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Relationship Influences on Exploration in Adulthood: The Characteristics and Function of a Secure Base

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Abstract

This investigation advances theory and research regarding relationship influences on exploration in adulthood. This is accomplished by (a) identifying important characteristics of a secure base, (b) examining the influence of the presence/absence of these characteristics on exploration behavior in adulthood, and (c) identifying individual difference factors that are predictive of the provision and receipt of secure base support. In two sessions, married couples (N = 167) provided reports of relationship dynamics involving exploration, and they participated in an exploration activity that was videotaped and coded by independent observers. Results indicated that the three identified characteristics of a secure base (availability, non-interference, and encouragement) are strongly predictive of exploration behavior, and that the provision and receipt of these behaviors can be predicted by individual differences in attachment. Implications of results and contributions to existing literature are discussed.

Keywords

Exploration; Secure Base; Relationships; Adulthood; Availability; Interference; Encouragement

> I can fly higher than an eagle, cause you are the wind beneath my wings. (song lyrics by Henley & Silbar, released by Bette Midler, 1989)

Individuals routinely give credit for their accomplishments to the support of the significant people in their lives. This is evident in award acceptance speeches, book acknowledgements and dedications, expressions of gratitude by students upon completing their degree requirements, song dedications, and so on. During special life events, people often make a point of expressing gratitude for this kind of support. However, the presence or absence of such support is also likely to be felt on a daily basis in many everyday contexts, and is likely to influence the nature and quality of exploratory behavior and goal strivings. Thus, it is surprising that research examining this important form of social support has been rare in both the relationships and social support research literatures (for exceptions see Brunstein, 1993; Brunstein, Dangelmayer, & Schultheiss, 1996; Feeney, 2004, 2007; Ruehlman & Wolchik, 1988). Historically, these literatures have focused on one general type of social support, which is the comfort and assistance provided to another person in stressful situations. Research examining the support of a relationship partner's personal growth, exploration, and goal

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strivings has been lacking. The goal of the present investigation is to narrow this gap in the literature by (a) identifying important characteristics of support for exploration, (b) examining the influence of the presence or absence of these characteristics on exploration in adulthood, and (c) identifying individual difference factors that are predictive of providing and receiving this kind of social support.

The Characteristics of a Secure Base

We refer to the support of a relationship partner's exploration, goal strivings, and personal growth as the provision of a *secure base* (e.g., Feeney, 2004, 2007). This builds on attachment theory's notion of a *secure base*, which, according to the theory, functions to support a relationship partner's exploratory behavior or behavior that involves going out from the partner and relationship for autonomous exploration of the environment (Bowlby, 1988; see also Crowell, Treboux, Gao, Fyffe, Pan, & Waters, 2002; Waters & Cummings, 2000). We distinguish secure base support from attachment theory's notion of a *safe haven*, which, according to the theory, functions to support a relationship partner's attachment behavior or behavior that involves coming to the partner and relationship for comfort, reassurance, and assistance in times of stress (Feeney, 2004; Feeney & Collins, 2004). Because a focus on secure base support provision has been lacking, the present investigation contributes to the development of both theory and research in this area.

First, it is important to elaborate the concept of a secure base. What is a secure base? And what does it do? Although in need of theoretical elaboration, attachment theory provides some important clues regarding the answers to these questions. According to the theory, a secure base creates the conditions that enable a relationship partner to explore the world in a confident way (Bowlby, 1988). John Bowlby, the pioneer of attachment theory, has described the concept of a secure base as *"one of being available, ready to respond when called upon to encourage and perhaps assist, but to intervene actively only when clearly necessary. In these respects it is a role similar to that of the officer commanding a military base from which an expeditionary force sets out and to which it can retreat, should it meet with a setback. Much of the time the role of the base is a waiting one but it is none the less vital for that. For it is only when the officer commanding the expeditionary force is confident his base is secure that he dare press forward and take risks"* (Bowlby, 1988, p. 11).

On the basis of this description, we have extrapolated three important characteristics of a secure base, which we will highlight and examine in the current investigation. First, a secure base supports exploration by *being available in the event that the base is needed* (e.g., to assist in removing obstacles, to be waiting if a retreat becomes necessary, to be sensitive and responsive to distress cues, to be accepting of dependence when needed). Continuing with the military analogy, a military base might convey this availability by remaining in contact with the troop during the expedition and by having established a history of being responsive whenever called upon. A close relationship partner might convey this availability to a loved one in the same way. For example, when Julia is away exploring a potential job opportunity that will help her meet important career goals, her husband John may show availability by checking in with her to see how she is doing, and by being responsive to Julia's phone calls and any need for reassurance during this time.

Second, a secure base supports exploration by *not unnecessarily interfering with exploration*. Continuing with the military analogy, most expeditionary troops are prepared for their missions and simply need the time and space to accomplish the goals before them. Any unnecessary interference is likely to jeopardize the mission or undermine the troop's ability, concentration, and confidence with regard to accomplishing the mission. Similarly, a close relationship partner may undermine a loved one's confidence, concentration, and abilities with regard to goal striving and exploration (and diminish his or her enjoyment of goal striving and exploration)

by unnecessarily interfering, perhaps by providing support that is not needed or desired, by taking over and controlling the activity, or by impeding the accomplishment of a goal or activity. For example, if John wants to explore a new weight-loss program to accomplish his goal of losing weight, his wife Julia would be unnecessarily interfering if she responded by creating an (unsolicited) exercise and eating schedule for him. As described above, the role of a base is primarily one of waiting to help only if needed (Bowlby, 1982).

Third, a secure base supports exploration by being *encouraging and accepting of exploration*. Continuing with the military analogy, a commanding officer would be unlikely to lead his or her troop forward if the expedition was not encouraged and accepted by the home base as being worthwhile. Similarly, individuals are unlikely to explore in ways that might enhance their learning, personal growth, and self-esteem (i.e., by taking on challenges and striving to accomplish important personal goals) when the goals, challenges, or exploratory efforts are not encouraged and accepted by their close relationship partners. For example, if John would like to learn how to paint, he will be less likely to pursue this goal if Julia thinks it is a waste of time or resents the time spent apart, but he will be more likely to pursue the goal if Julia accepts it as being worthwhile and encourages him to try it.

Characteristics of a Secure Base Predicting Exploratory Behavior

Here, we consider the ways in which these three characteristics of secure base support predict exploration behavior and immediate outcomes of exploration in adulthood. We propose that all three characteristics are necessary for optimal exploration behavior, but that the three components may predict different aspects of exploration. We consider three categories of exploration behaviors that are likely to encompass the experience of exploration. These exploration behaviors were derived from theory and from prior research regarding parental influences on children's exploration (described below) and include the following: (a) exploration behaviors related to the exploration activity itself (performance, self-confidence, persistence, and enthusiasm); (b) explorer behavior toward the relationship partner who may provide a secure base (concern about partner watching one's exploration activities, seeking of task assistance and encouragement/emotional support during exploration, expressions of negative and positive affect toward partner during exploration); and (c) explorer response to task assistance (receptiveness to solicited and unsolicited task assistance, overt rejection of solicited and unsolicited task assistance). The immediate outcomes of secure base support that we consider include changes in explorer mood and self-esteem from before to after the exploration, and explorer perceptions of the exploration activity and of the partner afterwards. Below we discuss the impact each characteristic of secure base support (or lack thereof) is likely to have on exploration.

Availability—A relationship partner's availability should be an important predictor of exploratory behavior. This idea has been supported recently by research on the dependency paradox, which states that the ability to depend on a close relationship partner when needed allows one to function more autonomously (Feeney, 2007). The dependency-paradox concept was derived from attachment theory, which stipulates that throughout the lifespan the *availability* of a responsive attachment figure remains the source of a person's feeling secure, and only when a person is feeling secure will he or she be able to explore most effectively, confidently, and autonomously. The reasoning behind this idea is that it is much easier for people to engage in behaviors that will enhance their personal growth (e.g., accepting challenges, exploring, trying new things, and taking risks) when they know someone is available to provide comfort and assistance if things go wrong. This is because an individual who feels confident in the availability of his or her “secure base” does not have to cling to that base as much as an individual who lacks such confidence.

Evidence for this idea has been found in studies of age groups from infancy through adulthood. With regard to infants, researchers have shown that by the end of the first year, mothers who attended promptly to their crying babies have babies who cry much less than the babies of mothers who let them cry (Ainsworth et al., 1978; Belsky et al., 1984; Bowlby, 1988). Evidence also indicates that children raised by responsive attachment figures (who are tuned in to the child's signals, interpret them correctly, and respond promptly and appropriately) are able to explore in a confident way because they know their figures will be available in times of need. In contrast, children raised by attachment figures who are less sensitive and responsive (who fail to notice the child's signals, misinterpret signals when they are noticed, and respond tardily, inappropriately, or not at all) show signs of restricted exploration because they are less confident about receiving support when needed. Similarly, for adolescents, researchers have found that independence is most easily established not at the expense of attachment relationships with parents, but against a backdrop of secure relationships with them (Allen & Land, 1999; Moore, 1987; Noom et al., 1999).

As for adults, the dependency paradox has recently been tested in samples of married and dating couples using surveys that ask couple members to provide reports of each other's behaviors, videotaped observations of couple members' behaviors during discussions, and longitudinal methods that follow couples over time as they pursue important goals (Feeney, 2007). These studies examine one couple member's independent goal striving as a function of the other couple member's dependency acceptance (availability). Collectively, this research provides strong empirical support for the paradoxical hypothesis that accepting dependence promotes independence. Specifically, reports of one partner's dependency acceptance (defined as responsiveness to the other's needs and sensitivity to the other's distress cues) was associated with reports of the other's perceived independence and self-efficacy, engagement in independent exploration, and ability to achieve independent goals. Also, during couples' discussions of personal goals for the future, one partner's dependency acceptance (communication of future availability and sensitive/responsive support provision) was associated with the other's autonomous functioning (e.g., confident exploration of independent goals). Additionally, individuals whose partners were accepting of dependence (as observed and reported at one point in time) experienced increases in independent functioning over 6 months, and they were more likely to have accomplished an important independent goal that had been identified 6 months earlier.

The present investigation examines the extent to which availability influences exploration behavior during a laboratory exploration activity. We predict that a partner's availability (i.e., attentiveness and responsiveness to needs during exploration; a lack of avoidance) will be linked with exploration behaviors including better performance, greater confidence in exploration, greater persistence in exploration, and greater enthusiasm during exploration activities. We further predict that individuals whose partners exhibit availability during exploration will seek less task assistance and will be receptive to solicited task assistance but unreceptive to unsolicited task assistance (because they enjoy the exploration challenge and wish to try it on their own). Finally, after engaging in an exploration activity, we predict that explorers whose partners exhibited availability will report greater enjoyment of exploration, greater feelings of competence, greater perceptions that their partners were helpful during the exploration, increases in positive mood, decreases in negative mood, and increases in state self-esteem.

Non-interference—According to attachment theory, intrusive or interfering behavior is antithetic to sensitive and responsive support provision, and it is a major inhibitor of exploration (Bowlby, 1988). Intrusive or interfering behavior is expected to inhibit exploration because it communicates a variety of negative messages to the recipient: It may communicate that (a) he or she is not capable of engaging in independent exploration, (b) he or she is not intelligent or

competent enough to succeed at exploratory activities, (c) he or she is not deserving or worthy of engaging in independent exploration, (d) independent exploration is threatening to close others and one's relationship with close others, (e) close others have negative views of one's abilities, or (f) exploration is futile because it is consistently interrupted. Any one of these messages should lead a person to develop negative perceptions of his or her own abilities regarding exploration, to conclude that exploration is not enjoyable or worth the effort, and to believe that exploration attempts result in negative outcomes and thus should be avoided. Intrusive or interfering behavior should also undermine performance during exploration because it undermines concentration and confidence.

