

## ABSTRACT

Title of Dissertation: ROMANTIC ATTACHMENT STYLES AND COPING  
BEHAVIORS IN LONG-DISTANCE ROMANTIC  
RELATIONSHIPS

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The purpose of the current study was to examine romantic attachment styles and approaches to coping among individuals presently involved in long-distance romantic relationships (LDRs). Those in proximal relationships (PRs) were also recruited for comparison purposes. Results revealed that those in LDRs were significantly younger, lived further apart from their partners, used less confrontation coping, and had lower levels of avoidance of intimacy than their PR counterparts. There were no differences in the proportions of the four romantic attachment styles represented in the LDR and PR sub-samples.

For those in LDRs, secure individuals were more satisfied than participants in any other attachment category. Among those in LDRs who were insecurely attached, preoccupied individuals reported greater relationship satisfaction than fearful participants. For those in PRs, secure individuals were more satisfied than those in any other attachment category. Secure and preoccupied individuals in LDRs relied on their partners and others for social support to a greater degree than did fearful participants.

Among PR participants, secure individuals reported the highest use of both types of social support.

For the most part, fearful (and to a lesser extent preoccupied) individuals in LDRs tended to cope poorly. Different relationships were found among attachment styles and coping for those in PRs.

The single best positive predictor of satisfaction for either type of relationship was level of partner-specific social support. This was followed by avoidance of intimacy (a negative predictor) for both LDRs and PRs, and confrontational and distancing coping for LDRs only. Distancing coping was actually associated with higher rates of satisfaction for those in LDRs, whereas confrontational coping tended to predict lower satisfaction.

Finally, cluster analysis revealed six distinct clusters in both the LDR and PR subsamples. Three of the LDR clusters had analogous PR counterparts. These included one cluster of individuals who rely almost entirely on their partners for support, one cluster of insecure and deeply unsatisfied individuals, and one cluster of anxious, confrontational but content participants. The other three sets of clusters were quite different for those in LDRs and PRs. Limitations and implications for future research are discussed.

ROMANTIC ATTACHMENT STYLES AND COPING BEHAVIORS IN LONG-  
DISTANCE ROMANTIC RELATIONSHIPS

by

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## DEDICATION

For my former long-distance love, now wife, Sarah—always the prettiest (and most patient) woman in the room. Also, for my son, Joseph, who reminded me of what truly mattered throughout this process.

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# Romantic Attachment Styles and Coping Behaviors in Long-Distance Romantic Relationships

## Chapter 1—Introduction

In the late 1970s, sociologists began to note the growing prevalence of long-distance romantic relationships (LDRs) in American society (Farris, 1978; Gross, 1980; Kirschner & Walum, 1978). Although such distal romantic relationships existed prior to that era, these authors noted that reasons for separation were shifting. Whereas in the past it may not have been uncommon for husbands or male partners to separate temporarily from their female partners to enlist in the military or to pursue career goals, a new breed of LDRs began to develop in the wake of the feminist revolution of the 1960s. With more women pursuing higher educational and vocational objectives, the pressure for couples to separate temporarily began to be felt from both sides of the relationship. In documenting such a societal shift, researchers began to coin new terms such as “long-distance romantic relationships” and “commuter marriages” (Farris, 1978).

Through interviews with those involved in LDRs and commuter marriages, early researchers documented the unique rewards and challenges of such romantic arrangements. On the positive side, the growth in opportunities for American women represented a positive step toward a more egalitarian society. Women with goals outside of the home could apply themselves to more fulfilling activities, perhaps raising the couple’s or family’s gross income in the long-run. By enabling both partners to feel more fulfilled, the relationship might actually grow stronger despite the distance. Finally, progressive male spouses or partners may have viewed their companions’ new

opportunities as offsetting an inequality that had traditionally been in males' favor (Gross, 1980).

However, with these benefits also came clear drawbacks. Time apart interfered with normal communication and intimacy processes. Any increase in income was immediately offset by the expense of maintaining dual households and by travel and telephone bills (Gross, 1980). Indeed, there is evidence that many commuting couples actually lower their net income by choosing to live apart (Gerstel & Gross, 1982). Added to these new challenges was the violation of one of the most sacred of American institutions, namely that of the nuclear family. Women faced widespread disapproval for "abandoning" their partners and families, while men were often derided for "letting her go" (Farris, 1978). Implicit in this societal disapproval was the notion that LDRs or commuter marriages were deviant and could not survive.

More than two decades after sociologists first began to describe these revolutionary romantic arrangements, one wonders how these couples fare, and how much of what was true in the late 1970s remains so today. Recent research shows that LDRs are ubiquitous on college campuses and beyond. As many as 25% to 45% of college students are engaged in LDRs at any given time (Dellmann-Jenkins, Bernard-Paolucci, & Rushing, 1994; Guldner, 1996; Guldner & Swensen, 1995; Stafford & Reske, 1990), and estimates are that 70% of this population has been in an LDR at some point in their lives (Guldner, 1996). The limited research available also documents much of the same challenges and rewards associated with LDRs of a generation ago.

Despite these findings, surprisingly few studies have been dedicated to a thorough investigation of the phenomenon of LDRs and commuter marriages. Rohlfsing (1995),

lamenting the dearth of research in this area, noted that “almost any research on these relationships [is] enlightening” (p. 176). The purpose of the current study was to examine how those with different romantic attachment styles tend to experience and cope with LDRs. Attachment and coping styles, as well as demographic factors, were examined for their impact on relationship satisfaction. Before proceeding with the current study, however, it is important to introduce the research on LDRs conducted to date.

Given that two romantically involved individuals are physically separated for significant periods of time, one might expect higher levels of distress and dissatisfaction in LDRs than in couples involved in proximal relationships (PRs). In much of the research conducted in this area, however, results have been equivocal. Although a recent study (van Horn, Arnone, Nesbitt, Desilets, Sears, et al., 1997) found lower rates of satisfaction among those in LDRs when compared to their PR counterparts, other researchers have found that those in LDRs and PRs show no difference in satisfaction, intimacy, trust, and progress (Dellmann-Jenkins et al., 1994; Guldner & Swensen, 1995). There is also evidence that time and distance conspire to diminish intimacy and satisfaction in long-distance couples only when visits occur less frequently than once per month (Holt & Stone, 1988). In contrast, a recent study that looked specifically for signs of psychological distress among those in LDRs, found higher rates of depression, phobic anxiety, and psychoticism among those in LDRs when compared to those in PRs (Guldner, 1996).

The empirical evidence is less ambiguous when it comes to differences in longevity between LDRs and PRs. Van Horn and colleagues (1997) found no difference

in breakup rates among these two groups during a 3-month period, and Stafford and Reske (1990) revealed the same finding over 12 months. Still, when LDRs did terminate, 60% of the partners surveyed blamed distance as the biggest factor contributing to the breakup (van Horn et al., 1997).

Much of the research in this area of romantic relationships has concentrated on the interpersonal processes between couples, again with varying results. Stafford and Reske (1990) found decreased communication among partners in LDRs when compared to those in PRs. Similarly, van Horn et al. (1997) found that those in LDRs showed lower descriptive self-disclosure, companionship, and certainty in the course of the relationship than their PR counterparts. In contrast, Guldner and Swensen (1995) found no difference in satisfaction, intimacy, trust and progress between couples in LDRs and PRs.

As noted earlier, a substantial proportion of college undergraduates is or has been involved in an LDR. That such a large proportion of students (and others) is engaged in distal relationships suggests that these unions likely serve some beneficial purpose or that those involved in them believe they can manage their relationships and achieve other goals. As Rohlfsing (1995) suggests, LDRs may enable each partner to pursue his or her academic or career aspirations before reuniting. Indeed, much has been made of the notion that LDRs may be growing in prevalence as a result of increased opportunities for women in modern educational and vocational settings (Anderson, 1992; Anderson & Spruill, 1993; Farris, 1978; Gerstel & Gross, 1982; Rohlfsing, 1995). Whereas in the recent past it was common for women to follow their husbands or partners when these men found employment, the increasing number of women pursuing their own educational

and career goals has required that innumerable couples make a very difficult decision between what may be best for the relationship and what may be best for one individual or the other.

As important as it appears to be for highly motivated individuals to pursue their aspirations, their educational and vocational freedom may come at an emotional cost to partners involved in LDRs. Though the evidence suggests that these relationships are no more likely to dissolve over a one-year period than PRs, such a finding may belie the difficulties encountered by those in LDRs. As noted earlier, research findings in the area of relationship satisfaction, intimacy and distress have been equivocal. However, it stands to reason that individuals in LDRs may need to adapt and cope with their relationships differently from those involved in PRs.

Research into the examination of coping strategies used by those in LDRs has been very limited. Holt and Stone (1988) explored the cognitive coping styles of *verbalizing* and *visualizing* among college students involved in LDRs. The authors found that the coping approach that had the most positive effect on intimacy and relationship satisfaction for visualizers was the frequency that partners visited each other. This research also suggested that relationships tended to suffer regardless of coping style when partners were unable to see each other at least once monthly.

Through their work in facilitating a “Coping with Long-Distance Relationships” workshop, Westefeld and Liddell (1982) articulated nine coping resources that those in LDRs tended to employ. These approaches are delineated in chapter two. Westefeld and Liddell’s contribution to the LDR knowledge base represented an important first step toward understanding coping mechanisms operating among those in distal relationships.

However, a more empirically based approach to the study of coping in LDRs is long overdue.

Westefeld and Liddell (1982) noted that one important facet of adaptive coping included the presence and use of a social support network among those in LDRs. The great majority of the research into the effects of social support on well-being suggests that the presence of a support network acts as a buffer against psychological distress (Cohen & Wills, 1985). Those who can turn to friends and family members for help may use this support network to relieve symptoms of distress. It is likely that those involved in LDRs also make use of their social support system to deal with stressors. However, the limited research in this area suggests that those in LDRs may feel somewhat isolated from others given that they may not be familiar with many other couples involved in similar relationships (Anderson, 1992; Anderson & Spruill, 1993; Govaerts & Dixon, 1988). Also, if such individuals are highly dedicated to their careers when separated and to each other when they are reunited, perhaps they have limited social support systems. In the same vein, it could be that those in LDRs derive more support from each other than they do from others in their network (Anderson, 1992; Anderson & Spruill, 1993). A closer examination of how those in LDRs benefit from social support received from others and from their partners is also needed in this area.

Finally, the current study focused on romantic attachment dimensions as a way of understanding LDRs more clearly. The attachment dimensions of avoidance of intimacy and anxiety over abandonment have received a great deal of attention in the relationship literature. However, only two published studies have attempted to explore romantic attachment styles and how partners cope with relationship separation (Cafferty, Davis,

Medway, O'Hearn, & Chappell, 1994; Feeney, 1998). In her study, Feeney (1998) found that romantic partners reported strong feelings of loneliness when separated regardless of their romantic attachment style. Anxious individuals were more likely to experience the more severe reaction of despair and were also more likely to take a restricted approach to coping with their feelings. Males were more likely to report discomfort with intimacy and were also more likely to engage in escape-avoidance coping and less confrontive coping strategies. Although Feeney's (1998) study represents an important piece of a complicated puzzle, her participants were only asked about periods of separation and were not at the time involved in an LDR.

Cafferty et al. (1994) explored attachment styles and emotional responses of Gulf War veterans and their spouses upon reunion after the war. The authors found that secure attachment was associated with more positive and less negative affect upon reunion for the male veterans. Secure attachment was also related to higher marital satisfaction for both spouses. Though a valuable addition to the literature, Cafferty and colleagues (1994) examined reactions to reunion rather than reactions to separation. Also, the fact that one member of the couple was placed in a foreign and hostile environment makes that study rather unique in the LDR literature and limits how much one can generalize to samples comprised largely of undergraduate students.

These caveats notwithstanding, the two studies addressing romantic attachment styles and reactions to separation present a good foundation for the current study by confirming that separation from a romantic partner activates attachment behaviors to cope with this relationship stressor. The intent of the current study was to shed light upon LDRs and romantic attachment styles by assessing how these styles might relate to



other variables of interest. For example, although one might assume that only securely attached couples could survive an LDR, it may be that dismissing types (those with low anxiety and high avoidance of intimacy) may very much appreciate being separated from their partners. Such individuals might well differ from other attachment types in their relationship commitment levels. As Feeney (1998) found, coping styles may also differ according to romantic attachment types.

To summarize, surprisingly few studies have been dedicated to examining the dynamics of long-distance romantic relationships despite the fact that these relationships are increasingly common in modern America and that they represent unique rewards and challenges to those involved in them. The goal of the current study was to explore how those with different romantic attachment styles involved in LDRs cope with a specific relationship stressor and how satisfied these individuals are in their relationships. By examining these variables thought to contribute to the satisfaction of those in LDRs, it was hoped that this paper would illuminate some of the dynamics associated with these little understood relationships.

## Chapter 2—Review of the Literature

The current study represented an attempt to approach the topic of long-distance romantic relationships (LDRs) from the perspective of romantic attachment styles and coping. The following literature review provides an overview of the coping and attachment literature as well as a detailed review of specific studies relevant to the current research project. Included in the review is information regarding social support as a means of coping.

### *A General Review of Coping*

There is reason to believe that how those involved in LDRs cope with stress may play an important role in their well-being and in their perceived quality of the relationship. The rationale for this hypothesis comes from a review of the LDR literature and from the perception that the presence of distance in a romantic relationship is, in itself, a significant life stressor that must be negotiated. The immensity of the coping literature necessitates a focused approach to this subject area. The current review of the coping literature provides a framework for understanding the basics of coping, as well as an analysis of specific coping styles most clearly related to both well-being and psychological distress. Understanding which approaches to coping are most and least adaptive should help to clarify how different approaches to coping may influence those involved in LDRs.

The current study envisioned a cognitive-behavioral approach to stress and coping made popular by Folkman and Lazarus (1980). In this framework, stress is defined as “a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and as endangering his or her well-being”

(Folkman, 1984, p. 840). Coping is defined as “cognitive and behavioral efforts to master, reduce, or tolerate the internal and/or external demands that are created by a stressful transaction” (Folkman, 1984, p. 843). As these definitions suggest, the process of stress and coping is situation-specific. In other words, how an individual perceives and copes with one particular stressor may be quite different from how he or she copes with a different stressor. Rather than thinking of coping as a particular “style,” implying the use of a fixed approach to all stressors, coping can best be thought of as a dynamic process in which an individual might use several approaches simultaneously or in sequence to alleviate distress (Folkman & Lazarus, 1980; 1985; Long, 1990). Further, the same individual might use an entirely different set of coping resources from one situation to the next depending on, for example, the person’s perception of how likely his or her response is to ameliorate the situation.

