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WASHINGTON UNIVERSITY IN ST. LOUIS
Department of Psychological & Brain Sciences

Attachment Orientations and Relationship Maintenance
in College Friendships
by
Samuel Chung

A thesis presented to
The Graduate School
of Washington University in
partial fulfillment of the
requirements for the degree
of Master of Arts

May 2018
St. Louis, Missouri

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Samuel Chung

Washington University in St. Louis

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ABSTRACT OF THE THESIS

Attachment Orientations and Relationship Maintenance

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Professor Michael Strube

Friendships are a ready source of social support and have been shown to be important to individuals' well-being, especially among young adults. Evidence suggests that the quality of students' friendships are associated with transition into college life. Students with high friendship quality report less anxiety and depression and also show better academic performance. This suggests that proper maintenance of friendships is important to function well and succeed in college. However, maintenance behaviors in friendships remain largely unexamined. The present thesis examines maintenance behaviors in friendships through an attachment theory perspective.

Chapter 1: Introduction

Among close relationships, friendships are often understudied and the literature on friendships lacks a coherent body of research. This may be in part due to the large variety of ways people view and treat friendships across individuals, cultures, and age (Blieszner & Adams, 1992). That is, an individual's friendship with one person often looks quite different from their relationship with another friend. On the one hand, friendships are similar to romantic relationships and the literature on romantic relationships can provide some guidance. In both types of relationships, closeness and trust are highly valued (Bukowski, Hoza, & Boivin, 1994) and people often refer to their partner as their "best friend" (Myers, 2000). However, friendships differ from romantic relationships as well, as friendships do not typically involve romantic or sexual feelings (Ackerman, Kenrick, & Schaller, 2007). The following study examines maintenance behaviors in friendships from an attachment perspective (Bowlby, 1969); and friendships are treated as a distinct type of close relationship characterized as highly voluntary and lacking romantic or sexual elements.

1.1 Friendship and Well-being

One of the defining characteristics of friendships is that they are voluntary. As such, the foundation of friendships rests on two qualities--liking and trust (Sias & Bartoo, 2007). Close friends share an affinity with each other (Hill & Stull, 1981), and their high trust for each other leads to high self-disclosure of thoughts and feelings (Davidson & Duberman, 1982). Further, self-disclosure becomes an important dynamic in friendship formation and maintenance (Altman & Taylor, 1973). These characteristics make friendships readily available sources of social

support, providing an environment that facilitates exchange of support and in turn increases well-being.

In their review, Albrecht and colleagues (1994) describe how social support and well-being are related. The quality of one's well-being is directly proportional to the level of social support one receives. By receiving ongoing and steady support, individuals are able to maintain balance and stability in their lives, enabling healthy self development (Sias & Bartoo, 2007). Social support can also influence well-being by acting as a buffer, or as a moderating link, between stress and health (Cohen & McKay, 1984; DeLongis, Folkman, & Lazarus, 1988). Friends often help each other deal with specific stressful events, providing helpful advice on how to resolve the issue as well as emotional support through empathy and sympathy (Sias & Bartoo, 2007; Hoybye, Johansen & Tjornhoj-Thomsen, 2005).

Social support can help to explain how friendships affect health and well-being, even influencing individuals' physical and biochemical reactions to stressors (Taylor et al., 2000). Individuals who feel a strong sense of personal support from their close friends tend to live longer, are healthier, and more optimistic when faced with adversity (Loucks, Berkman, Gruenewald, & Seeman, 2005; Ryff & Singer, 2000; Taylor et al., 2000). Further, there has been some evidence of benefits for the individual providing social support (Schroeder, Penner, Dovidio, & Piliavin, 1995).

Some gender differences in social support have been found in past research. Compared to men, women tend to be more attentive and supportive of their close friends (Oswald, Clark, & Kelly, 2004). Female adolescents tend to be more involved and intimate in their relationships and their self-esteem is more closely tied to having a close friend (Townsend, McCracken, & Wilton,

1988). Close friends are so important that the primary method to hurt their peers, as reported by adolescent girls, is social exclusion (Owens, Shute, & Slee, 2000). In college, women reported having more same-sex friends than men did, and also reported being closer to those friends (Nezlek, 1993; Wheeler, Reis, & Nezlek, 1983).

Further, women tend to be more agreeable, more empathetic, and more effective at non-verbal communication than men (Bank & Hansford, 2000; Klein & Hodges, 2001). Women tend to be more direct in showing appreciation for one another (Carli, 1989; Helgeson, Shaver, & Dyer, 1987) and are more likely to seek out support when stressed (Benenson & Koulmazarian, 2008; Tamres, Janicki, & Helgeson, 2002). However, while women tend to exchange emotional support more so than men, men may be more adept at providing instrumental support, lending information and expertise to help solve problems (Barbee et al., 1993).

Friendship has also been positively associated with happiness across cultures (Brannan, Biswas-Diener, Mohr, Mortazavi, & Stein, 2013; Cheng & Furnham, 2003; Demir and Weitekamp, 2007). Importantly, only a weak association between the number of friends and happiness has been found (Lucas & Dyrenfreth, 2006; Pinqart & Sörensen, 2000). Instead, the quality of friendship with an individual's closest friends was found to be the most important (Demir, Özdemir, & Weitekamp, 2007). Further evidence has suggested that friendship is an important predictor of happiness above and beyond other major correlates of happiness such as personality, especially among young adults (Demir, Orthel-Clark, Özdemir, & Özdemir, 2015; Demir & Weitekamp, 2007; Lu, 1999).

1.2 Friendship and College Transition

The transition into college can be a stressful experience for first-year students, and new students are more likely to report poorer social skills and adjustment problems than older students (Lapsley, Rice, & Shadid, 1989). First-year students also tend to be lonelier during their first term (Cutrona, 1982); but students report feeling less lonely when they had strong social support and satisfying friendships (Cutrona, 1982; Jones & Moore, 1987) and when they continued to maintain pre-college friendships (Oswald & Clark, 2003). First-year students who reported more social support and higher levels of friendship quality were also more likely to report lower levels of anxiety and depression (Mounts, Valentiner, Anderson, & Boswell, 2006; Pittman & Richmond, 2008), as well as less negative externalizing behaviors such as aggression and rule breaking (Pittman & Richmond, 2008). Further, first-year students who reported more social support and higher levels of friendship quality were also more likely to perform better academically (Ashwin, 2003; Dennis, Phinney, & Chuateco, 2005; Lapsley, Rice, & Fitzgerald, 1990). In sum, friendships appear to hold an important role in students' adjustment to college, and studies suggest effective maintenance of friendships is important to both psychological

1.3 Friendship Phases

Friendships are dynamic relationships as they develop between acquaintances through an increase in emotional closeness. Like other close relationships (e.g., romantic relationships), friendships can be observed in three general phases: initiation, maintenance, and dissolution.