Virtually no research has examined the effects of intrusive, interfering behavior on exploration in adulthood. Although researchers have shown that compulsive or intrusive support in stressful situations is linked with attachment insecurity (e.g., Feeney & Collins, 2001; Kunce & Shaver, 1994), the consequences of intrusive, interfering behavior in exploratory situations have not been established in adulthood. To our knowledge, only one prior study has considered the effects of intrusiveness on exploration (Feeney, 2004). This study showed that (a) intrusive partner behavior during couple members' goal discussions was linked with greater merging of goals with that of one's partner, (b) experimentally manipulated intrusive/interfering support behaviors (indicating a lack of the “sit back and wait” aspect of secure base support) were perceived more negatively by recipients than nonintrusive support behaviors and (c) recipients' negative perceptions of intrusive, interfering support behavior predicted decreases in their self-esteem and positive mood from before to after an exploration activity (Feeney, 2004).

Research examining the effects of intrusive, interfering behavior on children also provides some clues regarding likely effects of intrusiveness on exploration behavior in adulthood. This research has shown that parental interference in children's exploratory activities is associated with a variety of negative outcomes for children, including disrupted concentration, less persistence and enthusiasm in exploration, more passivity, more negative emotion, less competence, and less curiosity (e.g., Ainsworth, Bell, & Stayton, 1974; Cassidy & Berlin, 1994; Egeland & Farber, 1984; Main, 1983; Matas, Arend, & Sroufe, 1978). We expect to observe similar effects in adulthood. In particular, we predict that a partner's intrusive, interfering behavior will be linked with exploration difficulties including poor performance during exploration (because concentration is disrupted), less confidence in exploration (because intrusiveness conveys negative information about one's competence and abilities), and less persistence and enthusiasm in exploration (because intrusiveness reduces the pleasure of exploration). Explorers are also expected to express concern about being observed by an interfering partner, and to express greater negativity or hostility and less positivity toward interfering partners while engaging in exploratory activities.

Because explorers who have interfering partners are likely to believe they are less capable of successful independent exploration, we further predict that they will solicit task assistance during exploration. However, because of the negative messages conveyed by partner interference, explorers are expected to be rejecting of assistance that is offered. Finally, we predict that after engaging in exploration, explorers whose partners were interfering will report less enjoyment of exploration, lower perceived competence, perceptions that their partners were unsupportive during the exploration, decreases in positive mood, increases in negative mood, and decreases in state self-esteem.

Encouraging and accepting exploration—A relationship partner's encouragement and acceptance of exploration should be another important predictor of exploration behavior in adulthood. Although to our knowledge no prior work has isolated and examined the effects of this specific behavior in adulthood, we theorize that a relationship partner who is encouraging and accepting of exploration will positively motivate his or her loved one to take on challenges,

pursue personal goals, and grow as an individual by learning and discovering. Encouragement is expected to facilitate exploration and increase the pleasure one is able to take in exploration because it conveys an excitement and enthusiasm regarding exploration, as well as confidence in the explorer's abilities.

Thus, we expect this component of secure base support to be associated with greater enthusiasm, greater persistence, greater self-confidence, and therefore better performance during exploration. We further predict that individuals whose partners are encouraging during exploration activities will express more positive affect toward the partner, seek encouragement from the partner during exploration (e.g., by celebrating accomplishments with the partner), and be especially receptive to solicited task assistance, but unreceptive to unsolicited task assistance (because they enjoy the exploration challenge and wish to try it on their own). Finally, we predict that after engaging in an exploration activity, explorers whose partners were encouraging will report greater enjoyment of exploration, greater feelings of competence, greater perceptions that their partners were helpful during the exploration, increases in positive mood, decreases in negative mood, and increases in state self-esteem.

Individual Differences in Secure Base Support Provision and Receipt

Who is a good or bad secure base support provider?—Just as attachment theory provides a useful framework within which to begin to identify important characteristics of a secure base, so too does the theory provide useful information regarding potential individual differences in the provision of secure base support. Attachment styles reflect general beliefs about oneself and others that are based, in part, on one's history of experiences in significant relationships (Bowlby, 1969/1982, 1973, 1980; Collins, Guichard, Ford, & Feeney, 2004; Main et al., 1985). Avoidant attachment reflects a discomfort with closeness and intimacy, as well as a belief that others cannot be relied upon to be available when needed. Attachment anxiety reflects a concern about being rejected, abandoned, or unloved, views of the self as being unacceptable/unworthy, and views of others as being available only occasionally or contingently (e.g., Hazan & Shaver, 1987; Kobak & Sceery, 1988; Shaver & Mikulincer, 2007). Secure attachment (low avoidance and low anxiety) reflects views of close others as being accessible, available, and responsive when support is needed, and views of the self as being acceptable and the sort of person toward whom others are likely to respond in a helpful way (Bowlby, 1969/1982, 1973).

Previous research examining the *safe haven* function of support has provided evidence for the systematic association of each attachment style with unique patterns of support provision (e.g., Carnelley et al., 1996; Collins & Feeney, 2000; Feeney, 1996; Feeney & Collins, 2001; Kunce & Shaver, 1994; Simpson et al., 1992). It is expected that attachment-style differences in *secure base* support behavior will emerge as well. Specifically, because of their discomfort with intimacy and their emphasis on self-reliance, individuals who score high on avoidant attachment are expected to be non-intrusive in, and perhaps also encouraging of, their partners' autonomous exploration (because they may perceive autonomous exploration as creating some distance between relationship partners, which they value). However, for the same reasons, they are unlikely to be available for any difficulties their partner may encounter during exploration. In contrast, individuals who are high in attachment anxiety, who tend to desire extreme closeness with others and are sensitive to the possibility of rejection, are expected to have difficulty encouraging autonomous exploration and resisting the adoption of an intrusive or interfering stance. This speculation is consistent with the infant literature indicating that insecure parents tend to interfere with their baby's exploratory activities (see Cassidy & Berlin, 1994, and Grossmann, Grossmann, & Zimmerman, 1999, for reviews). It is unclear whether anxious individuals will fare well with the availability component of secure base support,

because prior work indicates that they provide support that is out of sync with the their partner's needs (e.g., Feeney & Collins, 2001; Kunce & Shaver, 1994).

Who is most likely to receive secure base support?—We will also consider the role of the explorer's attachment style in influencing secure base support provision. Because social support is an interpersonal phenomenon that involves the characteristics and behaviors of two interaction partners, and because prior research has revealed individual (attachment style) differences in individuals' willingness and ability to engage in exploration (e.g., Elliot & Reis, 2003; Hazan & Shaver, 1990) and in individuals' reactions to different types of caregiving (Simpson, Winterheld, Rholes, & Orina, 2007), it is equally important to consider the explorer's attachment characteristics in predicting secure base receipt. Partners may adjust their secure base behavior to fit the characteristics of their particular relationship partners, and explorers may elicit particular behaviors from their partners during exploration.

Specifically, explorers who have anxious tendencies (and are perhaps more dependent on the relationship and more reluctant to pursue independent goals) may not view intrusive behaviors as unsupportive to the extent that other individuals might; therefore, they may elicit (or be accepting of) this form of behavior from their relationship partners. In addition, they may require more encouragement for exploration than other, more secure, individuals because they are unlikely to value exploration that does not also meet interpersonal needs. Moreover, anxious individuals' desire for extreme closeness (and perhaps over-dependence on relationship partners) may be taxing on their partners and may result in less partner availability (and perhaps also less encouragement) during exploration. These predictions are consistent with research indicating that interpersonal concerns (e.g., receiving admiration and acceptance; fear of rejection for poor performance) interfere with the productivity of anxious individuals, and that they view achievement tasks in terms of potential losses, resulting in greater performance pressure and a defensive focus on avoiding negative outcomes (Elliot & Reis, 2003; Hazan & Shaver, 1990).

In contrast, explorers who score high on avoidant attachment (who value independence and emotional distance from others) are unlikely to receive encouragement for exploration from their partners – either because they do not need encouragement to explore, or because their partners perceive them as being too distant and independent. Avoidant explorers may also receive less of the availability component of secure base support because they communicate a lack of need or desire for it. These predictions are consistent with research indicating that avoidant individuals use exploration (e.g., work) as a way to avoid social interaction (Hazan & Shaver, 1990).

Method

This study examines (a) the ways in which the components of secure base support predict exploratory behavior and outcomes during a laboratory exploration activity and (b) individual differences in the provision and receipt of these components of secure base support. The components of secure base support are assessed both observationally and with couple member reports. Detailed procedures are described below.

Participants

Participants were 167 married couples recruited from a large metropolitan area through local newspaper advertisements and posted flyers. Couples had been married for an average of 10.2 years (median = 6.0 years), all were living together, and all were heterosexual. Couples were paid $50 for participating in each of two sessions.

Each member of the couple was randomly assigned to the role of either "explorer" or "spouse." The mean age of explorers was 39.1 (range = 18 – 81), and the mean age of spouses was 39.3 (range = 21 – 82). Eighty women and 87 men were assigned to the explorer role, and 87 women and 80 men were assigned to the spouse role. Demographics for explorers include: 76.6% Caucasian, 15.6% African American, 1.2% Asian, 1.8% Hispanic, 3.0 Native American, 1.8% other, 38.5% high school education or some college credit, 43.8% college education, 12.4% advanced professional degree, and 5.3% did not complete high school. Demographics for spouses include: 78.1% Caucasian, 17.2% African American, 1.8% Asian, 1.8% Hispanic, .6 Native American, .6% other, 41.1% high school education or some college credit, 43.4% college education, 11.9% advanced professional degree, and 3.6% did not complete high school. In this investigation, we treat couples as units of analysis, not individuals; thus, our observations are independent.

Procedure

Couples visited the laboratory for two sessions, one couple at a time, as part of a larger investigation of marital relationships. The two sessions were scheduled approximately one week apart.

Session 1: Measures for Testing Individual Difference Hypotheses—During the first session, couple members completed a packet of questionnaires in separate, private rooms, which included measures relevant to testing hypotheses regarding individual differences in secure base characteristics.

Attachment style: Each couple member (explorer and spouse) completed an abbreviated 26-item version of Brennan, Clark, and Shaver's (1998) Experiences in Close Relationships scale, which is a well-validated measure for assessing adult attachment style and contains two subscales: The Avoidance subscale ($\alpha = .89$ for spouse ratings; $\alpha = .87$ for explorer ratings) measures the extent to which one is comfortable with closeness, intimacy, and dependence on others (e.g., "I prefer not to show people how I feel deep down," "I am very uncomfortable being close to people"). The Anxiety subscale ($\alpha = .91$ for spouse ratings; $\alpha = .89$ for explorer ratings) measures the extent to which one is worried about being rejected, abandoned, or unloved (e.g., "I worry about being abandoned," "I worry a fair amount about losing close relationships"). Couple members responded to each item on a scale ranging from 1 *(strongly disagree)* to 7 *(strongly agree)* in terms of their general orientation toward close relationships. To ensure an assessment of participants' general attachment style (and not a relationship-specific one), respondents answered in terms of their general orientation toward close relationships instead of their more specific orientation to romantic relationships. The avoidance and anxiety scales were correlated for explorers ($r = .36$, $p < .001$) and for spouses ($r = .38$, $p < .001$).