Central to this understanding of stress and coping is a two-stage process of appraisal (Folkman, 1984; Folkman & Lazarus, 1980). In the primary appraisal stage, the individual considers what is at stake in a particular situation. Take, for example, the scenario of a woman suggesting to her male partner that she might accept a promotion that would require her to move 500 miles away. If her partner were highly invested in their relationship, he would likely interpret this news, at least on some level, as threatening and stressful because it might bring about uncertainty in their relationship. If, however, her partner were not invested in their relationship, he might consider the news irrelevant to his well-being or even beneficial (e.g., if he had been looking for a reason to terminate the relationship). Thus, primary appraisal plays an important role in whether or not an individual perceives an event as stressful.

Secondary appraisal refers to the individual's evaluation of the demands of a stressful situation and what coping resources he or she can use to bring about a desired outcome. As Folkman (1984) notes, secondary appraisal "becomes critical when there is a primary appraisal of harm, loss, threat, or challenge" (p. 842). Using the same example from the previous paragraph, the male partner highly invested in his relationship would likely feel a sense of loss and threat if his partner moved away (primary appraisal). His thorough understanding of the demands inherent in establishing and maintaining an LDR, as well as his belief that doing so is feasible (secondary appraisal) might serve to mitigate distress. If his secondary appraisal process led him to believe that sustaining an LDR would not be feasible, such a determination would likely increase his level of distress. Note that the male partner not invested in his relationship would likely not have to engage this secondary appraisal process to the extent of his highly invested counterpart. If the primary appraisal were one of irrelevance, the individual might consider any secondary appraisal as a waste of time.

The specific strategies individuals employ to cope with life's many challenges and crises has been the topic of much research. McCrae and Costa (1986) postulated as many as 27 different coping strategies. Although there is debate over what constitutes specific approaches to coping, most researchers broadly categorize coping strategies as either problem-focused, emotion-focused, or avoidant (Endler & Parker, 1990; Lazarus & Folkman, 1984). Problem focused coping entails taking an active or instrumental approach to relieving distress. Emotion-focused coping refers to reappraising distress in order to reduce the disturbing emotions it tends to evoke (Lazarus & Folkman, 1984). Such an approach might involve searching for the "bright side" or reinterpreting the

negative aspects of a stressful situation as a challenge that makes one stronger in the long-run. Avoidance coping involves an individual's attempts to reduce distress by mentally or physically disengaging from the source of distress. This coping strategy might involve denial of what is really happening or engaging in other activities to distract oneself (Endler & Parker, 1990). It is important to note that Lazarus and Folkman (and other researchers who follow their lead) typically place avoidance under the rubric of emotion-focused coping, thereby suggesting only two broad coping mechanisms of problem-focused and emotion-focused (Folkman, 1984; Folkman & Lazarus, 1980; Lazarus & Folkman, 1984).

Simply delineating and categorizing the various coping styles individuals may employ represents only the beginning of a comprehensive look at coping. What is especially interesting to researchers, and what is most relevant to the current study, is which coping strategies are most and least adaptive under various circumstances. Although there is no single answer to this complex question, most research has found that problem-focused coping is most effective in situations that are amenable to change, whereas emotion-focused coping tends to be more adaptive in situations deemed uncontrollable or not amenable to change (Conway & Terry, 1992; Endler & Parker, 1990; Folkman, 1984; Folkman & Lazarus, 1988; Lazarus & Folkman, 1984). We may look to the same example used previously (of a female partner accepting a promotion 500 miles away) to explore different approaches to coping with this type of relationship stressor. If both members of the dyad were highly invested in the relationship, they might take the problem-focused steps of looking at their finances, planning visits when possible, and remaining in close contact via phone and electronic mail. An emotion-

focused or avoidant approach to this same situation might serve to reduce stress in the short-run, only leading to greater distress and, most likely, relationship termination in the long-run. This is not to suggest that these latter two coping approaches should not be used at all in the present example. Indeed, coming to terms with an LDR will likely require a good deal of positive reappraisal and self-control, two emotion-focused coping strategies included in the Ways of Coping Questionnaire (Folkman & Lazarus, 1988). However, it probably would be maladaptive to use emotion-focused and avoidant coping exclusively or predominantly when a problem-focused approach is most effective.

Whereas problem-focused and emotion-focused coping can be either adaptive or maladaptive depending on the situation at hand, most research concerning avoidance coping suggests that it is generally a maladaptive strategy (Carver et al., 1989; Endler & Parker, 1990). Some examples of this coping style include distracting oneself with food, alcohol or a movie, or physically or mentally removing oneself from a situation (Endler & Parker, 1990; Folkman & Lazarus, 1988). Although avoidance coping may supply potent short-term reinforcement or relief, it is clearly not oriented toward providing any permanent resolution of the problem at hand. Indeed, research has uncovered a positive relation between avoidance and emotion-focused coping and anxiety (Dusenburg and Albee, 1988). Summerfeldt and Endler (1996) go as far as classifying avoidance as a “chief behavioral component” of anxiety (p. 618). Other studies show a similar positive relation between avoidance and emotion-focused coping and neuroticism (Carver et al., 1989; Folkman & Lazarus, 1980; Watson & Hubbard, 1989).

The finding that some emotion-focused coping is related to anxiety and neuroticism is troubling, because there seem to be clear instances in which an emotion-

focused approach is most effective. The studies that uncovered this association (Carver et al., 1989; Folkman & Lazarus, 1980; McCrae & Costa, 1986; Watson & Hubbard, 1989), however, revealed that certain emotion-focused approaches were maladaptive whereas others were adaptive. For example, McCrae and Costa (1986) had participants rank the frequency with which they used 27 coping strategies to deal with a recent stressor. Participants were asked which strategies they used recently and how effective each strategy was toward solving the problem at hand and reducing feelings of distress. By developing such a detailed measure of coping styles, the authors were able to observe the effects on well-being of a variety of specific problem-focused, emotion-focused, and avoidant coping styles. The five strategies with the highest average rank for effectiveness were faith, seeking help, drawing strength from adversity, rational action, and expression of feelings. Coping approaches deemed least effective included hostile reaction, indecisiveness, self-blame, wishful thinking, passivity, and isolation of affect. It is worth noting that the most effective strategies employed were problem-focused (seeking help, rational action, and expression of feelings) and emotion-focused in nature (faith and drawing strength from adversity). Those deemed least effective were emotion-focused (hostile reaction, self-blame, and isolation of affect) and avoidant approaches (indecisiveness, passivity, and wishful thinking). McCrae and Costa (1986) found these same ineffective emotion-focused and avoidant coping styles correlated positively with neuroticism. These findings support the theory that problem and emotion-focused coping can be effective means of allaying distress, with the caveat that focusing on or simply repressing negative emotions tend not to be very effective coping strategies.

Carver and colleagues' (1989) validation study of the COPE Inventory provides further support for the notion that some emotion-focused coping styles are more effective than others. In this study, the authors found significant negative correlations between anxiety and active coping, restraint coping, and positive reinterpretation and growth. The latter two styles are emotion-focused approaches. Emotion-focused and avoidant coping styles found to correlate positively with anxiety were focusing on and ventilating emotions, denial, behavioral disengagement, and mental engagement. Thus, although it may be convenient to label coping styles as either problem-focused, emotion-focused, or avoidant, it is important to be as specific as possible when referring to the effectiveness of different approaches to coping.

The findings described above suggest that those who cope best may use a wide range of coping strategies in any given situation. Summerfeldt and Endler's (1996) research into the effects of coping on psychopathology concluded that "the flexibility, range, and appropriateness of...coping strategies may distinguish ultimate adjustment from psychopathology" (p. 611). Krohne's (1992) research into vigilant and cognitive avoidant coping styles supports the theory that it is one's ability to employ appropriate and complementary coping strategies that ultimately determines psychological well-being. In this vein, the present study included six subscales from the Ways of Coping Questionnaire (Folkman & Lazarus, 1988) to measure a variety of problem-focused and emotion-focused coping strategies. Let us now turn to what is known about coping processes in LDRs.



*The Role of Coping in Long-Distance Romantic Relationships*

Relatively little is known about the role of coping in LDRs. Westefeld and Liddell (1982) published a brief summary of their group workshops with 25 individuals involved in LDRs. The authors found the following nine strategies that individuals in these workshops most frequently used to cope with their relationships: (a) realizing that being in an LDR is stressful, (b) developing social support systems while apart, (c) developing creative ways to communicate with one's partner, (d) discussing relationship ground rules before separating, (e) using together time judiciously, (f) being honest with each other, (g) communicating thoughts and feelings with each other, (h) developing trust, and (i) focusing on the positive developments that separating has caused.

Although an important contribution to the knowledge base, Westefeld and Liddell's (1982) suggestions have never been explored in a systematic manner. Other studies have limited their exploration of coping mechanisms in LDRs by focusing only on frequency of visits and time spent on the telephone (Carpenter & Knox, 1986; Guldner, 1996; Guldner & Swensen, 1995; Stafford & Reske, 1990; van Horn et al., 1997).

Holt and Stone (1988) examined cognitive coping styles, satisfaction and intimacy in LDRs. Stating findings from Gerstel and Gross (1982), namely that spouses in commuter marriages reported greater dissatisfaction than those living together, Holt and Stone conducted their study with the intent of examining the coping strategies of unmarried couples living together and apart. Gerstel and Gross reported that married couples who were apart for more than a month felt out of touch with each other. Holt and Stone used this finding to posit that unmarried couples would cope, in part, by visiting

each other. Given that it is not always possible to have frequent visits, the authors reasoned that those in LDRs would engage in both verbal and imagined communication, coping strategies derived from cognitive psychology.

Holt and Stone summarized that people tend to possess dispositional preferences for either verbal or visual cognitive processes. With this in mind, the authors suggested that those with verbal preferences would “report greater frequency and quality of verbal communication” in their LDRs (p. 137). Those with a visual preference would report greater use of and more satisfaction with imaginal communication (behavior the authors described only as “daydreaming”). Holt and Stone based the remainder of their hypotheses on this rationale. First, they hypothesized that frequency of visits would impact relationship satisfaction. Second, individuals using their preferred coping style (either verbal or imaginal) would be more satisfied than those not using their preferred style. Finally, the authors also singled out those in LDRs unable to visit once monthly to examine whether or not they would be more satisfied in their relationship if they used their preferred coping style rather than their non-preferred style.

Participants in Holt and Stone’s (1988) study were 134 individuals from a university town in the Midwest. To be eligible for the study, participants had to be involved in a romantic relationship for at least 6 months. Nearly all of the participants (92.5%) were university students. The age range of the sample was 17 to 44 years old, with three-quarters of the participants between 19 and 24.

The authors used their demographic questionnaire to derive three of their four independent variables of interest—distance apart, amount of time apart, and frequency of visits. The authors divided these responses into categories. Distance apart had three

categories 0-1 miles (n=42), 2-249 miles (n=33), and greater than 250 miles (n=59). There were also the following three time apart categories: no time (n=42), up to 6 months (n=49), and more than 6 months (n=43). The authors based the time apart categories on the work of Gerstel and Gross. They admitted that the distance categories were arbitrarily selected. Frequency of visits was also divided into three categories, namely more than once weekly (n=55), once weekly to once monthly (n=42) and less than once monthly (n=48). To determine preference for cognitive style (the final independent variable), the authors used the Visualizer-Verbalizer Questionnaire (VVQ). Scores on this measure were used to categorize participants as Verbalizers (n=23), Mixed (n=92), or Visualizers (n=24). The authors gave no explanation for why the total number of individuals in the frequency of visits (145) and cognitive coping categories (139) exceeded the sample size of 134.

Verbal communication was assessed using the demographic question of hours spent on the telephone and a slightly modified version of the Marital Communication Inventory (MCI; Bienvenu, 1968). The term “partner” was substituted for “spouse” and “relationship” replaced “marriage” to make the MCI applicable to this sample. Imaginal communication was assessed using the Imaginal Processes Inventory (IPI; Singer & Antrobus, 1970). This measure enabled the authors to derive frequency of daydreaming, as well as positive and frightened reactions to daydreaming. Relationship satisfaction and intimacy were each assessed by a single item with a 5-point Likert format.

Holt and Stone (1988) used ANOVAs and follow-up *t*-tests to analyze their data. First, the authors reported significant interactions for distance and time on satisfaction and intimacy. Specifically, individuals who were at least 250 miles apart for over 6

months were the least satisfied and intimate. Second, as expected, participants who scored higher on Visualizing also reported more time daydreaming. Also, as time apart increased, Visualizers reacted more positively to daydreaming than did Verbalizers. In another positive interaction, Verbalizers experienced less frightened reactions to daydreaming as the frequency of visits increased. The authors admitted that the meaning of this interaction was not immediately apparent.

A significant interaction revealed that the least satisfied were those in the 2-249 mile-apart range who were unable to visit each other at least once monthly. When individuals in this group were able to visit once per month, their level of satisfaction increased almost to the same level as individuals in proximal relationships (0-1 mile). Another significant interaction revealed that more frequent visits had a positive effect on satisfaction for Visualizers and a “weak or detrimental effect for all other groups” (Holt & Stone, 1988, p. 139).

Post hoc analyses examined the rate of satisfaction among individuals using their preferred cognitive coping style. The authors noted that such results needed to be interpreted with caution given small cell sizes and the number of *t*-tests employed. Holt and Stone summarized their findings in this area as suggesting that “the frequent use of imagery by Visualizers generated less satisfaction in certain relationship conditions” (p. 140). Finally, the authors found no significant results when they conducted identical analyses only with those in LDRs who did not visit monthly. However, some cells in these analyses were empty due to the imposition of this additional criterion.

At the time Holt and Stone published their study, it represented one of the most ambitious attempts at exploring coping and interpersonal processes of those in LDRs.

