ROMANTIC RELATIONSHIPS AND ADULT ATTACHMENT:

PROVIDING A SECURE BASE FOR EXPLORATION

A Thesis

by

ARCHIBALD MCLEISH MARTIN III

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

May 2006

Major Subject: Psychology

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Approved by:

Chair of Committee,   W. Steven Rholes
Committee Members, Jeffry A. Simpson
                   Ramona L. Paetzold
Head of Department, W. Steven Rholes

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ABSTRACT

Romantic Relationships and Adult Attachment:

Providing a Secure Base for Exploration. (May 2006)

Archibald McLeish Martin III, B.A., Whitman College

Chair of Advisory Committee: Dr. W. Steven Rholes

The current study examines both attachment style and the current romantic relationship's influence on exploration. A sample was gathered of 152 female and 130 male undergraduate students from Texas A&M University. The study found that attachment styles were related to the participants' perceptions of their partner with regards to exploration. Specifically, avoidant people report using exploration as a means to distance themselves from their partner. Anxious people respond that they are dependant on their partner to explore. In addition, the study found that the Anxiety dimension predicted exploration across a range of established scales from the literature. Finally, the study presents evidence that the degree to which anxious people feel that they explore out of dependency on their partner mediates the association between anxiety and exploration. These findings highlight the importance of accounting for the current relationship partner in future studies of exploration and attachment.

ACKNOWLEDGMENTS

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INTRODUCTION

Bowlby (1969) proposed that a science of human behavior could best be created by borrowing from biology, in particular literature in ethology and evolution. Through an examination of this literature in relation to infant development, Bowlby developed attachment theory. Bowlby came to argue that one of the chief instinctive systems in humans is a goal–oriented system of attachment. The goal of this instinctive system is for an infant to maintain proximity to a primary caregiver. Bowlby argued that the primary reason to maintain contact with a caregiver is the protection provided by the attachment figure. There are two main strengths to this argument. First, it explains why attachment to others is observed throughout the human lifespan. Second, it explains the findings that attachment behavior is strongest in times in which a person is in need because of a stressful or anxiety provoking situation. Even in adulthood, when an individual is sick or in danger, the presence of a trusted other to help and defend is highly adaptive. However, as people become adults, attachment behavior shifts from the parent to romantic partners.

Since 1987, when Hazan and Shaver published the first article linking attachment theory to adult romantic relationships, a great deal of research has been conducted on what Bowlby termed "the safe haven aspect of attachment theory." This aspect refers to the comfort that, for people with secure attachments, is reliably provided by the primary caregiver (for greater discussion of this topic, see Feeney & Collins, 2004). However, a second aspect of attachment behavior, the secure base, has been neglected. This aspect refers to the notion that people with good attachment figures learn that, if they encounter something that they cannot handle, they have someone to retreat to that will protect and

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This thesis follows the style of *Journal of Personality and Social Psychology.*

comfort them. Thus, these individuals have greater confidence and are able to more freely

explore their environment (Feeney & Collins, 2004). To date, most research on support

focuses on the interaction and active support that partners provide when they are in each

other's presence. Studying the secure base a partner provides would help us understand

how a good attachment figure plays a role in people's lives even in their partner's

absence. Findings demonstrating that merely having a secure base which provides

support for individuals to explore and grow would have wide implications; not just in the

area of attachment, but also areas such as stress and coping, therapeutic applications, and

personal growth.

Exploration and Its Ties to Attachment

In addition to his theory of attachment, Bowlby (1969) described a complex

interaction between attachment behavior and exploration behavior. Bowlby thought of

attachment as a control system designed to maintain a certain optimal distance from the

attachment figure. For example, infants maintain a close proximity to the mother. (Note

that mother and attachment figure are used interchangeably because of precedent and for

stylistic reasons, but an attachment figure can take many forms other than a mother.)

However, not all behaviors increase proximity to the attachment figure. In Bowlby's

discussion of infant behavior he breaks the child's behavior into two groups, "the child's

attachment behavior [and the] behavior of the child that is antithetical to attachment,

notably exploratory behavior (1969, pp. 237)." Thus, Bowlby defined attachment

behaviors as those that brought the infant and the caregiver closer together, whereas

exploration is the chief motivator for behavior that distances the two. The key point here

is that a dynamic equilibrium exists wherein attachment behavior closes the distance and

exploratory behavior increases the distance, such that some optimal distance between the figures is maintained.

Bowlby (1969) describes infant exploration behavior as the investigation of novel situations and novel experiences: "Exploratory behavior is elicited…by stimuli that are novel and/or complex" (pp. 238). Bowlby gives examples of exploration ranging from an infant crawling to the far side of the room, to a child playing with a new toy, to a toddler agreeing to go on a play date without mother (pp.205). Bowlby also makes special mention of social situations as an important part of exploration, and argues that if examination of an inanimate object is novel then examination of a new playmate must be all the more so. From Bowlby's description of childhood exploration, a three–part description of what adult exploration might include may be developed.

Exploration involves a voluntary encounter with novel stimuli. First, consistent with lay understanding of exploration, this may involve new activities, objects or situations such as new sports, or traveling to new places. This type of exploration is drawn from Bowlby's (1969) examples of experiments involving a child's willingness to venture down a dark hallway. Second, exploration could also include the realm of purely mental activities. Thus, deciding to read a book with the potential to make one think about the world in a different way or thinking about different peoples' values, philosophies, and ways of life are examples of exploration. Exploration of this type is drawn from Bowlby's examples of infants preferentially gazing at and "studying" novel stimuli. Third, exploration might also include new social situations, such as trying out new student clubs or making new friends with different types of people. This aspect of

exploration is similar to the example mentioned above of an infant going on a play date without their mother.

The attachment behavior of a human child begins at about the age of three months, when infants respond differentially to their mother and begin to seek out interaction (Bowlby, 1969, pp.203, 210). At this stage in development the main function of attachment behavior, proximity, is maintained through crying. As the infant grows and is able to follow his or her attachment figure, crying is less necessary to maintain proximity (pp. 201). Once infants begin to crawl they also begin to engage in more exploratory behavior (crawling away from the mother to stare at new people or putting new toys in their mouths). Even at the age of two or three, most infants are comfortable engaging in exploration only when their mothers are present. Children begin to be more comfortable exploring their environment outside of their mother's presence by the age of four or five (pp. 205). However, if something goes wrong when they are exploring their environment, they immediately seek out an attachment figure (pp. 207).

Overall, the optimal distance to an attachment figure increases as an individual moves towards adulthood (Bowlby, 1969, pp. 207, 261). In addition to this increased distance, a greater variety of support suffices in times of need. For example, in toddlers, a frightening situation often requires being hugged or cuddled. As adults, however, the level of contact can be satisfied by "an increasingly large range of conditions, some of which are purely symbolic. Thus, photographs, letters and telephone conversations can become more or less effective means of 'keeping contact' so long as intensity is not too high" (Bowlby, 1969, pp. 261). This is not to say that adults never need or rely upon the active comfort and close proximity of their partner in times of need. Related to adults'

ability to be comforted by weaker contact is the development of mental models. Adults develop and maintain a mental model of how their specific partner and partners in general will treat them (Collins, Guichard, Ford, & Feeney, 2004). This allows adults to rely on a mental representation of their partner without their partners' actual presence.

We argued above that in all stages of development the optimal distance between the self and the attachment figure must be maintained; however, over the course of development, this optimal distance increases (Bowlby, 1969, pp. 207, 261). Therefore, when an adult goes through a stressful event it is improbable that his or her partner will be there in person to provide active reassurance (a safe haven). Rather, it is more likely to be the secure base aspect (the knowledge that if a situation goes badly one can return to the attachment figure) that provides an adult with comfort in most traumatic situations. So, we again see the practical importance of understanding the interaction between a person's attachment figure and the ways in which adults go about exploring their worlds.

Attachment Style Differences in Attachment and Exploration

In Bowlby's (1969) discussion of differences in infant attachment to caregivers, one of the chief behaviors which distinguishes between secure and insecure attachment styles is exploratory behavior. For example, in describing secure infants, Bowlby noted that, "the picture was that of a happy balance between exploration and attachment" (pp. 338). His description of insecure infants was quite different as he pointed out that, "some tended to be passive, exploring little and/or rarely initiating contact….Others of the [insecurely] attached engaged in exploration, but they did so more briefly than the securely attached; and they seemed constantly concerned about mother's whereabouts" (pp. 338). Thus, Bowlby believed the more secure an infant, the more that infant is able

to engage in exploratory behavior. Inversely, the more insecure the infant, the more that infant is tied up in maintaining proximity and thus unable to explore.

There have been a number of empirical studies seeking to examine exploration in the context of adult attachment, beginning with Hazan and Shaver (1990). In this study, exploration was operationalized as work orientation and attitudes about work. Their results showed that secure people enjoyed their work more, felt they were better at their jobs, and felt that work did not interfere with their romantic relationships. Conversely, the anxious/ambivalent participants reported that work interfered with their relationships and they feared rejection due to poor performance. Avoidant people reported using work as a means to avoid social interaction. Thus, at least in the context of attitudes toward work, adult attachment style clearly maps onto the differences in exploration exhibited by infants. That is, securely attached adults go about their work confidently, whereas people with an anxious style are not as satisfied with work and people with an avoidant style use work as a means to avoid closeness to their attachment figure.

Although Hazan and Shaver's results provided a productive first step, they also conceded that operationalizing exploration in adults at work might be too limited. There are many other adult behaviors that one could argue are examples of exploration. It is also, perhaps, not the best route to try to define certain areas of life such as work or play as exploration. Rather, a more useful idea might be to look at exploration as encompassing a set of personality traits or individual differences (e.g., dispositional curiosity). By investigating a personality trait researchers would be able to generalize across a wide array of behaviors without having to address each of them one by one.

The second investigation into adult attachment and exploration was undertaken by Mikulincer (1997) in an article addressing information processing and attachment. Only the first two studies in the article are relevant to exploration. The author's first study was a questionnaire study that examined the link between attachment style and state and trait curiosity. The results of the first study showed that secure individuals had significantly higher scores than avoidant individuals on the measures of curiosity. They also showed that secure individuals were more likely to endorse normative beliefs about the appropriateness of curiosity. These results demonstrate that, even for state and trait curiosity scores, people exhibit differences based on attachment style. This first study also goes beyond Hazan and Shaver's (1990) method to show how attachment style influences the approach which people would take on a range of activities.

Mikulincer's (1997) second study was a behavioral test of curiosity in which the dependent measure representing "exploration" was how many video clips individuals chose to watch about a new product. Participants in the control condition were told that after watching the video clips they would test the product. In the experimental condition they were told they would engage in a "social interaction" and that the duration of this second portion of the study was dependent on how much time they spent viewing the clips. The results showed that the secure individuals chose to watch more of the clips across both conditions. The avoidant individuals only chose to watch more clips when they thought that the clips would be followed by the social interaction. Thus, Mikulincer argues that they were probably watching the clips because it reduced the time they would spend in the social interaction. Anxious–ambivalent people only chose more clips when they knew it would be followed by the product testing. When the clips were to be

followed by the interaction they chose fewer of the clips. Presumably this was to proceed to the interaction as quickly as possible. A major problem with the study (and any generalizations to exploration outside of the study) is the operationalization of exploration. It could be argued that the opportunity to meet a new person is the same or even a better example of exploration as watching commercials—though it was not scored in that way. Thus, it is unclear if the avoidant or anxious people were truly less exploratory or if they just had different preferences in exploration. Nevertheless this study did demonstrate that attachment style significantly influenced exploratory behavior in some way. In addition, the data showed there is not a simple association between attachment style and exploration. In this study it was the interaction between the participants' curiosity and the activities with which it had to compete that created the differences between exploration in secure and insecure individuals. In a larger context, this research shows that any study of exploration will have to account for not only the "healthy" styles of exploration exhibited by secure individuals, but also the behavior of those with anxious or avoidant attachment styles. In particular, we see the first evidence that anxious people might be more willing to explore if the exploration does not compete with the opportunity for social interaction. Further, avoidant people might use exploration as a means of avoiding their needs for intimacy.

