholomew and Shaver, 1998) supporting the existence and usefulness of continuous dimensions of attachment underlying discrete categories. These results also raise questions relating to Bowlby’s (1994) assumption about insecure attachment and “juvenile thieves.” In regards to moral judgment theory, the present study not only provides insights into the influence of peer interaction on the development of mature moral development, but adds attachment to the small number of psychological variables which appear to be related to Type B ethical Ideality.

If, as Bartholomew and Shaver (1998) propose, two traditions of adult attachment exist, findings from the present study would provide support for a relationship between both adult attachment traditions and moral judgment. Whereas the van IJzendoorn and Zwart-Woudstra (1995) study utilized the Adult Attachment Interview (AAI) and would therefore represent the first tradition, the present study utilized attachment questionnaires and represents the second tradition. The fact that the present study employed these questionnaire measures meant that we were able to examine details not assessable in van IJzendoorn and Zwart-Woudstra study; details allowing the present study to propose that not only are distinctions in the type of relationship dyad being examined important (e.g., attachment to mothers, fathers, or peers), but that attachment dimension distinctions are important as well. If the relationship between attachment and moral judgment maturity does only exist for representations of Peer Alienation, and the AAI can’t assess either peer attachment or the Alienation dimension of attachment, it is
unlikely the AAI will ever detect a relationship between attachment and moral judgment maturity. In addition, since the AAI collapses the attachment variable across both parents, it would also never be able to detect differences between attachment to mothers and to fathers, as would appear to exist in the relationship of attachment to Type B ideality.

While the theoretical consistency of the findings in the present study noted above would seem to argue for the existence and usefulness of continuous measures of attachment dimensions, equal consideration must be given for the arguments against their applicability. First of all, the inclusion of attachment dimensions dramatically increases the number of analyses performed, increasing the possibility that a significant finding would emerge by chance alone. Theoretical differences inherent in the two traditions of adult attachment are also far more complex than the methodological surface differences reflected in the interview and questionnaire formats. If, as van IJzendoorn (De Haas, Bakermans-Kranenburg, and van IJzendoorn, 1994; van IJzendoorn and Bakermans-Kranenburg, 1997) and others (Crowell and Treboux, 1995; Wampler, Shi, and Nelson, 1997; Stein et al., 1998; Crowell et al., 1999) suggest, the two adult attachment research traditions assess different underlying concepts of attachment, then it may also be considered inappropriate by some researchers to integrate van IJzendoorn and Zwart-Woudstra’s (1995) finding on parental attachment with the AAI and the present study’s findings of attachment to mothers and to fathers assessed with the Inventory of Parent and Peer Attachment (IPPA) questionnaire. One drawback to this argument against
integrating the two studies is that if it is carried to its logical conclusion, it would also have to be argued that research involving the AAI is simply not as informative as research involving attachment questionnaires, at least as it applies to the study of the relationship between attachment and moral judgment.

It could also be argued that the dichotomous attachment variables utilized in the present study are not equivalent to the dichotomous attachment variables obtained with the AAI. First of all, the measures are assessing different attachment dyads (e.g., relationships to peers rather than relationships to parents). In addition, whereas the AAI dichotomous categories of attachment are based on the scoring of interview transcripts (Main, 1995), the measures used in the present study first identify a subject's relative attachment dimensions scores, and then translates those dimension scores into categories of attachment. Although effective, this latter process presupposes that these specific attachment dimensions underlie the attachment categories; an assumption proponents of the AAI may not accept. Once again, if an integration of the two traditions is not acceptable, the more productive alternative appears to involve using questionnaires that provide dimension scores that have been empirically shown to relate to moral judgment variables in a theoretically consistent manner, rather than using the AAI and rejecting a relationship between the two constructs.