Secure base characteristics: A 15-item Secure Base Characteristics Scale (SBCS) was developed for this investigation to assess the three characteristics of a secure base proposed above; five items were developed to assess each characteristic. Explorers completed a version in which they reported on their spouse's characteristics, and spouses completed a version in which they reported on their own characteristics. Thus, we obtained both explorer and spouse reports of the spouse's secure base qualities. The *Availability* subscale assesses the extent to which spouses generally make themselves available to the explorer if needed during exploratory activities. The *Interference* subscale assesses the extent to which spouses generally intrude in the explorations and goal pursuits of the explorer. The *Encouragement* subscale assesses the extent to which spouses generally encourage the explorer's goal strivings, personal growth, and exploration. Couple members rated the extent to which they agreed with each statement on a 6-point Likert scale. All items for the SBCS are provided in Table 1.

Reliabilities for each subscale were as follows: α = .81 for explorer reports of spouse's availability, α = .78 for explorer reports of spouse's interference, and α = .85 for explorer reports of spouse's encouragement, α = .68 for spouse reports of availability, α = .70 for spouse reports of own interference, and α = .75 for spouse reports of own encouragement. Spouse and explorer reports were correlated as follows: $r = .25$, $p < .01$ for availability, and $r = .20$, $p < .05$ for interference, $r = .30$, $p < .001$ for encouragement. These significant but modest correlations indicate some agreement between spouses about secure base support, but also considerable room for different views or opinions. Intercorrelations between the secure base components reported by the spouse were as follows: $r = .45$, $p < .001$ for availability and encouragement, $r = -.38$, $p < .001$ for encouragement and interference, and $r = -.20$, $p < .01$ for availability and interference. Intercorrelations between the secure base components reported by the explorer are as follows: $r = .54$, $p < .001$ for availability and encouragement, $r = -.52$, $p < .001$ for encouragement and interference, and $r = -.43$, $p < .001$ for availability and interference.

Session 2: Laboratory Exploration Activity for Testing Exploration Hypotheses

—Couple members were seated in a laboratory living room. In order to help couples feel comfortable interacting in the laboratory, they first interacted for 5 minutes while playing a cooperative game (a version of the game Pictionary). Then, as part of the larger project on marital relationships, couple members participated in a discussion activity, which is not part of the current investigation and thus is not discussed further. Next, the explorer participated in a novel exploration activity in the presence of his or her spouse. This activity is the focus of the present investigation and is used to test hypotheses regarding links between an individual's exploration behavior and his or her spouse's secure base behavior.

Exploration activity: Consistent with attachment theory (Bowlby, 1988), we view the urge to explore the environment as a basic component of human nature, and we view exploration as including a wide range of activities that involve adventure, discovery, learning, novelty, challenge, goal striving, and/or self-enhancement. This conceptualization formed the basis for our operationalization of exploration in the laboratory. A laboratory situation was created to permit the observation of one couple member's exploration behavior as a function of the other couple member's secure base behavior: This was accomplished by giving the explorer a novel exploration activity to try in the presence of his or her spouse. To mimic the characteristics of many real-life explorations, this activity was selected to be novel and challenging (as well as goal-oriented), but performance pressure was minimized to alleviate any potential concerns about performance or evaluation (and to ensure the elicitation of exploration behavior instead of attachment behavior that is likely to emerge in stressful situations). The following instructions were given to the explorer in the presence of the spouse:

> We'd like for you to try an activity called “Brick by Brick.” This is an activity that you've probably never tried before – and that you've probably never even heard of before. We'd just like for you to try it out and see what you think. It doesn't matter if you solve the puzzles or not – we just want you to have fun with it and tell us what you think about it afterwards. The object is to arrange these bricks into the patterns illustrated on this stack of cards. [The experimenter demonstrates with the first card.] The solution is on the back of each card in case you get stuck. Again, just check it out and have fun with it.

During this time, the spouse was given a brief questionnaire to complete. The purpose of this questionnaire was to make it clear to both couple members that the exploration activity was not a joint one (that the explorer was the one given the exploration opportunity). However, the spouse remained in the same room, and the spouse's questionnaire was a brief one, to allow the spouse the time and flexibility to exhibit qualities relevant to secure base support provision. After the experimenter left the room, the explorer and spouse were unobtrusively videotaped

for 10 minutes. The spouse's secure base behavior and the explorer's exploration behavior were later coded by independent observers. A total of six coders were trained to reliability. Among the six coders, pairs of coders were randomly selected to code a subset of the explorers, and different pairs of coders were randomly selected to code a subset of the spouses. All coders were blind to study hypotheses and participant characteristics. To assess interobserver reliability, intraclass correlation coefficients were computed (ICCs; McGraw & Wong, 1996) for all coded behaviors. Averages of the two observers' ratings were used in data analysis.

Coding of spouse's secure base behavior: Spouse behaviors relevant to each of the 3 qualities of a secure base (availability, non-interference, and encouragement) were coded. The extent to which each behavior occurred was coded on well-defined 5-point rating scales. Two specific spouse behaviors were coded to represent *Availability*: (a) *Attentiveness* was a rating of the extent to which the spouse attended to the explorer (appeared to be focused on him or her) and sensitively responded to his or her requests as he or she engaged in the brick activity (*ICC* = .93). (b) *Avoidance/Dismissing/Escaping Behaviors* (reverse coded) was a rating of the extent to which the spouse ignored the explorer's attempts to engage the spouse, minimized or dismissed the importance or significance to the explorer of solving the puzzles, ignored the explorer's emotional and/or instrumental support-seeking, withdrew physically in the room, and/or encouraged the explorer to suppress emotions or concern regarding performance on the activity (*ICC* = .90). A composite index representing Availability during the exploration activity was formed by averaging ratings for these two behaviors (mean $r = .46$, $p < .001$; $\alpha = .65$).

Two additional behaviors were coded to represent spouse *Interference*: (a) *Intrusive Support* was a rating of the extent to which the spouse attempted to provide task assistance that was unsolicited (not requested by the explorer). This included behaviors such as jumping in and trying to help the explorer with the activity, taking over the task and doing it for the explorer, or giving unsolicited advice/suggestions about what to do (*ICC* = .94). (b) *Controlling Support* was a rating of the extent to which the spouse appeared to be too bossy, too directive, or too dominating in his or her support attempts (*ICC* = .91). Although this code is similar to the intrusive support code, it is important to note that a spouse may provide intrusive support in a manipulative or concerned way (e.g., “Are you sure you want to do that?”) without being controlling. A composite index representing Interference during the exploration activity was formed by averaging ratings for these two behaviors (mean $r = .68$, $p < .001$; $\alpha = .80$).

The two behaviors that were coded to represent spouse *Encouragement* were as follows: (a) *Encouragement of Exploration* was a rating of the extent to which the spouse actively encouraged the explorer during the activity (*ICC* = .95). This included behaviors such as praising the explorer for solving a puzzle, complimenting the explorer's efforts, providing encouragement (e.g., “You can do it.”), and encouraging persistence (“Just keep trying…you'll get it.”). (b) *Confidence in Explorer's Ability* was a rating of the extent to which the spouse conveyed confidence (either directly/explicitly or indirectly) in the explorer's ability to succeed at the brick activity (*ICC* = .86). A composite index representing Encouragement during the exploration activity was formed by averaging ratings for these two behaviors (mean $r = .39$, $p < .001$; $\alpha = .62$).

Intercorrelations among the three behavioral composites (representing the three qualities of a secure base) are as follows: $r(167) = .42$, $p < .001$ for availability and encouragement, $r(167) = -.26$, $p < .001$ for encouragement and interference, and (surprisingly) $r(167) = .33$, $p < .001$ for availability and interference.

Coding of explorer's exploration behavior: The following exploration behaviors related to the exploratory task were coded: (a) *Performance* was scored by assigning 2 points for each

puzzle solved alone, 1 point for each puzzle solved while looking at the answer (on the back of the card) or with assistance from the spouse, and 0 points if the puzzle was solved entirely by the spouse or if the explorer gave up without solving the puzzle (*ICC* = .99). All other exploration behaviors were coded on well-defined rating scales. (b) *Expressed Confidence in Self*: the extent to which the explorer conveyed a sense of confidence and comfort with the activity and with working on the activity without necessarily involving the spouse (*ICC* = .85). (c) *Persistence at Task*: the extent to which the explorer actively worked on the brick activity and remained focused on it during the activity period (*ICC* = .87). (d) *Change in Persistence When Spouse Watches*: the extent to which the explorer exhibited more or less persistence at the task when the spouse watched the activity than when the spouse did not watch (when completing his or her questionnaire) (*ICC* = .93). (e) *Expressed Enthusiasm in Process of Task*: the extent to which the explorer seemed to enjoy the activity and to be enthusiastic about it, for example, by smiling while working on the activity, making victory signs upon solving a puzzle, stating that the activity is fun (*ICC* = .93). (f) *Change in Enthusiasm When Spouse Watches*: the extent to which the explorer exhibited more or less enthusiasm in the task when the spouse watched the activity than when the spouse did not watch (while completing his or her questionnaire) (*ICC* = .86). A composite index representing *Persistence* during the exploration activity was formed by averaging ratings for the two persistence behaviors (mean $r = .36$, $p < .001$; $\alpha = .65$), and a composite index representing *Enthusiasm* was formed by averaging ratings for the two enthusiasm ratings (mean $r = .39$, $p < .001$; $\alpha = .67$). The formation of these composites was supported by a principal components analysis.

The following explorer behaviors regarding the spouse were coded: (a) *Concern About Spouse Watching*: the extent to which the explorer either verbally or nonverbally expressed a concern about the spouse watching him or her perform the exploration activity, for example, by telling the spouse not to watch, by blocking the spouse's view of the activity, etc. (*ICC* = .88). (b) *Seeking of Task Assistance*: the extent to which the explorer asked for tangible or informational help/assistance in working on the brick activity (*ICC* = .88). (c) *Seeking of Encouragement/ Emotional Support*: the extent to which the explorer sought encouragement, compliments, praise, validation, or reassurance from the spouse with regard to the brick activity (e.g., “Look honey, I did it!”, *ICC* = .83). (d) *Negativity/Hostility Toward Spouse*: the extent to which the explorer exhibited any (verbal or nonverbal) negativity or hostility toward the spouse including criticism, disapproval, annoyance/irritation, contemptuous facial expressions (*ICC* = .92). (e) *Positive Affect Toward Spouse*: the extent to which the explorer interacted with the spouse in a warm, friendly, and positive manner (*ICC* = .94).

The following explorer behaviors in response to the spouse's task assistance were coded: (a) *Receptiveness to Solicited Task Assistance*: the extent to which the explorer was receptive to and accepting of task assistance that was solicited by the explorer (*ICC* = .89). (b) *Receptiveness to Unsolicited Task Assistance*: the extent to which the explorer was receptive to and accepting of task assistance that was unsolicited by the explorer (*ICC* = .89). (c) *Overt Rejection of Solicited Task Assistance*: the extent to which the explorer was overtly rejecting of task assistance that was solicited by the explorer (*ICC* = .91). (d) *Overt Rejection of Unsolicited Task Assistance*: the extent to which the explorer was overtly rejecting of task assistance that was unsolicited by the explorer (*ICC* = .92).

Because the goal of this investigation was to provide a thorough examination of the links between spouses' secure base behavior and a variety of specific exploration behaviors, we considered each coded explorer behavior separately in data analyses. This decision is strengthened by the lack of (or low) associations among many of the explorer variables. Intercorrelations among all coded explorer variables are provided in Table 2.