Green and Campbell (2000) were the first to directly tie adult attachment styles to *attitudes* about exploration. In this case, a questionnaire was developed to measure exploration. The items assessed participants' willingness to engage novel stimuli in social, environmental, and intellectual contexts. The authors conducted two studies. In the first they examined the relation between exploration and chronic attachment style. In

the second they inspected the link between a primed attachment style and exploration. The results of both studies showed that both greater avoidance and greater anxiety were related to less endorsement of exploration items. In the second study the authors also asked participants how interested they were in three Escher prints, as these were presumably novel stimuli. They found that participants primed for security liked the prints the most. This work is particularly important because it was the first attempt to create a questionnaire addressing the broad definition of exploration used by Bowlby, and thus showed that attachment style was directly related to a wide range of possibilities for exploration. Therefore, this work is perhaps the most generalizable of the research discussed thus far; it moves beyond simple measures of curiosity and exploration in the work environment and examines specific attitudes towards the whole range of exploration behaviors. In addition, this is the only work that has manipulated attachment style. These primes created the same patterns of exploration as chronic attachment. This study provides some evidence that it is the attachment style that is causing the differences in exploration.

Carnelley and Ruscher (2000) followed the logic of Hazan and Shaver's (1990) article, but applied it to leisure activities instead of work. They found that avoidant and anxious people were more likely to explore as a means of gaining social approval. These results relate to those of Mikulincer (1997), who found that anxious people were less likely to engage in exploration when it competes with social interaction. In Carnelley and Ruscher's study, because they were asking about exploration in terms of various leisure activities, they found that anxious people were more likely to engage in exploration that leads to greater social interaction. Carnelley and Ruscher also found that anxious people

were less likely to engage in thrill–seeking activities. The authors suggest this result

could be due to their preoccupation with relationships in general, thereby distracting them

from those activities. This finding could also be because they do not feel they have the

secure base necessary to attempt something which might provoke a great deal of anxiety.

This research is severely limited in its scope, however. First, there were no behavioral

measures of exploration. Second, like Hazan and Shaver (1990), this research tried to fit

exploration into only one aspect of people's lives, with leisure occupying even less time

than work for most people. Peoples' disposition towards exploration should control their

behavior in the context of leisure activities, but it should also control behavior in a vast

array of other areas of life, making a one by one investigation of each area inadequate.

A novel approach to the question of attachment and exploration was put forth by

Elliot and Reis (2003). Instead of trying to link attachment style with *behaviors or*

attitudes toward exploration, such as work, leisure activities, or curiosity, Elliot and Reis

focused on the influence of attachment style on *motivations* for exploration. Elliot and

Reis focused in particular on goal behavior in the form of mastery versus performance

motivation and approach versus avoidance motivation. They found that secure people are

more likely to adopt mastery/approach based goals, with the degree to which they viewed

the goal as a challenge mediating this association. Thus, secure people were influenced

by a high need for mastery and a low fear of failure.

Feeney (2004) was the first to examine exploration in the context of a romantic

relationship, focusing on the support of the romantic partner. However, in neither of her

studies is the exploration behavior directly tied to attachment style. Instead, Feeney chose

to tie exploration to the intermediate behavior of providing a secure base, which should

be related to attachment style. In the first study, one partner in each couple talked about his or her goals for different exploratory activities while the other provided support. The results showed that people with a secure base are also more likely to explore. Feeney's (2004) second study was an experimental study where one partner played puzzle games on the computer and the degree of support was manipulated through an instant messaging program. The study included four conditions, a control and three types of support – intrusive/controlling, intrusive/support and nonintrusive/support. The intrusive/controlling condition involved giving answers to the puzzle or telling the partner which problem to work on at the rate of one message every 15 seconds for the first three minutes then one message every 30 seconds the last 2 minutes. The intrusive/support condition involved messages that were emotionally supportive but were delivered at the same intrusive rate as the previous condition. The nonintrusive/support condition involved the same emotionally supportive message but was delivered only once at 4 minutes into the task. Feeney drew these conditions from Bowlby's (1988) description of a secure base as someone who is there when needed but does not interfere. She also relied on previous research showing that insecurely attached people engage in more intrusive support and less instrumental support (Feeney & Collins, 2001). Feeney's (2004) results show that people in both of the supportive conditions found the messages more helpful/thoughtful than did people in the controlling condition. The results also showed that people in the nonintrusive/support condition found their messages the least frustrating/insensitive. Finally, these perceptions of support were moderately correlated with a positive change in self–esteem. Thus, these findings demonstrate that the type of support given is a key factor in how people feel about their exploration behavior. This

link between type of support and exploration, combined with the previously mentioned research linking attachment style and type of support, provide evidence that the attachment style of the partner providing support is probably important. Feeney's (2004) studies also used more externally valid measures of exploration behavior–goals for the future and game playing.

It is the interaction between exploration and attachment styles *in a romantic relationship* that will be the focus of the current study. Bowlby's (1969) theory is based on the attachment relationship, yet all of the studies so far, except Feeney (2004), have sought to examine the interaction between attachment and exploration outside of the romantic relationship. In this study, the inclusion of information about the partner allows us to see if the current romantic relationship is an important predictor of exploration.

Present Study

It is clear there are some areas that need further illumination. Only some of the articles discussed so far have even included participants who were in current romantic relationships and Feeney's (2004) article is the only one to have used the relationship as an important aspect of the study design. That the romantic relationship is not at the center of research is a void in the literature on attachment and exploration. Bowlby (1969) did contend that working models would control a person's outlook in various aspects of life outside of the immediate context of a relationship. However, the chief role of attachment theory is to provide explanations concerning relationships, which in adults typically means couples in a romantic relationship.

Feeney's (2004) work has some limitations. The use of goals for the future is not the most direct link to exploration. In addition, it is premature to isolate one variable and

operationalize it as exploration. This problem is seen not just in Feeney's study, but more broadly in existing research. So far the efforts in the literature to identify variables linked to exploration have been done in a haphazard manner. What is needed is a comprehensive survey investigating not just one variable at a time but many variables, already established in the literature, which could be measures of exploration.

Thus, this questionnaire–based study will address the construct of exploration (as described above) from a number of different angles. In addition, we will attend to both attachment styles in general as well as how much the current partner is the focus for addressing attachment needs. Finally, as all participants will have a current romantic partner, we will also deal with their perceptions of their partner with regards to their own exploration. That is, we are interested first in how much support and encouragement participants perceive getting from their partners. Second, we are curious how much participants use exploration as a distancing tactic in their relationships. Third, we are interested in how much participants feel that they are dependant on their partner for their exploration.

Six primary hypotheses are examined in this study and all six hypotheses include each of the exploration variables in the same way. Therefore, for the sake of brevity, we will use the term "exploration" to mean all of the exploration variables described in the methods section. The hypotheses are as follows:

H1.   *Influence of Attachment Dimensions on Exploration* – Higher levels of either avoidance or anxiety will be associated with lower levels of exploration.

Bowlby (1969) repeatedly describes infants who are insecure as unwilling to explore their environment. Thus, it is reasonable to expect that this will be the case for adults as well,

regardless of whether the insecurity manifests itself as avoidance or anxiety. Green and Campbell's (2000) study, which showed that secure people explore more, and Mikulincer's (1997) study, which showed that secure individuals were more curious, both provide added support for this hypothesis.

 H2. Influence of Perceptions of Partner and Exploration on Exploration

  a. Perceptions of greater support and encouragement from the partner will be associated with higher levels of exploration.

  b. Using exploration as a distancing tactic will be associated with lower levels of exploration.

  c. Greater dependence on the partner for exploration will be associated with lower levels of exploration.

Relationships are built around interdependence and interaction between the partners. Thus, the more encouragement to explore a person receives from their partner, the more that person will explore, regardless of attachment style. Conversely, people who explore because of an ulterior motive, either dependence on the partner or distancing from the partner, will be less free to explore.

 H3. *Influence of Attachment Focus on Exploration* – Greater focus on the current partner for attachment needs will be associated with higher levels of exploration.

This hypothesis goes directly back to Bowlby's description of exploration: children explore only when they are confident in their attachment figure. Thus, the degree to which people rely on their current partners should relate to how comfortable they feel exploring, regardless of attachment style. In addition, both hypotheses two and three are

partially supported by Feeney's (2004) study, which showed that people respond to positive, non–interfering support, from their partners.

H4. *Influence of Attachment on Perceptions of Partner and Exploration*

a. Both anxiety and avoidance will be related to perceptions of less support and encouragement from the partner.

b. Avoidance will be related to using exploration as a distancing tactic.

c. Anxiety will be related to greater dependence on the partner for exploration.

There is an abundance of evidence that attachment style influences a plethora of perceptions about the partner (for a review see Collins, Guichard, Ford & Feeney, 2004). Thus, because attachment style is related to both exploration and perceptions of the partner it should be related to perceptions of the partner regarding exploration.

H5. *Influence of Interactions on Exploration*

a. When both anxiety and avoidance are low, exploration will be high, regardless of attachment focus. When either anxiety or avoidance is high or both are high, exploration will depend on attachment focus: Focused attachment will be associated with higher exploration, and unfocused attachment will be associated with lower levels of exploration.

This pattern of findings, that attachment focus compensates for insecure attachment, has been shown with other outcome variables, such as depression (Rholes & App, 2005). Because this type of finding has been shown previously, it leads us to believe the same should hold true for exploration.

b. When either or both anxiety or avoidance are high, exploration will be low, regardless of the level of partner encouragement for exploration. However, when anxiety and avoidance are low, exploration behavior will be higher if partner support for exploration is high and lower if partner support for exploration is low.

c. Concerning the interaction between attachment focus and partner support of exploration: when attachment focus is low, exploration will be low, regardless of the level of partner encouragement. However, when attachment focus is high, exploration behavior will be higher if partner support of exploration is high and lower if secure partner support of exploration is low.

Hypothesis 5b and 5c should be supported because partner encouragement will only be effective if people trust their partners, which is not true of people who are highly anxious, highly avoidant, or low in attachment focus.

It is not fully clear what the possible three–way interactions might demonstrate. Thus, these interactions will be investigated, but no specific hypotheses will be made concerning them.

The above hypotheses concern the various moderating influences of attachment style, attachment focus and perceptions of partner and exploration. However, there is an alternative set of hypotheses that are just as plausible. This alternative is that attachment focus and perceptions of partner and exploration will be mediators between attachment and exploration.

H6.   *Perceptions of Partner and Exploration Mediates the Association between*

Attachment and Exploration

    a. Perceptions of support and encouragement from the partner will mediate the association between avoidance and exploration.

    b. Using exploration as a distancing tactic will mediate the association between avoidance and exploration.

    c. Perceptions of support and encouragement from the partner will mediate the association between anxiety and exploration.

    d. Dependence on the partner for exploration will mediate the association between anxiety and exploration.