Basing their rationale for exploring visualization and verbalization in the cognitive literature, the authors took an innovative route toward uncovering particular coping responses of those in LDRs. It is unfortunate, however, that Holt and Stone's (1988) study contained numerous methodological flaws, which limit the inferences one can draw from it. The most egregious of these flaws involved using single-item measures of satisfaction and intimacy (when high quality short measures of these variables exist), not reporting the validity and reliability of other measures, and not controlling for Type I error.

The categorization of Holt and Stone's most important independent variable (distance apart) also bears close scrutiny. Specifically, the authors admitted that the categorization of relationships by distance (0-1 mile; 2-249 miles; and 250 miles or more) was arbitrary. Although such candor is appreciated, it does not change the fact that this could present major implications for their study. For example, is a person separated from his or her partner by 3 miles comparable to a similar person separated from his or her partner by 249 miles? It seems likely that the former would not be involved in an LDR whereas the latter would. It also seems quite likely that frequency of visits and coping strategies (the variables of interest in this study) would differ considerably for these two hypothetical participants. Yet, the authors chose to place them in the same relationship category. A similar case can be made for those living 249 miles apart as opposed to 260 miles apart, for example. Are such individuals likely to have qualitatively different relationships? A better rationale than arbitrary creation of distance categories seems appropriate.

In summarizing Holt and Stone's (1988) study, perhaps the most that can be concluded is that infrequency of visits is associated with lower relationship satisfaction in LDRs. Specifically, the authors found that participants in their LDR category who were unable to visit their partners at least once per month were the least satisfied group. However, later research has called into question even this finding related to frequency of visits and relationship satisfaction (van Horn et al., 1997).

Feeney (1998) examined coping processes of those faced with a temporary separation in their relationship. Her study, which is reviewed in greater detail in a later section of this chapter, focused on the use of six different coping strategies used to manage emotions during separation. Some of these six styles were derived from the Ways of Coping Questionnaire (Folkman & Lazarus, 1988), however, Feeney did not actually use this standardized measure in her study. Instead, she analyzed interviews with participants and coded their responses into the coping strategies of (a) confrontive coping, (b) maintaining contact with the partner, (c) engaging in personal or couple goals, (d) positive reappraisal, (e) escape-avoidance, (f) minimizing. Feeney described the first three coping techniques as problem-focused and the last three as emotion-focused.

Feeney's (1998) results suggested that males with a secure romantic attachment style were less likely to rely on emotion-focused coping and more likely to use problem-focused techniques than others in the sample. Males and females with secure attachment styles tended to use a broader range of coping approaches than those with more relationship-centered anxiety. These findings suggest that how an individual copes with the stress of maintaining an LDR is in part a factor of the person's underlying romantic attachment style. Thus, although it is difficult to predict how any one person might cope

with a random stressor, Feeney's (1998) study suggests that knowing an individual's adult attachment style helps us to predict how that person will react to a distressing situation when apart from his or her romantic partner. This intriguing finding is presented in much greater detail later in this review, as it is central to the current study.

### *Social Support as a Means of Coping*

The coping strategies detailed up to this point represent individual efforts directed toward mitigating distress. Although such strategies play a very important role in coping, they do not take into consideration the importance of social support as a means of dealing with distress. Weiss (1974) suggested that social relationships serve six important functions. Attachment relationships provide individuals with feelings of affection and security. Friendships help individuals to develop a sense of belonging and integration within a larger community. Both formal and informal sources of advice and guidance often assist individuals in times of need. Interactions with colleagues tend to provide a sense of self-worth. In addition to these rather intangible benefits of supportive relationships, others often provide us with material goods (e.g. money and shelter), which serve obvious and important functions. Finally, being able to provide social support to others is an important, and often overlooked, aspect of social relationships, which Weiss refers to as opportunity for nurturance.

Much of the research related to social support in adult populations proposes that it affects psychological well-being in two distinct ways. The "buffering effect" suggests that the presence of a supportive social network mitigates the pathogenic effects of stress, whereas the "direct effect" model proposes that having a support network is beneficial regardless of the presence or absence of a stressful situation (Cohen & Wills, 1985).

Cohen and Wills (1985) reviewed scores of social support studies searching for evidence of the buffering and direct effects. They presented a meta-analysis of 60 studies, 29 of which found evidence for the buffering effect, whereas 40 showed evidence of a direct effect of social support on well-being. The authors concluded that there is ample evidence to suggest both a main effect and buffering effect for social support.

More recent research supports Cohen and Wills' (1985) findings. A number of studies have found social support to predict lower levels of psychological distress, including symptoms of anxiety, depression, and neuroticism (Cutrona, 1989; Elliot, Herrick, and Witty, 1992; Elliot, Marmarosh, & Pickelman, 1994; Mallinckrodt, 1996; Pierce, Sarason, & Sarason, 1996; Sandler and Lakey, 1998; Tardy, 1985) as well as lower levels of emotional loneliness (Davis, Morris, & Kraus, 1998). Further evidence of the beneficial aspect of social support was found in a large-scale study of Canadian psychiatric patients, welfare recipients, and normal controls, which found that quality of life was positively correlated with measures of social support for all three populations (Caron, Tempier, Mercier, & Leouffre, 1998).

In summary, a great deal of research confirms that those who possess an adequate social support network are less prone to suffer from symptoms of distress in the presence of stressful life events than those who are more isolated.

#### *The Role of Social Support in Long-Distance Romantic Relationships*

Given the importance of social support as a means of coping, it seems reasonable to assume that those in LDRs would benefit from a supportive social network. Early writers noted that those in LDRs often faced derision and disapproval from those closest to them (Gross, 1980; Kirschner & Walum, 1978). Women, especially mothers involved



in commuter marriages, were often sharply criticized by relatives for “abandoning” their husbands and children (Farris, 1978). The men in these relationships were sometimes viewed as emasculated by their career-oriented wives (Kirschner & Walum, 1978). The isolation for those in LDRs is often compounded by the fact that most participants in these relationships do not have other long-distance couples in their social support network (Anderson, 1992; Anderson & Spruill, 1993; Govaerts & Dixon, 1988). Finally, those in LDRs often treat their time together as precious, which may lead them to cut themselves off from other members of their social support network during reunions (Govaerts & Dixon, 1988; Westefeld and Liddell, 1982).

Feeney (1998) examined the use of social support as a means of coping with temporary separation in romantic relationships. Her results, which will be reviewed in greater detail in a later part of this chapter, revealed a negative correlation between female participants’ levels of relationship-centered anxiety and their use of social support ( $r = -.31$ ). In other words, the more anxious these females were about their relationships, the less likely they were to seek out others for support.

All of these factors suggest that those in LDRs may face special challenges in the area of social support. Indeed, given their relative levels of isolation, it may be that those in LDRs rely on each other for support more than they rely on others. Perhaps the growing acceptance of LDRs has removed some of the stigma formerly associated with this type of relationship. Those engaging in LDRs may not face the same criticism that they did some twenty years ago. Whether or not this is the case, it stands to reason that those who can rely on a stable and supportive social network will likely report greater

relationship satisfaction and less distress than those without such a network (Vormbrock, 1993).

In summary, research addressing the role of social support in LDRs has been almost entirely qualitative and speculative in nature. Given that social support can be a potent means of coping with stress, the concept of social support was explored in the current study. Specifically, the current study included a general (Folkman & Lazarus, 1988) and partner-specific (Cutrona, 1989) measure of social support to determine how those in LDRs might enlist their partners and others in dealing with a relationship stressor.

#### *The Long-Distance Relationship Literature*

Research into LDRs is extremely limited, despite the fact that these relationships are currently quite prevalent in our society. Recent research has shown that as many as 25% to 45% of college students are engaged in LDRs at any given time (Dellmann-Jenkins, Bernard-Paolucci, & Rushing, 1994; Guldner, 1996; Guldner & Swensen, 1995; Stafford & Reske, 1990), and that 70% of college students have been in an LDR at some point in their lives (Guldner, 1996). This portion of the literature review presents extant LDR research relevant to the current study. Specifically, this review addresses studies that examined level of distress among those in LDRs and the perceived satisfaction with these relationships.

#### *Long-Distance Relationships and Psychological Distress*

Helgeson (1994) explored reactions to physical separation and relationship dissolution in college students involved in LDRs. College students involved in LDRs were assessed, using the Brief Symptom Inventory (BSI; Derogatis & Spencer, 1982),

two weeks into the fall semester (Time 1) and one week prior to the end of the same semester (Time 2). The great majority of participants (81%) were first-year undergraduate students. Among the variables explored was the amount of time partners spent together during the summer before separation (interdependence). In an intriguing interaction effect, results suggested that women who had spent little time with their partners the previous summer functioned at a significantly higher level than men who had spent the same amount of time with their partners. Indeed, there was a strong, negative linear relationship between these variables for women. The same association applied for the experience of positive and negative emotions based on amount of contact prior to separation (Helgeson, 1994). Among the individuals whose relationships ended over the course of the semester, women reported more global distress than men at initial assessment but lower distress than men at Time 2 (Helgeson, 1994).

Helgeson's (1994) results suggest that college women adjusted more easily to separation than did college men when the amount of time spent together prior to separation was relatively low. Women were also more distressed at Time 1 than were men, suggesting that college men likely benefit from romantic relationships more so than college women. This finding is consistent with the marriage literature, which suggests that men benefit psychologically from marriage more than women (Gove, 1973). An explanation for such sex differences may be that men rely on their romantic partners for social support more than women. Thus, women may feel overly burdened by their male partners' social and emotional needs (Helgeson, 1994). Further, at separation and breakup, women may have a more extensive social support network to rely on than do men, which may serve as a buffer to women's levels of distress (Helgeson, 1994).

Given that the first year of college is a time when a high proportion of relationships transition from proximal to long-distance (due to one partner remaining in high school, attending a different college, or not entering college at all), Helgeson's (1994) study is an important contribution to the literature on LDRs. The interaction effect involving participant sex and interdependence raises some interesting questions and seems to contradict the commonly held belief that women place more importance on romantic relationships than men. Contrary to this assumption, Helgeson (1994) found that college women were more burdened by their long-distance relationships than were college men and that breakup was easier for women than for men. The idea that women may have a more extensive social support network to buffer their transition to a long-distance relationship and to a possible breakup is a plausible explanation. However, Helgeson (1994) did not incorporate a measure of partner and general social support, which could have explained more definitively this interaction effect. Further, the author admitted that her measure of interdependence (time spent together during the summer) was "crude" (p. 263). Although it appears logical that partners who spend more time together are more "interdependent," it seems to be a rather simplistic operationalization of a complex phenomenon. Time spent together may suggest more opportunity for interaction, but it does not shed light upon the quality of interactions. Helgeson (1994) seems to assume that time spent together is inherently enjoyable, whereas one can imagine that some couples with poor relationships may spend relatively more time together in an attempt to improve their relationships. A more comprehensive approach to exploring interdependence could have elucidated the discussion of these results.

In the only published study that could be found that examined rates of distress in LDRs compared to those in proximal relationships (PRs), Guldner (1996) found that those in LDRs were, on average, more psychologically distressed (as measured by the Brief Symptom Inventory) than their PR counterparts. Guldner's (1996) study consisted of 384 undergraduate students, 25% of whom were involved in an LDR. Participants were drawn from an introductory psychology course; the mean age of participants in both the LDR group and the PR group was 19. In a very simple design, participants completed only a demographic questionnaire and the BSI.

Results indicated that those involved in LDRs suffered from more symptoms of depression, phobic anxiety, and psychoticism than did those in PRs. The most pronounced difference between groups was on levels of depression, with those in LDRs more likely to report feeling lonely and "blue" than those in PRs. Guldner (1996) also found that levels of distress were unrelated to the demographic variables of length of relationship prior to separation, distance separated, expected duration of separation, and frequency of visits.

Guldner's (1996) study provides some evidence that undergraduate college students involved in LDRs experience slightly elevated symptoms of depression compared with their PR counterparts. This said, it is important not to overstate his findings. First, although there was a significant difference between scores on the depression subscale of the BSI for those involved in LDRs and PRs, there was no significant difference in global ratings of distress on this measure. In other words, "students in LDRs reported no greater difficulty with overall psychological functioning" (Guldner, 1996, p. 295). Further, although the 5-point difference in mean depression

scores was statistically significant, it is unclear whether or not such a difference would be clinically significant. Finally, Guldner did not provide information on intercorrelations among BSI subscales. Subscales of the BSI are known to correlate quite highly due to the overlapping nature of psychological symptoms (Derogatis & Spencer, 1982; Helgeson, 1994). Such strong correlations can reveal elevated scores on subscales that share symptomatology. For example, in Guldner's (1996) study, elevations in the phobic anxiety and psychoticism subscales were due to those in LDRs feeling uneasy in crowds and lonely even in the presence of others, more so than for those in PRs. These feelings of mild anxiety and loneliness are not uncommon in those experiencing depressive symptoms. However, Guldner only emphasized those differences between groups on the depression subscale and noted that such mild increases in depressive symptoms are likely normal given the separation of partners in LDRs.

These caveats notwithstanding, Guldner's (1996) study is important for several reasons. First, it represents one of the only attempts to compare levels of psychological distress among those in LDRs and PRs. Given the unique challenges that those in LDRs face, such an exploration represents a good starting point in this area of research. Second, findings of elevated distress are important because they have the potential to guide the treatment of those involved in LDRs who present clinically. Finally, Guldner's study introduced the idea of geographical separation as a type of threat to adult attachment bonds. From this framework, mild depressive symptoms, such as withdrawal and emptiness, represent a normal reaction to the disruption of affectional bonds. Indeed, these symptoms may serve an "adaptive value...by limiting the amount of energy expended in fruitless protest" (Guldner, 1996, p. 295). This observation is important to

the current study, which explores for the first time adult romantic attachment styles of those involved in LDRs.

*Long-Distance Romantic Relationships and Relationship Satisfaction*

The majority of research in LDRs has examined relationship processes including communication, intimacy, and satisfaction. One of the earliest studies to take this approach was conducted by Govaerts and Dixon (1988). These authors examined 55 individuals involved in commuter marriages and 55 non-commuters. All participants in Govaerts and Dixon's (1988) study characterized their careers as "an important life goal, and one that required ongoing development" (p. 270). Individuals were classified as commuters if they kept a residence in the city where they were employed and lived apart from their spouses at least two nights per week.