In initiation, communication is the main means by which friendships form (Blieszner & Adams, 1992). As the frequency and breadth of interactions increases, friendships progress (Hays, 1984, 1985); conversation topics increase in variety as do individuals' responsiveness to and observations of the other person (Miell & Duck, 1986). Strong affective components are also

observed: growing friendships were rated increasingly higher in intimacy even when frequency of contact declined (Hays, 1984, 1985).

Further, numerous studies have observed positive effects of similarity in friendship formation. That is, friendships are more likely to form among more similar individuals. Similarities in personality (Blankenship, Hnat, Hess, & Brown, 1984; Duck & Craig, 1978), attitudes (Baker, 1983), and values (Lea & Duck 1982) have been found to be positively associated with friendships formation. However, similarity may become less important in later stages of the friendship whereas feeling understood becomes increasingly more important (Cahn, 1990).

Once established, friendships need to be nurtured and maintained. Individuals sustain their relationships around continued similarity as well as rewarding communication and interactions (Blieszner & Adams, 1992). Successful maintenance of friendships seems to vary according to emotional closeness in the relationship. Compared to less close friendships, emotionally closer friendships relied less on physical proximity to successfully maintain the relationship (Rose & Serfica, 1986) and more on frequency and variety of settings of interactions (Hays, 1989).

During maintenance, dissatisfaction and conflicts can occur in friendships. When asked to describe a recent event where a friend had said or done something to upset them, all 327 participants in the study were able to identify such an event (Healey & Bell, 1990). How people respond to conflict or handle dissatisfactory situations can determine the course of the friendship. Prior evidence has shown that individuals who experience conflict in their friendship and work to resolve it may feel closer with their friend afterward (Braiker & Kelly, 1979). However, it may

be difficult to have an accurate understanding of maintenance processes in friendships as, compared to romantic relationships, friendships may end more quickly due to the relative abundance of other opportunities for friendships.

Although a handful of studies have examined predictors of friendship stability (Bowker, 2004; Schneider, Fonzi, Tani, & Tomada, 1997), the data are inconclusive. For example, the association between friendship quality and friendship stability has been inconsistent across age groups, being positively associated in young children (Schneider et al., 1997), but unrelated in adolescents (Blachman & Hinshaw, 2002; Bowker, 2004). Further, while individuals commonly reported that disputes preceded the end of friendships (Bigelow & LaGuipa, 1975), no association was found between friendship conflict and friendship stability by Schneider and colleagues (1997).

Participants in past qualitative studies have reported numerous reasons for why their friendships ended. These include lack of social skills; inappropriate expressions of feelings or inability to express feelings; spending less time together due to a member entering a romantic relationship (Rose, 1984); and changes in their criteria of a friend as well as changes in their friend in ways they dislike (Hays, 1988; Rose, 1984). There has been less work investigating methods by which individuals terminate friendships; however, limited work has shown that compared to romantic relationships, dissolution in friendships tend to be less direct (Baxter, 1985). For example, participants reported that they gradually spent less time together rather than distinctively ending the friendship at a particular moment.

1.4 Relationship Maintenance Behaviors

One model used to investigate maintenance in relationships is Rusbult's accommodation typology (Rusbult, Zembrodt, & Gunn, 1982). In studying romantic relationships, Rusbult theorized that satisfying and positive relationships could be distinguished from dissatisfying relationships by examining how romantic partners responded to each other's negative behaviors in the relationship. Rusbult's model differentiates responses to a partner's negative behaviors into four categories: voice, loyalty, exit, and neglect. These categories are conceptualized along two dimensions: an active/passive dimension and a constructive/destructive dimension. Active behaviors describe behaviors that directly address the issue at hand and constructive behaviors describe behaviors that promote the well-being of the relationship, and optimistic towards the relationship's future. In contrast, passive behaviors describe behaviors that either indirectly address the issue or avoids it altogether; and destructive behaviors describe behaviors harmful to the relationship.

The first category, voice, describes behaviors in the relationship that are both active and constructive. Voice behaviors include seeking outside help, negotiating with one's partner, and changing one's own behavior. Second, loyalty describes passive and constructive behaviors such as hoping for conditions to improve and making benign attributions of one's partner. Third, exit describes behaviors in the relationship that are active and destructive. They include actions such as walking out during an interaction and physical and/or emotional abuse. Fourth, neglect describes behaviors that are passive and destructive. Neglect actions include ignoring or withdrawing from one's partner and refusing to address the problem.

An important distinction of constructive/destructive actions is that they refer to the actions' impacts on the relationship, not the effects on the individual. For example, an exit

behavior such as leaving the room in anger may seem constructive to the individual, but this is destructive to the future of the relationship.

Past work in the literature has shown that constructive responses positively predict relationship well-being; and both active and passive types of destructive responses negatively predict relationship well-being (Gottman, 1998; Rusbult, Verette, Whitney, Slovic, & Lipkus, 1991). However, passive-constructive responses may be more nuanced in a relationship. For example, Gable and colleagues (2004) found that passive-constructive responses to the partner's shared good news was associated with poorer perceived relationship quality.

Gable's (2006) approach-avoidance social motivation model is another theoretical perspective that provides guidance for investigating relationships maintenance behaviors. Gable proposed that two relatively independent motivations, approach goals and avoidance goals, could be used to understand various processes and outcomes in close relationships. Approach goals direct individuals towards potentially positive and rewarding outcomes such as intimacy and growth in close relationships. In contrast, avoidance goals direct individuals away from potentially negative outcomes in the relationship, such as conflict and rejection. For example, in a discussion about assigning chores, a roommate with a strong approach goal may be concerned with the discussion going smoothly and both roommates being happy with the outcome. In contrast, a roommate with a strong avoidance goal may be concerned with avoiding conflict and a situation where both individuals are unhappy with the outcome.

Past evidence suggests a link between approach goals with positive relationship outcomes, and avoidance goals with negative relationship outcomes (Elliot, Gable, & Mapes, 2006; Impett, Peplau, & Gable, 2005; Impett et al., 2010). For example, Elliot and colleagues

(2006) found that approach goals positively predicted satisfaction in friendships and the frequency of positive relational events while avoidance goals positively predicted loneliness and the frequency of negative relational events.