We have already argued for hypotheses that attachment will be related to both perceptions of partner with regards to exploration as well as exploration. Perceptions of partner and exploration should be more proximal to the attachment dimensions than exploration. Thus, attachment should affect perceptions which should affect exploration.

METHOD

Participants

One hundred and fifty two female and 130 male undergraduate students from Texas A&M University participated in this study for psychology course credit. All participants were currently involved in a romantic relationship for at least one month. A minimum relationship length of only one month was used to maximize the variability in the attachment focus measure. One participant did not fill out the sensation seeking scale. Thus, the degrees of freedom differ for analyses including sensation seeking. That one participant's responses are included in the rest of the analyses.

Procedure

Participants were administered questionnaires in groups of up to 50. Participants were asked their sex, age, how long they had been dating their current partner, and the status of the relationship: dating, dating exclusively, engaged, and married. The order of the questionnaires was counterbalanced, with half of the participants first receiving the attachment measures and perceptions of partner and exploration and the other half of the participants first receiving the exploration measures. Within these two groups, participants received questionnaires in the same order as they are described below. The measures tapping into possible covariates were always administered last.

Measures

Predictor Variables. Attachment was measured using the Experiences in Close Relationships questionnaire (Brennan, Clark, & Shaver, 1998). This scale measures attachment along two dimensions, anxiety and avoidance. Here, $\alpha = .92$ $M = 3.58$, $SD = 1.21$ for anxiety and $\alpha = .92$, $M = 2.31$, $SD = .98$ for avoidance. All participants

answered with reference to both partners and relationships in general. Attachment focus was measured using the WHOTO scale (Hazan, & Zeifman, 1994). This measure consisted of twelve items concerning attachment needs—proximity to attachment figure, secure base, safe haven, etc. Participants rank ordered the top five people who they turn to for each item. For example, one item is, "Persons you know will always be there for you, no matter what." For example, a person might list his or her mother, romantic partner, father, best friend, and grandmother. The scale is scored such that higher scores mean the participants turn to their partner before other people across all of the twelve attachment needs listed. Summary statistics for the WHOTO for this study are, $\alpha = .87$, $M = 3.96$, $SD = .92$.

One of the main purposes for the project was to examine how partners influence exploration. Therefore, we developed three measures of Perceptions of Partner and Exploration (PPE). The first, a seven item measure assesses the "secure" PPE. Participants responded on 7 point Likert scales, with "strongly agree" and "strongly disagree" as anchors. It is the "secure" version because the scale was designed to assess how much partners encourage and support exploration for its own sake. Thus, this scale has items such as, "My partner encourages me to explore my world" (See Appendix C for the complete scale). Statistics for the scale were, $\alpha = .88$, $M = 5.57$, $SD = 1.07$. The second scale is an avoidant version of the PPE. This scale is five items long with participants once again using the same 7 point Likert scales. In this scale, the items tap into the way that avoidant people might explore in the context of their relationship with their partner. Thus, this scale has items such as; "I explore new things to be on my own" (See Appendix C for the complete scale). Statistics for the scale were, $\alpha = .79$, $M = 3.50$,

SD = 1.26. The last version of the scale is the seven item anxious version. Participants

responded on the same 7 point Likert scales. Items on this scale tap into the way that

anxious people might explore in the context of their relationship with their partner. Thus,

this scale has items such as, "I only explore when my partner is present" (See Appendix

C for the complete scale). Here, α = .84, *M* = 2.45, *SD* = 1.06.

Exploration Dependant Variables. Seven dependant variables were examined in

this study. The first measure of exploration was self designed. This scale, which we

named the Attachment Exploration scale, was developed to provide a means to directly

compare reports of exploration to reports of the secure PPE. The Attachment Exploration

scale is composed of the 8 items which address the broad definition of exploration that

Bowlby used (See Appendix D). This scale had high reliability and reasonable summary

values, α = .88, *M* = 5.69, *SD* = .84.

Additional measures were chosen because they were already established in the

literature and an argument could be made that they tap into Bowlby's definition of

exploration. The eighteen–item Need for Cognition Scale was included to measure the

intellectual aspects of exploration (Cacioppo, Petty, & Kao, 1984). Here, we obtained, α

= .91, *M* = 4.3, *SD* = 1.04. Openness, a subscale of the Big Five personality traits, was

included because enjoyment of new experiences is clearly related to exploration. Thus,

this trait was assessed using the subscale from the Big Five Inventory (BFI). The subscale

is ten items, measured on 5–point Likert scales (John & Srivastava, 1999). Reliability

was somewhat low, α = .79, with *M* = 3.54, and *SD* = .60.

In addition, Zuckerman's Sensation Seeking Scale Form V was used to measure

exploration (Zuckerman, Eysenck & Eysenck, 1978). Zuckerman describes Sensation

Seeking as, "the tendency to seek relatively novel and stimulating situations and explore them" (pp.11). This description suggests that Sensation Seeking may be considered a component of exploration. This scale is a forty–item measure in which each item is composed of forced choices between a sensation seeking sentence and a non–sensation seeking sentence. Statistics for the scale were found to be, $\alpha = .90$, $M = 1.47$, $SD = .22$.

The final measures of exploration were two curiosity scales, the Curiosity and Exploration Inventory (CEI; Kashdan, Rose, & Fincham, 2004) and the State–Trait Curiosity Inventory (STCI; Spielberger, Barker, Russell, Silva, Westberry, Knight, & Marks, 1979). The CEI was included because this measure is a current measure of curiosity and reflects the ideas in the curiosity literature that have been developed since the STCI. Namely, the CEI begins with the theoretical idea that curiosity is a positive emotional–motivation system. Curiosity is viewed as two separate but interrelated dimensions: exploration of new stimuli and absorption in a task. The measure is a seven item measure with two subscales of absorption and exploration. All seven items are responded to on 7–point Likert scales, with "strongly agree" and "strongly disagree" on the ends. In this study we obtained, $\alpha = .75$, $M = 4.89$, $SD = .89$ for the CEI. A sample absorption item is, "My friends would describe me as someone who is 'extremely intense' when in the middle of doing something," and an exploration item is: "Everywhere I go, I am out looking for new things or experiences." The CEI is also designed to avoid the common confounding variables for curiosity, namely positive affect, which is part of the STCI (Spielberger et. al., 1979), and Sensation Seeking (Zuckerman, Eysenck & Eysenck, 1978).

The State Trait Curiosity Inventory was included because Mikulincer (1997) has already shown significant differences based on attachment working models with this measure. The STCI is composed of two subscales addressing trait and state curiosity. Ten items assess state curiosity with the instructions to concentrate on "how you feel right now?" Ten items, almost exactly the same, are then asked to assess trait curiosity, this time with the instructions, "how do you generally feel?" Two sentences were changed from "feel" to "am" to convert "State" to "Trait". Participants respond on 4–point Likert scales, in this case anchored by "almost never" and "almost always." These ten items are face valid and meant to tap into curiosity behavior (e.g., "I feel/am curious" and "I feel eager"). Statistics for the state and trait subscales were, $\alpha = .84$, $M = 2.65$, $SD = .60$, and $\alpha = .83$, $M = 2.87$, $SD = .49$, respectively.

Control Variables. Two control variables were used in the study, one measure and sex of the participant. First, there are stable differences in relationship satisfaction due attachment styles (e.g., Simpson, 1990). Thus, Hendrick's (1988) seven item satisfaction measure was used. This scale is answered on 7–point Likert scales anchored with A Great Deal/Extremely Good and Not at All/Poorly. Statistics for the scale was as follows, $\alpha = .86$, $M = 5.79$, $SD = 1.00$. This variable was chosen to examine the argument that differences in relationship satisfaction confound a relationship between the predictor variables and exploration behavior. Second, sex was analyzed because of possible differences between sexes on the exploration variables. For example, Zuckerman, Eysenck and Eysenck (1978) found that there were differences between sexes on their Sensation Seeking Scale. In addition, personal communication with other researchers in

the field of attachment and exploration suggested that sex could be an issue (N. L.

Collins, January, 14, 2006)

RESULTS

Factor Analyses

Factor analysis was used for two purposes in the current study. First, it was necessary to show that the Attachment Exploration scale we designed did not load onto a factor with one of the other scales used in the study. Specifically, there was concern with regards to three scales: the CEI, the secure version of the PPE scale, and the extraversion scale. There was concern with the CEI because one of the subscales was meant to tap directly into exploration. There was concern with the secure PPE scale because this scale was initially used to help design the Attachment Exploration scale. Finally, we included the extraversion scale because some of the items relate to social aspects of exploration and as a control variable it was important that it was not measuring the same construct. The second issue addressed with factor analysis was the factor structure of the PPE items from the anxious and avoidant PPE scales. These scales have not be used in previous research therefore we conducted exploratory factor analysis to obtain factor loadings and confirmatory factor analysis to acquire model fit statistics.

Exploratory factor analysis of the attachment exploration scale was conducted in SPSS. This was done to determine the number of them that exceeded one. Preliminary analysis yielded five eigenvalues greater than one, however, the scree plot and theory suggested four factors. We then conducted a confirmatory factor analysis using SAS CALIS. We hypothesized that a four–factor model would show better fit than a three–factor model in which the CEI and the Attachment Exploration scale loaded onto one factor. Confirmatory factor analysis of these two models revealed that the four–factor

structure was more appropriate ($\Delta\chi^2$ (3) = 97.23, p<.001). However, the fit for the four–

factor model was not particularly good (GFI = .776, RMSEA = .078, χ^2 (399) = 1077).

Exploratory factor analysis of the anxious and avoidant PPE items was used to

find factor loadings for the items onto the two factors (See Table 1 in Appendix A for

details). Confirmatory factor analysis was then run on the model and acceptable levels of

fit were found, (GFI = .900, RMSEA = .093, χ^2 (53) = 180).

Tests of Primary Hypotheses

Correlations between all the dependent and independent variables were conducted

for both men and women. In general, they showed that anxiety but not avoidance was

related to many of the exploration scales and then many of the exploration variables were

correlated among themselves (See Tables 2 and 3 in Appendix A). Sex was controlled for

in the analyses below and no differences emerged, therefore sex was not considered in

further analyses.

Hierarchical linear regression is used throughout the rest of the results section. In

all cases satisfaction was entered at the first level and the predictors were entered at the

second level. Coefficients for the predictor variables were then reported. Probability of

Type I error throughout the study was α = .05.

Hypothesis 1 – Influence of Attachment on Exploration. Anxiety and avoidance

were entered simultaneously as the predictor variables in second level of these models.

We report ΔR^2 as well as coefficients for anxiety and avoidance because the two variables

were simultaneously entered.

For the Attachment Exploration scale there was a significant change in the model

when the predictors were included ΔR^2 = .042, F(2, 277) = 4.95, p = .002. There was a

significant main effect for avoidance, $B = -.12$, $t(277) = -1.79$, $p = .037$, and there was a significant main effect of anxiety, $B = -.13$, $t(277) = -2.98$, $p = .002$. Thus, as predicted, greater avoidance appears to be linked to less exploration and greater anxiety was related to less Exploration.