The variables of interest to this study were marital and vocational satisfaction, and communication styles. The authors found no differences between these groups on the global measures of marital and vocational satisfaction. However, commuters were less satisfied than non-commuters with the amount of affective communication and time spent together. Affective communication includes receiving "caring, empathy, understanding, and self-disclosure" from one's partner (Govaerts and Dixon, 1988, p. 275). Also, commuters tended to use a parallel communication style less frequently than did non-commuters. Such a style of communication is typified by a flexible and responsive approach to communicating with one's spouse. The authors speculated that perhaps time apart leads those in commuter marriages to grow accustomed to making more unilateral decisions, thereby accounting for the differences in communication styles (Govaerts and Dixon, 1988).

Govaerts and Dixon (1988) also entered their variables of interest into a regression equation with marital satisfaction as the criterion variable. They found that for commuters, a parallel communication style accounted for 72.11% of the variance in marital satisfaction. This value was significantly less for non-commuters (13.8%), but parallel communication was the only predictor to emerge as significant in that regression equation as well.

That a single variable (parallel communication style) would account for so much of the variance in marital satisfaction, especially among commuters, is an intriguing finding. It seems reasonable that commuters, who have less opportunity for extensive communication with their spouses, would benefit greatly from communicating in a manner that “allows for more flexibility, encourages acceptance, and fosters encouragement to exchange information and ideas” (Govaerts and Dixon, 1988, p. 277). The fact that satisfaction for non-commuters was dramatically less dependent upon communication styles and that only 13.8% of the total variance was explained in this equation, suggests that there were important aspects of non-commuter marriage not explained by the variables of interest (Govaerts & Dixon, 1988).

Given the importance that communication styles played in Govaerts and Dixon’s (1988) study, it is unfortunate that the authors devoted little time to the discussion of communication styles. Also, the authors admit that both commuters and non-commuters reported using a parallel communication style with their partner in over 80% of the scenarios presented. That such a large proportion of their sample claimed to use this highly adaptive communication style makes one wonder whether social desirability played a role in these responses. Although Govaerts and Dixon (1988) used standardized



instruments to measure their variables of interest, their failure to report psychometric data for these instruments leaves the reader unable to draw meaningful inferences from their data.

Another innovative approach to studying interpersonal processes in LDRs has been the exploration of idealistic distortion in these relationships. Stafford and Reske (1990) hypothesized that those involved in LDRs would tend to idealize their relationship more than those in PRs. The authors based this hypothesis on the idea that those in LDRs would have less communication with each other than those in PRs. This limited communication would lead those in LDRs to “fill in the gaps” in their relationship with “preconceived, idealistic images of one’s partner or images of what a relationship should be” (Stafford & Reske, 1990, p. 274). The authors predicted that such idealization would lead those in LDRs to rate their relationships more positively, to report higher levels of romantic love, and to rate their communication as more positive than those in PRs.

Stafford and Reske (1990) recruited 34 proximal couples and 37 long-distance couples, all of them undergraduates. All participants individually completed questionnaires without their partners, using standardized instruments to measure idealistic distortion, relationship satisfaction, romantic love, and quality of communication.

Results suggested communication was more “restricted” for those in LDRs than for those in PRs. Communication patterns of those in LDRs were restricted based on the finding that those in LDRs were much less apt to engage in face-to-face communication, and much more likely to communicate by phone and through letters than those in PRs. As predicted, those in LDRs scored higher on idealistic distortion, perceived love, quality of communication, and relationship satisfaction than did their PR counterparts. Further,

80% of those in LDRs rated themselves as likely to marry their partners, as opposed to only 62% of those in PRs. At a 6-month follow-up interview, those in LDRs were more likely to still be together than those in PRs; relationship stability rates were equal at 12 months (Stafford and Reske, 1990).

Although past research has revealed a tendency toward idealization in engaged couples (Schulman, 1974), Stafford and Reske have been the only researchers to explore idealization in long-distance couples. However, Stafford and Reske's contention that the differences they uncovered are entirely due to idealistic distortion must be viewed cautiously. It seems possible that those in LDRs may actually have higher quality relationships than those in PRs, a possibility that the authors dismiss as "unlikely" (Stafford & Reske, 1990, p. 277). Indeed, perhaps when the decision to separate, stay together, or end their relationship arose, those in LDRs chose the first option because they already perceived their relationship to be stronger than most. Thus, a type of "selection bias" in LDRs may result (i.e., these relationships are, on average, more stable and positive than PRs even before separation). Stafford and Reske (1990) could have explored in greater detail the role of idealization in LDRs by providing a detailed correlational matrix and by utilizing regression analysis to partial out the effects of idealization on a criterion variable such as relationship satisfaction.

Intimacy processes, and how these contribute to relationship satisfaction, have been the focus of several studies in the LDR literature (Dellmann-Jenkins, et al., 1994; Guldner & Swensen, 1995; Schwebel, Dunn, Moss, & Renner, 1992; van Horn et al., 1997). Schwebel et al. (1992) explored, among other things, whether intimacy scores at the beginning of a semester apart would predict relationship status (still dating or broken

up) at the end of the semester. Participants were 89 first-year students recently separated from their partners, who remained at home. To be eligible to participate in the study, partners had to be involved in the relationship for at least three months, and students had to live a minimum of 50 miles from their partners. Students completed questionnaires at the beginning of the fall semester (Time 1) and again approximately nine weeks into the semester (Time 2). At Time 2, students were also asked if they were still involved in the same relationship; their response was used as a measure of relationship stability.

The major variables of interest in Schwebel et al.'s (1992) study were intimacy, dyadic adjustment, and empathy. The authors used the Personal Assessment of Intimacy in Relationships Inventory (PAIR; Schaefer and Olson, 1981) as a multidimensional measure of intimacy. The PAIR measures the following five types of intimacy: emotional, social, intellectual, sexual, and recreational. It also provides a measure of relationship conventionality. Dyadic adjustment was measured using the Dyadic Adjustment Scale (DAS; Spanier, 1976), which has the following four subscales: dyadic consensus, dyadic satisfaction, dyadic cohesion, and affectional expression. Empathy was measured using the 33-item, Questionnaire Measure of Emotional Empathy (QMEE; Mehrabian & Epstein, 1972). Additionally, the authors explored the number of times partners saw each other weekly, the average number of times they spoke on the phone each week, and the length of their relationship (Schwebel et al., 1992).

Schwebel et al. (1992) performed a 2 (participant sex) x 2 (relationship stability) MANOVA with the above variables of interest. Only Time 1 scores were used in these analyses. There were significant main effects for sex and relationship stability, and a significant interaction effect. First, women were more likely to express greater levels of

empathy than men. As for relationship status, those who were still together at Time 2 were more likely to have higher Time 1 levels of satisfaction, sexual intimacy, emotional intimacy, and conventionality. For couples that remained together at Time 2, women's ratings of recreational intimacy, social intimacy, and intellectual intimacy were higher than men's, whereas for couples that broke up, men's ratings on these same variables were higher than women's.

Results of their stepwise multiple regression analysis revealed that the single best predictor of relationship stability for both men and women was satisfaction at Time 1 (Schwebel et al., 1992). For men, both recreational intimacy and intellectual intimacy predicted poorer relationship stability. Similarly, for women consensus (i.e. how much they and their partners agree on a variety of issues) was a negative predictor of relationship stability. Schwebel et al. (1992) explain that recreational intimacy, intellectual intimacy, and consensus may contribute negatively to relationship stability because such apparently positive relationship characteristics are missed sorely when partners separate. This yearning for one's partner may then encourage those who separate to seek out a different partner, thereby ending the original relationship. The authors point out that such a scenario would be especially common among young men and women, of which their sample was entirely comprised. The authors use Rusbult's (1983) Investment Model of relationship stability to bolster this explanation. In short, when the costs of keeping the relationship begin to outweigh the benefits and when the availability of other potential partners is high (as it often is in college), the relationship may be in greater jeopardy of terminating. However, Schwebel et al.'s (1992) results do not allow us to test this hypothesis.

A competitive explanation for Schwebel et al.'s (1992) interaction effect could be that women are more accurate assessors of relationship quality than men. To summarize Schwebel et al.'s (1992) findings, when women reported higher levels than men of recreational, social, and intellectual intimacy at Time 1, these relationships were more likely to endure than when men rated these variables higher at Time 1. There is research to suggest that women tend to be more accurate in their perceptions of relationship problems than men (Helgeson, 1997; Hill, Rubin & Peplau, 1976; Levinger, 1966). Further, women in Schwebel et al.'s study showed higher rates of empathy than men. Perhaps higher empathy also makes women more accurate assessors of their relationships because they are more attuned to their own and to their partners' feelings.

More recent research (Dellmann-Jenkins et al., 1994) explored differences between those in LDRs and those in PRs on measures of intimacy. The authors sampled 250 undergraduate students who were romantically involved for at least six months with the same partner. The authors presented examples of long-distance and geographically close relationships and asked their participants to classify their current relationship into one category or the other. The final sample was comprised of nearly equal numbers of participants involved in LDRs and PRs. Dellmann-Jenkins et al. (1994) used the PAIR (Schaefer and Olson, 1981) as their multidimensional measure of intimacy. The authors made no specific predictions as to how those in LDRs and those in PRs might differ on intimacy processes, however, they sought to answer the perennial question "does distance make the heart grow fonder?"

Results of the ANOVA suggested no main effect for relationship type (LDR versus PR), but there was a significant, unexpected main effect for gender. Specifically,

women in both types of relationships rated their relationships higher than males on four of the five intimacy areas, namely social, sexual, intellectual, and recreational (Dellmann-Jenkins et al., 1994). The authors attribute this difference in satisfaction to two demographic variables. First, men involved in LDRs reported that their partners supported their academic pursuits less than females involved in LDRs. Also, women in LDRs reported higher levels of daydreaming, which the authors note could lead to more idealization, thereby accounting for their higher intimacy ratings, a finding supported by prior research (Stafford & Reske, 1990).

Dellmann-Jenkins et al.'s (1994) reason that men reported lower satisfaction on intimacy scales was due in part to less perceived support for their academic pursuits. However, only men involved in LDRs held such a perception. Thus, if the authors' explanation were correct, one would expect that these men were less satisfied than men involved in PRs, because those in PRs felt that their partners supported their academic pursuits. The authors found no such evidence for this. Similarly, women in LDRs daydreamed more than women in PRs. If daydreaming were responsible for higher intimacy scores, then women in LDRs should have reported more satisfaction with intimacy than women in PRs, which was not found. It appears that Dellman-Jenkins et al. (1994) did not address relationship satisfaction, but focused on intimacy, assuming perhaps that higher levels of intimacy result in greater relationship satisfaction. Although this seems a reasonable assumption, Schwebel et al. (1992) found that certain types of intimacy actually predicted poorer relationship outcome in LDRs.

A year after Dellmann-Jenkins et al. published their study, Guldner and Swensen (1995) expanded the research in this area by exploring satisfaction, intimacy, dyadic

trust, and progress in LDRs and PRs. The authors used the same intimacy scale as Dellmann-Jenkins et al. (1994), but supplemented their study with a reliable and valid measure of relationship satisfaction (Relationship Assessment Scale; Hendrick, 1988), as well as three standardized measures of progress toward marriage, trust, and commitment. Guldner and Swensen (1995) reasoned that “if simply spending time together as a couple is fundamental to a satisfying and stable relationship,” (pp. 315-316) then those in LDRs should rate their relationships lower on all five variables of interest than those in PRs.

Guldner and Swensen’s (1995) participants were the same sample of 384 undergraduate students surveyed in Guldner (1996). Results of the MANOVA suggest no significant differences between participants in LDRs and those in PRs on any of the variables of interest. The authors concluded that simply spending more time together does not make those in PRs more satisfied with their relationship than those in LDRs. Such results complement prior research (Stafford and Reske, 1990) suggesting that those in LDRs might idealize their relationships more than those in PRs, leading to inflated satisfaction scores for the former group. Guldner and Swensen noted this tendency toward idealization in the introduction to their study, yet did not include a measure of idealistic distortion to control for the inclination. Second, the American college experience, which tends to include high levels of social interaction, may help to alleviate some of the negative aspects associated with spending time apart from one’s partner (Guldner and Swensen, 1995). Finally, given that the average age of participants in Guldner and Swensen’s study was 19, one wonders how well they are able to assess accurately intimacy processes, progress toward marriage and the like.

Finally, van Horn et al. (1997) examined intimacy and communication processes in LDRs and PRs. The authors explored nine intimacy processes, closeness, and relationship satisfaction to determine if any differences existed between those in LDRs and those in PRs. The nine aspects of intimacy examined were intimate self-disclosure, descriptive self-disclosure (sharing factual information), receiving attention, enhancement of worth, confidence in the relationship (reliable alliance), companionship, receiving instrumental help, feeling understood, and giving nurturance. The authors used the Network of Relationships Inventory (NRI; Furman & Buhrmester, 1992) to measure the nine intimacy areas and relationship satisfaction. Closeness was measured using the Inclusion of Other in the Self scale (IOS; Aron, Aron, & Smollan, 1992), which asks participants to characterize the level of closeness between themselves and their partners by choosing one of seven diagrams depicting two circles overlapping to different degrees. Van Horn et al. (1997) provided adequate psychometric data to support the reliability and validity of their measures.

In an exploratory approach, van Horn et al. (1997) predicted that overall levels of intimacy would be equal between the different relationship groups but that there would be differences between the groups on some of the nine intimacy subscales. Given discrepant results of past studies, the authors did not predict *a priori* whether LDRs and PRs would differ in relationship satisfaction or whether frequency of visits would be correlated with satisfaction.

Using a sample of 162 undergraduates, half of whom were in LDRs and half in PRs, the authors found, as predicted, that those in LDRs rated their relationships as lower on three intimacy subscales, but equal in overall intimacy. Specifically, those in LDRs



reported lower companionship, descriptive self-disclosure, and reliable alliance than their PR counterparts (van Horn et al., 1997). Further, the authors found that those in LDRs were less satisfied with their relationships than those in PRs. These results contrast with earlier works, which found little or no differences between LDRs and PRs with regard to relationship satisfaction, commitment, and intimacy (Dellmann-Jenkins et al., 1994; Guldner and Swensen, 1995; Stafford & Reske, 1990). Also in contrast to earlier work (Holt & Stone, 1988), van Horn et al. found no difference in relationship satisfaction dependent upon frequency of visits. Despite their lower satisfaction and intimacy ratings, LDRs and PRs did not differ in breakup rates over the three-month period examined (van Horn et al., 1997), a finding consistent with earlier research (Stafford & Reske, 1990; Stephen, 1987).