One finding from the present study that may be interpretable as support for the argument that the two traditions are not assessing the same construct are the findings that indicate a sample of juvenile criminal offenders do not exhibit the higher indices of
insecure attachment as expected. Bowlby (1944) was the first to propose a relationship between insecure attachment histories and criminal behavior. Recent research by van IJzendoorn (1997) found that, in support of Bowlby's position, the percentage of secure attachment relationships in a sample of criminal offenders under psychiatric treatment is lower than that found in a sample of comparable non-clinical, non-offenders. In contrast to Bowlby's position, though, this study also found that the percentage of secure attachment relationships in the criminal offender sample is similar to that of a clinical, noncriminal sample under treatment at the psychiatric hospital, suggesting that "insecure attachment representations may be a mental health risk factor rather than a direct determinant of criminal behaviour" (p. 718). The present study failed to find any differences in attachment variables between a sample of juvenile criminal offenders and a comparably aged sample of college students. While the small subsample size in the present might allow suggestions that the present sample is simply atypical, this is belied by the expected relationship evidenced between criminal offender status and moral judgment maturity. Further research needs to examine larger samples of juvenile offenders with both attachment questionnaires and interviews to accurately assess any true difference in the attachment variable vis a vis the methodological traditions.

The moral judgment variables in the present study performed in a manner consistent with moral development theory. Moral judgment maturity was inversely related to both criminal offender status and a negative expression of attachment (i.e., Peer Alienation), as well as being positively related to a perspective-taking variable. The
relationships Type B ideality appear to exhibit with various representations of attachment not only provide empirical research relevant to attachment theory, but add another area of research to the small but robust area previously shown to be related to Type B ideality. Although discussion of Type B ideality is often neglected in the moral development literature, consistent relationships have been found to areas such as moral action (Blasi, 1980; Gibbs et al. 1986). Future research should explore possible relationships between Type B ideality, moral behavior, and attachment variables, especially in light of the growing research relating insecure attachment to problem behaviors (see Greenberg, Speltz, and DeKlyen, 1993).

**Summary**

To summarize, the present study was directed toward examining the relationship between attachment representations and moral judgment. In a replication and extension of van IJzendoorn and Zwart-Woudstra’s 1995 study, relationships were found between the two constructs, especially in terms of representations of attachment to mothers and to peers, and support was found for viewing perspective-taking abilities as a possible mediating variable between the two constructs. Support was also found for the use of measures assessing continuous dimensions of attachment, although the relevance of such dimensions will most likely continue to be debated. The present study also identifies a new area of research relating to Type B ethical ideality, a relatively underexamined area of moral judgment theory. Finally, new directions for future research were suggested, including examining the mediating influence both autonomy and alienation variables may
exert on the relationship between attachment and moral judgment, the relative influence that representations of attachment to mothers and fathers may exert throughout the life span, and the possibility that attachment and Type B ideality may exert a combined influence on moral behavior.
LIST OF REFERENCES


92


97


Appendix A

Sociomoral Reflection Measure–Short Form (SRM–SF)
Social Reflection Questionnaire

Name: ___________  Date: _____________________________

Birthdate: ________  Sex (circle one):  male  female

Instructions

In this questionnaire, we want to find out about the things you think are important for people to do, and especially why you think these things (like keeping a promise) are important. Please try to help us understand your thinking by WRITING AS MUCH AS YOU CAN TO EXPLAIN—EVEN IF YOU HAVE TO WRITE OUT YOUR EXPLANATION MORE THAN ONCE. Don't just write "same as before." If you can explain better or use different words to show what you mean, that helps us even more. Please answer all the questions, especially the "why" questions. If you need to, feel free to use the space in the margins to finish writing your answers.

SRM-SF  (code #: _______________)

101
1. Think about when you’ve made a promise to a friend of yours. How important is for people to keep promises, if they can, to friends?

Circle one: very important  important  not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2. What about keeping a promise to anyone? How important is it for people to keep promises, if they can, even to someone they hardly know?

Circle one: very important  important  not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

3. How about keeping a promise to a child? How important is it for parents to keep promises, if they can, to their children?