For the Need for Cognition scale there was a marginally significant change in the model when the predictors were included $\Delta R^2 = .026$, $F(2, 277) = 2.55$, $p = .056$. When examining the coefficients we found that there was no main effect for avoidance, $B = -.027$, $t(277) = -.26$, $p = .358$ but there was a main effect for anxiety, $B = -.14$, $t(277) = -2.70$, $p = .004$. Therefore, as predicted, greater anxiety was related to less Need for Cognition.

For the Big Five–Openness subscale there was a significant change in the model when the predictors were included $\Delta R^2 = .015$, $F(2, 277) = 2.85$, $p = .038$. There was no main effect for avoidance, $B = -.01$, $t(277) = -.03$, $p = .487$, but there was a main effect for anxiety, $B = -.07$, $t(277) = -2.10$, $p = .019$. Therefore, as predicted, greater anxiety appears to be related to less Openness to New Experience.

For the Sensation Seeking scale there was a significant change in the model when the predictors were included $\Delta R^2 = .02$, $F(2, 276) = 6.13$, $p = .001$ There was no significant main effect for avoidance, $B = .02$, $t(276) = 1.95$, $p = .974$. There was no significant effect for anxiety, $B = -.01$, $t(276) = -1.05$, $p = .147$.

For the CEI there was a non–significant change in the model when the predictors were included $\Delta R^2 = .01$, $F(2, 277) = .84$, $p = .473$. There was no significant main effects for avoidance, $B = -.05$, $t(277) = -.77$, $p = .222$. However, there was a marginally significant effect for anxiety, $B = -.06$, $t(277) = -1.35$, $p = .09$. However, given that the

model change was not significant, this result is most likely spurious. The subscales—

exploration and absorption were tested as well and no significant effects were found.

For the state subscale of the STCI there was a non–significant change in the

model when the predictors were included $\Delta R^2 = .02$, $F(2, 277) = 1.51$, $p = .212$. There

were no significant main effect for avoidance, $B = -.03$, $t(277) = -.74$, $p = .23$, nor was

there an effect for anxiety $B = .06$, $t(277) = 1.97$, $p = .975$.

Finally, for the trait subscale of the STCI there was a non–significant change in

the model when the predictors were included $\Delta R^2 = .02$, $F(2, 277) = 1.76$, $p = .156$. There

were no significant main effects for avoidance, $B = -.04$, $t(277) = -1.12$, $p = .131$.

However, there was a significant effect for anxiety $B = -.04$, $t(277) = 1.98$, $p = .024$.

However, the model change was not significant so the result should not be interpreted as

evidence that anxiety is related to lower levels of trait curiosity. See Table 4 in Appendix

A for details of all the attachment and exploration regressions.

Hypothesis 2a – Perceptions of Greater Support and Encouragement From the

Partner Will be Associated with Higher Levels of Exploration. Secure PPE was the only

predictor entered in the second level of these models, thus, ΔR^2 is not reported. Secure

PPE (encouragement from the partner to explore) was found to significantly relate to the

Attachment Exploration scale, $B = .23$, $t(279) = 4.58$, $p = .001$. In testing the Need for

Cognition scale, there was no significant link, $B = .07$, $t(279) = 1.24$, $p = .109$. However,

we did find a significant association between the secure version of the PPE scales and the

Big Five Openness subscale, $B = .08$, $t(279) = 2.03$, $p = .022$. For the Sensation Seeking

scales there was no significant association, $B = .03$, $t(278) = .284$, $p = .612$. The secure

PPE was significantly related to the CEI, $B = .20$, $t(279) = 3.67$, $p = .001$. In addition,

secure PPE significantly related to the state subscale of the state trait inventory, $B = .08$, $t(279) = 2.41$, $p = .008$. Finally, in testing the trait subscale of the STCI, we found a significant link, $B = .05$, $t(279) = 2.03$, $p = .022$. Together these findings provide multiple pieces of evidence for a link between secure PPE and exploration. (See Table 5 in Appendix A for details.)

Hypothesis 2b – Using Exploration as a Distancing Tactic Will be Associated with Lower Levels of Exploration. There was no significant relation between the avoidant PPE (using exploration as a distancing tactic) and the Attachment Exploration scale, $B = .11$, $t(279) = 2.46$, $p = .993$. There was no significant connection to Need for Cognition, $B = -.04$, $t(279) = -.73$, $p = .232$. There was no significant relation between the avoidant version of the PPE scale and the Big Five – Openness subscale, $B = .01$, $t(279) = .04$, $p = .517$. There was not a significant association with the Sensation Seeking scale, $B = .01$, $t(278) = .954$, $p = .830$. For the CEI we again found no significant link $B = .05$, $t(279) = 1.01$, $p = .843$. For the state subscale of the STCI there was no significantly connection, $B = -.03$, $t(279) = -.85$, $p = .198$. In testing the trait subscale of the STCI no significant relation was found, $B = .02$, $t(279) = .80$, $p = .787$. (See Table 6 in Appendix A for details.)

Hypothesis 2c –Greater Dependence on the Partner for Exploration Will be Associated with Lower Levels of Exploration. There was a significant link between anxious PPE (dependence on the partner for exploration) and the Attachment Exploration scale, $B = -.29$, $t(279) = -6.57$, $p = .001$. There was a significant association with Need for Cognition, $B = -.14$, $t(279) = -2.72$, $p = .004$. There was a significant relation with the Openness subscales, $B = -.11$, $t(279) = -3.15$, $p = .001$. Taken together the last three

results point towards a strong link between the degree to which people will only explore

with their partner and a lack of exploration in general. For the Sensation Seeking Scale

there was a significant association, $B = -.01$, $t(278) = -1.67$, $p = .048$. There was a

significant association with the CEI, $B = -.14$, $t(279) = -2.83$, $p = .003$. There was no

significant link with the state subscale of the STCI, $B = -.01$, $t(279) = -.37$, $p = .358$.

There was a significant connection for the trait subscale of the STCI, $B = -.07$, $t(279) = -3.30$, $p = .001$. (See Table 7 in Appendix A for details.)

Hypothesis 3 – Higher Levels of the Attachment Focus Associated with Greater

Exploration. There were no significant main effects for attachment focus on any of the

exploration related variables. (See Table 8 in Appendix A for details.)

Hypothesis 4a, 4b, & 4c – Attachment Dimensions and Perceptions of Partner

and Exploration. Regressions were run in the same format as above with both anxiety

and avoidance predicting each of the three PPE scales in turn. First, for the secure PPE

scale there was a significant change in the model when anxiety and avoidance were

entered, $\Delta R^2 = .01$, $F(2, 277) = 21.91$, $p = .001$. However, neither avoidance, $B=-.06$

$t(279)=-.83$, $p = .204$, nor anxiety were significant predictors of secure PPE, $B=-.06$

$t(279)=-1.06$, $p = .145$. This finding is interesting given the zero order correlations for

women show that both anxiety and avoidance are moderately correlated with secure PPE

and for the men anxiety is moderately correlated with secure PPE. Thus, it could be that

the lower relationship satisfaction typically reported by anxious and avoidant people

could be the driving the link between insecure attachment and perceptions of partner

support. For the avoidant version of the PPE scale there was a significant $\Delta R^2 = .03$, $F(2,$

$277) = 41.80$, $p = .001$. In addition, as predicted, avoidance was related to the avoidant

PPE, $B = .27$, $t(279) = 3.20$, $p = .001$, and anxiety was not, $B = -.01$, $t(279) = -.21$, $p = .835$. This analysis shows that avoidant people explore as a means to distance themselves from their partner. For the anxious version of the PPE scale there was a significant $\Delta R^2 = .17$, $F(2, 277) = 19.22$, $p = .001$. In addition, as predicted, anxiety was related to the anxious PPE, $B = .39$, $t(279) = 7.54$, $p = .001$, and avoidance was not, $B = -.04$, $t(279) = -.51$, $p = .611$. This finding shows that anxious people are more likely to report dependence on their partner for their exploration. See Table 9 in Appendix A for details.

Hypothesis 5 – The Influence of Interactions on Exploration. The following multilevel regression analysis was used to test the five hypotheses one at one time. First, satisfaction was entered as a control variable. Second, the independent variables related to all nine of the predicted main effects and interactions were included in the analysis. These are anxiety, avoidance, attachment focus, secure PPE, anxiety by attachment focus, avoidance by attachment focus, anxiety by secure PPE, avoidance by secure PPE and attachment focus by secure PPE. This analysis was repeated with each of the six different exploration scales, entered in turn, as the dependent variable. By conducting the analysis in this way each of the predictor variables will also control for one another. These analyses led to no meaningful pattern of interactions for the exploration related variables. (See Tables 10 and 11 in Appendix A for details.)

Mediation Analyses

There was also an alternative hypothesis presented at the end of the introduction. The alternative hypothesis was that PPE would mediate the connection between attachment and exploration. Mediation was tested following Barron and Kenny (1986). The first step in their model is to test for main effects for anxiety and avoidance onto

exploration, which has already been reported under hypothesis 1. The second step is to test for main effects between the attachment dimensions and perceptions of partner and exploration, which was hypothesis 4. Finally, to examine for mediation both perceptions of partner and exploration and attachment are simultaneously regressed onto exploration. Just as before, all regressions are conducted with satisfaction as a control variable entered in the first level.

Hypothesis 6a – The Secure Version of PPE Mediates the Association between Avoidance and Exploration. Concerning avoidance there was only one main effect for avoidance, with the Attachment Exploration scale. However, the second step in Baron and Kenny's model, a significant association between the predictor, avoidance, and the mediator, secure PPE was not met. Thus, mediation could not be investigated following Barron and Kenny (1986).

Hypothesis 6b – The Avoidant Version of PPE Mediates the Association between Avoidance and Exploration. We discussed above the significant relation between avoidance and Attachment Exploration. We also found a link between avoidance and avoidant PPE in testing hypothesis 4. Following Baron and Kenny (1986) we entered both avoidance and the avoidant PPE scale into the model as predictors of the Attachment Exploration scale and there was a significant change in the model, $\Delta R^2 = .37$, $F(2, 277) = 4.42$, $p = .005$. However, the effect of avoidance was not significantly reduced, $B = -.15$, $t(277) = -2.30$, $p = .011$. In addition, the relation between avoidant PPE and Attachment Exploration was opposite of the predicted direction, $B = .13$, $t(277) = 2.71$, $p = .997$. Thus, there is no evidence of mediation. (See Figure 1 in Appendix B for details.)

Hypothesis 6c – The Secure Version of PPE Mediates the Association between Anxiety and Exploration. The second set of mediation analyses concerns the links between anxiety and the exploration variables. We have already shown that anxiety is negatively related to the Attachment Exploration scale and the Openness subscale of the Big Five Inventory, thus fulfilling the first step of the mediation model. However, the second step in Baron and Kenny's model, a significant association between the predictor, anxiety, and the mediator, secure PPE was not met. Thus, mediation could not be investigated (Barron & Kenny, 1986).

Hypothesis 6d – The Anxious Version of PPE Mediates the Association between Anxiety and Exploration. The second potential mediator between anxiety and exploration is the anxious version of the PPE scale. We have already shown that anxiety is significantly linked to two of the exploration scales above. In addition, we have shown a connection between anxiety and the anxious version of the PPE scale. When both anxiety and the anxious PPE scale were entered into the model as predictors of the Attachment Exploration scale there was a significant change in the model, $\Delta R^2 = .13$, $F(2, 277) = 15.22$, $p = .001$. In addition, the effect of anxiety was significantly reduced, $B = -.02$, $t(277) = -.51$, $p = .608$. Sobel's Z test confirms that this is full mediation, $Z = 2.77$, $p = .005$ (MacKinnon & Dwyer, 1993, See Figure 2 in Appendix B for details). When both variables were used to predict the Openness subscale of the Big Five Inventory there was a significant change in the model, $\Delta R^2 = .04$, $F(2, 277) = 5.02$, $p = .002$. In addition, anxiety was significantly reduced, $B = -.03$, $t(277) = -.90$ $p = .369$. Sobel's Z test confirms that this is full mediation, $Z = 2.38$, $p = .017$. (See Figure 3 in Appendix B for details.)