Van Horn and colleagues (1997) attributed the differences found in the three intimacy processes to the restrictions that distance imposes on those in LDRs. Descriptive self-disclosure (i.e., discussing everyday occurrences) is a luxury that those in LDRs might not have, given that their communication is likely to take place over the telephone or computer. Nor is it surprising to find that those in LDRs reported lower levels of companionship than those in PRs, who spend much more time in face-to-face interactions. Finally, although LDRs are no more likely to terminate than PRs, van Horn et al. (1997) did find that those in LDRs were less confident in the future of their relationship than those in PRs. Further, this confidence (termed “reliable alliance”) was the single best predictor of relationship satisfaction in LDRs and PRs, accounting for about 75% of the variance in satisfaction for both relationship types.

Van Horn et al.'s (1997) study represents one of the few examples of a comprehensive and rigorous approach to exploring LDRs and PRs. Van Horn and colleagues (1997) improved upon earlier research in this area by using a longitudinal design and high quality measures to compare specific intimacy processes in LDRs and PRs. In doing so, the authors were able to show that although these two types of relationships may not appear to differ when viewed globally, a more refined analysis suggests important differences in how those in LDRs negotiate and view their relationships. Such a finding helps to explain the apparently equivocal results found in this literature over the past 15 years or so. In discussing directions for future research, van Horn et al. (1997) noted that future studies should examine a variety of coping processes employed by those in LDRs. This suggestion was incorporated into the current study.

#### *Summary of the Long-Distance Literature*

Perhaps the best that can be said of the very limited research conducted on LDRs thus far is that the results are largely equivocal. It is unfortunate, however, that so much of the research conducted in this area is limited by the poor design characteristics. Examples of these include using single item measures (Carpenter & Knox, 1986; Holt & Stone, 1988) when high quality measures exist in the literature, and using arbitrary or confounded classifications of relationship type (Holt & Stone, 1988; Stephen, 1987). Taking these factors into consideration, it is possible to summarize the literature as showing that undergraduate college students in LDRs may suffer from slightly higher levels of depression than those in PRs (Guldner, 1996), are no more likely to terminate their relationships than those in PRs (Stafford & Reske, 1990; Stephen, 1987; van Horn et

al., 1997), may benefit from monthly visits (Holt & Stone, 1988), may tend to engage in idealization of their partner and the relationship (Stafford & Reske, 1990), and may suffer from less satisfying communication and certain types of intimacy (Dellmann-Jenkins et al., 1994; van Horn et al., 1997).

Given that many of the results of research conducted in this area have been equivocal, it may be that important variables that contribute to relationship satisfaction have been overlooked. In this vein, Feeney (1998) published a study that explored the role of romantic attachment styles in coping with a period of separation from one's partner. The results of her study are presented below following an overview of infant and adult attachment.

#### *A Brief History of Infant Attachment*

Understanding adult romantic attachment requires a brief review of the concepts associated with infant attachment. Attachment theory has had a major impact on numerous facets of psychology. Bowlby (1969/1982) first speculated that human infants have an instinctual drive to form a close emotional bond with a primary caregiver (usually the mother). This instinct springs from the evolutionary advantage it conveys to the newborn. By forming an emotional bond with a more capable adult, the infant gains a sense of security and protection from what may often be hostile surroundings. Bowlby suggested that infants enact attachment behavior (e.g., crying in protest) when they sense potential danger in their environment. Such danger can include the presence of an unknown person or the absence of the caregiver. The infant's protest serves as an alert to the mother, who, under ideal circumstances, should draw near and reassure the infant. From their interactions with caregivers, infants learn the means to cope with situations

that engender feelings of fear and uncertainty. As such, attachment theory is, in its most basic sense, a theory of affect regulation (Feeney, 1998).

When infants were separated from their primary caregiver for prolonged periods of time (such as when placed in an orphanage), Bowlby (1969/1982) noted that they tended to have a three-stage reaction. *Protest* in the form of crying eventually gave way to *despair* and finally to emotional *detachment* in the mother's absence. Infants who became detached appeared to seek little comfort from secondary caregivers, relying instead on solitary play. This detachment presumably played a protective role at the time by replacing acute despair with a more sustainable reliance on oneself for emotional regulation.

Bowlby's theory was not entirely new to science. Ethologists had long since documented animals' powerful drive to form enduring bonds with their caretakers (Ainsworth, 1991; Bretherton, 1991). In applying these ethological principles to humans, however, Bowlby suggested a psychological advantage, as well as a survival benefit, to forming attachment bonds. Bowlby proposed that the emotional bond between mother and child serves as a template for the child's understanding of future relationships and also instills in the child a growing sense of self. Bowlby called these templates "internal working models," and he and other developmental psychologists (e.g., Ainsworth, 1991) found evidence that supports the theory that early attachment bonds have an enduring effect in shaping a child's psyche.

Ainsworth's research provided empirical support for Bowlby's theoretical claims (Ainsworth, Blehar, Waters, & Wall, 1978) through her "Strange Situation" experiment, where she found that infants' attachment styles seemed to fit into three distinct

categories. The strange situation requires a mother, in the context of a laboratory playroom, to separate from her infant for increasing periods of time. By observing infant reaction during the separation and, in particular, upon reunion with the mother, Ainsworth and colleagues could arrive at an infant's attachment style. Securely attached infants showed a healthy balance of independence and protest in the playroom. These infants might play for a short time after their mother left the room but would grow increasingly alarmed as the mother's absence grew longer. Upon reunion with their mothers, securely attached infants sought proximity to their mother, soothed relatively quickly and returned to play. Insecurely attached infants could be classified as either avoidant or anxious-ambivalent. Infants in the former category tended to show little or no concern even when their mothers were absent for long periods of time. Indeed, these infants seemed hardly to notice the departure or arrival of their mothers. Finally, anxious-ambivalent infants exhibited a mix of both proximity seeking and protest behavior when reunited with their mothers. Such behavior was typified by clinging to the mother coupled with a nearly simultaneous arching of the back in protest (Ainsworth et al., 1978).

This same study revealed motherly behaviors that correlated with infant attachment style (Ainsworth et al., 1978). It was found that mothers of secure children cultivated a balance of allowing their children freedom to explore and responded in a timely and appropriate manner to infants' proximity-seeking behavior. Mothers of anxious-avoidant children tended to be overly punitive in reaction to their infants' attachment behavior. As infants' needs are repeatedly greeted with a harsh response, it is believed that these infants learn to inhibit their attachment behavior except when danger

seems most imminent. Thus, in the context of the strange situation, avoidant children tend to show little concern over their mothers' absence. Children classified as anxious-ambivalent tended to have mothers who were inexperienced and inconsistent in their caretaking duties. Such mothers might respond in a soothing manner on some occasions and in a punitive or absent manner at other times. Presumably confused by such inconsistency, these infants learn to express exaggerated attachment behavior manifested in the clingy and protesting reaction typical of anxious-ambivalent infants.

As infants begin to form associations between themselves and stimuli in the environment, their budding consciousness forms schema to help them interact effectively with their surroundings. As alluded to above, an important early schema relates to how the infant interprets interactions with his or her mother. Through these interactions infants learn whether or not they can rely on those closest to them for support. Presumably, securely attached infants learn that they can trust their primary caregiver to attend to their needs. This inchoate understanding instills in a child a working model of others that includes the sense that others can be trusted and relied upon for help when needed. Similarly, insecurely attached infants internalize working models of others that are consistent with their interactions with their primary caregivers. Thus, an anxious-avoidant infant learns that others are hostile and cannot be trusted for help, whereas the anxious-ambivalent child may form a working model that suggests that others are inconsistent and unpredictable.

As the child continues to develop a sense of himself or herself as an autonomous being, he or she also begins to create a working model of self. Because infants must learn from others what it means to be an individual, their working models of self are also

based upon their interactions with others. Again, beginning with the securely attached infant, this child, in learning that others can be trusted and relied upon for help, eventually infers that he or she is worthy and deserving of care. An anxious-avoidant child learns that he or she is not worthy of love and nurturance because his or her cries only elicit punishment. In the same vein, anxious-ambivalent infants get a confusing message from caregivers. These children may internalize a working model of self that is conflicted and fraught with uncertainty. Such a model might include a fragile sense of self that is dependent upon the inconstant behavior of others.

The term “working models” suggests that the schemas individuals form are works in progress and that these templates are somewhat malleable based upon ongoing interactions with others. In this sense, attachment styles are not cast in stone, nor does the importance of attachment bonds dissipate with age. Indeed, recent authors have argued cogently for adult love as an attachment process (Hazan & Shaver, 1987), with intimate romantic relationships serving similar purposes as childhood interactions with significant others. Let us turn now to this discussion of adult romantic attachment.

#### *Adult Romantic Attachment*

In their seminal work on love as an attachment process, Hazan and Shaver (1987) suggested that adult romantic relationships serve purposes analogous to relationships in infancy. Although a human infant is clearly in more need of physical assistance from his or her caretakers than is a typical human adult, the need to form affectional bonds with others remains present throughout life. The authors predicted that working models of self and others, which are formed in infancy, would impact adult romantic attachment styles. For example, an anxious-avoidant infant, who has learned that others cannot be trusted

for nurturance, would carry these attachment beliefs into adulthood. Such an adult would be unlikely to trust others in close personal relationships, because he or she never found others consistently available early in life. Because working models of self are based upon interactions with others, this same adult might also deem himself or herself unworthy of the type of affection that others deserve and enjoy.

By adopting Bowlby's attachment framework and applying it to the realm of love, Hazan and Shaver (1987) developed numerous theoretically consistent hypotheses, many of which were borne out by their data. First, the authors found that proportions of adults who classified themselves as secure, avoidant, and anxious-ambivalent were consistent with the proportion of infants who normally fit these categories (Campos, Barrett, Lamb, Goldsmith, & Stenberg, 1983). Specifically, Hazan and Shaver (1987) found that 56% of their adult respondents classified themselves as secure in their most meaningful romantic relationship, whereas the proportions of those who self-identified as avoidant and anxious-ambivalent were 25% and 19% respectively. Those who categorized themselves as secure in their most important romantic relationship described the experience as being "happy, friendly, and trusting" (Hazan & Shaver, 1987, p. 515). These relationships tended to last longer and were less likely to end in divorce than those who classified themselves in either of the two insecure categories. Avoidant adults, on the other hand, reported emotional lability, jealousy, and fear of intimacy, whereas anxious-ambivalent adults tended "to experience love as involving obsession, desire for reciprocation and union, emotional highs and lows, and extreme sexual attraction and jealousy" (Hazan & Shaver, 1987, p. 515).



Individuals also expressed different schema for how they thought of love relationships based upon their romantic attachment style. Those classified as secure held a balanced view of love, suggesting that feelings of romance may fluctuate over time but that true love never fades completely. Avoidant adults were dismissive of the type of love frequently depicted as idealistic infatuation. These individuals tended to agree with the contention that romantic relationships are rare and do not endure. Finally, anxious-ambivalent participants found themselves falling in love frequently but rarely finding what they would call true, enduring love (Hazan & Shaver, 1987).

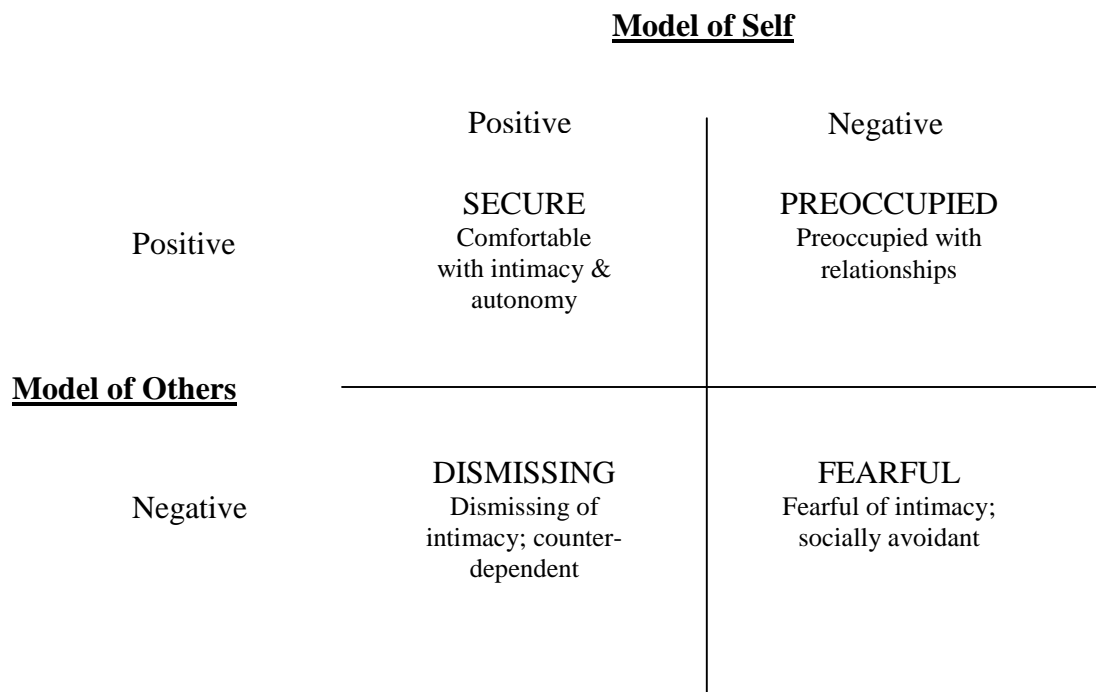
Perhaps most interesting and suggestive of a link between infant attachment style and adult romantic attachment were the results of Hazan and Shaver's (1987) discriminant analysis. The data revealed that participants who classified themselves as secure in their most important love relationship reported relatively warmer affectional bonds with both parents and between their parents than did insecurely attached participants. Avoidant adults were more likely to describe their mothers as "cold and rejecting" (p. 517), whereas anxious-ambivalent participants more often claimed that their fathers were "unfair." Again, such findings are highly interesting because they suggest a potential association between parent-child relationships and romantic relationships formed later in adulthood.