Circle one: very important  important  not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
4. In general, how important is it for people to tell the truth?
Circle one: very important  important  not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

5. Think about when you've helped your mother or father. How important is it for children to help their parents?
Circle one: very important  important  not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

6. Let's say a friend of yours needs help and may even die, and you're the only person who can save him or her. How important is it for a person (without losing his or her own life) so save the life of a friend?
Circle one: very important  important  not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?
7. What about saving the life of anyone? How important is it for a person (without losing his or her own life) to save the life of a stranger?

Circle one: very important important not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

8. How important is it for a person to live even if that person doesn't want to?

Circle one: very important important not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

9. How important is it for people not to take things that belong to other people?

Circle one: very important important not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?
10. How important is it for people to obey the law?

Circle one: very important important not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

11. How important is it for judges to send people who break the law to jail?

Circle one: very important important not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Appendix B

Adult Attachment Scale (AAS)
Please read the following statements and rate them on the extent to which each one describes your feelings about adult relationships. Please think about all of your relationships (past and present) and respond in terms of how you generally feel in these relationships. Please use the scale below by placing a number between 1 and 5 in the space provided to the right of each statement.

<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I find it relatively easy to get close to people.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I find it difficult to allow myself to depend on others.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>In relationships, I often worry that my partner does not really love me.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I find that others are reluctant to get as close as I would like.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I am comfortable depending on others.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>I do not worry about someone getting too close to me.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I find that people are never there when you need them.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I am uncomfortable being close to people.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>In relationships, I often worry that my partner will not want to stay with me.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>When I show my feelings for people, I’m afraid they will not feel the same about me.</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>In relationships, I often wonder whether my partner really cares about me.</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>I am comfortable developing close relationships with others.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>I am nervous when anyone gets too close to me.</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>I know that people will be there when I need them.</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>I want to get close to people but I worry about being hurt by them.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>I find it difficult to trust others completely.</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Often, people want me to be closer than I feel comfortable being.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>I am not sure that I can always depend on people to be there when I need them.</td>
<td></td>
</tr>
</tbody>
</table>

AAS # ______
Appendix C

Inventory of Parent and Peer Attachment (IPPA)
Section 1
Each of the following statements asks about your feelings about your mother, or the woman who has acted as your mother. Please use the scale below by placing a number between 1 and 5 in the space provided to the right of each statement.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost Never or True</td>
<td>Not Very Often True</td>
<td>Sometimes True</td>
<td>Often True</td>
<td>Almost Always or Always True</td>
</tr>
</tbody>
</table>

1. My mother respects my feelings.  
2. I feel my mother does a good job as my mother  
3. I wish I had a different mother.  
4. My mother accepts me as I am.  
5. I like to get my mother's point of view on things I'm concerned about.  
6. I feel it's no use letting my feelings show around my mother.  
7. My mother can tell when I'm upset about something.  
8. Talking over my problems with my mother makes me feel ashamed or foolish.  
9. My mother expects too much from me.  
10. I get upset easily around my mother.  
11. I get upset a lot more than my mother knows about.  
12. When we discuss things, my mother cares about my point of view.  
13. My mother trusts my judgement.  
14. My mother has her own problems, so I don't bother her with mine.  
15. My mother helps me to understand myself better.

Please Continue to the next page
PC-ORT - Page 4

0 = NOT TRUE OR RARELY TRUE
1 = SOMEWHAT TRUE OR SOMETIMES TRUE
2 = VERY TRUE OR OFTEN TRUE

40. At work, I have friends and/or coworkers of the opposite sex.  0 1 2
41. At work, my friends and/or coworkers are very similar to me.  0 1 2
42. At work, I have many friends and/or coworkers and talk to them very often.  0 1 2
43. At work, I have had many friends and/or coworkers who are older than I am.  0 1 2