1.5 Person by Situation Interactions

An important concept in social psychology is person by situation interactions, i.e., how person variables and situation variables interact to predict how people think, feel, and behave (Kenrick & Funder, 1988; Shoda, Lee Tiernan, & Mischel, 2002; Snyder & Ickes, 1985). Persons and situations can interact in several different ways. For example, different people may respond in different ways to the same situation. Different individuals may attune to different parts of a situation, shaping their interpretations and the meaning they find in the situation, ultimately influencing how they respond.

Different situations may also prime different parts of a person. Situations prime knowledge, goals, and beliefs relevant to the situation, influencing people's interaction with their surroundings, even well past the context of the immediate situation (e.g., Higgins, 1996). Some goals and beliefs are activated only in certain situations. For example, a core assumption of attachment theory (Bowlby, 1969) is that threats, whether physical or psychological, will activate the attachment system, a motivational system involving the maintenance of close proximity with supportive others. Further research in this realm (Mikulincer, Gillath, & Shaver, 2002) has provided supportive evidence that threats involving close others activates the attachment system above and beyond more neutral threats.

Persons may also change the situation and vice versa. A situation such as a dinner with in-laws may be changed from an awkward dinner to a relaxing one by the persons involved in

their choice of venue; or the person's anxiety may be increased by the awkward dinner. Further, these types of interactions, if experienced repeatedly, can change individuals or affect them profoundly. For example, neglectful and/or inconsistent parenting can significantly affect how children develop attachment orientations (Bowlby, 1969), and continues to have impacts into adulthood (Fraley, 2002; Hazan & Shaver, 1987).

1.6 Attachment Theory

Initially conceptualized by Bowlby (1969), attachment theory refers to the strong emotional bond in close relationships that forms from the perceived quality of interactions in the relationship. These perceptions form internal working models (schemas) and develop into systematic patterns of thinking referred to as attachment orientations. Research has shown that attachment orientations impact multiple aspects in close relationships, including: self-disclosure, emotional expressiveness (Bartholomew & Horowitz, 1991), resilience when faced with distress (Mikulincer, Ein-Dor, Solomon, & Shaver, 2011), and are predictive of being in a well-functioning relationship (Holland, Fraley, & Roisman, 2012).

Attachment theory was first developed based on observations of interactions between infants and young children with their primary caregiver (usually the mother). Research by Ainsworth and others suggests that the mother's sensitivity and responsiveness to her child's needs shaped patterns of behavior in the child. Mothers who were consistent in their responding to her child's needs saw infants who would smile, cry less, and actively pursue closeness with their mother. Researchers also observed that in the presence of their mother, these children would explore their environment and interact with other people, using the mother as a secure base. In contrast, mothers who were slow or inconsistent in their responding saw infants who would cry more, explore their surroundings less, and seem generally anxious; and mothers who

consistently rejects or ignored saw infants who would avoid them. Through these observations, Ainsworth and colleagues (1978) outlined three styles or types of attachment: secure, anxious-ambivalent, and avoidant.

1.7 Adult Attachment

Although Bowlby focused primarily on the infant-caregiver relationship in his research, he firmly believed that attachment patterns persisted throughout the individual's life. Further, some researchers (Fraley et al., 2011; Overall, Fletcher, & Friesen, 2003; Sibley & Overall, 2008) have found that young adults held distinct attachment representations for different relationships (e.g., parents, romantic, friendships), suggesting the importance of investigating different types of relationships.

However, attachment in adulthood was largely ignored until Hazan and Shaver's (1987) work in romantic relationship. According to these researchers, the emotional bond between adult romantic partners develops in part due to the same behavioral system that promotes attachment between infant and caregiver. They argued that much like the infant-caregiver relationship, adult romantic relationships show similar attachment patterns, or orientations.

In adults, attachment orientations are assessed on two relatively independent dimensions: avoidance and anxiety (Brennan, Clark, & Shaver, 1998; Simpson, Rholes, & Phillips, 1996). Individuals who score high in attachment avoidance have low trust in others, strive to maximize distance and maintain autonomy in their relationships (Hazan & Shaver, 1994). Individuals who score high in attachment anxiety have moderate but inconsistent trust in others (Campbell, Simpson, Boldry, & Kashy, 2005), worry about the proximity, availability, and responsiveness of their partner, seeking to maximize closeness in their relationships. Individuals who score low in

both avoidance and anxiety are considered to be securely attached, and show high levels of trust in others and are comfortable with emotional closeness without seeking it excessively.

Attachment theory provides a framework to help explain individual differences in approaching and maintaining relationships with others. A considerable amount of research has shown that attachment orientations predict important differences in how people provide and receive social support (Collins & Feeney, 2000; Fraley & Shaver, 1998; Carnelley, Pietromonaco, & Jaffe, 1996) and what maintenance behaviors are observed in close relationships (Mikulincer & Shaver, 2007). For example, individuals high in attachment avoidance tend to prioritize independence and interpersonal distance, self-disclose less and are less likely to seek support or intimacy from others (Feeney, 2016). Individuals high in attachment anxiety tend to worry about being abandoned or rejected, and are motivated to increase intimacy with others (Feeney, 2016). Attachment avoidance and anxiety have both been linked to negative outcomes such as the tendency to view one's partner more negatively (e.g., Collins & Feeney, 2004) and more destructive relationship behaviors (e.g., Campbell et al., 2005).

1.8 Friendships and Attachment Theory

Although the majority of attachment research has focused on romantic and parental relationships, researchers have also successfully applied attachment theory to other types of relationships, including friendships (Fraley & Davis, 1997; Furman, 2001; Miller & Hoicowitz, 2004).

Researchers such as Furman & Wehner (1994) and Jones & Furman (2011) have proposed that friendship attachment representations function similarly to romantic attachments, conceptualized along the same two-dimensional approach to adult attachment: avoidance and anxiety (Brennan, Clark, & Shaver, 1998).

Despite these similarities, recent research has provided support that argues for the importance of investigating friendship attachments independently from parent-child and romantic attachment relationships (Doherty & Feeney, 2004; Fraley, Heffernan, Vicary, & Brumbaugh, 2011; Markiewicz, Lawford, Doyle, & Haggart, 2006; Wilkinson, 2010). Friendship attachment has been found to uniquely predict various social and emotional outcomes above and beyond that of parent-child and romantic attachment relationships (Bartholomew & Horowitz, 1991; Chow & Buhrmester, 2008; Burge, Hammen, Davila, & Daley, 1997). For example, friendship attachment has been found to uniquely predict loneliness, depression, and self-esteem (Chow & Buhrmester, 2008). In addition, individuals' attachment with their best friend was significantly related to psychological adjustment above and beyond general peer relationship quality (Wilkinson, 2010).