After examining Bowlby's original theory as well as Hazan and Shaver's (1987) modification, Bartholomew and Horowitz (1991) proposed a four-factor model of adult attachment. The authors reasoned that if one can internalize either positive or negative models of self and others, the result should be a matrix of four different adult attachment styles, as depicted in Figure 1. In this framework, an individual's working model of self

and others serves to predict his or her adult attachment style. Those with a positive view of self and others are comfortable with both intimacy and autonomy, making them *secure* in romantic relationships. Diametrically opposed to this category are those who have a negative view of themselves and others. Such individuals are *fearful* of intimacy and are socially avoidant. Individuals with a positive view of themselves and a negative opinion of others tend to be counter-dependent and *dismissing* of intimacy. Finally, those *preoccupied* with relationships have a negative opinion of themselves and a positive opinion of others (Bartholomew & Horowitz, 1991).

Using self and friend reports on 15 different measures, as well as a 60-minute interview, Bartholomew and Horowitz (1991) found strong evidence for the existence of these four attachment styles in a random sample of undergraduate psychology students. In their study, “47% of the sample was classified as *secure*, 18% as *dismissing*, 14% as *preoccupied*, and 21% as *fearful*” (Bartholomew & Horowitz, 1991, p. 229; italics in the original). These proportions are similar to those found in a later study that also used a random sample of undergraduate psychology students (Brennan & Morris, 1997). The numerous differences noted among these four groups included their levels of involvement and control in romantic relationships, their self-confidence, emotional expressiveness, reliance on others, and tendency toward caregiving. Specifically, secure and preoccupied individuals showed the same level of high involvement in romantic relationships, whereas the fearful and dismissing participants were equally low in involvement. Those

Figure 1. Four-category model of adult attachment styles—Bartholomew and Horowitz (1991)



categorized as dismissing tended to take more control in their romantic relationships than participants in any other classification. These same participants ranked highest in self-confidence, followed by the secure, then the preoccupied, and finally the fearful. With regard to emotional expressiveness, those preoccupied with relationships were by far the most emotionally expressive, whereas dismissive participants were least likely to express their emotions. The same pattern arose for reliance on others and caregiving—the most reliant and likely to provide care were those preoccupied with relationships, whereas dismissive individuals were least reliant and least likely to offer care to their partners (Bartholomew & Horowitz, 1991).

There was also evidence to suggest that interpersonal problems correlated with different attachment styles. Bartholomew and Horowitz (1991) examined both participants' ratings of themselves as well as their close personal friends' ratings of them on a variety of interpersonal dimensions. The authors found that the dismissing style was strongly associated with self and friend-ratings of coldness and lack of expressiveness in interpersonal interactions. Fearful individuals were rated by friends and themselves as introverted, and friends of dismissing types also rated them as introverted. Finally, there was a negative correlation between dismissing types self and friend-ratings of nurturance, which contrasted with friends of secure individuals, who rated their friends as more nurturing.

Bartholomew and Horowitz's (1991) study represented an important step forward in the attachment literature for a number of reasons. First, the authors confirmed a four-type structure that had been suspected for some time by other theorists (Ainsworth et al., 1978; Collins & Read, 1990) and which has been confirmed by subsequent research

(Brennan, Clark, & Shaver, 1998; Feeney, 1998; Griffin & Bartholomew, 1994; Latty Mann & Davis, 1996). This four-type matrix is grounded in Bowlby's original concept of working models of self and others, so it has a great deal of theoretical relevance to complement its empirical findings. Also, by exploring interpersonal dynamics characteristic of different attachment types, the authors suggest how individual's views of self and others are displayed in social situations. Given that self and friend-ratings of participants' interpersonal styles so often mirrored each other, Bartholomew and Horowitz's (1991) study suggests that these social dynamics are robust enough to be interpreted accurately by others. Such a finding may have strong implications for how others tend to interpret and react to the behavior of those possessing different attachment types. Finally, Bartholomew and Horowitz's (1991) refinement of adult attachment paved the way for research exploring attachment styles among dating partners as well as relationship stability among those with similar and dissimilar attachment styles.

#### *Romantic Attachment Styles in Long-Distance Relationships*

Adult attachment styles are associated with how individuals evaluate their romantic relationships. For example, secure individuals tend to view their relationships as high in trust, commitment, satisfaction and interdependence, whereas those insecurely attached report lower levels of trust and commitment, with avoidant individuals also reporting low levels of interdependence (Feeney, 1999). Such findings raise the question of what types of attachment styles may be present in LDRs and what role attachment dynamics might play in such relationships.

Physical and emotional separation has been viewed as a type of relationship stressor that tends to activate attachment behavior in an attempt to mitigate negative

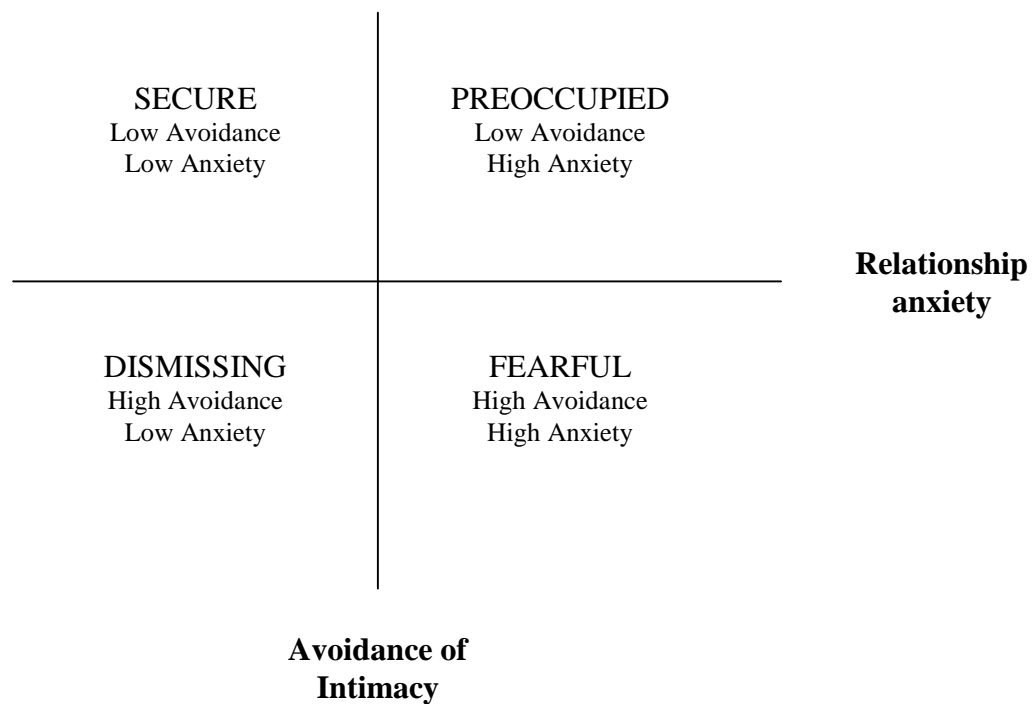
emotions (Feeney, 1998; Vormbrock, 1993). Just as an infant must learn to regulate his or her emotions in the absence of the primary caregiver, so too must a romantic partner come to terms with distress when his or her partner is at a distance. This being the case, one may assume that only those who are securely attached could withstand the difficulty of negotiating a romantic relationship from afar. Such individuals are comfortable both with intimacy and with autonomy, creating a type of balance that might be essential for those in LDRs. However, one could make an argument that both preoccupied and dismissing individuals would find LDRs gratifying for different reasons. First, an individual with a dismissing style might gravitate toward LDRs because they provide that person with a sense of counterdependence. The preoccupied individual, on the other hand, might appreciate being in an LDR because it essentially confirms his or her belief in the nature of relationships. In other words, if one believes that anxiety and preoccupation over relationships is the norm, one may view an LDR as the confirmation of one's convictions. Indeed, there is evidence in the literature to suggest that individuals do seek out relationships that confirm their attachment related beliefs (Feeney, 1999).

Still, one must wonder how long an LDR would last if one or both individuals were insecurely attached. Given the amount of time partners may be apart from each other, and the trust required to sustain such relationships, insecure attachment styles may affect relationship satisfaction and well-being in a potent, adverse way. In understanding how attachment dynamics may affect LDRs, let us address the two main factors associated with adult attachment, namely *avoidance* of closeness and *anxiety* over abandonment, and the manner in which these factors combine to form four different attachment categories.

In developing their Experiences in Close Relationships scale, Brennan and colleagues (1998) combed the adolescent and adult attachment literature for romantic attachment measures. The authors then comprised their own attachment questionnaire based upon 323 items compiled from the 60 attachment subscales they uncovered (items of similar content were not repeated). A factor analysis of these 323 items revealed a two-factor solution of avoidance of closeness and anxiety over abandonment. Such a solution is consistent with prior research in the area of adult romantic attachment (Bartholomew & Horowitz, 1991; Collins & Read, 1990; Hazan & Shaver, 1987; Levy & Davis, 1988; Simpson, 1990) and is consistent with Ainsworth and colleagues' (1978) initial observation of infants. This solution also complements Bartholomew's (1990) four-category approach to attachment styles (see figure 1). Figure 2 illustrates how Bartholomew's classification of attachment styles corresponds with the 2-factor solution found by Brennan et al. (1998).

As noted above, securely attached individuals may be well suited for LDRs because they possess a healthy blend of comfort with closeness (low avoidance) and independence (low anxiety). Research has shown that securely attached individuals represent a slight majority of those involved in proximal romantic relationships (Hazan & Shaver, 1987; Kirkpatrick & Davis, 1994). Given the unique challenges that time and distance represent in LDRs, one might expect to find securely attached individuals overly represented in LDRs. Diametrically opposed to this subset of the population are the fearfully attached. Their high avoidance of intimacy coupled with high anxiety over separation and abandonment would likely make them rare participants in LDRs.

*Figure 2.* Brennan et al.'s (1998) 2-factor solution of adult romantic attachment dimensions and its correspondence with Bartholomew's (1990) four categories.





Predictions become less straightforward when one looks at the remaining two attachment styles. First, preoccupied individuals are, as their classification suggests, preoccupied with their relationships. Because they possess a low degree of avoidance and a great deal of anxiety over abandonment, they frequently desire more intimacy than their partners are willing to give. It may be tempting to assume that preoccupied individuals would be as rarely represented in LDRs as fearful ones because “individuals who are highly anxious about their attachment relationships are likely to respond with greater anxiety to situations involving physical or emotional separation from romantic partners” (Feeney, 1998, p. 192). Such a conclusion may be premature, however, given that preoccupied individuals desire intimacy and may be more likely to be involved in a romantic relationship than fearful individuals. Further, research shows that preoccupied individuals work hard at maintaining their romantic relationships, again because intimacy needs and fear of abandonment play a central role (Collins & Read, 1990; Kirkpatrick & Davis, 1994). Finally, as noted above, there is evidence to suggest that individuals seek out relationships that confirm their attachment-related beliefs (Collins & Read, 1990; Kirkpatrick & Davis, 1994). Thus, if anxiety over separation and abandonment is the norm, perhaps preoccupied individuals would feel a sense of fit in an LDR. Given these considerations, the proportion of preoccupied individuals in LDRs is likely to be significantly smaller than securely attached individuals, but relatively greater than the proportion of fearful individuals.

Dismissing individuals are counter-dependent. They exhibit little anxiety over abandonment and also a tendency to avoid closeness with their partners. As such, their approach to relationships tends to be rather superficial, and they might be motivated to

break things off when a partner makes too many intimacy demands (Bartholomew & Horowitz, 1991; Brennan & Shaver, 1995). Dismissing individuals might enjoy LDRs because they provide a buffer of distance between themselves and their partners.

Assuming this is the case, however, one must wonder how such a relationship would fare in the long-term. If such a person truly prized distance as a means of reducing intimacy it seems unlikely that he or she would make the strong efforts necessary (e.g., frequent visits and communication) to keep the relationship afloat. Still, given the possible allure of distance to dismissing individuals, they may be as represented in LDRs as preoccupied individuals, both of which should be more represented than the fearfully attached.

In summary, it is not a simple matter to predict the relative proportion of different attachment styles that will be represented in a sample of LDR participants. However, given the considerations discussed above, it was expected that securely attached participants would be highly represented, followed in equal proportions by preoccupied and dismissing, with fearful participants in the relative minority. More interesting and central to the goal of this study was not merely the proportion of different attachment styles represented in the LDR population, but rather the manner in which these styles related to the other variables of interest. Let us turn now to this topic, specifically whether or not there is any association between romantic attachment styles and relationship satisfaction among those involved in LDRs.

#### *Romantic Attachment Styles and Relationship Satisfaction in LDRs*

Hazan and Shaver (1987) in their seminal study on adult romantic attachment found that securely attached married couples were more likely to have been together longer and less likely to divorce than insecurely attached couples. Secure couples also

reported being happier in their relationship, viewed their partner more as a friend, and reported higher levels of trust than avoidant and anxious-ambivalent types. Such findings have been borne out by numerous subsequent studies. Kirkpatrick and Davis (1994) found that women anxious about abandonment were less satisfied and viewed their relationships as less viable than securely attached women. Male partners of anxiously attached women also reported less satisfaction and perceived viability in their relationships. Men who avoid intimacy also reported being less satisfied with their relationship than secure or anxious men. Interestingly, avoidant men and anxious women showed surprisingly stable relationship duration despite low satisfaction in their relationships. Avoidant men were as likely as secure men to remain with their partner over a 7 to 14-month period, and anxious women were even more likely than securely attached women to be romantically involved with the same partner over a 30 to 36-month period of time (Kirkpatrick & Davis, 1994).

Such data suggest that despite being relatively unhappy in their relationships, avoidant men and anxious women must see some advantage to remaining in their relationships over the short run (i.e., 1 to 3 years). Kirkpatrick and Davis (1994) suggested that relationship stability among anxious women and avoidant men may be due to their expectations in relationships. For example, avoidant men expect partners to make excessive intimacy demands, which they likely encounter when paired with an anxious or even secure partner. Anxious women, on the other hand, fear abandonment and expect their intimacy needs to go unmet. Because their intimacy needs may indeed be perceived as excessive to secure partners and especially to avoidant partners, their partners may be unable or unwilling to comply with all of their demands for intimacy. The idea of a

confirmatory bias in partner selection is supported by the failure to find a single avoidant-avoidant or anxious-anxious pair in that particular study. Further, anxiously attached women are much more likely to work hard at maintaining their relationships than males and females of any attachment style (Collins & Read, 1990), so it may not be surprising that their relationships endure longer even than securely attached participants.