Explorer's Mood: The explorer's mood was assessed immediately before and after the exploration activity. Explorers rated, on 5-point scales, the extent to which they felt each of 16 emotions "*right now*." A principal components analysis indicated that the mood items loaded on three separate factors representing Positive Mood (5 items; e.g., pleased, happy; α = .81 for pre- and post-activity positive mood), Concerned Mood (5 items; e.g., nervous, worried; α = .89 for pre-activity and α = .76 for post-activity), and Frustrated Mood (6 items; e.g., frustrated, annoyed; α = .83 for pre-activity and α = .88 for post-activity). Associations among these composite scales are as follows: $r(167) = -.58$, $p < .001$ for positive and frustrated mood, $r(167) = -.24$, $p < .001$ for positive and concerned mood, and $r(167) = .51$, $p < .001$ for frustrated and concerned mood.

Explorer's state self-esteem: A modified, shortened version of McFarland and Ross's (1982) state self-esteem measure was used to assess the explorer's state self-esteem immediately before and after the exploration activity. Explorers were asked to describe how they felt about themselves "*right now*" on 8 pairs of opposing attributes (e.g., *good-bad*, *failure-success*, *unimportant-important*) using a 7-point scale anchored by the opposing attributes. Responses were averaged to form composite measures of Pre-Activity State Self-Esteem (α = .93) and Post-Activity State Self-Esteem (α = .93).

Explorer's perceptions of the exploration activity: The explorer reported the following perceptions of the exploration activity on 7-point rating scales: the extent to which he or she enjoyed the exploration activity (2 items, α = .82), the extent to which he or she felt knowledgeable or smart during the activity (1 item), the extent to which the spouse was helpful or supportive during the activity (1 item), and the extent to which the spouse was negative or unsupportive during the activity (2 items, α = .58).

Upon completion of the questionnaires, the couple members completed additional components of the larger investigation of marital relationships, and then they were fully debriefed and thanked for participating.

Results

Secure Base Behaviors Predicting Exploration Behaviors and Outcomes

The first set of analyses focused on the laboratory exploration activity and examined the extent to which exploration behavior (exploration behaviors related to the exploration task, explorer behavior toward the spouse, and explorer response to task assistance) and immediate outcomes of exploration (changes in mood, changes in self-esteem, and perceptions of exploration and of the spouse) could be predicted from spouse behaviors representing the three components of secure base support (availability, interference, encouragement). [For ease of presentation and discussion, we use variables representing interference (instead of non-interference) in data analyses.] A series of simultaneous multiple regression analyses were conducted to examine whether the spouse's secure base behaviors during the laboratory exploration activity were predictive of the explorer's exploration behaviors and outcomes. For each analysis, observers' ratings of the spouse's secure base behaviors (availability, interference, encouragement) were entered simultaneously as predictors of observers' ratings of the explorer's behavior and outcomes. Simultaneous entry of predictor variables was selected to reveal effects that are unique to each predictor variable (and not effects that involve shared variance with other predictor variables). However, zero-order correlations were also computed and reported. The following description of the results is organized by the explorer variables that are being predicted.

Exploration Behaviors Related to the Exploration Task

Performance: Spouse interference and encouragement emerged as significant predictors of performance during exploration in the regression analyses (see Table 3). When spouses were encouraging of the explorers, the explorers performed better. However, when spouses exhibited interfering behavior, the explorers performed worse. The zero-order correlations indicated that all three secure base variables (availability as well as interference and encouragement) were significantly related to explorers' performance on the exploration activity.

Expressed confidence in self: Contrary to expectations, none of the secure base variables were significant predictors of observers' ratings of the explorers' self-confidence during the exploration activity (Table 3).

Persistence: Spouse availability and interference emerged as the significant predictors of persistence at the exploration activity in the regression analyses. When spouses were available to the explorers, the explorers persisted longer. However, when spouses exhibited interfering behavior, the explorers persisted less. All three secure base variables (encouragement as well as availability and interference) were significantly related to explorers' persistence in the correlational analyses (see Table 3).

Enthusiasm: Spouse interference and encouragement emerged as significant predictors of expressed enthusiasm during the exploration activity. When spouses were encouraging of exploration, the explorers expressed greater enthusiasm during the activity. However, when spouses exhibited interfering behavior, the explorers expressed less enthusiasm. Spouse availability was not a significant predictor of explorer enthusiasm (see Table 3).

Explorer Behavior toward the Spouse during Exploration

Concern about Spouse Watching: Results indicated that when spouses were interfering during the activity, explorers expressed greater concern about their spouses watching as they engaged in the exploration activity (see Table 4). Neither spouse availability nor encouragement was a significant predictor of explorers' expressed concern about the spouse watching.

Seeking of Task Assistance: In the regression analyses, only spouse interference emerged as a significant predictor of seeking task assistance during the exploration activity. When spouses were interfering during exploration, the explorers sought greater task assistance from them. All three secure base variables (interference as well as availability and encouragement) were significantly and positively related to explorers' seeking of task assistance in the correlational analyses (see Table 4).

Seeking of Encouragement/Emotional Support: It was spouse encouragement that significantly predicted the explorers' seeking of encouragement/emotional support (see Table 4). Spouse availability and interference were not significant predictors of this behavior.

Affectivity toward Spouse: Spouse interference was strongly predictive of explorers' negativity/hostility toward the spouse during the activity, whereas spouse encouragement was strongly predictive of explorers' positive affect toward the spouse (see Table 4). There was also a non-significant trend ($p < .10$) for spouse availability to predict less negativity/hostility toward the spouse. The correlational analyses revealed an additional negative association between spouse encouragement and negativity/hostility toward the spouse that did not emerge in the regression analyses. Spouse availability and interference did not predict explorer positivity toward the spouse (see Table 4).

Explorer Response to Spouse's Task Assistance during Exploration

Receptiveness to Task Assistance: As shown in Table 5, spouse interference was positively associated with explorers' receptiveness to both solicited and unsolicited task assistance. Spouse availability also emerged as a significant predictor of explorers' receptiveness to solicited task assistance. Spouse encouragement was not a significant predictor of explorers' receptiveness to task assistance, and a link between availability and receptiveness to unsolicited task assistance emerged only in the correlational (and not in the simultaneous regression) analyses.

Rejection of Task Assistance: Interestingly, spouse interference was also a strongly significant predictor of explorers' rejection of both solicited and unsolicited task assistance (see Table 5). Spouse encouragement was unrelated to explorers' rejection of solicited and unsolicited task assistance, and a link between spouse availability and explorers' rejection of task assistance emerged only in the correlational (and not in the regression) analyses.

Immediate Outcomes of Exploration

Changes in Mood: Standard procedures outlined by Cohen and Cohen (1983) were used to test the hypothesis that spouses' secure base behaviors (availability, interference, encouragement) would predict changes in explorers' mood (positive, concerned, frustrated mood) from before to after the exploration activity. A series of hierarchical multiple regression analyses were conducted predicting post-activity assessments of the explorers' mood from the spouses' secure base variables, controlling for pre-activity assessments of explorers' mood. Thus, on the first step of each equation, the pre-activity assessment of explorers' mood was entered as a control variable in the prediction of post-activity mood, and then each secure base variable was entered on Step 2. The pre-activity mood assessment was expected to predict a substantial portion of variance in the post-activity mood assessment. However, it was expected that additional variance in the post-activity mood assessment would not be accounted for by the pre-activity assessment. It was expected that the spouses' secure base behaviors would predict this additional variance representing the change in explorers' mood from before to after the exploration activity.

As shown in Table 6, explorers' pre-activity positive mood was a strong predictor of their post-activity positive mood. However, consistent with hypotheses, spouses' encouraging behavior predicted changes in explorers' positive mood from before to after the activity. Specifically, when their spouses had been encouraging during the exploration activity, explorers reported their mood to be more positive after the activity than before the activity. Neither spouse availability nor spouse interference predicted changes in positive mood.

Results also indicated that both spouse availability and spouse encouragement predicted changes in explorers' concerned mood from before to after the exploration activity (Table 6). Explorers whose spouses exhibited availability and encouragement during the activity reported less concern/anxiety after the activity than they had reported beforehand. However, spouse interference did not predict changes in concerned mood.

Finally, spouses' encouraging behavior predicted decreases in explorers' frustrated mood from before to after the activity (Table 6). Specifically, when their spouses had been encouraging during the exploration activity, explorers reported less frustration after the activity than they did before the activity. Neither spouse availability nor spouse interference predicted changes in frustration.

Changes in State Self-Esteem: Next, we tested the hypothesis that spouses' secure base behaviors (availability, interference, encouragement) would predict changes in explorers' state

self-esteem from before to after the exploration activity. A series of hierarchical multiple regression analyses were conducted predicting post-activity assessments of the explorers' state self-esteem from the spouses' secure base variables, controlling for pre-activity assessments of explorers' state self-esteem. As shown in Table 7, explorers' pre-activity self-esteem was a strong predictor of their post-activity self-esteem. However, consistent with hypotheses, spouses' interfering behavior predicted decreases in the explorers' self-esteem from before to after the activity, and spouses' encouraging behavior predicted increases in explorers' self-esteem from before to after the activity. Spouse availability did not predict changes in self-esteem.

Explorer's Perceptions of Exploration Activity: Next, we tested the hypothesis that spouses' secure base behavior during the exploration activity would predict the explorers' perceptions of the activity (as reported afterwards). As shown in Table 8, when spouses exhibited greater encouragement during the exploration activity, the explorers later reported greater enjoyment of the activity, feeling more knowledgeable/smart, and views that the spouse was more helpful/supportive and less negative/unsupportive during the activity. Interestingly, when spouses were interfering during the activity, explorers later reported views that the spouse was *both* helpful/supportive *and* negative/unsupportive during the activity. There were two significant correlations that did not emerge as significant in the regression analyses: Spouse interference was associated with explorers' reports of feeling less knowledgeable/smart after the activity, and spouse availability was associated with explorers' reports that the spouse was helpful/supportive during the activity. Spouse availability was not a significant predictor of explorers' reports of enjoyment of the activity, of feeling knowledgeable/smart, or of the spouse as being negative/unsupportive.

Individual Differences in Secure Base Characteristics

Next, we tested hypotheses regarding individual differences in the provision and receipt of secure base support. Given that the individual difference variables assessed are well-validated measures of adults' *general* attachment orientation, we sought to achieve a similar level of validity with regard to spouses' *general* secure base characteristics. Thus, to adequately assess spouses' general secure base qualities, we reasoned that it would be important to include both explorer and partner reports of the spouses typical secure base characteristics, as well as the behavioral assessments we obtained during the laboratory exploration activity. We accomplished this by creating three latent variables representing each of the three characteristics relevant to secure base support provision: availability, interference, and encouragement. Each latent variable included three indicators: the explorers' reports of their spouses' typical behavior (assessed using the Secure Base Characteristics Scale), the spouses' reports of their own behavior (also assessed using the SBCS), and observers' assessments of the spouses' behavior during the exploration activity. Our goal in taking this approach was to provide the most valid and reliable measurement of spouse availability, spouse interference, and spouse encouragement by taking into account three indicators of each construct and extracting variance that was shared by the indicators.

First, we used structural equation modeling to predict the latent variable representing spouse availability from the spouses' anxious and avoidant attachment scores, and from the explorers' anxious and avoidant attachment scores.[1] We tested the model using AMOS software (Arbuckle, 2007) and maximum likelihood estimation. As shown in Figure 1, results indicated that spouses' avoidant attachment predicted less availability to their partners. In addition, explorers' avoidant attachment and explorers' attachment anxiety predicted the receipt of less

[1]For analyses involving structural equation modeling, sample size was reduced to 136 because cases for which there was missing data on any variable were excluded.

availability from their spouses. Thus, results indicate that more avoidant spouses are less available to their partners during exploration, and both more avoidant and more anxious explorers experience less availability from their spouses during exploration. Spouses' attachment anxiety was not a significant predictor of spouse availability. An additional model was created to examine potential interactions between spouses' avoidance and anxiety, and between explorers' avoidance and anxiety, in predicting availability. No significant interaction effects emerged.