1.9 The Present Study

Friendships are an important predictor of well-being and provide a rich source of social support. They may be especially critical to young adults as they transition into college, predicting happiness and academic performance. Maintenance of satisfying friendships is therefore an important task for young adults. However, relatively little is known about how individuals maintain, or try to maintain their friendships, especially when relationship-threatening situations (e.g., disagreements) occur. To address these gaps of knowledge, the present study is guided by attachment theory to investigate associations between attachment orientations and relationship maintenance behaviors in friendships. Maintenance behaviors were identified by drawing on Rusbult's accommodation model and Gable's approach and avoidance model.

1.10 Hypotheses

On the basis of attachment theory, I predict that individuals high in attachment anxiety will report more active maintenance behaviors (or less withdrawal behaviors). Individuals high in attachment anxiety tend to seek extreme closeness in relationships and engage in compulsive caregiving behaviors (Carnelley, Pietromonaco, & Jaffe, 1996). I predict that, in order to hold onto the relationship, individuals high in attachment anxiety will be more proactive in maintaining their friendships and report less withdrawal from the relationship.

In contrast, I predict that individuals high in attachment avoidance will report more passive maintenance behaviors. Highly avoidant individuals are motivated to maintain autonomy in their relationships and past research has shown that individuals high in attachment avoidance are less likely to seek and provide support to their partners (Simpson, Rholes, & Nelligan, 1992). Therefore, highly avoidant individuals may take a more passive approach relationship maintenance and withdraw more.

Further, I predict that a threatening social situation such as an argument will moderate the effects hypothesized above. When presented with a hypothetical threat to their friendship, I predict that individuals high in attachment anxiety will report more active maintenance behaviors and less passive maintenance behaviors. Individuals high in attachment anxiety are highly sensitive to relationship conflict (Simpson et al., 1996) and presenting them with such a scenario should activate their attachment-related goals of avoiding separation and maintaining high levels of closeness to their friend. Therefore, highly anxious individuals should be more likely to pursue active strategies such as increasing physical proximity and engage in less withdrawal behaviors to return their relationship to high levels of closeness.

Lastly, I predict that when presented with a threatening situation to their friendship individuals high in attachment avoidance will report more passive maintenance behaviors and less active behaviors. Past research has shown that individuals high in attachment avoidance are more likely to withdraw and pull away when faced with relationship stress (Collins & Feeney, 2000; Fraley & Shaver, 1998). A threat to their friendship should increase stress for the individuals involved and should lead highly avoidant individuals to withdraw from the relationship.

Chapter 2: Methods

2.1 Sample

Undergraduate university students ($N = 255$) were recruited from Washington University's Psychology Subject Pool to participate in this study. The sample consisted of 214 females and 42 males with one individual identifying as 'other'. Participant age ranged from 18 to 24 years old ($M = 19.88$, $SD = 1.22$). The majority of participants identified as White (48.6%), followed by Asian (34.2%), multiracial/other (7.4%), Black or African American (5.8%), and Latino/Latina or Hispanic (3.9%).

2.2 Procedure

Participants completed the study online hosted through Qualtrics Survey Software. After completing questionnaires on their current mood, participants completed the adult attachment measure and relevant personality measures (all measures are described below). Participants were then randomly assigned to one of two conditions and presented with a hypothetical scenario describing either a conflict or a non-conflict situation. Upon completion, participants were presented with a debriefing statement and received one course credit as compensation.

In one condition, the *conflict condition* ($n = 126$), participants were asked to read the following scenario and imagine themselves in the situation:

Imagine a friend with whom you're not as close as you used to be. The two of you haven't been hanging out as much as you used to, and when you do, you feel like you are drifting apart. One day, while eating lunch together, your friend says something offensive that

really hurts you. You try to laugh it off, but a sarcastic comment leads to an argument. Tempers flare and you exchange harsh words. The semester ends and you go home for the break. During the new semester, your friend asks to hang out but you decline because you are busy. A few days later, your friend texts you for the third time to see if you would like to meet up.

In the second condition, the *non-conflict condition* ($n = 129$), participants were asked to read the following scenario and imagine themselves in the situation:

Imagine a friend with whom you're not as close as you used to be. The two of you haven't been hanging out as much as you used to, and when you do, you feel like you are drifting apart. The semester ends and you go home for the break. During the new semester, your friend asks to hang out but you decline because you are busy. A few days later, your friend texts you for the third time to see if you would like to meet up.

Participants were asked to reflect on the presented scenario and rate how they would react in the situation on items adapted after Rusbult's Accommodation scale (Rusbult et al., 1991) for use in a friendship context.

2.3 Measurement

2.3.1 Attachment Orientation

Participants' adult attachment orientation was measured using the 17-item Adult Attachment Questionnaire (AAQ; Simpson, Rholes, & Phillips, 1996), a global measure of attachment orientation. Two major dimensions are assessed: avoidance (8-items) and anxiety (9-items). Participants were asked to rate their agreement with each item generally experience close relationships. Each item was measured on a 7-point Likert scale ranging from 1 (*Strongly*

disagree) to 7 (*Strongly agree*). Sample items measuring attachment avoidance and anxiety, respectively, include: “I’m not very comfortable having to depend on other people” and “I usually want more closeness and intimacy than others do”. Composite scores for each dimensional construct were created. Cronbach’s alpha for avoidance was $\alpha = .84$, and for anxiety $\alpha = .83$.

2.3.2 The Big Five

For discriminant validity purposes, participants completed relevant subscales of the Big Five measurement of personality. In previous work, associations between attachment orientations and extraversion and neuroticism have been found. Neuroticism and extraversion were found to have the strongest associations with attachment anxiety and avoidance respectively (Nofle & Shaver, 2006; Roisman et al., 2007). Neuroticism has been found to be positively associated with attachment anxiety and avoidance (Nofle & Shaver, 2006; Shaver & Brennan, 1992). Extraversion has been found to be negatively associated with avoidance and also, although less consistently so, with attachment anxiety (Nofle & Shaver, 2006; Shaver & Brennan, 1992).

Participants’ levels of extraversion and neuroticism were measured using the extraversion and neuroticism subscales of the Big Five Inventory (BFI; John & Srivastava, 1999). Each subscale consists of 8 items. Each item was measured on a 5-point Likert scale ranging from 1 (*Disagree strongly*) to 5 (*Agree strongly*). Sample items measuring neuroticism and extraversion, respectively, included: “I see myself as someone who worries a lot” and “I see myself as someone who has an assertive personality”. Composite scores for each subscale were created. Cronbach’s alpha for neuroticism was $\alpha = .88$, and for extraversion $\alpha = .89$.