Brennan and Shaver (1995) found that avoidance of intimacy correlated positively with relationship frustration, self-reliance and ambivalence, and negatively with trust and proximity seeking. An anxious attachment style was correlated positively with frustration, jealousy, and clinginess, and negatively with trust. Other research has shown that avoidant men provide less comfort and support when their female partners are distressed (Simpson, Rholes & Nelligan, 1992), and that anxious-ambivalent women engage in more negative behavior during disagreements with their partners and are more likely to perceive their relationships as less positive after such disagreements (Simpson, Rholes, & Phillips, 1996).

In summary, although adults with insecure attachment bonds may manage to sustain romantic relationships at least in the short-run, the evidence is strong that such individuals report less satisfaction in their relationships. There was no reason to believe that the association among attachment styles and relationship satisfaction would differ among those involved in LDRs.

#### *Romantic Attachment Styles and Coping in LDRs*

As noted earlier, there is very little research exploring the effectiveness of specific coping styles used by those in LDRs. In most LDR research, exploration of coping strategies has focused on frequency of visits and on time spent communicating by

telephone (Carpenter & Knox, 1986; Guldner, 1996; Guldner & Swensen, 1995; Stafford & Reske, 1990; van Horn et al., 1997).

In a thorough review of the long-distance literature, Vormbrock (1993) interpreted studies dating back to World War II from the perspective of attachment theory. Most of the studies she reviewed focused on wives' coping with their husbands' absence due to military service. In prefacing her review, Vormbrock noted that attachment to a romantic figure takes on much greater importance in adulthood than one's childhood attachment to close caregivers. However, affect regulation remains an essential skill that one must employ throughout life. Because one's romantic partner in adulthood assumes a role analogous to the primary caregiver during early childhood (Feeney, 1998; Hazan & Shaver, 1987; Vormbrock, 1993), in times of great stress, one should expect that an individual will attempt to regulate negative affect primarily by seeking proximity to his or her romantic partner. When that partner is physically or emotionally absent, there should be a pattern of protest, despair, and emotional detachment similar to how infants react to prolonged absence of the primary caregiver (Pearlman, 1970; Vormbrock, 1993).

In summarizing each study's results, Vormbrock noted how the findings could be explained in terms of attachment theory. For example, it was commonly found that wives of soldiers experienced immediate feelings of loneliness, depression and anxiety when their husbands left for military service. This acute reaction eventually gave way to feelings of emotional withdrawal for some wives, whereas others found solace in religion, family, and childrearing. When spouses finally reunited, there were often feelings of anxiety, anger, and emotional detachment especially during the initial few

days or weeks until partners were able to reestablish close ties. Vormbrock found similar results in the literature for long-term separations due to work.

Vormbrock's review (1993) represents an important link between the infant and adult attachment literature. Because her work addressed temporary separation during marriage, it is of theoretical importance to the current study. This said, Vormbrock admitted that her review was limited to an attempt to fit past studies into the framework of attachment theory. As such, she was unable to perform any statistical analyses, which could have shed light on her hypotheses. Furthermore, the studies she reviewed were conducted prior to Hazan and Shaver's (1987) elaboration of romantic love as an attachment process, so these studies did not always collect data relevant to Vormbrock's interests. Regardless, Vormbrock's review was essential to the few researchers who, in the decade since she published her study, have collected data suggesting that adult attachment may indeed play an important role in how individuals cope with distance in their romantic relationships (Cafferty et al., 1994; Feeney, 1998).

One such study apparently inspired by Vormbrock was Cafferty and colleagues' (1994) exploration of attachment styles and reunion dynamics of Operation Desert Storm veterans and their spouses. In their study, Cafferty et al. examined the reaction upon reunion of 145 deployed, male National Guard troops and 148 non-deployed, female spouses. The authors found that for the deployed men, secure attachment style was associated with more positive emotion and less negative emotion at reunion than for insecure (both preoccupied and avoidant) men. Contrary to their expectations, there was no relationship between attachment style and emotions at reunion for the non-deployed, female spouses. There was, however, a clear relationship between attachment style and

post-reunion relationship satisfaction for both Guard members and their spouses. Specifically, secure men and women reported greater relationship satisfaction and less conflict after reunion than preoccupied men and women. Fearful and dismissive participants (which were combined into a single group labeled “avoidant”) did not differ significantly from the other groups.

Cafferty and colleagues’ (1994) findings support the notion that romantic attachment style may play an important role in the reunion dynamics of spouses separated due to military service. The authors found that the male veterans were especially sensitive to differences in positive and negative affect depending on their attachment style, and that relationship satisfaction differed for all participants depending on attachment style. The authors explained that the additional effect for the veterans was likely due to them being placed in a foreign and hostile environment—a condition to which the female spouses were not subjected. This condition likely led to higher stress levels, and presumably more attachment related behavior, for the veterans than for their spouses.

Cafferty and colleagues’ (1994) study was the first to explore empirically what had been proposed theoretically in the adult attachment literature—namely that spousal separation would lead to reactions upon reunion analogous to what has been found in the infant attachment literature. Such a finding provides important support for attachment theory as a whole and also adds to our understanding of potential factors at work in LDRs. It could well be that some of the equivocal results reported in the LDR literature are due to the failure to assess for participant attachment styles. The applicability of Cafferty and colleagues’ study to the current research is, however, limited in a few

important ways. First, the authors admitted that gender was completely confounded with deployment status in their study, making it impossible to separate the effects of these potentially important variables. Second, this study involved military personnel placed in a foreign, hostile environment, which makes it difficult to compare the results found here to samples involving graduate students. Finally, Cafferty et al. focused on reunion dynamics as opposed to reactions to and coping with ongoing separation.

A more recent study that appears more relevant to the current research was that of Feeney (1998). Feeney explored the effects of separation on those involved in romantic relationships. Her study did not address LDRs per se but rather reactions to periods of separation ranging from 2 weeks to 12 months. Feeney used the two attachment dimensions of comfort with intimacy (the opposite of Brennan et al.'s "avoidance") and anxiety over abandonment. She explored emotional reactions to separation (i.e., loneliness and despair), perceived effects of separation on the relationship, and coping strategies. Perceived effects of separation were classified into one of three categories—brought the couple closer, created future problems, or mixed results. The coping styles that Feeney examined were problem-focused (confrontive coping, maintaining contact with one's partner, engaging in goal directed behavior, and enlisting one's social support network) and emotion-focused (positive reappraisal, escape-avoidance, and minimizing). It must be emphasized that although most of Feeney's coping approaches bear the same names as those found in the Ways of Coping Questionnaire (Folkman & Lazarus, 1988), she did not use that questionnaire in her study, nor did she define these coping strategies in the same way as Folkman and Lazarus (1988). A notable example of this difference was her use of confrontive coping as an "active discussion and negotiation of the



situation with the relationship partner” (Feeney, 1998, p. 197), whereas Lazarus and Folkman (1988) define confrontive coping as “aggressive efforts to alter the situation [involving] some degree of hostility and risk-taking” (p. 11).

Feeney’s sample consisted of 72 unwed, heterosexual couples, about half of whom were college students. Couples were invited into separate rooms and each member was required to speak for five minutes about “a time when they were physically separated from their partner” (p. 195). Following this open-ended interview, participants completed a 15-item attachment questionnaire derived from Hazan and Shaver’s (1987) original adult attachment measure. Transcripts of the 5-minute interview were later coded to arrive at coping styles, reactions to separation, and the perceived effects of separation on the relationship.

Feeney found that comfort with intimacy was positively related to males’ use of confrontive coping ( $r = .33$ ) and negatively related to their use of escape-avoidance coping ( $r = -.24$ ). For females, anxiety was inversely related to their tendency to seek out social support ( $r = -.31$ ). For both males and females, there was a negative correlation between anxiety and the number of different coping skills employed to come to terms with separation. In other words, anxiety was related to a more restricted approach to coping regardless of participant gender. As predicted, anxiety was positively correlated with feelings of despair for both males ( $r = .23$ ) and females ( $r = .29$ ). Loneliness, on the other hand, did not correlate significantly with anxiety or comfort, suggesting that this reaction may be a universal feeling when couples are faced with separation. Finally, males lower in comfort with intimacy were more likely to express problems during separation than males more comfortable with intimacy. Similarly, females’ difficulties

during separation were correlated positively with their level of anxiety. Females also had an easier time renegotiating their relationship upon reunion if they were comfortable with intimacy ( $r = .32$ ) and a more difficult time with this important task if they were anxious ( $r = -.29$ ). Males' attachment scores did not correlate significantly with ability to effectively renegotiate the relationship upon reunion.

Feeney's (1998) study, although it did not address LDRs per se, represents an important step toward understanding how attachment styles might impact coping with relationship separation. Feeney's results suggest that comfort with intimacy and relationship-centered anxiety may play a role in how individuals react to distance. First, loneliness appears to be a natural reaction to separation from one's partner. Despair, a decidedly more severe reaction, was positively correlated with relationship-centered anxiety. Anxiety was also related to a more restricted approach to coping with this relationship stressor. For females, this anxiety was also related to more problems with separation, a tendency to seek out less social support, and difficulty renegotiating their relationship upon reunion. Comfort with intimacy was more problematic for males, a finding that fits with the stereotype of males as less likely to be "the makers or maintainers of relationships" (Feeney, 1998, p. 201). Males who admitted to discomfort with intimacy engaged in more escape-avoidance coping and less confrontive coping, strategies that are unlikely to bode well for a relationship.

There are a few important limitations to Feeney's (1998) research. First, she used a rather dated instrument to measure adult romantic attachment styles when higher quality instruments exist. Second due to the interview format, participants' coping styles, emotional reactions, and perceived effects on the relationship, were all coded

categorically. In other words, Feeney's results showed whether or not a participant engaged in certain coping approaches or felt certain emotional reactions, but could not provide information on *how often* such approaches were used, how effective the coping processes were, or how intensely such emotional reactions were felt. Feeney based her coping categories on a model established by leading coping researchers (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986), however, she might have used a self-report measure by these authors, which would have provided more detailed information on specific coping strategies. Finally, she might also have defined her coping approaches in keeping with these leading coping researchers to avoid confusion. All of these criticisms were addressed in the current study, which used valid and reliable instruments to measure attachment styles, coping approaches, and relationship satisfaction.

Despite these caveats, by incorporating adult romantic attachment dimensions and coping, Feeney's (1998) work has important implications for the current study and potentially for the LDR literature. As noted earlier, a more detailed investigation of coping in LDRs is long overdue. Romantic attachment styles and coping provide a novel framework for examining how those in LDRs react to and cope with the inherent challenges in these types of relationships. This new framework, by incorporating two variables that have strong theoretical relevance to relationship satisfaction and well-being, may shed light on some of the equivocal results uncovered in earlier studies involving LDR couples.

To summarize, the current study sought to examine relationship satisfaction and levels of distress in those involved in LDRs. Romantic attachment and coping styles

served as the framework for understanding how those in LDRs react to and cope with the challenge of living separately from their partners. It was predicted that those with different attachment styles would have differing levels of relationship satisfaction and would use different coping strategies to cope with a relationship stressor. It was hoped that the results could add to the limited but growing literature on LDRs.

### Chapter 3—Statement of Problem

Depending upon the parameters used to define long-distance romantic relationships (LDRs), various authors have found that between 25% and 45% of college students are involved in such distal relations at any given time (Dellmann-Jenkins, Bernard-Paolucci, & Rushing, 1994; Guldner, 1996; Guldner & Swensen, 1995; Stafford & Reske, 1990). In one study, 70% of college students reported having been in a long-distance romantic relationship at some point in their lives (Guldner, 1996). It seems likely that distal romantic relationships are becoming much more common in America due in part to an increase in women's career aspirations and to the growing view that it may be acceptable for a couple to separate temporarily so that both individuals may pursue their respective educational and vocational interests (Farris, 1978; Gross, 1980; Gerstel & Gross, 1982; Kirschner & Walum, 1978; Rohlfing, 1995).

The sheer number of such romantic relationships would necessitate a closer look in the psychological literature. Beyond the mere prevalence of LDRs, however, it is clear that these unions deserve further study due to the fact that they likely present unique difficulties and rewards for those concerned (Rohlfing, 1995).

The preceding review of the research literature pointed out the relative dearth of studies dedicated to understanding LDRs. Of the studies published in this area, many concentrated on intimacy processes, communication styles, rates of distress, and partner satisfaction. Although these are all important topics, it is clear that there are many more questions than answers in the LDR literature. The current study focused on romantic attachment styles and coping strategies of those currently involved in LDRs. By focusing on these variables and how they may relate to levels of distress and relationship

satisfaction, it was hoped that the current study would help shed light upon an important area of research that has received relatively little attention to date.

The following hypotheses and research questions were based upon the limited research conducted on LDRs and commuter marriages, and upon the theories presented above.

**Hypothesis 1: There will be a significant, negative correlation between relationship satisfaction and avoidance of intimacy for those in LDRs.**

Individuals who have a great deal of relationship-centered anxiety and who fear intimacy will likely rate their LDRs less favorably than securely attached participants. These attachment variables have been shown to correlate in this manner among individuals in proximal relationships (Brennan & Shaver, 1995; Hazan & Shaver, 1987; Kirkpatrick & Davis, 1994; Simpson, Rholes, & Phillips, 1996), and there is no reason to suspect that the same would not apply to LDRs.

**Hypothesis 2: There will be a significant, negative correlation between relationship satisfaction and anxiety in close relationships for those in LDRs.**

The same rationale presented in Hypothesis 1 applies to this hypothesis.

**Hypothesis 3a: Relationship satisfaction of those in LDRs will differ according to attachment category. Specifically, secure individuals should report higher levels of satisfaction than both preoccupied and fearful individuals in LDRs.**

Secure individuals, because they are able to negotiate autonomy with intimacy, should be relatively satisfied in an LDR.