DISCUSSION

The current study integrated and expanded upon the field of adult attachment and exploration. This study used measures found throughout the literature as well as from previous research in attachment and exploration, such as the STCI (Mikulincer, 1997). Further, we developed our own items drawing from Bowlby's discussions of exploration involving novel stimuli in mental, social and environmental domains.

The current study found that anxiety and exploration were inversely related across a range of variables. Specifically, we found that anxious people reported less exploration on the Attachment Exploration scale, Need for Cognition, Openness to New Experiences, and trait curiosity. However, we found no link to anxiety on some of the exploration measures. Specifically, no link was found with some of the curiosity measures: the CEI, and the state subscales of the STCI. We also did not find a link with the Sensation Seeking Scale.

Our finding for avoidance showed, in general, that exploration and avoidance were unrelated. Specifically, we found no link between avoidance and the CEI, the state or trait subscales of the STCI, Need for Cognition, or the Openness to New Experiences subscale. However, we did find a significant link between avoidance and lower reports on the Attachment Exploration scale.

This study also examined the impact of the current romantic relationship on reports of exploration, not just the effects of mental models of attachment. Although we did not gather data from the partners themselves, we did link the participant's perception of the partner to exploration, something that was neglected in earlier research. Specifically, we found that both anxious and avoidant people reported receiving less

support from their partners to explore. This finding is new, but entirely consistent with previous research on the safe haven aspect of attachment (for a review see Feeney & Collins, 2004). But this connection disappeared when we controlled for satisfaction, suggesting that it could simply be a by product of insecure attachments chronic low relationship satisfaction. We showed that avoidant people were more likely to endorse using exploration as a means to avoid intimacy in their romantic relationships. Finally, we also demonstrated that anxious people were more likely to report that they explore based on their dependence on their partner. These finding provide evidence that different attachment styles regard their relationship with their partner and how they go about exploring differently. The next question is: are these different perceptions of partner and exploration predictors of exploration.

The findings for the secure PPE scale showed that there is a strong link between encouragement from the partner and reports of exploration. Specifically, we found links between secure PPE and the Attachment Exploration scale, Openness to New Experiences, the CEI, and the State and Trait versions of the STCI. However, we did not find a link between secure PPE and Need for Cognition or the Sensation Seeking scale. However, the Sensation Seeking scale did not show strong associations to any of our predictor variables in the study. Thus, there is some doubt cast on whether Sensation Seeking is truly a measure of exploration. Overall however, these results provide support for the influence of the partner on exploration. They also provide some additional support for the idea that the perception of the partner with regards to exploration is predictor of exploration.

The results of the anxious PPE scales mirrored the results for anxious attachment style. The anxious PPE scale showed the strongest links with the exploration scales of all of the predictors used in the study. Specifically, the anxious PPE scale was linked to the Attachment Exploration scale, Need for Cognition, Openness to New Experiences, CEI, and the trait subscale of the STCI.

Finally this research was able to address the connection between peoples' mental model, their perceptions of their current partner and exploration. We found that dependence on partners for exploration fully mediated the relation between anxiety and Attachment Exploration and Openness to New Experiences. That is, the more anxious people were, the more they felt they were exploring only because of their partners, and the less they reported exploring overall. For example, an anxious person might try a new activity if their partner suggested one. However, the degree to which they will only try something if their partner is there to lead them is probably symptomatic of their general discomfort with exploration. These results must be interpreted cautiously however. We did not gather data across time, so causality cannot be assumed. We did not find any evidence for mediation by the secure version of the PPE scale. The mediation findings provide evidence that we are taping into an attachment related view of the partner with regards to exploration. In addition, this attachment related view of the partner is a more proximal predictor of exploration than is general attachment style.

The Current Study in the Context of the Literature

There are some specific aspects of the study that provide important replications and extensions of previous work. For example, Hazan and Shaver (1990) found that anxiously attached people did not approach work as freely as did the secure people in

their sample. In addition, Elliot and Reis (2003) found that secure people were more likely to show a mastery/approach profile while insecure people were more likely to show avoidance–oriented motivations. These previous findings are consistent with the finding of the present study that anxious people reported less exploration across a range of different variables. Hazan and Shaver also stated that anxiously attached people "reported a tendency to slack off following praise, which may indicate that their main motivation at work is to gain respect and admiration from others" (pp. 278). This speculation is consistent with our general findings regarding anxiety and mediation by dependence on the partner. Our mediation results showed that anxious will probably explore if their partner is there to guide them but that this limited form of exploration most likely signified a general lack of exploration overall. Thus, one can imagine a situation where a partner suggests trying something new and an anxious person follows their partner because of the praise they hope to receive. Then once having received that praise they may feel even less desire to explore on their own. This idea also fits with Carnelley and Ruscher's (2001) report that anxious people engage in more leisure activities for social, rather than exploratory reasons.

Finally, the present results are consistent with Mikulincer's (1997) second study examining attachment style using a behavioral measure of exploration. In that study the author found that anxious people were not interested in the video clips if they were followed by another task but they were likely to view only a few video clips when they knew the session would be followed by a social interaction. Again the endorsement of exploration only when it does not conflict with social interests is in line with the support for the anxious PPE scale. In our study anxious people report exploring if their partner is

present, thus providing the social interaction, but when their partner is removed from the situation they report less exploration.

The results of the current study also fit well with Feeney's (2004) study of support and exploration in intimate relationships. The current study confirms the importance of the partner's affect on exploration. In particular, our study, similar to Feeney's (2004), had measures of how participants' felt their partner supported their exploration and these measures were linked to reports of exploration. In fact, the two studies complement each other, Feeney's study focused on what partners did that interfered with exploration while our study focused on what partners were *not* doing that inhibited exploration.

Additions to the Existing Literature

The current study provides a number of additions to the literature. This study is the first study in adult attachment to address the ways that people with different attachment styles would view and interact with their partners in regards to exploration. In addition, we were able to provide evidence that there is a robust link between attachment anxiety and exploration, and that this link is mediated by dependence on the partner for exploration. Unfortunately, we did not gather data from the partners so it is unclear how much of this mediation is through participant's perceptions and how much might be due to actions of the partner. Finally, our results are perhaps more generalizable than past studies because we used a variety of exploration–related variables. In addition, most of our scales assessed exploration in trait based terms. Thus, we are not limited to the immediate situation as are laboratory measures such as Mikulincer's (1997) second study and Feeney's (2004) study.

Unexpected Results

There were four areas in which our hypotheses were not supported in the present study. First, controlling for neuroticism and extraversion left all of the results for anxiety and anxious PPE non–significant. (These findings were not presented to save space.) Second, avoidant people did not, in general, report less exploration. Third, there were no main effects relating attachment focus to exploration. Fourth, none of the interactions that were predicted were significant. However, there are plausible explanations for all of these issues.

There is a reasonable answer for the findings for anxiety and anxious partner support when controlling for neuroticism and extraversion. First, there are no reports of controlling for either neuroticism or extraversion in any of the previous literature. Therefore, these results are not contrary to previous findings, but rather, they simply present findings from previously uncharted waters. Second, anxiety was moderately correlated with extraversion in this study, ($r = -.24$, $p = .001$), and even more highly correlated with neuroticism ($r = .50$, $p = .001$). These results are different from previous research which showed a more moderate association between anxiety and neuroticism and no relation between anxiety and extraversion (Shaver & Brennan, 1992). It could be that our sample had some bias compared to previous research. Finally, when neuroticism was controlled for, it was not the case that it was simply a much better predictor of exploration than anxiety or the anxious PPE scale. Rather neither predictor was significant in most cases, although there were no issues of multicolinearity. A prediction which was not tested here, but could be tested in the future, is the interaction between neuroticism and anxiety or dependence on the partner for exploration. It could be that

both constructs combined provide a strong prediction for exploration. However, further research in this area needs to account for these two variables in their findings as they did produce broad changes in the results of this paper.

One explanation for the general lack of main effects for avoidance regards how exploration was measured. In most of the previous studies of attachment and exploration the significant findings for avoidance were regarding the *perceptions* participants had of the exploration they did engage in (e.g., their reasons for work and leisure and avoidance versus approach goals), not the *level* of exploration in which they engaged (Hazan & Shaver, 1990 Carnelley & Ruscher, 2000; Elliot and Reis, 2003). Thus, most of the studies concerning avoidant people used different constructs. This idea is further backed by our finding that avoidant people report more exploration on the Attachment and Exploration scale. The main difference between this scale and the other exploration scales is that it asks not only if people explore, but if people enjoy exploring. However, there are some examples of work that directly tied lower levels of exploration to avoidance. Specifically, Mikulincer (1997) showed a significant link between the STCI and the avoidance attachment dimension but not the anxious dimension of attachment. In addition, Green and Campbell (2000) found that higher levels of both avoidance and anxiety were associated with lower reports on their measure of exploration. In the current study it was most often higher levels of anxiety that corresponded to lower levels of curiosity. However, we did find that avoidant people reported less exploration on the Attachment and Exploration scale. While this in only one scale among the six that we tested, we developed it directly from Bowlby's descriptions of exploration thus, it probably strikes closer to the heart of exploration in an attachment sense.

There is another possibility that would explain the results for the present study as well as the previous studies. Both Mikulincer's (1997) and Green and Campbell's (2000) studies did not account for the relationship status of the people in their study, whereas everyone in the current study was in a relationship. This divergence is particularly problematic given that Bowlby (1969) theorized, and the current study has evidenced, that avoidant people use exploration as a way to distance themselves from their partner. Previous research has also shown that avoidant people lack internal motivations to explore (Hazan & Shaver, 1990; Carnelley & Ruscher, 2000; Elliot & Reis, 2003). Thus, it is plausible that avoidant people outside of relationships are not exploring because they have no partner from whom to distance themselves. On the other hand, avoidant people in a relationship have a strong external motivation to explore.

Another hypothesis that requires explanation has to do with the predictions for main effects of attachment focus. One possible explanation for this is that the partners were not actually present during the study, thus their influence was perhaps not salient. In addition, most of the scales were tapping into exploration as a trait, which could also make the effect of the partner less salient. It could be the majority of participants explore more because of their partner, but also perhaps that their relationship has not gone on long enough for them to incorporate greater exploration as a trait. Thus, perhaps the best way to search for a link between attachment focus and exploration would be by having the partner present and having the exploration occur immediately (similar Feeney, 2004).

For the lack of interactions between attachment style and attachment focus, we must return to the language of the hypothesis. We were not predicting a suppression effect where only when the two variables interact do findings emerge. Rather we were

predicting that in the case of insecurity, attachment focus would still lead to greater exploration. Given that there is no main effect for attachment focus it would have been just as surprising if there had been a significant interaction while there was no main effect of attachment focus.