2.3.3 Social Support

Previous work has found associations between attachment orientations and social support (Collins & Feeney, 2000). Specifically, higher attachment avoidance and attachment anxiety have been associated with having less social support. Higher attachment avoidance was positively associated with poor support seeking behavior. Participant social support was measured using a modified 6-item Social Support Questionnaire Short Form (SSQSR; Sarason, Sarason, Shearin, & Pierce, 1987). Participants are asked provide the number of individuals they feel fit into each item. Each item is rated on a 5-point scale from 0 (*No one*) to 5 (*Five or more persons*). Sample item includes, “Whom can you really count on to be dependable when you need help”. A composite score was created for social support. Cronbach’s alpha was $\alpha = .91$.

2.3.4 Self-Esteem

Previous work (Chow & Buhrmester, 2008) has found that both higher attachment avoidance and attachment anxiety are associated with lower self-esteem. Participant self-esteem was measured using the 5-item Rosenberg Self-esteem Scale (RSS; Rosenberg, 1965). Participants were asked to rate their agreement with each item. Each item is rated on a 7-point Likert scale from 1 (*Strongly disagree*) to 7 (*Strongly agree*). Sample item includes, “So far I have gotten the important things I want in life”. A composite score was created for self-esteem. Cronbach’s alpha was $\alpha = .92$.

2.3.5 Mood

Previous work have also found associations between attachment orientations and mood (Wei, Vogel, Ku, & Zakalik, 2005). Specifically, higher attachment anxiety and avoidance have both been associated with increased negative mood. Participant mood was measured using the overall mood item from the Brief Mood Introspection Scale (BMIS; Mayer & Grashke, 1988). This

item asks participants to rate their overall pleasantness of their current mood on a 21-point Likert scale ranging from -10 (*Very unpleasant*) to 10 (*Very pleasant*).

2.3.6 Approach Goals and Avoidance Goals

Participant approach and avoidance goals were measured using the 8-item Friendship Goals Scale (FGS; Elliot et al., 2006). Two major dimensions are assessed: approach behaviors (4-items) and avoidance behaviors (4-items). Participants were asked to rate how well each item described themselves. Each item was measured on a 7-point Likert scale ranging from 1 (*Not at all true of me*) to 7 (*Very true of me*). Sample items measuring approach and avoidance goals respectively include: “Trying to enhance the bonding and intimacy in my close relationships.” and “Trying to stay away from situations that could harm my friendships.”. Composite scores for each dimensional construct were created. Cronbach’s alpha for approach goals was $\alpha = .89$, and for avoidance goals was $\alpha = .85$.

2.3.7 Friendship Maintenance Behaviors

Participants completed six items that measure approach and avoid behaviors (see Appendix) from a maintenance behavior scale adapted after Rusbult’s Accommodation Scale (Rusbult et al., 1991). Items were measured on a 5-point Likert scale ranging from 1 (*Highly disagree*) to 5 (*Highly agree*).

Six items measuring approach and avoid behaviors compose the *withdrawal*-subscale (e.g., “I would try to spend less time with my friend”, “I would meet with my friend and confront him/her about what is bothering me”; see Appendix). It was determined that one of the items in the withdrawal subscale (“I would meet with my friend but have an excuse to leave early”) was not phrased properly and did not measure what we had intended for it to measure. The item was removed and the five remaining withdrawal items were all subsequent analyses.

An exploratory factor analysis was conducted on the five withdrawal items using principal-axis extraction with oblimin rotation. The rotated factor revealed two factors and accounted for 50.4% of the variance. Factor 1 accounted for 41.8% of the variance and comprised of the five items (eigenvalue = 2.52). Factor 2 accounted for 12.4% of the variance (eigenvalue = 1.07). Across the two factors, the average primary factor was .64 (ranging from .51 to .80), and the average secondary factor was .01 (ranging from -.32 to .48). One item cross-loaded on both factor 1 (.56) and factor two (.48). However, the item loads more strongly with the other four items on the first factor, is the only item to load on the second factor, and the second factor accounts for little of the variance (12.4%). For these reasons, participant responses on the five items were summed to form the *withdrawal* index, with higher scores indicating more withdrawal. The Cronbach's alpha for the combined withdrawal scale was $\alpha = .75$ ($M = 3.8$, $SD = .77$).

Chapter 3: Results

3.1 Analysis Plan/Preliminary Analyses

Correlational analyses showed that the associations between the two attachment dimensions and neuroticism and extraversion were consistent with past work (see Table 3.1 for correlations).

Attachment avoidance was positively correlated with neuroticism ($r = .20, p < .01$) and negatively correlated with extraversion ($r = -.38, p < .01$). Attachment anxiety was positively correlated with neuroticism ($r = .57, p < .01$). No significant association between attachment anxiety and extraversion was found. Models controlling for extraversion and neuroticism were conducted to test for possible effects on the relationship between attachment orientation and withdrawal behavior.

Table 3.1 Descriptive statistics for study variables

	M	SD	1	2	3	4	5	6	7	8
1. Attachment Avoidance	3.26	1.07	-							
2. Attachment Anxiety	3.60	1.07	.27**	-						
3. Neuroticism	2.63	.75	.20**	.57**	-					
4. Extroversion	3.14	.89	-.38**	-.12	0.21**	-				
5. Social Support	4.63	1.20	-.48**	-.41**	-.30**	.33**	-			
6. Self-Esteem	3.00	.56	-.32**	-.51**	-.57**	.33**	.43**	-		
7. Mood	4.93	3.33	-.29**	-.27**	-.41**	.27**	.39**	.48**	-	
8. Approach Goals	5.75	1.02	-.39**	-.02	-.03	.32**	.43**	.15*	.23**	-
9. Avoid Goals	5.52	1.18	-.03	.06	.12	.01	.07	-.08	.05	.27**

Note. N = 255. Means and standard deviations were calculated using the entire sample, regardless of condition assignment. * $p < .05$, ** $p < .01$

Correlations between the two attachment dimensions and social support were consistent with past work. Individuals higher in attachment avoidance were more likely to report having less social support ($r = -.48, p < .001$). Individuals higher in attachment anxiety were also more likely to report having less social support ($r = -.41, p < .001$). Models controlling for social support was conducted to test for possible effects on the relationship between attachment orientation and withdrawal behavior.