Answer if applicable

44. At work, when with my friends and/or coworkers I have been more of a follower than a leader.  0 1 2
45. At work, my friends and/or coworkers and I do not talk about our opinions when they differ.  0 1 2
46. At work, my friends and/or coworkers agree with what I say.  0 1 2
47. At work, my friends and/or coworkers generally have been very open with me.  0 1 2
48. At work, my friends and/or coworkers generally become angry when we disagree.  0 1 2
49. At work, my friends and/or coworkers have been concerned about hurting others' feelings.  0 1 2
50. At work, I have a say in what my friends and/or coworkers and I do.  0 1 2
51. At work, my friends and/or coworkers listen to me and want to hear what I have to say.  0 1 2
52. At work, my friends and/or coworkers and I discuss our differences of opinion.  0 1 2
PC-ORT - Page 3

0 = NOT TRUE OR RARELY TRUE
1 = SOMEWHAT TRUE OR SOMETIMES TRUE
2 = VERY TRUE OR OFTEN TRUE

27. My parents encourage me to express my opinions, even when we disagree. 
   0 1 2

28. My parents and I do not talk very much. 
   0 1 2

29. My parents listen to me and want to hear what I have to say. 
   0 1 2

30. I read the news articles in newspapers or news magazines, or watch TV news programs. 
   0 1 2

31. I have learned just how many different ways there are to look at things in the world since beginning to college. 
   0 1 2

32. I have been involved in voting as well as other civic or political activities. 
   0 1 2

33. Circle number 0 please. 
   0 1 2

34. I have learned just how culturally varied the world is since coming to college. 
   0 1 2

35. I have become aware of conflicts between various groups, locally, nationally, or around the world. 
   0 1 2

Answer if applicable:

36. At work, my boss or supervisor generally seems to ignore me or not want to hear what I have to say. 
   0 1 2

37. At work, I am (or have been) engaged in many different kinds of activities dealing with people. 
   0 1 2

38. At work, my boss or supervisor generally encourages me to express my opinions, even when we disagree. 
   0 1 2

39. At work, my boss or supervisor generally listens to me and wants to hear what I have to say. 
   0 1 2
PC-ORT - Page 2

0 = NOT TRUE OR RARELY TRUE
1 = SOMEWHAT TRUE OR SOMETIMES TRUE
2 = VERY TRUE OR OFTEN TRUE

11. I have discussed intellectual, political, or social issues — even controversial issues — with other students or co-workers. 0 1 2
12. Other students or co-workers have challenged me to consider their points of view. 0 1 2
13. I have campus friends of the opposite sex. 0 1 2
14. My campus friends are very similar to me. 0 1 2
15. I have many campus friends and talk to them very often. 0 1 2
16. I have had many campus friends who are older than I am. 0 1 2
17. When with my campus friends, I have been more of a follower than a leader. 0 1 2
18. My campus friends and I do not talk about our opinions when they differ. 0 1 2
19. My campus friends agree with what I say. 0 1 2
20. My campus friends generally have been very open with me. 0 1 2
21. My campus friends generally become angry with we disagree. 0 1 2
22. Circle number 0 please. 0 1 2
23. My campus friends have been concerned about hurting others' feelings. 0 1 2
24. I have a say in what my campus friends and I do. 0 1 2
25. My campus friends listen to me and want to hear what I have to say. 0 1 2
26. My campus friends and I discuss our differences of opinion. 0 1 2
This questionnaire asks about experiences you have had since you started college. For each item you are to indicate how true it is for you by circling the appropriate number. For each item the possible answers are:

0 = NOT TRUE OR RARELY TRUE
1 = SOMEWHAT TRUE OR SOMETIMES TRUE
2 - VERY TRUE OR OFTEN TRUE

**NOTE: ANSWER ACCORDING TO EXPERIENCES SINCE BEGINNING COLLEGE**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have found that professors generally seem to ignore me or not want to hear what I have to say.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2. I am or have been involved in many different college activities.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>3. I belong to or have been a member of many clubs or organizations around campus.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>4. I have found that my campus professors generally listen to me and want to hear what I have to say.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>5. I have participated in a lot of class discussions.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>6. I have played or have been asked to play a leadership role in a group (social, athletic, political, religious) around campus or work.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>7. I have found that the professors generally encourage me to express my opinions, even when we disagree.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>8. I have encountered and become friends with other students or co-workers of different ethnic or cultural backgrounds (for example, a student from another country).</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>9. I have found that professors generally encourage me to consider other points of view.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>10. I have cooperated with people even when they have had different opinions.</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
Appendix D

Post-Childhood Opportunities for Role-Taking (PC–ORT)
16. I tell my mother about my problems and troubles.  