Second, we created a structural equation model to predict the latent variable representing spouse interference from the spouses' attachment anxiety and avoidance, and from the explorers' attachment anxiety and avoidance. As shown in Figure 2, results indicated that spouses' attachment anxiety was strongly predictive of spouses' interference with partners' exploration. Specifically, greater attachment anxiety was associated with greater interference. However, neither the spouses' avoidant attachment, nor the explorers' avoidant or anxious attachment, was a significant predictor of spouse interference. An additional model was created to examine potential interactions between spouses' avoidance and anxiety, and between explorers' avoidance and anxiety, in predicting interference. No significant interaction effects emerged.

Finally, we created a structural equation model to predict the latent variable representing spouse encouragement from the spouses' attachment anxiety and avoidance, and from the explorers' attachment anxiety and avoidance. As shown in Figure 3, results indicated that spouses higher in attachment anxiety were less encouraging of their partners' exploration, and spouses higher in avoidant attachment received less encouragement from their spouses. However, neither the spouses' avoidant attachment nor the explorers' attachment anxiety was a significant predictor of spouse encouragement of exploration.

An additional model was created to examine potential interactions between spouses' avoidance and anxiety, and between explorers' avoidance and anxiety, in predicting encouragement. Results revealed an interaction between spouse avoidance and spouse anxiety in predicting spouse encouragement of exploration ($\beta = -.21$, b = -.09, $t(134) = -1.82$, $p = .06$). As depicted in Figure 4, follow-up tests revealed a strong negative association between attachment anxiety and encouragement of exploration for spouses high in avoidance (simple $\beta = -.39$, $b = .-.16$, $t(134) = -2.70$, $p < .01$); however, no significant association emerged between attachment anxiety and encouragement of exploration for spouses low in avoidance (simple $\beta = -.04$, $b = -.02$, $t(134) = -.36$, *ns*). Thus, it appears to be spouses who are high in anxiety and high in avoidance (fearful avoidant spouses, to use Bartholomew & Horowitz's, 1991, label) who are least encouraging of exploration.

Discussion

> Because of you, I never stray too far from the sidewalk
>
> Because of you, I learned to play on the safe side so I don't get hurt
>
> Because of you, I find it hard to trust not only me but everyone around me
>
> Because of you, I am afraid (song lyrics by Clarkson, Hodges, & Moody, released 2005)

This study advances theory and research regarding relationship influences on exploration in adulthood. It centers on the idea that close relationship partners exert powerful influences on the exploration behavior of their loved ones: These influences may be positive, as portrayed in the song *Wind Beneath My Wings*, or they may be negative, as depicted in the lyrics of *Because of You*. Given the potential importance of these relationship dynamics for healthy

personal and relationship functioning, it is surprising that very little research has been conducted on this topic. Our goal was to begin to fill this gap in the literature by (a) identifying important characteristics of a secure base, (b) examining the influence of the presence or absence of these characteristics on exploration behavior in adulthood, and (c) identifying individual difference factors that are predictive of the provision and receipt of this important type of social support.

Characteristics of a Secure Base

We advanced theory by identifying three important characteristics of a secure base: First, we proposed that a secure base supports exploration by *being available in the event that the base is needed* (e.g., to assist in removing obstacles, to be waiting if a retreat becomes necessary, to be sensitive/responsive to distress cues, to be accepting of dependence when needed). Second, we proposed that a secure base supports exploration by *not unnecessarily interfering with exploration*. And third, we proposed that a secure base supports exploration by being *encouraging and accepting of exploration*. We then considered the ways in which these three characteristics of secure base support predict exploration behavior in adulthood. We proposed that all three characteristics are necessary for optimal exploration behavior, but that the three components may predict different aspects of exploration behavior. Below we summarize and discuss results for each component of secure base support.

Secure Base Behaviors Predicting Exploration Behaviors

Availability—Results of regression analyses indicated that when spouses were available to their partners during an exploration activity, the partners persisted longer at the activity, were more receptive to task assistance they requested from their spouses, and experienced decreases in concerned/anxious mood from before to after the activity. These results are consistent with predictions regarding the availability component of secure base support, and with prior research on the dependency paradox, which states that the ability to depend on a close relationship partner when needed allows one to function most optimally and autonomously (Feeney, 2007). Again, the logic behind this idea is that it is much easier for people to accept challenges, explore, try new things, and take risks when they know someone is available for comfort and assistance if things go wrong. Thus, it makes good sense that persistence at exploration, receptiveness to solicited task assistance, and decreases in concerned/anxious mood would be the aspects of exploration most strongly associated with the availability component of secure base support.

Contrary to expectations, spouse availability was not predictive of explorers' performance, confidence, enthusiasm, behavior toward the spouse, or changes in self-esteem in the regression analyses. In fact, none of the secure base behaviors were predictive of explorers' expressed self-confidence during their exploration. This may reflect the difficulty of observing “self-confidence” and the possibility that we did not adequately capture it in our coding system. Also, in retrospect, spouse availability may not be the component of secure base support that should be most predictive of enthusiasm or changes in self-esteem. It makes sense that enthusiasm would be more strongly predicted by spouse encouragement because availability serves a protective function, whereas encouragement serves a “pumping up” function. Similarly, it makes sense that self-esteem would be better predicted by support behaviors that serve a motivational or pumping up function (encouragement) or by behaviors that communicate negative messages to the recipient (interference) than behaviors that are protective (availability).

Interference—Results of regression analyses indicated that when spouses were interfering during an exploration activity, their partners performed more poorly, persisted less at the activity, expressed less enthusiasm for the activity, and expressed greater negativity/hostility

toward the spouse. In addition, explorers with interfering spouses expressed greater concern about the spouse watching their exploration yet they sought greater task assistance from the spouse, they were receptive to both solicited and unsolicited task assistance, and they were simultaneously rejecting of both solicited and unsolicited task assistance. Explorers whose spouses were interfering also experienced decreases in self-esteem from before to after the exploration activity, and they reported (after the exploration activity) perceptions of their spouses as being *both* helpful/supportive *and* negative/unsupportive.

These results are consistent with the theoretical proposition that intrusive, interfering behavior is a major inhibitor of exploration (Bowlby, 1988), and with many of our specific predictions regarding the effects of interfering behavior during exploration. These results indicating detrimental effects of interference in adult relationships are also consistent with prior research indicating detrimental effects of parental interference in children's exploratory activities (e.g., Ainsworth, Bell, & Stayton, 1974; Cassidy & Berlin, 1994; Egeland & Farber, 1984; Main, 1983; Matas, Arend, & Sroufe, 1978). It is interesting that interfering behavior (in which spouses were assisting with or taking over the task) resulted in worse performance instead of better performance on the exploration activity. Thus, although some spouses may think they are being helpful when interfering, they are actually hindering successful performance. This may be because of the negative implicit messages that are conveyed along with interfering behavior. For example, interfering behavior may communicate to the recipient that he or she lacks the competence and ability to perform well, or that exploration is futile because it is consistently interrupted. Such messages may undermine performance by leading explorers to minimize the effort and persistence that they put into exploration activities. Interfering behavior is also likely to undermine performance simply because it reduces one's ability to concentrate at a task and to take initiative in one's own exploration. An important next step in this line of research will be to uncover the mechanisms that underlie the link between interfering behavior and decrements in performance.

It is especially fascinating to note the ambivalent behavioral pattern of explorers with interfering partners: (a) Despite the fact that their spouses were interfering and the fact that they were concerned about their spouses watching their exploration, explorers sought task assistance from their interfering partners. (b) These explorers were receptive to *both* solicited and unsolicited task assistance, and they were simultaneously rejecting of *both* solicited and unsolicited task assistance. (c) After the exploration activity, these explorers reported perceptions of their spouses as being *both* helpful/supportive *and* negative/unsupportive. We suspect this ambivalence arises for the following reason: On the one hand, individuals with interfering spouses may believe that they are incapable of successful independent exploration. The self-doubts created by a history of spouse interference may lead explorers to solicit and become receptive to any type of task assistance and to perceive their spouses' assistance as supportive. On the other hand, because the negative messages conveyed by spouse interference are likely to feel demeaning, and because interference generally impedes one's own goals, it makes sense that explorers would simultaneously show evidence of rejecting both solicited and unsolicited task assistance, express negativity/hostility toward their spouses, and perceive their spouses as being unsupportive. Evidence that interfering behavior feels demeaning to recipients is indicated in the decreases in self-esteem that explorers experienced from before to after the exploration activity as a function of their spouses' interference. This is corroborated by other recent research showing that experimentally manipulated intrusive, interfering partner behavior leads to decrements in self-esteem (Feeney, 2004).

Contrary to expectations, spouse interference was not predictive of explorers' expressed self-confidence during the activity, their changes in mood from before to after the activity, or their post-activity reports of enjoyment of exploration. We were particularly surprised that spouse interference did not predict increases in frustrated mood from before to after the activity. In

retrospect, we suspect that the null results for changes in mood may reflect either (a) the ambivalence that seems characteristic of explorers with interfering spouses; that is, these individuals may have experienced a mixture of positive and negative emotions that may obscure any potential mood effects, or (b) that people with interfering spouses experienced elevated levels of negative mood both before and after the activity such that there were no changes in negative mood to capture in our analyses.

Encouragement—Results of regression analyses indicated that when spouses exhibited encouragement during an exploration activity, their partners performed better, expressed greater enthusiasm during their exploration, expressed greater positive affect toward their spouses, and sought more encouragement/emotional support. In addition, explorers with encouraging spouses experienced increases in positive mood, decreases in concerned/anxious mood, decreases in frustrated/discouraged mood, and increases in state self-esteem from before to after the exploration activity. After their exploration activity, explorers whose spouses were encouraging reported greater enjoyment of the activity, they reported feeling more knowledgeable/smart, and they reported perceptions of their spouses as being more helpful/supportive and less negative/unsupportive.

These results are consistent with the theoretical prediction that a relationship partner who is encouraging of exploration will (a) positively motivate his or her loved one to take on challenges, pursue goals, and grow as an individual by learning and discovering, and (b) increase the pleasure a loved one is able to take in exploration activities because it conveys an excitement and enthusiasm regarding exploration, as well as confidence in the loved one's abilities. It is particularly noteworthy that spouse encouragement was the component of secure base support that was most strongly predictive of changes in all three measured aspects of explorers' mood (positive mood, concerned mood, frustrated mood) from before to after the activity. With the exception of availability predicting changes in concerned mood, no other component of secure base support predicted changes in mood. This suggests that encouragement serves an important emotional, and hence motivating, function that availability and non-intrusiveness does not serve. This influence on motivation also can be seen in explorers' greater expressed enthusiasm during exploration, their better performance, and their subsequent reports of greater enjoyment of the exploration activity.

It is also noteworthy that encouragement was the component of secure base support that was predictive of *all* of the post-activity perceptions reported by the explorers (perceptions that the exploration activity was enjoyable, that oneself is knowledgeable/smart, that the spouse was helpful/supportive and not negative/unsupportive). Again, this seems to indicate that spouse encouragement plays an important role in setting the tone for a partner's exploration and in influencing the partner's feelings about exploration in a way that the other components of secure base support do not. As indicated by the imperfect correlation between availability and encouragement [$r(167) = .42$, $p < .001$], a spouse may be available to a loved one without also being encouraging of the loved one's exploration. Consistent with this idea, the results of this investigation reveal that the encouragement component of secure base support predicts aspects of exploration behavior that are not as well predicted by the other components. In fact, although not assessed in the current investigation, spouse encouragement during a current exploration activity is expected to be a strong predictor of the recipient's likelihood of engaging in future exploration activities (in the presence or absence of one's partner). Because no prior study (to our knowledge) has examined the influence of encouragement on exploration behavior in adulthood, many such questions await future investigation. Longitudinal methods will be particularly useful in this regard.