Correlations between the two attachment dimensions and self-esteem were consistent with past work. Individuals higher in attachment avoidance were more likely to report a lower self-esteem ($r = -.32, p < .001$). Individuals higher in attachment anxiety were also more likely to report a lower self-esteem ($r = -.51, p < .001$). Models controlling for self-esteem was conducted to test for possible effects on the relationship between attachment orientation and withdrawal behavior.

Correlations between the two attachment dimensions and overall mood were found. Individuals higher in attachment avoidance were more likely to report a less positive mood ($r = -.29, p < .01$). Individuals higher in attachment anxiety were also more likely to report a less positive mood ($r = -.27, p < .01$). Models controlling for participant mood was conducted to test for possible effects on the relationship between attachment orientation and withdrawal behavior.

To prepare the data, I dummy coded the condition variable (0 = non-conflict condition, 1 = conflict condition). In addition, all variables were centered on their sample mean value prior to being modeled.

I conducted hierarchical linear regression analyses to examine whether the effects of attachment orientations on the dependent variables were moderated by condition. I entered the main effects of attachment avoidance, attachment anxiety, and condition in Step 1 and all possible two-way interactions involving attachment orientations and condition in Step 2. Lastly, I entered the three-way interaction involving attachment avoidance, attachment anxiety, and condition in Step 3 (see Table 3.2). Because this three-way interaction was not significant ($\beta = .032, t = .322, p = .75$), it was dropped from the model and the results reported below are obtained from models including all possible two-way interactions. To explore significant interactions, I plotted attachment orientation 1 standard deviation (*SD*) above and below the mean (Aiken & West, 1991). Preliminary analyses revealed that, consistent with past research, attachment anxiety and avoidance were correlated ($r = .27, p < .001$).^{1 2}

¹ A test for gender moderation was conducted. A significant Avoidance x Condition x Gender interaction ($\beta = .49, p = .02$). However, I did not further interpret the data because participant gender in the sample was severely imbalanced (only 16.5% of the sample were male).

² Repeating the analyses including gender as a covariate did not change the significance of the results reported below. There was no significant main effect of gender predicting withdrawal behavior ($p = .59$). Gender was therefore removed in subsequent models.

Table 3.2 Hierarchical regression analysis for the effects of attachment orientation and condition on relationship withdrawal

	B	SE	Beta	<i>t</i>	<i>p</i>
Model 1					
Attachment Avoidance	.23	.04	.32	5.19	.00
Attachment Anxiety	.09	.04	.13	2.08	.04
Condition	-.01	.09	-.01	-.16	.87
Model 2					
Attachment Avoidance	.12	.06	.17	1.90	.06
Attachment Anxiety	.16	.06	.22	2.50	.01
Condition	-.02	.09	-.01	-.17	.87
Attachment Avoidance * Condition	.20	.09	.20	2.24	.03
Attachment Anxiety * Condition	-.12	.09	-.12	-1.37	.17
Attachment Avoidance * Attachment Anxiety	.00	.04	-.01	-.09	.93
Model 3					
Attachment Avoidance	.12	.06	.17	1.91	.06
Attachment Anxiety	.16	.06	.22	2.52	.01
Condition	-.01	.09	-.01	-.11	.91
Attachment Avoidance * Condition	.20	.09	.20	2.23	.03
Attachment Anxiety * Condition	-.12	.09	-.11	-1.35	.18
Attachment Avoidance * Attachment Anxiety	.01	.06	.01	.10	.92
Attachment Avoidance * Attachment Anxiety * Condition	-.02	.08	-.02	-.21	.83

Note. B, unstandardized beta; SE, standard error; β , standardized beta; *t*, *t* statistic. Attachment avoidance and anxiety were centered on their respective sample means.

3.2 Attachment x Condition

There was no significant main effect of condition on withdrawal behavior ($\beta = -.01, t = -.17, p = .87$). There was a significant main effect of attachment anxiety on withdrawal behavior ($\beta = .22, t = 2.53, p < .05$) such that as attachment anxiety increased, withdrawal behaviors also increased. Thus, the prediction that highly anxious participants would generally withdraw less was not supported. There was also a marginally significant main effect of avoidance on withdrawal behavior ($\beta = .17, t = 1.91, p = .06$), suggesting that as attachment avoidance increased, withdrawal behavior also increased.

There was no significant Avoidance x Anxiety interaction predicting withdrawal ($\beta = -.01, t = -.09, p = .93$), and no significant Anxiety x Condition interaction predicting withdrawal ($\beta = -.12, t = -1.37, p = .17$). However, there was a significant Avoidance x Condition interaction predicting withdrawal behavior ($\beta = .20, t = 2.24, p < .05$; see Figure 3.1). Individuals low in attachment avoidance and in the *conflict* condition were the least likely to report withdrawal behaviors. Individuals high in attachment avoidance and in the *conflict* condition were the most likely to report withdrawal behaviors. Simple slopes analyses showed a significant positive association between avoidance and withdrawal behaviors for individuals in

the *conflict* condition ($t = 5.09, p < .001$) and a marginally significant positive association for individuals in the non-conflict condition ($t = 1.75, p = .08$).³

³ Due to the small number of male participants in the sample, all analyses were repeated with women only. A model including the main effects of attachment avoidance, attachment anxiety, and condition in Step 1, all possible two-way interactions in Step 2, and the three-way interaction in Step 3 was run. Once again, the three-way interaction was not significant ($\beta = -.17, t = -1.65, p = .10$). Subsequent models involving all two-way interactions showed that, as before, there was no significant main effect of condition on withdrawal behavior ($\beta = -.00, t = -.24, p = .98$). Also as before, there was a significant main effect of attachment anxiety on withdrawal behavior ($\beta = .26, t = 2.74, p < .01$) such that as attachment anxiety increased, withdrawal behaviors also increased. The main effect of avoidance on withdrawal behavior was not significant ($\beta = .15, t = 1.56, p = .12$).

Once again, there was no significant Avoidance x Anxiety interaction predicting withdrawal ($\beta = -.04, t = -.69, p = .49$). However, a significant Anxiety x Condition interaction ($\beta = -.22, t = -2.37, p = .02$) emerged. Simple slopes analyses showed a significant positive association between anxiety and withdrawal for individuals in the *non-conflict* condition ($t = 2.73, p < .01$) but no significant association was found for individuals in the *conflict* condition ($t = -.55, p = .58$). There was also a significant Avoidance x Condition interaction predicting withdrawal ($\beta = .28, t = 2.84, p < .01$). Simple slopes analyses showed a significant positive association between avoidance and withdrawal for individuals in the *conflict* condition ($t = 5.56, p < .001$) but no significant association was found for individuals in the *non-conflict* condition ($t = 1.56, p = .12$).