Finally, there were no interactions found between partner support and attachment styles. However, we did find strong evidence that there was mediation in the case of anxious people and the anxious partner support questionnaire. The causality of these results must be interpreted cautiously though, because we did not gather longitudinal evidence. Nevertheless, it seems that in predicting exploration it is not that both attachment mental models and the view of the current partner act together to determine exploration. Rather, the current evidence indicates, but does not prove, a causal chain in which the mental model helps to determine how a person will view their partner and it is that view of the partner which will determine exploration. However, because we did not collect longitudinal data in the current study there is no firm evidence for this prediction. In creating the hypotheses for this study either of the above two connections among the variable seemed plausible as the effect of the partner on exploration has had almost no research. Thus, the fact that one model of the variables is perhaps more accurate than another does not fly in the face of any previous research and requires further research before any stable conclusion might be formed.

Limitation and Future Directions

A limitation of the current study is the inability to distinguish between a participant's perceptions of the partner and the partner's actions. Perhaps the most interesting addition to this research would be to assess the variables for both the actor and

the partner and begin to tease apart the effects due to each. This type of research could answer a great deal of questions regarding the true foundation for the perceptions of the partner and exploration. For example, Feeney and Collins' (2004) review of the literature on attachment mental models details the numerous ways in which people strive to maintain their mental models. Thus, it could be that peoples' views of their partners are just another way in which their mental models are shaping their perceptions. For example, secure people are more likely to hold positive views about themselves and others, thus they could be shaping their perceptions towards their partner being more supportive. However, there are also differences in behavior as recorded from outside observers. For example, Simpson, Rholes and Nelligan (1992) showed that avoidant people do not provide as much support. Thus, if we gathered information about the attachment style of the partner we would be able to control for these differences.

Finally, the current study is a cross sectional design. Although we found evidence for mediation, it is not possible to conclude causation. A diary or other type of longitudinal study that covered similar variables would help further illuminate this area. It could be in the initial formation of a relationship, peoples' mental models of attachment will lead to different perceptions of the partner with regards to exploration. These perceptions might then become more influential in how likely people would be to engage in exploration as the relationship progresses. It could also be that attachment style might create a general trend towards or away from exploration but on a day to day level the immediately felt encouragement is the most important predictor of exploration. Similarly, we have discussed the idea that avoidant people explore to distance themselves from their partner. A diary study would be able to test this hypothesis by linking avoidant

peoples' feeling of closeness and intimacy on one day with greater levels of exploration in the future. Finally, with regards to anxious people it would be interesting to investigate accounts of exploration conducted with and without the partner. We argued earlier that it could be that anxious people explore with their partner, gain social approval, and thus do not feel the desire to explore on their own. Thus, it could be that anxious people who report exploring with their partner one day are less likely to explore on their own the next day. Conversely, it could be that anxious people who have not had their partner drag them out of the house recently, might feel a greater need to explore on their own, to find new sources of social approval.

There are many directions that the field of attachment and exploration could progress towards outside of simply expanding on the current study. For example, Feeney and Collins, (2004) set out a model which sought to tie together the safe haven and secure base aspects of attachment with exploration and various outcome measure. Along these lines, further studies into attachment and exploration might seek to examine more distal outcomes. Future studies might seek to show that successful exploration leads to higher self esteem, self–efficacy, and/or relationship satisfaction. There is some evidence for this idea in a recent study that linked novel and arousing behavior to higher relationship satisfaction (Aron, Norman, Aron, McKenna, & Heyman, 2000). However, Aron et.al.'s study was not conceived of in an attachment framework and thus it is unclear how attachment styles might inform their findings.

Finally, there is a lack of external validity in most of the studies done in this domain. The behavioral measures of exploration have ranged from a novel computer game, (Feeney, 2004) to strangely colored drinks (Gorchoff, Chen, & Ayduk, 2005), to

watching commercials (Mikulincer, 1997). Bowlby's descriptions of exploration in children all go far beyond these examples. To a child, crawling down a dark corridor, or leaving their attachment figure to go on a play date is both, a novel, and an arousing stimuli. In the preceding examples, it is unclear if they are using stimuli which fulfill these requirements. A study that used a behavioral measure, that was equally novel and anxiety provoking, would much more closely compare to Bowlby's understanding of exploration in infancy and childhood.

In order to gain access to these types of stimuli researchers will probably have to leave the controlled environment of the lab. Outside of the lab there are a number of possible behavioral measures that might fit the criteria of both novel and arousing. For example, traveling abroad or backpacking for the first time probably provides a more similar psychological distance from the attachment figure, and novelty and arousal from the situation, as going on a play date does for a child. A bit closer to the lab than a pure observational study, might be jumping off of a high dive into a pool, climbing on an indoor climbing wall, or doing a "high ropes" course.

CONCLUSION

The present study shows that there is a link between both attachment dimensions and reports of perceptions of partner and exploration. Anxiety is strongly related to participants exploring only with their partner. Avoidance is clearly linked to reports of exploration as a means to avoid the partner. There is also evidence of anxious peoples' lack of interest in exploration across a wide range of related variables. These effects are mediated by the degree to which they felt that they were only exploring because of their partner. These findings fit with most of the literature available on attachment and exploration. In particular, the finding with the more current studies in attachment and exploration are all in line with the present evidence. The study provides some insight into the effect that both the mental model of attachment and the current relationship partner have on exploration. In addition, this study focuses on the support which partners provide outside of their physical presence. There is the possibly that the findings generalize to a broader range of situations than do the findings in the traditional support seeking studies.

Exploration is perhaps one of the chief purposes in a person's life. It is one of the only drives that will cause an infant to leave its attachment figure. Understanding why people are able to explore freely may have broad implications for happiness and success throughout people's lives. The present study is only a small step in this understanding.

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APPENDIX A

TABLES

Table 1

Factor Loadings Using Principle Component Analysis and Varimax Rotation.

	Factor	
Item	I	II
1. I only explore to be with my partner	.77	
2. I need constant reassurance from my partner to explore new situations	.76	
3. When I explore it is only because my partner insists	.73	
4. I am happiest trying new things only if my partner is there to help me	.72	
5. When I explore I follow my partner's lead	.68	
6. I tend to explore just to be with my partner	.68	
7. I only explore when my partner is present	.66	
8. I like to try new things as a way to escape from the pressures of my relationship		.85
9. I like being in new situations because it distracts me from my relationship		.81
10. There is not much my partner could do to reassure or help me when I try new things		.69
11. I explore because it proves my independence		.65
12. I explore new things to be on my own		.64

Factor loadings less that .25 are left blank.

Table 2

Correlations Between Attachment and Exploration Variables for Women (N = 152).

						Factors							
	1	2	3	4	5	6	7	8	9	10	11	12	13
1.Anxiety	1.00												
2. Avoidance	.25 **	1.00											
3.Attachment Focus	-.08	-.52 **	1.00										
4. Partner Exploration Scale (secure)	-.23 **	-.28 **	.19 *	1.00									
5. Partner Exploration Scale (anxious)	.30 **	-.01	.16 *	-.16	1.00								
6. Partner Exploration Scale (avoidant)	.22 **	.40 **	-.47 **	-.37 **	-.10	1.00							
7. Curiosity and Exploration Inventory	-.06	.01	-.13	.15	-.16	.17 *	1.00						
8. Our Exploration Scale	-.22	-.16 *	-.10	.16	-.34 **	.16 *	.51 **	1.00					
9. Big Five Inventory - Openness	-.16 *	-.13	.12	.15	-.19 *	-.03	.44 **	.43 **	1.00				
10.State Trait Curiosity Inventory (state)	.01	-.02	-.04	.15	.00	.00	.42 **	.25 **	.26 **	1.00			
11.State Trait Curiosity Inventory (trait)	-.18 *	-.09	-.13	.14	-.18 *	.06	.44 **	.43 **	.27 **	.50 **	1.00		
12. Need for Cognition	-.20 *	-.09	.02	.10	-.14	-.12	.43 **	.32 **	.57 **	.33 **	.33 **	1.00	
13. Sensation Seeking Scale	-.07	.20 *	-.09	-.09	-.16 *	.20 *	.18 *	.29 **	.13	.11	.18 *	.07	1.00

* Correlation is significant at the .05 level (2-tailed). ** Correlation is significant at the .01 level (2-tailed).

Table 3

Correlations Between Attachment and Exploration Variables for Men (N = 130).

	Factors												
	1	2	3	4	5	6	7	8	9	10	11	12	13
1.Anxiety	1.00												
2. Avoidance	.00	1.00											
3.Attachment Focus	-.04	-.48 **	1.00										
4. Partner Exploration Scale (secure)	-.06	-.33 **	.30	1.00									
5. Partner Exploration Scale (anxious)	.49 **	-.13	.09	-.01	1.00								
6. Partner Exploration Scale (avoidant)	.01	.53 **	-.48 **	-.40 **	-.42	1.00							
7. Curiosity and Exploration Inventory	-.12	-.13	.11	.28 **	-.21 *	-.09	1.00						
8. Our Exploration Scale	-.22 *	-.11	.08	.40 **	-.36 **	-.03	.55 **	1.00					
9. Big Five Inventory - Openness	-.09	-.02	.06	.22 *	-.25 **	-.01	.38 **	.53 **	1.00				
10.State Trait Curiosity Inventory (state)	.23 **	-.09	.11	.14	-.06	-.11	.23 **	.32 **	.32 **	1.00			
11.State Trait Curiosity Inventory (trait)	-.02	.01	-.06	.06	-.21 *	.03	.37 **	.42 **	.28 **	.35 **	1.00		
12. Need for Cognition	-.14	.02	.12	.09	-.27 **	.04	.42 **	.50 **	.52 **	.22 *	.32 **	1.00	
13. Sensation Seeking Scale	-.16	.23 **	.06	-.01	-.17	.15	.15	.25 **	.23 **	.09	.06	.02	1.00

* Correlation is significant at the .05 level (2-tailed). ** Correlation is significant at the .01 level (2-tailed).

Table 4

Summary of Hierarchical Regression Analysis for Attachment Predicting Exploration (N = 182).

Variable	Attachment and Exploration					Need For Cognition					Openness to New Experiences				
	B	*SE B*	*β*	*t*	*p*	*B*	*SE B*	*β*	*t*	*p*	*B*	*SE B*	*β*	*t*	*p*
Step 1															
Satisfaction	.080	.050	.095	1.597	.111	.026	.057	.028	.462	.644	.073	.036	.121	2.028	.044
Step 2															
Satisfaction	-.025	.063	-.029	-.389	.698	-.027	.072	-.028	-.370	.712	.054	.046	.089	1.161	.247
Avoidance	-.117	.065	-.133	-1.793	.074	-.027	.075	-.027	-.364	.716	-.002	.048	-.002	-.032	.974
Anxiety	-.130	.044	-.180	-2.982	.003	-.135	.050	-.165	-2.697	.007	-.067	.032	-.128	-2.099	.037

Variable	Senstation Seeking					State-Trait Curiosity Inventory (State)					State-Trait Curiosity Inventory (Trait)				
	B	*SE B*	*β*	*t*	*p*	*B*	*SE B*	*β*	*t*	*p*	*B*	*SE B*	*β*	*t*	*p*
Step 1															
Satisfaction	-.034	.009	-.214	-3.661	.001	.012	.032	.023	.382	.703	-.003	.023	-.008	-.136	.892
Step 2															
Satisfaction	-.022	.012	-.141	-1.870	.062	.009	.041	.017	.226	.821	-.035	.030	-.089	-1.162	.246
Avoidance	.024	.012	.144	1.949	.052	-.031	.042	-.056	-.736	.462	-.035	.031	-.085	-1.123	.262
Anxiety	-.009	.008	-.063	-1.053	.293	.056	.028	.121	1.968	.050	-.041	.021	-.122	-1.986	.048

Variable	Curiosity and Exploration Inventory				
	B	*SE B*	*β*	*t*	*p*
Step 1					
Satisfaction	.017	.053	.019	.318	.751
Step 2					
Satisfaction	-.033	.069	-.036	-.472	.638
Avoidance	-.054	.071	-.058	-.766	.444
Anxiety	-.064	.048	-.083	-1.345	.180

Type I error for the table is α = .05.