Also of interest is the combination of results indicating that when their spouse was encouraging, explorers sought more encouragement/emotional support, expressed greater positive affect

toward the spouse, *and* performed better at the exploratory activity. Thus, it seems that explorers with encouraging spouses are able to solicit support effectively and that their spouses are effective at providing support – such that the interaction between explorer and spouse contributes to both happy exploration and better performance. This is in contrast to the combination of support-seeking and support-giving behaviors that contribute to the poorer performance of explorers with interfering spouses. An important next step in this line of research will be to examine sequential patterns of interaction behavior between couple members to more precisely determine how some interactions are going well (and resulting in better performance and higher self-esteem) and how others are going awry (and resulting in poorer performance and lower self-esteem). With the exception of the lack of effects for explorers' expressed confidence, receptiveness to solicited task assistance, and rejection of unsolicited task assistance, our predictions regarding the influence of spouse encouragement on exploration were largely supported.

Individual Differences in Secure Base Provision and Receipt

We also identified individual-difference factors that predict the provision and receipt of secure base support. We focused on attachment orientation because attachment theory provides an ideal framework from which to consider individual differences in secure base provision and receipt, in addition to providing a framework for considering the characteristics of a secure base.

Attachment predicting secure base provision—Results indicated that spouses' avoidant attachment was predictive of less availability to partners, and spouses' attachment anxiety was predictive of greater interference in, and less encouragement of, partners' explorations. An interaction between spouse anxiety and avoidance indicated that it is the spouses who are high in both avoidance and anxiety (fearful avoidant spouses) who were least encouraging of exploration. These results are consistent with predictions and with other established characteristics of avoidant and anxious attachment. Specifically, avoidant spouses' lack of availability during exploration is consistent with research showing that these individuals are unresponsive caregivers when their partners are distressed (e.g., Feeney & Collins, 2001; Kunce & Shaver, 1994; Simpson et al., 1992). This finding is also consistent with theoretical propositions regarding avoidant individuals' discomfort with intimacy and learning from experiences with a lack of availability of others (e.g., Hazan & Shaver, 1987; Kobak & Sceery, 1988; Shaver & Mikulincer, 2007). Contrary to expectations, spouse avoidance was not predictive of the non-interfering component of secure base support.

Anxious spouses' interference and lack of encouragement for exploration are consistent with empirical work indicating that these individuals tend to be compulsive over-caregivers when their partners are distressed, and that they tend to provide support that is out of sync with their partners' needs (e.g., Collins & Feeney, 2000; Feeney & Collins, 2001; Kunce & Shaver, 1994). These findings are also consistent with theoretical propositions regarding anxious individuals' concerns about being rejected, their views of the self as being unacceptable, and their views of others as being available only occasionally or contingently (e.g., Hazan & Shaver, 1987; Kobak & Sceery, 1988; Shaver & Mikulincer, 2007). Interference in, and discouragement of, exploration may be strategies used by anxious individuals to keep their partners close and to minimize the possibility of abandonment. Even the null results for attachment anxiety predicting availability make sense in light of the conflicted behavioral patterns characteristic of anxious individuals, which are thought to arise because such individuals want to engage in situationally appropriate intimacy-related behaviors, but their efforts are sometimes counterbalanced by insecurities related to fear of rejection (Feeney & Collins, 2004). Results indicating that fearful avoidant individuals (those high in both avoidance and anxiety) were least encouraging of exploration are consistent with prior research

indicating that such people also tend to be the poorest caregivers when their partners are distressed (e.g., Kunce & Shaver, 1994).

Attachment predicting secure base receipt—Finally, results indicated that the attachment characteristics of the explorers predicted their receipt of secure base support. Insecure explorers (those higher in either attachment anxiety or avoidance) had spouses who were less available to them. In addition, explorers who were higher in avoidance had partners who were less encouraging of their explorations. Contrary to expectations, neither attachment dimension was predictive of the receipt of interference from spouses, nor was explorer anxiety predictive of the receipt of encouragement from spouses.

The findings that insecure explorer attachment predicted less spouse availability were consistent with theory and predictions. Although both attachment dimensions predicted a lack of availability, they most likely did so for different reasons. We suspect that anxious individuals' desire for extreme closeness (and perhaps over-dependence on relationship partners) may be taxing on their partners, resulting in less partner availability during exploration. Because anxious individuals explore for interpersonal reasons, fear rejection for poor performance, and have a tendency to slack off following praise (Hazan & Shaver, 1990), their spouses may come to view attempts to support their exploration as futile.

However, we suspect that it is avoidant individuals' preference for independence and emotional distance that causes them to receive less availability, as well as less encouragement, from their spouses. Avoidant individuals are likely to receive less availability from their spouses because they communicate (directly or indirectly) a lack of need or desire for it. In addition, they are likely to receive less encouragement either because they do not need encouragement to explore, or because their spouses perceive them as being too distant/independent and would prefer that they engage in less exploration. In fact, avoidant individuals admit that they use exploration activities such as work to avoid social interaction (Hazan & Shaver, 1990). For both types of insecure individuals, a lack of availability from others confirms their beliefs about how relationship partners are expected to behave; thus, self-fulfilling prophecy is likely to play a role in perpetuating these expectations. An important direction for future research will be to establish the precise mechanisms that underlie the link between explorers' attachment characteristics and the quality of secure base support they receive.

Conclusions

The emphasis of this investigation on the ways in which relationships may enhance exploration and personal functioning fits well with recent research emphasizing positive aspects of spousal interactions (e.g., Drigotas, Rusbult, Wieselquist, & Whitton, 1999; Gable, Gonzaga, & Strachman; 2006; Gable, Reis, Impett, & Asher; 2004). Our hope is that this work will contribute to extending the focus of the marital literature beyond a predominant focus on conflict and support in times of stress, to an equal consideration of the positive psychological aspects of relationships. Such research is important in bringing the field closer to representing the rich complexity of couples' daily lives.

There are a number of noteworthy strengths of this investigation. A first strength is that we considered the interaction behaviors of marriage partners as they unfolded during an actual exploration activity. The observation of couple member behaviors surrounding an exploration activity (in which one couple member is presented with an opportunity to explore and the other is presented with an opportunity to support exploration) offers a valuable contribution to the sparse literature regarding relationship influences on exploration in adulthood. To our knowledge, similar observational methods have not yet been applied to the study of exploration within the context of adult relationships. A related limitation, however, is that given the correlational nature of the investigation, we can make no claims regarding causality or

regarding the order in which behaviors appeared during the interactions. Important next steps in this research program will be to establish causal links by experimentally manipulating the components of secure base support and observing effects on exploration, and to identify sequences of behaviors within interactions that ultimately facilitate or impede exploration.

A second strength of this investigation was the assessment of a variety of exploration behaviors. The exclusion of any one of the specific behaviors we considered (e.g., performance, persistence, expressed enthusiasm, seeking of task assistance) would have provided a less complete picture of the links between the components of secure base support and exploration behavior. An important direction for future research will be to establish the mechanisms that underlie the predicted and observed effects. In this paper, we have laid out the theoretical reasons for why the links between secure base behavior and exploration should be there (e.g., reasons for why interference might impede exploration, whereas availability and encouragement facilitate exploration). A next important step will be to establish these reasons empirically.

A third and related strength of this work is that we obtained three assessments of each component of secure base support (explorers' reports of their spouses' characteristics, spouses' reports of their own characteristics, and observers' reports of the spouses' characteristics) and formed latent variables using all three indicators when testing individual difference hypotheses. Obtaining multiple measures of these constructs increases the confidence we can place in the assessment of the characteristics we intended to measure. It is important to note, however, that this investigation focused the spotlight on specific individual-difference variables (attachment anxiety and avoidance) as predictors of the components of secure base support. The fact that the attachment variables did not account for all variance in secure base support provision may indicate a need for future work to identify and examine additional, perhaps more proximal, predictors (e.g., relationship quality and relationship-specific attachment). It is also important to note that this investigation focused on the links between the three proposed components of secure base support (availability, non-interference, encouragement) and exploration behavior (and immediate outcomes of exploration). However, the components of secure base support are likely to have even more far-reaching implications for the recipients' ability to grow, learn, discover, and make contributions to their community and the wider world, for the recipients' personal well-being, and for the couple members' relationship functioning and stability. These long-term consequences of secure base support await future investigation.

The ultimate strength of this work is that it contributes to the advancement of theory and research on an important topic that has received very little attention in the social psychological literature in general, and in the social support and relationships literatures in particular. This investigation provides important insight into the characteristics and the function of a secure base, and it provides valuable information regarding the ways in which close relationships may facilitate or impede exploration in adulthood. Although research examining this important type of social support has been lacking, and although many important pieces of the puzzle await our discovery, it is hoped that this investigation will provide a point of departure for future work in this area. We are just beginning to scratch the surface, and much exciting research lies ahead.

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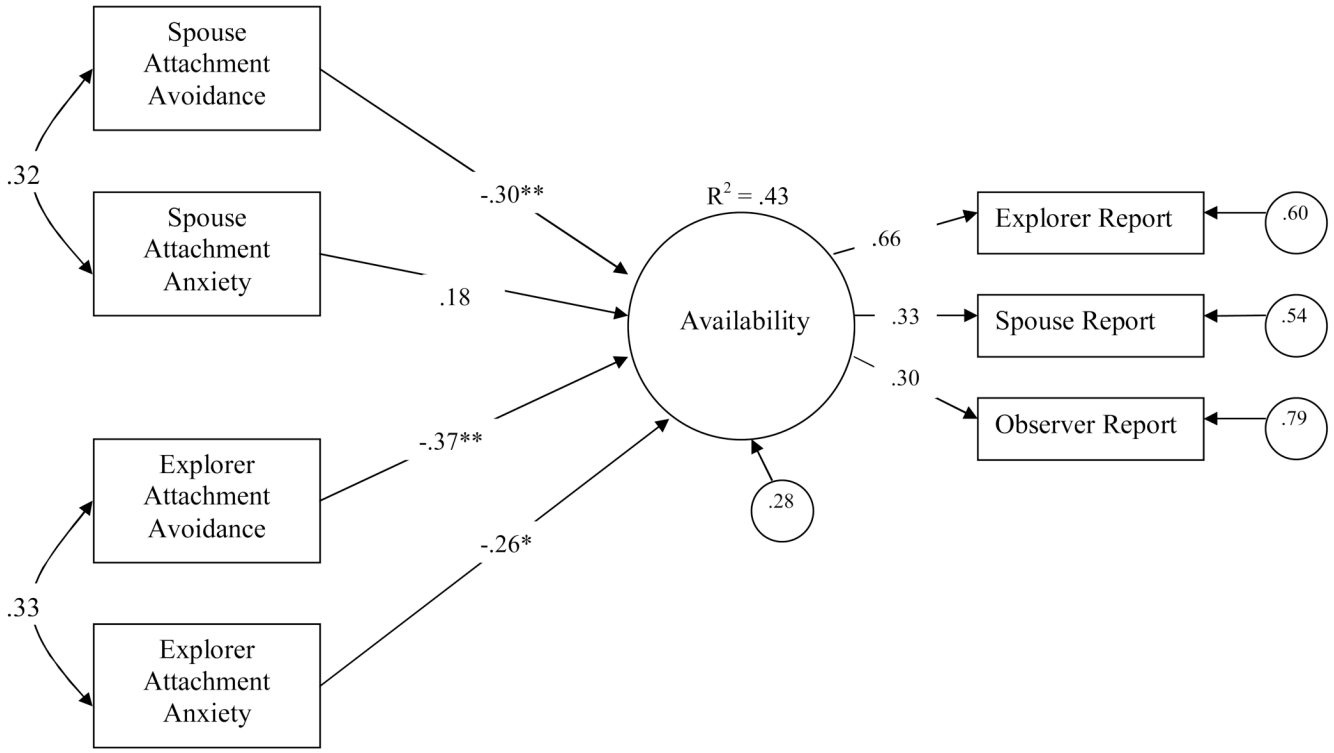