Again, supplemental analyses to control for covariates were conducted. In all models, the Avoidance x Condition interaction remained significant (β s ranged from .23 - .29, $ps < .05$) as did the Anxiety x Condition interaction (β s ranged from -.24 - -.21, $ps < .05$). As before, in the model controlling for self-esteem, the main effect of anxiety predicting withdrawal became non-significant ($\beta = .18, t = 1.76, p = .08$). The main effect of attachment anxiety on withdrawal remained significant in other models controlling for the other study covariates.

Moderation analyses showed no significant three-way interactions involving approach goals, avoidance goals, extroversion, social support, self-esteem, and mood; however, a significant Avoidance x Condition x Neuroticism interaction ($\beta = .24, t = 2.40, p < .05$), and a marginally significant Anxiety x Condition x Neuroticism interaction ($\beta = .22, t = 1.90, p = .06$) emerged.

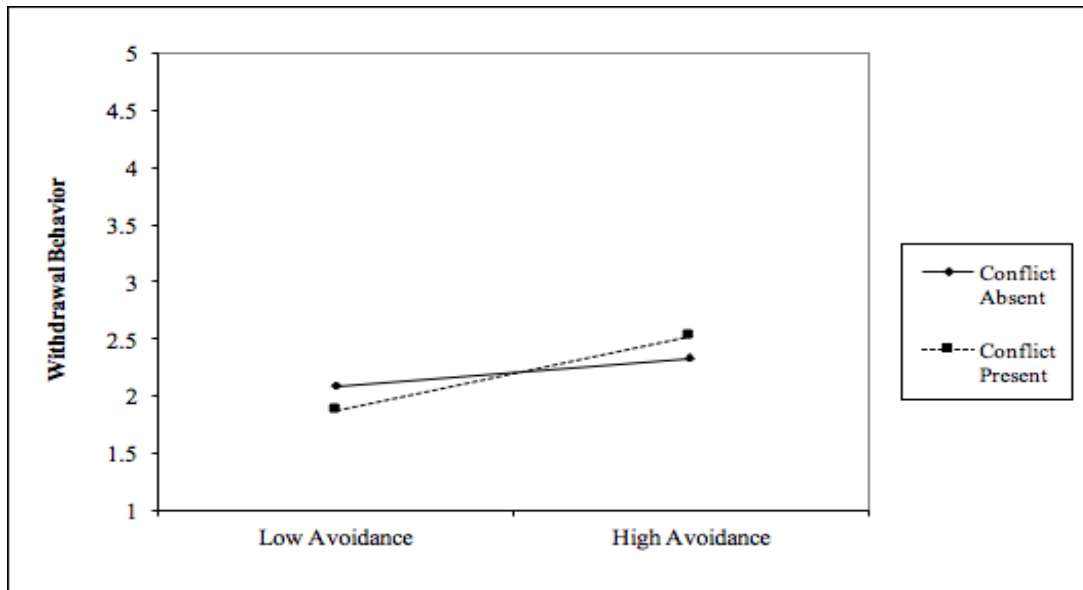


Figure 3.1 Withdrawal behavior as a function of attachment avoidance and condition

3.3 Supplemental Analyses

Additional models controlling for approach goals, avoidance goals, neuroticism, extraversion, social support, self-esteem, and mood were conducted. The primary regression analysis was repeated with each of the covariates included one by one, and the Avoidance x Condition interaction remained significant (β s ranged from .18 - .21, p s < .05) in all models. In addition, when controlling for self-esteem, the main effect of attachment anxiety on withdrawal became non-significant ($\beta = .16$, $t = 1.67$, $p = .10$). The main effect of attachment anxiety on withdrawal remained significant in other models controlling for approach goals, avoidance goals, neuroticism, extraversion, social support, and mood (β s ranged from .16 - .25, p s < .05). In the model controlling for social avoidance goals, the main effect of attachment avoidance predicting withdrawal became significant ($\beta = .18$, $t = 2.07$, $p < .05$). The main effect of attachment avoidance on withdrawal remained non-significant in other models controlling for approach goals ($p = .34$), neuroticism ($p = .06$), extraversion ($p = .28$), social support ($p = .18$), self-esteem ($p = .13$), and mood ($p = .06$).

To examine whether any of the covariates moderate the predicted effects, additional models including Avoidance x Condition x Covariate were conducted. There were no significant three-way interactions involving the variables: approach goals ($p = .39$), avoidance goals ($p = .13$), neuroticism ($p = .75$), extroversion ($p = .95$), social support ($p = .36$), self-esteem ($p = .91$), and mood ($p = .22$).

Chapter 4: Discussion

Prior research has indicated that meaningful friendships may be critical to well-being in young adults. However, little research has focused on how and when young adults maintain these relationships. In the present study, friendship maintenance behaviors were examined in response to a hypothetical stressful scenario in participants' friendships. The findings provide preliminary evidence that attachment orientations predict when individuals choose to maintain or withdraw from a friendship.

Contrary to predictions, participants high in attachment anxiety were more likely to report that they would withdraw from a friendship regardless of condition. While research has found links between attachment anxiety and more destructive behaviors in relationships such as negative expression towards their partners (Campbell et al., 2005; Simpson et al., 1996), other studies have found that highly anxious individuals also restrict expressing negative emotions (Feeney, 1995) and tend to accommodate their partners more in their relationships (Pistole, Clark, & Tubbs, 1995). Situations may arise in relationships in which leaving the partner alone may be more beneficial, especially if the behavior could be viewed as "clingy" (Tucker & Anders, 1998). Individuals high in attachment anxiety are motivated to hold on to their relationships and may have learned to use temporarily withdrawing from a relationship, or "giving some space", as a strategy to maintain a relationship.

Controlling for self-esteem led to the main effect of attachment anxiety on withdrawal to become non-significant. While self-esteem has been linked to attachment anxiety (Feeney & Noller, 1990), it is unclear when attachment anxiety and when self-esteem are predicting specific behaviors in relationship contexts. Thus, self-esteem should be studied further to better

understand how self-esteem and attachment anxiety are associated with withdrawal maintenance behaviors in friendships.

Although a marginal main effect of attachment avoidance showed that highly avoidant individuals reported more withdrawal, this effect was qualified by an interaction between avoidance and condition--specifically, highly avoidant participants reported more withdrawal in the conflict scenario. This is consistent with past research showing that highly avoidant individuals tend to avoid addressing emotional issues in a relationship.