Table 5

Summary of Hierarchical Regression Analysis for Secure Perceptions of Partner and Exploration Predicting Exploration (N = 182).

Variable	Attachment and Exploration					Need For Cognition					Openness to New Experiences				
	B	*SE B*	*ß*	*t*	*p*	*B*	*SE B*	*ß*	*t*	*p*	*B*	*SE B*	*ß*	*t*	*p*
Step 1															
Satisfaction	.079	.050	.094	1.572	.117	.026	.057	.027	.455	.649	.073	.036	.121	2.036	.043
Step 2															
Satisfaction	-.026	.054	-.031	-.489	.625	-.007	.063	-.008	-.118	.906	.039	.039	.064	.980	.328
Secure - PPE	.228	.050	.291	4.579	.001	.072	.058	.082	1.238	.217	.075	.037	.133	2.035	.043

Variable	Senstation Seeking					State-Trait Curiosity Inventory (State)					State-Trait Curiosity Inventory (Trait)				
	B	*SE B*	*ß*	*t*	*p*	*B*	*SE B*	*ß*	*t*	*p*	*B*	*SE B*	*ß*	*t*	*p*
Step 1															
Satisfaction	-.034	.009	-.215	-3.673	.001	.012	.032	.022	.363	.717	-.004	.023	-.009	-.153	.879
Step 2															
Satisfaction	-.035	.010	-.223	-3.436	.001	-.025	.035	-.046	-.704	.482	-.026	.026	-.066	-1.007	.315
Secure - PPE	.003	.009	.018	.284	.777	.079	.033	.159	2.419	.016	.049	.024	.133	2.030	.043

Variable	Curiosity Exploration Inventory				
	B	*SE B*	*ß*	*t*	*p*
Step 1					
Satisfaction	.016	.053	.018	.308	.759
Step 2					
Satisfaction	-.074	.058	-.083	-1.287	.199
Secure - PPE	.198	.054	.238	3.672	.001

Type I error for the table is α = .05.

Table 6

Summary of Hierarchical Regression Analysis for Avoidant Perceptions of Partner and Exploration Predicting Exploration (N = 182).

Variable	Attachment and Exploration					Need For Cognition					Openness to New Experiences				
	B	SE B	β	t	p	B	SE B	β	t	p	B	SE B	β	t	p
Step 1															
Satisfaction	.079	.050	.094	1.572	.117	.026	.057	.027	.455	.649	.073	.036	.121	2.036	.043
Step 2															
Satisfaction	.155	.059	.184	2.648	.009	.001	.067	.001	-.005	.996	.074	.042	.122	1.743	.082
Avoidant - PPE	.114	.046	.171	2.456	.015	-.039	.053	-.052	-.734	.463	.001	.033	.003	.041	.967

Variable	Senstation Seeking					State-Trait Curiosity Inventory (State)					State-Trait Curiosity Inventory (Trait)				
	B	SE B	β	t	p	B	SE B	β	t	p	B	SE B	β	t	p
Step 1															
Satisfaction	-.034	.009	-.215	-3.673	.001	.012	.032	.022	.363	.717	-.004	.023	-.009	-.153	.879
Step 2															
Satisfaction	-.028	.011	-.180	-2.605	.010	-.005	.038	-.010	-.145	.885	.008	.028	.021	.295	.769
Avoidant - PPE	.008	.009	.066	.954	.341	-.025	.030	-.060	-.852	.395	.017	.022	.056	.798	.426

Variable	Curiosity and Exploration				
	B	SE B	β	t	p
Step 1					
Satisfaction	.016	.053	.018	.308	.759
Step 2					
Satisfaction	.050	.063	.056	.797	.426
Avoidant - PPE	.050	.050	.071	1.009	.314

Type I error for the table is α = .05.

Table 7

Summary of Hierarchical Regression Analysis for Anxious Perceptions of Partner and Exploration Predicting Exploration (N = 182).

Variable	Attachment and Exploration					Need For Cognition					Openness to New Experiences				
	B	*SE B*	*β*	*t*	*p*	*B*	*SE B*	*β*	*t*	*p*	*B*	*SE B*	*β*	*t*	*p*
Step 1															
Satisfaction	.079	.050	.094	1.572	.117	.026	.057	.027	.455	.649	.073	.036	.121	2.036	.043
Step 2															
Satisfaction	.093	.047	.110	1.982	.048	.033	.056	.034	.583	.560	.078	.035	.129	2.209	.028
Anxious - PPE	-.290	.044	-.365	-6.565	.001	-.144	.053	-.161	-2.724	.007	-.105	.033	-.184	-3.154	.002

Variable	Senstation Seeking					State-Trait Curiosity Inventory (State)					State-Trait Curiosity Inventory (Trait)				
	B	*SE B*	*β*	*t*	*p*	*B*	*SE B*	*β*	*t*	*p*	*B*	*SE B*	*β*	*t*	*p*
Step 1															
Satisfaction	-.034	.009	-.215	-3.673	.001	.012	.032	.022	.363	.717	-.004	.023	-.009	-.153	.879
Step 2															
Satisfaction	-.033	.009	-.210	-3.606	.001	.012	.032	.023	.379	.705	.001	.023	.001	-.005	.996
Anxious - PPE	-.014	.009	-.097	-1.669	.096	-.011	.030	-.022	-.366	.715	-.072	.022	-.194	-3.303	.001

Variable	Curiosity and Exploration				
	B	*SE B*	*β*	*t*	*p*
Step 1					
Satisfaction	.016	.053	.018	.308	.759
Step 2					
Satisfaction	.023	.053	.026	.440	.660
Anxious - PPE	-.142	.050	-.167	-2.833	.005

Type I error for the table is α = .05.

Table 8

Attachment Focus Predicting Exploration (N = 182).

Variable	Attachment and Exploration					Need For Cognition					Openness to New Experiences				
	B	SE B	β	t	p	B	SE B	β	t	p	B	SE B	β	t	p
Step 1															
Satisfaction	.079	.050	.094	1.568	.118	.024	.057	.025	.420	.675	.072	.036	.119	1.992	.047
Step 2															
Satisfaction	.122	.059	.145	2.072	.039	-.013	.067	-.014	-.193	.847	.056	.042	.092	1.317	.189
Attachment Focus	-.093	.067	-.098	-1.398	.163	.078	.075	.074	1.043	.298	.034	.048	.050	.708	.480

Variable	Senstation Seeking					State-Trait Curiosity Inventory (State)					State-Trait Curiosity Inventory (Trait)				
	B	SE B	β	t	p	B	SE B	β	t	p	B	SE B	β	t	p
Step 1															
Satisfaction	-.033	.009	-.213	-3.620	.001	.012	.032	.023	.376	.707	-.003	.023	-.007	-.117	.907
Step 2															
Satisfaction	-.039	.011	-.246	-3.562	.001	.006	.038	.012	.171	.864	.025	.027	.064	.907	.365
Attachment Focus	.011	.012	.064	.925	.356	.012	.043	.020	.280	.780	-.059	.031	-.134	-1.908	.057

Variable	Curiosity and Exploration				
	B	SE B	β	t	p
Step 1					
Satisfaction	.019	.054	.021	.356	.722
Step 2					
Satisfaction	.038	.063	.043	.602	.548
Attachment Focus	-.041	.071	-.040	-.568	.570

Type I error for the table is α = .05.

Table 9

Summary of Hierarchical Regression Analysis for Attachment Predicting Perceptions of Partner and Exploration (N = 182).

Variable	Secure - PPE					Avoidant - PPE					Anxious - PPE				
	B	*SE B*	*β*	*t*	*p*	*B*	*SE B*	*β*	*t*	*p*	*B*	*SE B*	*β*	*t*	*p*
Step 1															
Satisfaction	.458	.057	.432	7.996	.001	-.670	.064	-.533	-10.513	.001	.048	.063	.045	.752	.453
Step 2															
Satisfaction	.406	.074	.383	5.497	.001	-.517	.081	-.411	-6.380	.001	.131	.074	.124	1.761	.079
Avoidance	-.063	.076	-.057	-.828	.408	.267	.084	.202	3.196	.002	-.039	.077	-.035	-.509	.611
Anxiety	-.054	.051	-.059	-1.059	.290	-.012	.056	-.011	-.208	.835	.388	.051	.424	7.537	.001

Type I error for the table is α = .05.

Table 10

Summary of Hierarchical Regression Analysis for Interactions Predicting Exploration (N = 182).

Variable	Attachment and Exploration					Need For Cognition				
	B	*SE B*	*β*	*t*	*p*	*B*	*SE B*	*β*	*t*	*p*
Step 1										
Satisfaction	.080	.050	.095	1.593	.112	.024	.057	.026	.427	.670
Step 2										
Satisfaction	-.096	.069	-.114	-1.395	.164	-.113	.081	-.120	-1.393	.165
Avoidance	-.131	.068	-.149	-1.940	.053	-.007	.080	-.007	-.086	.932
Anxiety	-.122	.044	-.169	-2.758	.006	-.159	.052	-.195	-3.045	.003
Attachment Focus	-.097	.073	-.103	-1.341	.181	.077	.086	.072	.897	.370
Secure - PPE	.238	.050	.300	4.712	.001	.074	.060	.083	1.239	.216
Avoidance X Attachment Focus	-.027	.047	-.042	-.576	.565	.004	.056	.006	.073	.942
Anxiety X Attachment Focus	-.075	.046	-.105	-1.635	.103	-.011	.054	-.013	-.194	.846
Avoidance X Secure - PPE	-.028	.057	-.032	-.492	.623	.116	.067	.118	1.727	.085
Anxiety X Secure - PPE	.055	.039	.084	1.408	.160	.068	046	.093	1.486	.138
Attachement Focus X Secure - PPE	-.020	.056	-.024	-.351	.726	-.024	.066	-.026	-.358	.721