Figure 1.
Spouse and Explorer Attachment Predicting the Availability Component of Secure Base Support
Note. Fit statistics for the model: χ^2 (12, N = 136) = 23.35, p = .05, χ^2/df = 1.95, SRMR = .07, CFI = .86, RMSEA = .08. * p < .05 ** p < .01 *** p < .001

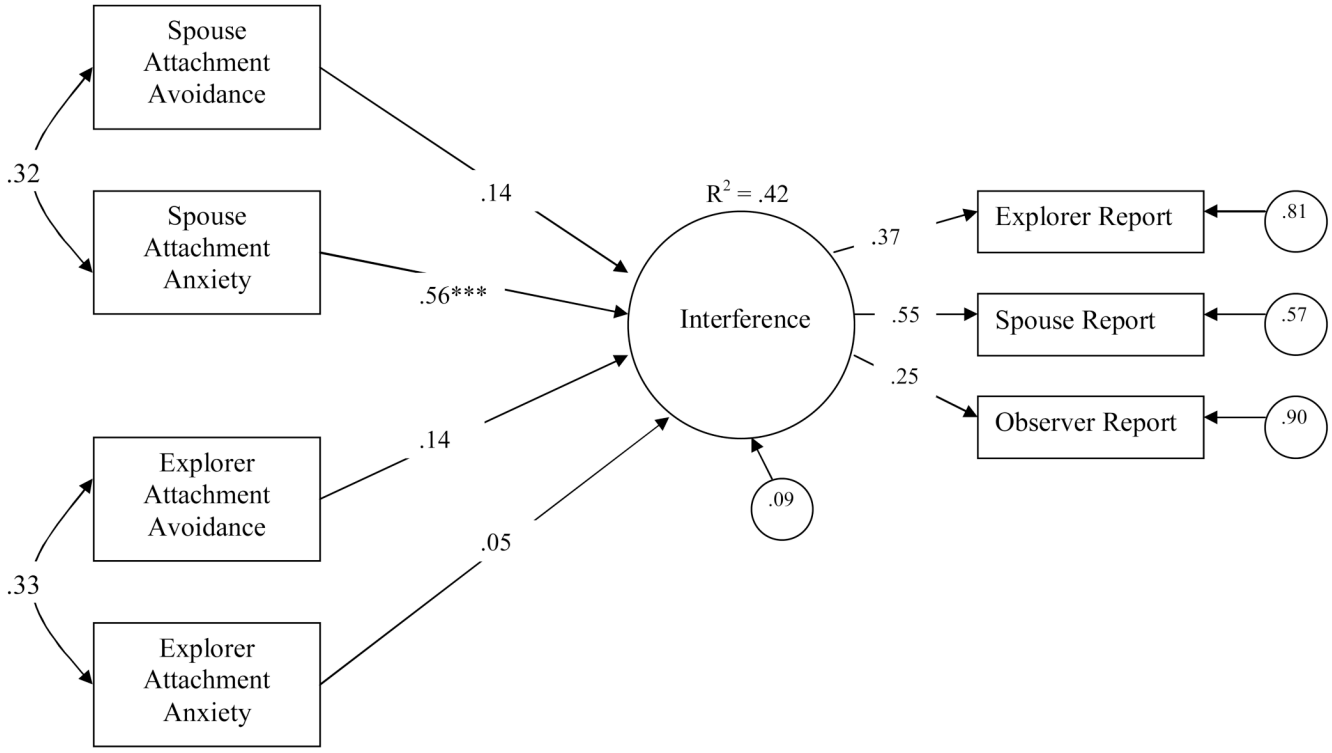

Figure 2.
Spouse and Explorer Attachment Predicting the Non-Interference Component of Secure Base Support
Note. Fit statistics for the model: χ^2 (12, N = 136) = 23.84, $p < .05$, χ^2/df = 1.99, SRMR = .09, CFI = .84, RMSEA = .09. * $p < .05$ ** $p < .01$ *** $p < .001$

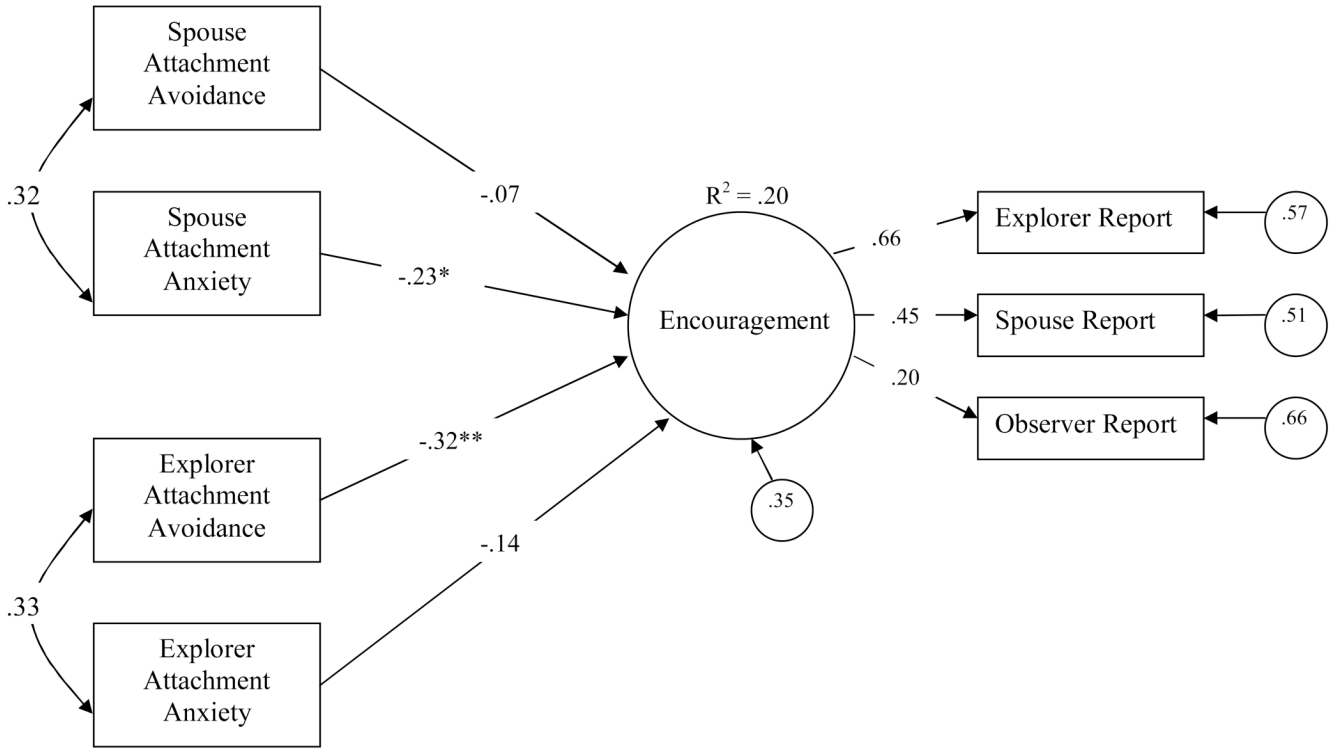

Figure 3.
Spouse and Explorer Attachment Predicting the Encouragement Component of Secure Base Support
Note. Fit statistics for the model: χ^2 (12, N = 136) = 12.98, $p < .37$, χ^2/df = 1.08, SRMR = .06, CFI = .98, RMSEA = .03. * $p < .05$ ** $p < .01$ *** $p < .001$

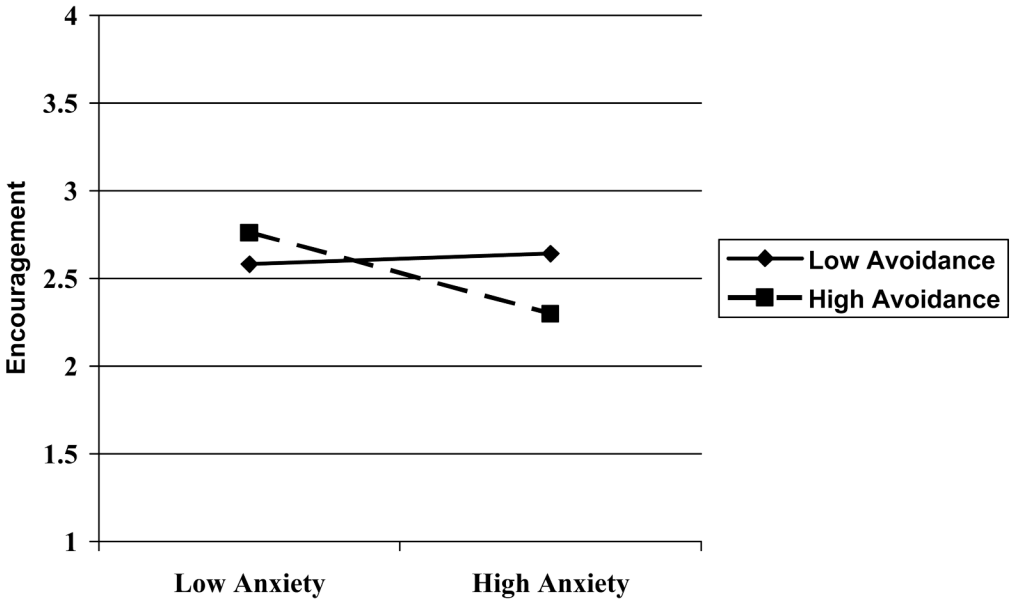

Figure 4.
Relations between spouse anxiety and spouse encouragement of exploration at low and high levels of spouse avoidance.