More securely attached participants (specifically, those low in attachment avoidance) were less likely to report withdrawal behaviors overall than their insecure counterparts, and more likely to report withdrawal behaviors in the non-conflict condition compared to the conflict condition. This is consistent with attachment theory. Secure individuals are more likely to make generally positive appraisals of their partner's intentions but not when their partner is clearly being hostile (Mikulincer 1998). The more ambiguous non-conflict scenario in the study may have led secure participants to have a more neutral view of the state of their friendship and to withdraw less than insecure individuals. However, when a clearly negative situation (i.e., conflict scenario) occurs, secure individuals withdraw less and employ a constructive, problem focused method of addressing the problem instead. This is consistent with the literature (e.g., Birnbaum, Orr, Mikulincer, & Florian, 1997; Shaver & Mikulincer, 2002). For example, Winterheld (2016) found a negative association between inhibition of emotion expression and perceptions of negative partner behaviors among highly secure individuals. That is, highly secure individuals were less likely to inhibit expressing their emotions when they perceived more (relative to fewer) clearly negative behavior from their partners.

The findings suggest that low avoidance individuals may use a different approach to maintaining their friendships compared to high avoidance individuals. Motivated to avoid stressful and emotional issues in the relationship, highly avoidant individuals withdraw more from the relationship as the threat of the situation increases. In contrast, less avoidant individuals withdraw less from the relationship as the situation becomes more threatening. Less avoidant individuals may be making benevolent attributions when the threat is low and actively maintaining the relationship when a clearer threat appears in the friendship.

The study has several limitations. One limitation involves the study sample. Participants were predominantly White or Asian, and female. It is difficult to generalize the findings beyond this participant demographic. Different cultural values may affect how people view and maintain friendships. Attachment researchers have found evidence that individuals in collectivistic cultures may view attachment relationships differently than individualistic cultures (e.g., Keller, 2013; Rothbaum, Weisz, Pott, Miyake, & Morelli, 2000). A more balanced cultural demographic in the sample may show more variability in maintenance behavior patterns than was found in the current study. In addition, due to the unusually high proportion of females in the sample the gender analyses should be interpreted with caution.

Moreover, because of the focus on young adults during their transition to college, the study sample was limited to university students and may not generalize to young adults' friendships outside of a school setting. For example, working young adults may have fewer friends available as old friends move away to different cities for jobs and school. These young adults at the typical college age may, therefore, be more motivated to maintain existing friendships as they have fewer alternatives and are less able to afford losing a friend.

In addition, the use of hypothetical scenarios also limits interpretation of the data. Participants reported their own likelihood of engaging in maintenance behaviors, and it is difficult to say how consistent the self-reported behaviors would be in any real-life situations. Hypothetical scenarios also only provide limited insight into the context of particular friendships. For example, the participants' perception of the responsiveness of the friend may play an important role in determining whether or not an individual withdraws from the relationship.

Follow-up studies should recruit more evenly across multiple demographics to increase the generalizability of the findings. Studies involving cross-cultural samples could be a promising direction for further studies. Individuals with different cultural backgrounds may show different friendship maintenance patterns. In addition, further studies should expand the scope of investigations to real-life friendships. For example, the hypothetical scenarios used in the current study could be modified to ask about a real-life friend. Specific types of relationships could be targeted, such those that are more vs. less close, or friendships that vary in length. A potential future study could ask participants to imagine a hypothetical conflict with a new real-life friend. Then, as part of longitudinal design, the study could follow up on participants to examine if the dynamics of a real-life conflict with the friend resembles how the participants had imagined it.

Other limitations include that the current study did not measure the efficacy of the experimental manipulation. Although relationship scenarios like the ones used in this study are commonly used in attachment research (Collins, 1996), it cannot be concluded with certainty that they indeed activated attachment orientations. Future studies should increase the strength of the manipulation. For example, participants could be instructed to immerse themselves in the hypothetical scenario by writing in as much detail as possible about the situation involving a

friend (e.g., where did you imagine that this happened, what were you wearing, how did you feel?).

Future studies should include a manipulation check to confirm the success and validity of the manipulation. Attachment orientations are activated when threats, whether physical or psychological, are perceived by the individual (Bowlby, 1969). A manipulation check could therefore be accomplished by asking participants how threatening they perceived the scenario to be. Measuring participants' emotions after reading the hypothetical scenario could also be used to help determine the efficacy of the manipulation. For example, participants could be asked to rate, among others, how nervous, angry, and sad they feel after reading and imagining the described scenario. Differences in the ratings of emotions between the two conditions could help determine if the manipulation did have the intended effect.

In addition, including post-manipulation measurements of important variables (e.g., discrete emotions, goals) in future studies could provide a better understanding of how conflict in a friendship affects individuals and how it may affect the maintenance of the relationship. Among others, changes in mood, goals, and self-esteem could have an effect on what maintenance behaviors people choose to employ.

I am interested in continuing this line of research in the context of real-life friendships. Would individuals maintain real-life friendships in the same way as they responded in this study? Additionally, I could conduct a similar study in the context of selecting relationships. For example, college students, especially those living in university housing and/or out of state, meet many new people during their first year at a university. However, many of these potentially rewarding and long-term friendships are discarded after the initial rush of orientation, new

classes, and activities. How do individuals choose to maintain a budding friendship and when do they decide a relationship is not worth pursuing further? Further, other potential moderators should be explored. The availability of other friends, closeness in the friendship, as well as trust in the friendship may be important factors in determining whether one approaches or withdraws from a friendship.

I am also interested in investigating partner effects in friendship maintenance. The effectiveness of certain relationship maintenance behaviors may depend on the friend counterpart in the relationship. For example, giving an avoidant friend more space during an argument may be more beneficial to the long-term health of the relationship. In addition, acceptable relationship maintenance behaviors may vary by culture. The cultural context in which relationship maintenance occurs, and the recipient of the relationship maintenance efforts may be important factors when considering the effectiveness of different relationship maintenance strategies.

The present study suggests that individuals low in avoidance may use different approaches to maintain their friendship than individuals high in avoidance. Previous research has shown that friendships are an important contributor to well-being and adjustment, and may be especially vital for young adults. College students in positive friendships report feeling less anxious and depressed, and are also more likely to perform better academically. Additionally, maintaining existing friendships helps to smooth the transition into college. An improved understanding of how individuals differ in maintaining their friendship is important to increasing well-being and adjustment in young adulthood.

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Appendix

Withdrawal Items

1. I would meet with my friend and talk with him/her about what is bothering me and try to resolve it.
2. I would meet with my friend and confront him/her about what is bothering me.
3. I would postpone meeting with my friend.
4. I would try to spend less time with my friend.
5. I would ignore the text.
6. I would meet with my friend but have an excuse to leave early.