17. I feel angry with my mother.  

18. I don't get much attention from my mother.  

19. My mother helps me to talk about my difficulties.  

20. My mother understands me.  

21. When I am angry about something, my mother tries to be understanding.  

22. I trust my mother.  

23. My mother doesn't understand what I'm going through these days.  

24. I can count on my mother when I need to get something off my chest.  

25. If my mother knows something is bothering me, she asks me about it.  

**Section 2**  
This part asks about your feelings about your father, or the man who has acted as your father. Please use the scale below by placing a number between 1 and 5 in the space provided to the right of each statement.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost Never or True</td>
<td>Not Very Often True</td>
<td>Sometimes True</td>
<td>Often True</td>
<td>Almost Always or True</td>
</tr>
</tbody>
</table>

1. My father respects my feelings.  

2. I feel my father does a good job as my father.  

3. I wish I had a different father.  

4. My father accepts me as I am.  

5. I like to get my father's point of view on things I'm concerned about.  

6. I feel it's no use letting my feelings show around my father.  

Please Continue to the next page
7. My father can tell when I'm upset about something.
8. Talking over my problems with my father makes me feel ashamed or foolish.
9. My father expects too much from me.
10. I get upset easily around my father.
11. I get upset a lot more than my father knows about.
12. When we discuss things, my father cares about my point of view.
13. My father trusts my judgement.
14. My father has her own problems, so I don't bother him with mine.
15. My father helps me to understand myself better.
16. I tell my father about my problems and troubles.
17. I feel angry with my father.
18. I don't get much attention from my father.
19. My father helps me to talk about my difficulties.
20. My father understands me.
21. When I am angry about something, my father tries to be understanding.
22. I trust my father.
23. My father doesn't understand what I'm going through these days.
24. I can count on my father when I need to get something off my chest.
25. If my father knows something is bothering me, he asks me about it.

Please Continue to the next page
**Section 3**

This part asks about your feelings about your friends. Use the scale below by placing a number between 1 and 5 in the space provided to the right of each statement.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost Never or Never True</td>
<td>Not Very Often True</td>
<td>Sometimes True</td>
<td>Often True</td>
<td>Almost Always or Always True</td>
</tr>
</tbody>
</table>

1. I like to get my friends' point of view on things I'm concerned about. ___
2. My friends sense when I'm upset about something. ___
3. When we discuss things, my friends consider my point of view. ___
4. Talking over my problems with my friends makes me feel ashamed or foolish. ___
5. I wish I had different friends. ___
6. My friends understand me. ___
7. My friends encourage me to talk about my difficulties. ___
8. My friends accept me as I am. ___
9. I feel the need to be in touch with my friends more often. ___
10. My friends don't understand what I'm going through these days. ___
11. I feel alone or apart when I am with my friends. ___
12. My friends listen to what I have to say. ___
13. I feel my friends are good friends. ___
14. My friends are fairly easy to talk to. ___
15. When I am angry about something, my friends try to be understanding. ___
16. My friends help me to understand myself better. ___
17. My friends are concerned about my well-being. ___

Please Continue to the next page
18. I fell angry with my friends.

19. I can count on my friends when I need to get something off my chest.

20. I trust my friends.


22. I get upset a lot more than my friends know about.

23. It seems as if my friends are irritated with me for no reason.

24. I tell my friends about my problems and troubles.

25. If my friends know something is bothering me, they ask me about it.