Table 1
Items for the Secure Base Characteristics Scale (SBCS)

Secure Base Characteristics Scale (SBCS)	
Availability	
1	My spouse does not generally count on me to be available to help out if he/she runs into trouble when pursuing personal goals. / I do not generally count on my spouse to be available to help out if I run into trouble when pursuing personal goals. (reverse coded)
2	My spouse is usually willing to take risks and try new things because he/she knows I'll be available to help and comfort him/her if things don't turn out well. / I am usually willing to take risks and try new things because I know my spouse will be available to help and comfort me if things don't turn out well.
3	I do not usually go out of my way to make myself available to my spouse when he/she is facing a challenging or difficult situation. / My spouse does not usually go out of his/her way to make him/herself available to me when I am facing a challenging or difficult situation. (reverse coded)
4	When my spouse is facing a challenging or difficult situation, I try to make myself available to him/her in case he/she needs me. / When I am facing a challenging or difficult situation, my spouse tries to make him/herself available to me in case I need him/her.
5	When my spouse is feeling stressed about a new or unknown situation, I find ways to let him/her know that I will be available to help him/her if he/she needs me. / When I am feeling stressed about a new or unknown situation, my spouse finds ways to let me know that he/she will be available to help me if I need him/her.
Intrusiveness	
1	I sometimes interfere with my spouse's activities when he/she is exploring a challenging activity or task. / My spouse sometimes interferes with my activities when I am exploring a challenging activity or task.
2	When my spouse is exploring a new activity (for example, working on a new and challenging task), I usually try to get involved and do it with or for him/her. / When I am exploring a new activity (for example, working on a new and challenging task), my spouse usually tries to get involved and do it with or for me.
3	I sometimes interfere with my spouse's ability to accomplish his/her personal goals. / My spouse sometimes interferes with my ability to accomplish my personal goals.
4	I'm usually very careful not to interfere in my spouse's activities when he/she is trying something new and challenging. / My spouse is usually very careful not to interfere in my activities when I am trying something new and challenging. (reverse coded)
5	When my spouse is working on something difficult or challenging, I sometimes try to take over and do it for him/her. / When I am working on something difficult or challenging, my spouse sometimes tries to take over and do it for me.
Encouragement	
1	When my spouse tells me about something new that he/she would like to try, I usually encourage him/her to do it. / When I tell my spouse about something new that I would like to try, he/she usually encourages me to do it.
2	I sometimes discourage my spouse from pursuing his/her personal goals and plans – especially if the things my spouse wants do not match my preferences and interests. / My spouse sometimes discourages me from pursuing my personal goals and plans – especially if the things I want do not match my spouse's preferences and interests. (reverse coded)
3	I usually encourage my spouse to accept challenges and try new things. / My spouse usually encourages me to accept challenges and try new things.
4	I encourage my spouse to do independent things that will help him/her grow as a person and develop new competencies. / My spouse encourages me to do independent things that will help me grow as a person and develop new competencies.
5	I usually encourage my spouse to do the things he/she needs to do to achieve his/her personal goals. / My spouse usually encourages me to do the things I need to do to achieve my personal goals.

Table 2

Intercorrelations Among Coded Explorer Variables

	Perform	Confidence	Persist	Enthus	Negative	Positive	Concern	Seek Assist	Seek Encour	Recept Solicit	Recept Unsolicit	Reject Solicit	Reject Unsolicit
Perform	-------												
Confidence	.13†	-------											
Persist	.43***	.09	-------										
Enthus	.34***	.16*	.30***	-------									
Negative	-.15†	-.08	-.24**	-.07	-------								
Positive	-.01	.12	.07	.40***	-.20**	-------							
Concern	.14†	-.21**	.07	.14†	.29***	-.07	-------						
Seek Assist	-.11	-.03	-.07	-.02	-.16*	.22**	-.02	-------					
Seek Encour	.19*	.15†	-.03	.02	-.17*	-.03	.05	.08	-------				
Recept Solicit	-.17*	-.08	-.21**	-.08	-.07	.21**	-.03	.47***	.07	-------			
Recept Unsolicit	-.09	-.05	-.06	-.01	.05	.22**	.02	-.04	-.07	.18*	-------		
Reject Solicit	-.14†	-.01	-.22**	-.06	.01	.22**	-.03	.42***	.02	.75***	.16*	-------	
Reject Unsolicit	-.04	-.05	-.05	.04	.51***	.05	.35***	-.13†	-.02	-.08	.44***	.02	-------

Note. $N = 167$.

$^{\dagger}p < .10$

$^{*}p < .05$

$^{**}p < .01$

$^{***}p < .001$

Table 3

Regression Analyses Predicting Observed Exploration Behavior from Spouse Secure Base Behavior

	B	β	SE	r	sr^2	Total R^2
Secure Base Variables		*Performance*				
Availability	.41	.15	.26	.17*	.01	.14***
Interference	-.50*	-.21*	.21	-.21**	.03	
Encouragement	.73*	.21*	.31	.32***	.03	
		Expressed Confidence in Self				
Availability	.01	.01	.07	.00	.00	.00
Interference	.01	.01	.06	.03	.00	
Encouragement	-.04	-.05	.08	-.04	.00	
		Persistence				
Availability	.20**	.26**	.07	.23**	.04	.21***
Interference	-.29***	-.46***	.05	-.38***	.15	
Encouragement	.02	.02	.08	.24**	.00	
		Enthusiasm				
Availability	-.03	-.05	.06	-.01	.00	.06*
Interference	-.08*	-.17*	.04	-.17*	.03	
Encouragement	.13*	.19*	.07	.19*	.04	

Note. $N = 167$.

† $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$

Table 4

Regression Analyses Predicting Explorer Behavior toward Spouse from Spouse Secure Base Behavior

	B	β	SE	r	sr^2	Total R^2
Secure Base Variables	*Expressed Concern About Spouse Watching*					.03
Availability	.00	.00	.06	.07	.00	
Interference	.09*	.18*	.05	.18*	.03	
Encouragement	.01	.02	.07	-.03	.00	
	Seeking of Task Assistance					.06*
Availability	.02	.05	.05	.18*	.00	
Interference	.08*	.18*	.04	.16*	.03	
Encouragement	.12†	.18†	.06	.16*	.02	
	Seeking of Encouragement/Emotional Support					.06*
Availability	-.06	-.12	.05	.03	.01	
Interference	.03	.05	.04	-.05	.00	
Encouragement	.20**	.29**	.06	.23**	.06	
	Negativity/Hostility Toward Spouse					.16***
Availability	-.13†	-.16†	.08	-.02	.02	
Interference	.29***	.42***	.06	.37***	.12	
Encouragement	-.01	-.01	.09	-.17*	.00	
	Positive Affect Toward Spouse					.06*
Availability	-.03	-.03	.10	.12	.00	
Interference	.12	.13	.08	.06	.01	
Encouragement	.33**	.25**	.12	.21**	.04	

Note. $N = 167$.

† $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$

Table 5

Regression Analyses Predicting Explorers' Response to Assistance from Spouse Secure Base Behavior

	B	β	SE	r	sr^2	Total R^2
Secure Base Variables	*Receptiveness to Solicited Task Assistance*					$.15^{***}$
Availability	$.33^{*}$	$.19^{*}$	.16	$.32^{***}$	.02	
Interference	$.38^{**}$	$.26^{**}$	.12	$.30^{***}$	.05	
Encouragement	.18	.09	.19	.11	.01	
	Receptiveness to Unsolicited Task Assistance					$.13^{***}$
Availability	.20	.14	.14	$.26^{***}$	.01	
Interference	$.37^{***}$	$.30^{***}$	.11	$.33^{***}$	.06	
Encouragement	.10	.06	.16	.04	.00	
	Overt Rejection of Solicited Task Assistance					$.09^{**}$
Availability	.01	.01	.06	$.17^{*}$	.00	
Interference	$.15^{***}$	$.29^{***}$	.04	$.26^{***}$	.06	
Encouragement	.10	.14	.07	.07	.01	
	Overt Rejection of Unsolicited Task Assistance					$.17^{***}$
Availability	-.02	-.02	.11	$.15^{\dagger}$	.00	
Interference	$.43^{***}$	$.43^{***}$	.09	$.40^{***}$	.13	
Encouragement	.09	.06	.13	-.05	.00	

Note. $N = 167$.

$^{\dagger}p < .10$

$^{*}p < .05$

$^{**}p < .01$

$^{***}p < .001$

Table 6

Hierarchical Regression Analyses Predicting Changes in Explorers' Mood from Spouse Secure Base Support

	B	β	SE	r	sr^2	ΔR^2	Total R^2
Post-Activity Positive Mood							
Step 1						$.18^{***}$	$.18^{***}$
Pre-Activity Positive Mood	$.45^{***}$	$.43^{***}$	.08	$.43^{***}$	.18		
Step 2						$.06^{**}$	$.24^{***}$
Pre-Activity Positive Mood	$.43^{***}$	$.40^{***}$	.08	$.43^{***}$	.15		
Availability	-.06	-.07	.08	.08	.00		
Interference	-.01	-.01	.06	-.07	.00		
Encouragement	$.28^{**}$	$.25^{**}$	.10	$.29^{**}$	.05		
Post-Activity Concerned Mood							
Step 1						$.12^{***}$	$.12^{***}$
Pre-Activity Positive Mood	$.22^{***}$	$.35^{***}$	.05	$.35^{***}$	.12		
Step 2						$.06^{**}$	$.18^{***}$
Pre-Activity Positive Mood	$.21^{***}$	$.33^{***}$	.05	$.35^{***}$	.11		
Availability	$-.08^{*}$	$-.19^{*}$	.03	$-.21^{*}$	.04		
Interference	-.01	-.01	.03	-.02	.00		
Encouragement	$-.10^{*}$	$-.18^{*}$	.04	$-.23^{*}$	.03		
Post-Activity Frustrated Mood							
Step 1						$.11^{***}$	$.11^{***}$
Pre-Activity Positive Mood	$.42^{***}$	$.33^{***}$	.10	$.33^{***}$	.11		
Step 2						$.04^{*}$	$.15^{***}$
Pre-Activity Positive Mood	$.40^{***}$	$.31^{***}$	.10	$.33^{***}$	.09		
Availability	-.08	-.10	.06	-.14	.01		
Interference	.06	.09	.05	.08	.01		
Encouragement	$-.21^{**}$	$-.21^{**}$	.08	$-.25^{**}$	.04		

Note. $N = 167$.

† $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$

Table 7

Hierarchical Regression Analyses Predicting Changes in Explorers' Self-Esteem from Spouse Secure Base Support

	B	β	SE	r	sr^2	ΔR^2	Total R^2
Post-Activity State Self-Esteem							
Step 1						$.38^{***}$	$.38^{***}$
Pre-Activity State Self-Esteem	$.62^{***}$	$.62^{***}$	.06	$.62^{***}$	.38		
Step 2						$.04^{*}$	$.42^{***}$
Pre-Activity State Self-Esteem	$.63^{***}$	$.63^{***}$	.06	$.62^{***}$	.38		
Availability	-.06	-.05	.08	.04	.00		
Interference	$-.13^{*}$	$-.13^{*}$	.06	-.07	.02		
Encouragement	$.20^{*}$	$.13^{*}$	.09	$.22^{*}$	.02		

Note. $N = 167$.

$^{\dagger}p < .10$

$^{*}p < .05$

$^{**}p < .01$

$^{***}p < .001$

Table 8

Regression Analyses Predicting Explorers' Perceptions of the Exploration Activity from Spouse Secure Base Support

	B	β	SE	r	sr^2	Total R^2
Secure Base Variables	*Enjoyment of Exploration*					$.07^{**}$
Availability	.03	.02	.18	.09	.00	
Interference	-.11	-.07	.14	-.12	.00	
Encouragement	$.52^{**}$	$.23^{**}$	.21	$.26^{***}$	.04	
	Feel Knowledgeable/Smart					$.09^{***}$
Availability	-.21	-.12	.17	-.01	.01	
Interference	-.07	-.04	.13	$-.16^{*}$	.00	
Encouragement	$.68^{***}$	$.31^{***}$	.20	$.27^{***}$	.06	
	Helpful/Supportive Spouse					$.18^{***}$
Availability	$.29^{\dagger}$	$.15^{\dagger}$	.18	$.34^{***}$	.01	
Interference	$.44^{**}$	$.27^{**}$	.14	$.26^{***}$	.05	
Encouragement	$.58^{**}$	$.24^{**}$	.21	$.24^{***}$	.04	
	Negative/Unsupportive Spouse					$.11^{***}$
Availability	.05	.04	.12	.03	.00	
Interference	$.24^{*}$	$.22^{*}$	.09	$.29^{***}$	.04	
Encouragement	$-.31^{*}$	$-.20^{*}$	.14	$-.24^{***}$	.03	

Note. $N = 167$.

$^{\dagger}p < .10$

$^{*}p < .05$

$^{**}p < .01$

$^{***}p < .001$