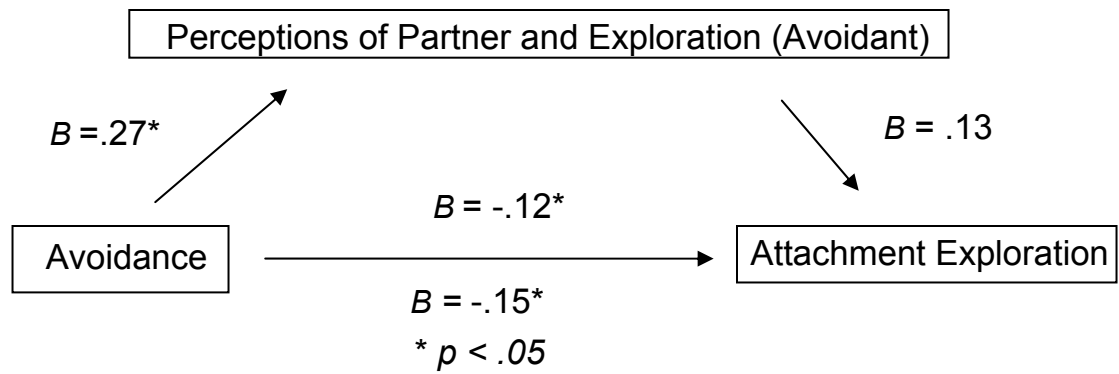| Variable	Openness to New Experiences					Senstation Seeking				
	B	*SE B*	*β*	*t*	*p*	*B*	*SE B*	*β*	*t*	*p*
Step 1										
Satisfaction	.071	.036	.118	1.984	.048	-.033	.009	-.212	3.607	001
Step 2										
Satisfaction	.007	.052	.012	.138	.890	-.032	.013	-.206	-2.434	.016
Avoidance	.020	.052	.032	.391	696	.034	.013	.208	2.619	.009
Anxiety	-.075	.034	-.144	-2.223	.027	-.013	.009	-.094	-1.484	.139
Attachment Focus	.025	.055	.037	.037	.652	.023	.014	.129	1.626	.105
Secure - PPE	.067	.039	.118	.118	.082	0.006	.010	.040	.610	.542
Avoidance X Attachment Focus	.022	.036	.046	.046	.550	-.001	.009	-.010	-.126	.900
Anxiety X Attachment Focus	-.014	.035	-.027	-.027	.691	-.024	.009	-.180	-2.714	.007
Avoidance X Secure - PPE	.001	.043	.001	.001	.985	-.013	.011	-.081	-1.213	.226
Anxiety X Secure - PPE	.020	.030	.042	.042	.503	.010	.008	.086	1.390	.166
Attachement Focus X Secure - PPE	-.019	.043	-.033	-.033	.659	-.001	.011	-.010	-.136	.892

Type I error for the table is α = .05.

Table 11

Summary of Hierarchical Regression Analysis for Interactions Predicting Curiosity (N = 182).

Variable	State-Trait Curiosity Inventory (State)					State-Trait Curiosity Inventory (Trait)				
	B	*SE B*	*β*	*t*	*p*	*B*	*SE B*	*β*	*t*	*p*
Step 1										
Satisfaction	.013	.032	.024	.394	.694	-.002	.023	-.006	-.100	.920
Step 2										
Satisfaction	-.031	.046	-.059	-.687	.493	-.037	.034	-.094	-1.094	.275
Avoidance	-.018	.045	-.033	-.410	.682	-.049	.033	-.120	-1.480	.140
Anxiety	.050	.030	.109	1.698	.091	-.038	.022	-.112	1.742	.083
Attachment Focus	-.004	.048	-.007	-.082	.935	-.064	.036	-.146	1.806	.072
Secure - PPE	.091	.034	.181	2.702	.007	.052	.025	.142	2.124	.035
Avoidance X Attachment Focus	-.019	.031	-.046	-.603	.547	-.003	.023	-.008	-.110	.913
Anxiety X Attachment Focus	-.059	.031	-.130	-1.920	.056	-.017	.023	-.052	-.768	.443
Avoidance X Secure - PPE	.007	.038	.012	.178	.859	-.017	.028	-.042	-.612	.541
Anxiety X Secure - PPE	.021	.026	.050	.802	.423	.025	.019	.083	1.312	.190
Attachement Focus X Secure - PPE	-.035	.037	-.068	-.929	.354	-.007	.027	-.018	-.247	.805

Variable	Curiosity and Exploration				
	B	*SE B*	*β*	*t*	*p*
Step 1					
Satisfaction	.020	.054	.022	.366	.715
Step 2					
Satisfaction	-.107	.076	-.120	-1.411	.159
Avoidance	-.065	.075	-.069	-.868	.386
Anxiety	-.051	.049	-.067	-1.050	.295
Attachment Focus	-.019	.080	-.019	-.241	.810
Secure - PPE	.203	.056	.241	3.649	.001
Avoidance X Attachment Focus	-.057	.052	-.082	-1.087	.278
Anxiety X Attachment Focus	-.079	.051	-.104	-1.555	.121
Avoidance X Secure - PPE	-.064	.063	-.068	-1.017	.310
Anxiety X Secure - PPE	.094	.043	.135	2.183	.030
Attachement Focus X Secure - PPE	-.042	.062	-.050	-.687	.493

Type I error for the table is α = .05.

APPENDIX B

FIGURES

Perceptions of Partner and Exploration (Avoidant)

B =.27*

B = .13

B = -.12*

Avoidance	⟶	Attachment Exploration

B = -.15*

* *p* < .05
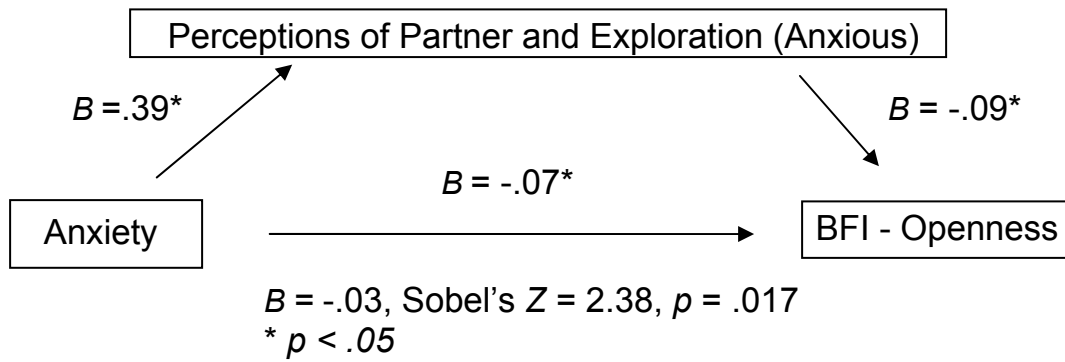
Figure 1. Avoidant Perceptions of Partner and Exploration Mediate the Association between Avoidance and Attachment Exploration.
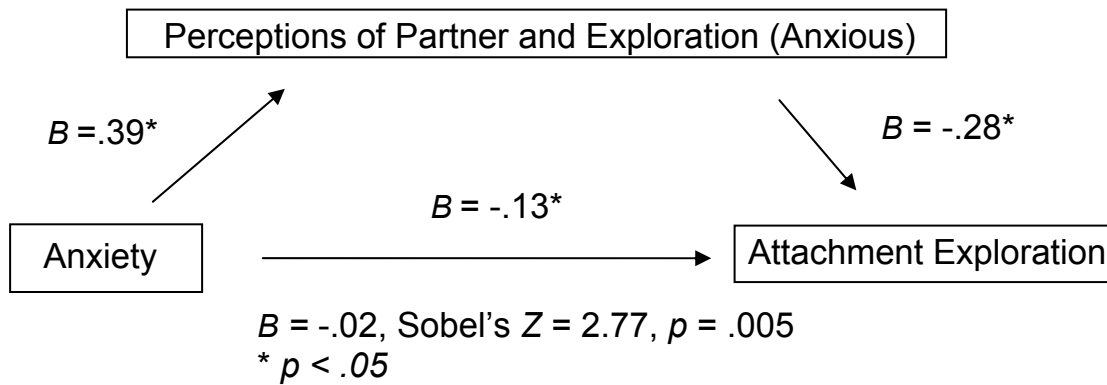
Figure 2. Anxious Perceptions of Partner and Exploration Mediate the Association between Anxiety and Attachment Exploration.

Figure 3. Anxious Perceptions of Partner and Exploration Mediate the Association between Anxiety and Openness to New Experiences.

APPENDIX C

Partner Support of Exploration

Instructions: In many of the below items the term **explore** is used. By exploration we mean things like trying new activities and sports, putting yourself in new situations, or going to new places. Exploration can also take place in purely mental activities such as reading a book that makes you think about the world in a different way or thinking about different people's values, philosophies and ways of life. Finally, exploration can also mean trying out new social situations (student clubs) and making new friends that are different than the friends you have now (for example, if all of your friends are from Texas, making friends with a foreign exchange student). Exploration in other words means confronting the unfamiliar in many different ways. With the above in mind please fill in the oval that is most appropriate to how you feel.

Scale Response:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

 not at all   very much so

Partner Support of Exploration (Secure Version)

1. My partner encourages me to explore my world

2. My partner discourages me from doing new things (R)

3. My partner likes it when I try new things

4. My partner encourages me to grow as a person

5. My partner does like it if I have new experiences (R)

6. My partner encourages me to look for new things in all walks of life

7. The last time I explored I felt good knowing my partner was there

Partner Support of Exploration (Avoidant Version)

1. I explore new things to be on my own

2. There is not much my partner could do to reassure or help me when I try new things.

3. I explore because it proves my independence

4. I like to try new things as a way to escape from the pressures of my relationship

5. I like being in new situations because it distracts me from my relationship

Partner Support of Exploration (Anxious Version)

1. I explore to be with my partner

2. I only explore when my partner is present

3. When I explore it is only because my partner insists

4. I need constant reassurance from my partner to explore new situations

5. I tend to explore just to be with my partner

6. When I explore I follow my partner's lead

7. I am happiest trying new things if my partner is there to help me

APPENDIX D

Exploration Scale

Instructions: In many of the below items the term **explore** is used. By exploration we mean things like trying new activities and sports, putting yourself in new situations, or going to new places; Exploration can also take place in purely mental activities such as reading a book that makes you think about the world in a different way or thinking about different people's values, philosophies and ways of life. Finally, exploration can also mean trying out new social situations and making new friends that are different than the friends you have now (for example, if all of your friends are from Texas, making friends with a foreign exchange student). Exploration in other words means confronting the unfamiliar in many different ways. With the above in mind please read each of the following statements carefully, and then fill in one of the one of the numbers to the right to indicate how you feel in general.

Scale Response

Not at all   **Very Much So**

   1   **2**   **3**   **4**   **5**   **6**   **7**

Exploration

1. I like to explore my world

2. I dislike doing new things (R)

3. I enjoy trying new things

4. I try to grow as a person

5. I do not like to have new experiences (R)

6. I seek new things in all walks of life

7. I do not feel comfortable exploring new things (R)

8. I felt good the last time I explored

VITA

Name: Archibald McLeish Martin, III

Address: McLeish Martin, Department of Psychology, Texas A&M University, College Station TX, 77843–4235

Email Address: martinam@neo.tamu.edu

Education: M.S. Psychology, Texas A&M University, 2006
B.A. With honors in Psychology, Whitman College, 2003

Peer–Review Publications:

Prull, M. W., Crandell, L.L., Martin, A.M., III, Backus, H.F., & Light, L.L. (In Press). Recollection and Familiarity in Recognition Memory: Adult Age Differences and Neuropsychological Test Correlates. *Psychology and Aging*.

Conference Presentations:

Martin, A. M., III (2006, January). Avoidant Couples: Not Seeking Intimate Information. Poster Presentation conducted at the annual meeting of the Society for Personality and Social Psychology, Palm Springs, CA.

Martin, A. M., III (2003, May). Ideals as a Mediator Between Attachment Styles and Relationship Satisfaction. In W. Marelich (Chair), *Close Relationships*. Symposium conducted at the annual meeting of the Western Psychological Association, Vancouver, BC.

Professional Affiliations:
Society for Personality and Social Psychology, 2004–present
American Psychological Association, 2005–Present