**Hypothesis 3b: Dismissing individuals in LDRs should report higher levels of satisfaction than both preoccupied and fearful individuals in LDRs.**

Dismissing individuals are counter-dependent and may be equally satisfied as secure individuals in LDRs because it gives them the independence they prize.

Preoccupied and fearful individuals should be least satisfied in their LDRs because they are both highly anxious when it comes to intimacy.

**Hypothesis 3c: Relationship satisfaction of those in PRs will differ according to attachment category. Specifically, secure individuals will be more satisfied than individuals in any other category.**

This hypothesis is based upon past research on romantic attachment styles of those in close relationships. It is expected that those in PRs, not having to manage absence of their partner as much as those in LDRs, will not suffer the same frustrations attempting to enact attachment-related behaviors. It is predicted that preoccupied, fearful and dismissing individuals in PRs will not differ in their levels of relationship satisfaction due to these presumably lower levels of frustration, which may make their attachment styles less salient. Secure individuals will, however, rate their relationships as more satisfying, as has commonly been found in past research (Bartholomew & Horowitz, 1991; Brennan & Shaver, 1995; Collins & Read, 1990; Hazan & Shaver, 1987; Kirkpatrick & Davis, 1994; Latty-Mann & Davis, 1996; Simpson et al., 1996).

**Hypothesis 4a: Secure and preoccupied individuals in LDRs will be more likely than dismissing and fearful individuals to report using higher levels of partner-specific social support.**

Secure individuals should value the support they give to and receive from their romantic partners and from friends and family. Preoccupied individuals, being highly concerned with the survival of their relationship, should rely to a high degree on their

partners and others for support and reassurance. Fearful individuals are afraid of too much intimacy and should avoid confiding in their partners or others for support.

Dismissing individuals are counter-dependent and should be least likely to feel they need to turn to others to cope with distress.

**Hypothesis 4b: Secure and preoccupied individuals in LDRs will be more likely than dismissing and fearful individuals to report using higher levels of global social support.**

Fearful individuals are afraid of too much intimacy and should avoid confiding in their partners or others for support. Dismissing individuals are counter-dependent and should be least likely to feel they need to turn to others to cope with distress.

**Hypothesis 4c: Secure individuals in PRs will be more likely than individuals in any other attachment category to report using higher levels of partner-specific social support.**

Again, secure individuals should value support from their partners, family and friends. Due to the presumably lower levels of frustration in enacting attachment-related behaviors of those in PRs, it is expected that those with preoccupied, fearful and dismissing styles will not engage in different levels of social support, but will differ from secure individuals on this coping approach.

**Hypothesis 4d: Secure individuals in PRs will be more likely than individuals in any other attachment category to report using higher levels of global social support.**

The same rationale presented in hypothesis 4c applies to this hypothesis.



**Hypothesis 5: The majority of LDR participants will list educational or employment goals as the main reason they currently live apart from their partner.**

This hypothesis is based on prior research on LDRs (Gerstel & Gross, 1982; Govaerts & Dixon, 1988; Kirschner & Walum, 1978; Rohlfing, 1995) and also the nature of the sample (i.e., participants are graduate students).

**Hypothesis 6: LDR participants who are unable to see each other at least once monthly will report less satisfaction in their relationships than those who are able to see each other at least once monthly.**

This hypothesis is based on prior research using a sample almost entirely comprised of undergraduate students (Holt & Stone, 1988). It is included to see if this finding holds true in graduate student relationships.

Due to the exploratory nature of the current study, data were used to address the following research questions:

**Research Question 1: Are there differences among the relative proportions of the four different romantic attachment categories represented in long-distance relationships compared to those in proximal relationships?**

**Research Question 2a: How will approaches to coping differ according to LDR participants' romantic attachment styles?**

**Research Question 2b: How will approaches to coping among those in PRs differ from those used by participants in LDR?**

**Research Question 3: How will the following variables contribute to relationship satisfaction: adaptive coping (planful problem solving, positive reappraisal, and general and partner-specific social support both general and**

**partner-specific); maladaptive coping (confrontive, escape-avoidance, and distancing); relationship-centered anxiety; avoidance of intimacy; and financial burden?**

**Research Question 4: How will LDR and PR participants' responses to the open-ended question "What makes your current relationship work?" differ or agree?**

**Research Question 5: How will participants in LDRs and PRs cluster on the variables of interest? Will these cluster sizes and types differ depending on relationship type?**

**Research Question 6: Did LDR participants differ in how important they rated their relationship stressor or how distressing they found it based on their romantic attachment type?**

This final research question was added after all other analyses were complete in an effort to understand why dismissing individuals in LDRs engaged in less escape-avoidance coping than their fearful and preoccupied counterparts. One possible explanation was that dismissing individuals did not appraise their relationship stressor as especially important or distressing.

## Chapter 4—Method

### *Participants*

Participants in the current study were 334 unmarried, graduate students involved in a romantic relationship of at least six months duration. Those in PRs were recruited along with LDR participants for comparison purposes. The criterion of a six-month relationship was based on past research (e.g., Dellmann-Jenkins, et al., 1994; Holt & Stone, 1988). The intent of this standard was to recruit individuals in presumably committed, long-term relationships. There was no minimum criterion for amount of time LDR participants had been separated from their partners. Individuals were classified as being in an LDR based on an affirmative response to the following prompt: “My partner lives far enough away from me that it would be very difficult or impossible to see him or her every day”(Guldner & Swenson, 1995). It should be noted that only this prompt was used to classify individuals as involved in an LDR. An additional question, “Do you consider your relationship to be a long-distance relationship?” was also included to explore how participants defined their own relationships. This question was used only for exploratory purposes and not to define relationship type.

The final sample was comprised of 133 individuals involved in long-distance relationships (LDRs) and 201 participants in proximal relationships (PRs). The initial sample contained 150 individuals in LDRs and 215 individuals in PRs, however, nine LDR and seven PR participants were eliminated because they were married, involved in a relationship for less than 6 months, or had clearly responded to the survey with false information (only one participant). Additional preliminary analyses revealed that participants in non-monogamous relationships differed from their monogamous

counterparts on several important variables. Specifically, in the LDR sub-sample, non-monogamous participants were less satisfied with their relationship, had lower partner-specific social support, and higher levels of avoidance of intimacy, escape-avoidance coping and maladaptive coping than their monogamous counterparts. In the PR sub-sample, non-monogamous participants also rated their relationships as less satisfying and were higher in relationship-centered anxiety than their monogamous counterparts. For this reason, the 8 non-monogamous LDR and 7 non-monogamous PR participants were eliminated from the sample, resulting in the total sample size of 334 as described above.

Similar analyses were conducted to determine if same sex participants differed in important ways from their heterosexual counterparts. Results of *t*-tests revealed that same-sex participants in LDRs did not differ from heterosexual participants on any of the variables. Same-sex individuals in PRs, were older and used more confrontational coping than their heterosexual counterparts. All subsequent quantitative analyses, were conducted with and without same-sex participants to determine if their inclusion would alter the significance of the study's findings. Because it was found that including same-sex participants did not result in any change in findings, they were retained in all analyses.

The majority of participants were graduate students at the University of Maryland at College Park. It was not possible to obtain an exact count of participants from various colleges due to the confidential nature of the data (i.e. participants were not required to provide information pertaining to what school they attended).

Of those in LDRs, 101 were females (75.9%) and 32 were males (24.1%). Median age of LDR participants was 25, and mean age was 25.63 (SD = 4.01). The

majority of LDR participants self-identified as White or European-American (73.7%), followed by Hispanic or Latino (5.3%), Black or African-American (4.5%), Asian-American or Pacific Islander (3.0%), Asian Indian or Pakistani (3.0%), biracial or multiracial (2.3%), and Middle Eastern or Arab (0.8%). In addition, 10 of the LDR participants (7.5%) identified their racial or ethnic status as “other.”

Of the PR participants, 156 were females (77.6%) and 45 were males (22.4%). Median age of PR participants was 26, and mean age was 27.20 (SD = 4.68). The majority of PR participants also self-identified as White or European-American (81.6%), followed by Asian Indian or Pakistani (5.0%), Black or African-American (5.0%), Hispanic or Latino (2.5%), Asian-American or Pacific Islander (1.5%), and biracial or multiracial (1.5%). Six of the PR participants (3.0%) identified their racial or ethnic status as “other.”

An initial goal of recruiting 150 participants for the LDR group was not entirely met as a result of eliminating the participants for the reasons described above. This figure was arrived at using power tables provided by Stevens (1986) for a four-group MANOVA with 10 variables, an alpha level of .05, and power set at .80. However, the sample size of 133 LDR participants was deemed adequate because the MANOVA used contained only nine variables.

### *Measures*

A demographic page (see Appendix A) asked participants for information regarding their sex, age, racial-ethnic status, length of time in their current romantic relationship, time since separation, personal income, frequency of visits, time until expected permanent reunification with their partner (if intended and known), desire for a geographically close relationship, and who was more motivated to live long-distance. LDR participants were

also asked to describe briefly (in a few sentences or less) the circumstances that led to the separation from their partner. Each LDR participant was also asked to estimate the amount of money he or she spends on their relationship that he or she would not need to spend if they lived proximally (e.g., telephone bills, travel expenses, etc.). These questions were followed by an item asking participants to rate how much of a financial burden these expenses were to them. In addition, LDR participants were asked to estimate the percentage of time they travel to visit their partner versus how often their partner travels to visit them. They were also asked what modes of transportation they use to make these visits. Questions unique to LDRs were omitted from the demographics page of PRs.

Coping strategies were measured using six subscales of the Ways of Coping Questionnaire (Folkman & Lazarus, 1988; see Appendix B). The Ways of Coping Questionnaire is a 66-item self-report measure designed to tap eight different methods of coping with a stressful event. These eight types of coping are (a) confrontive coping, (b) distancing, (c) self-controlling, (d) seeking social support, (e) accepting responsibility, (f) escape-avoidance, (g) planful problem solving, and (h) positive reappraisal. Subscale lengths range from four items (for accepting responsibility) to eight items (for escape-avoidance). The current study omitted the two subscales of self-controlling and accepting responsibility. These two subscales were omitted because their items appeared to contain both adaptive and potentially maladaptive approaches to coping. For example, the self-controlling subscale includes the items “kept others from knowing how bad things were” and “I thought about how a person I would admire would handle the situation and used that as a model.” The accepting responsibility subscale contains these

two sample items: “criticized or lectured myself” and “I apologized or did something to make up.” In both of these examples, the first statement appears to be an adaptive approach, whereas the second appears maladaptive. Due to these differences, it was not believed that these two subscales would add any additional value to the survey. This approach of using only the subscales of the Ways of Coping Questionnaire that are of interest to the study at hand, has been used by numerous other researchers (e.g., Long, 1990).

Respondents are typically asked to think of the most stressful event they experienced over the past week, although this timeframe can be extended depending upon the experimenter’s needs (Folkman & Lazarus, 1988). They may either discuss this stressful experience or write about it briefly. In the current study, participants were asked to think of the most stressful relationship-related event they had experienced in the past month. As a means of preparing participants to complete the Ways of Coping subscales, they were then required to describe this stressful experience briefly in writing. Next, they were asked to rate how upsetting the event was and how important it was to them. These items were rated on 5-point scales with higher numbers indicating greater levels of upset and importance (Long, 1990).

Participants then rated how extensively they used each coping strategy to cope with the event by responding to each item on a 4-point scale ranging from 0 (*does not apply or not used*) to 3 (*used a great deal*). The six subscale scores were calculated by summing responses to items on each subscale and then dividing by the number of items on that subscale. These subscale average scores could range from 0 to 3, with higher values representing a greater use of that coping approach. Relative scores were also

calculated for each subscale. Relative scores are useful in comparing the extent each coping approach was used in comparison to others. These scores were derived in a three-step manner. First, a subscale average score was calculated as described above. This subscale average score could range from 0 to 3. Next, the sum of the six subscale average scores was calculated; this sum could range from 0 to 18. Finally, the average score for each subscale (from step 1) was divided by the sum of the averages (from step 2) to arrive at the relative score for each subscale. Relative scores could range from 0 to 1 with higher scores representing increased use of that particular coping strategy.

In addressing the psychometrics of their scale, Folkman and Lazarus (1988) noted that test-retest reliability is not a good measure of a coping instrument's reliability because an individual's response to different stressors is likely to vary. Instead, the authors suggested internal consistency of subscales as a more appropriate measure of reliability. Even this measure of reliability is somewhat problematic, however, because an individual's use of one of the items on a subscale could positively impact the situation, thereby mitigating the need to use other strategies on that same subscale. Given that this is the case, coping subscales often suffer from lower internal consistency ratings than do other instruments (Folkman & Lazarus, 1988). Despite these caveats, the authors reported that internal consistency scores (using Cronbach's alpha) for their Ways of Coping Questionnaire are "higher than the alphas reported for most other measures of coping processes" (Folkman & Lazarus, 1988, p. 16). These alphas range from a low of .61 (for distancing) to a high of .79 for (positive reappraisal). In the current study, internal consistency alphas for the six subscales used were the following: playful problem solving  $\alpha = .67$ , positive reappraisal  $\alpha = .75$ , global social support  $\alpha = .80$ ,



confrontation  $\alpha = .65$ , escape-avoidance  $\alpha = .73$ , and distancing  $\alpha = .61$ . These alphas were calculated for the entire sample ( $N = 334$ ). They can also be found in Chapter 5, along with internal consistency alphas for the LDR and PR sub-samples.

Evidence for the validity of the Ways of Coping Questionnaire has been shown in its tendency to reveal theoretically consistent results. For example, studies employing the Ways of Coping Questionnaire indicate that primary and secondary appraisal play an important role in determining how individuals cope with distress. Primary appraisal is an individual's perception of what is at stake in a given situation. Secondary appraisal is an individual's perception of control over the situation. This two-stage approach to understanding coping was first outlined by the authors in an earlier work (Folkman & Lazarus, 1980). Briefly, the authors expected that people would cope with stressful situations in different ways depending on their appraisal of each situation. Situations in which a great deal was at stake would likely be perceived as more stressful than situations with less at stake. The authors found that situations in which an individual's self-esteem was at stake tended to elicit more self-control, acceptance of responsibility, escape-avoidance, and less social support than situations that did not pose a threat to self-esteem. When a loved-one's well-being was threatened, however, individuals were more likely to respond with confrontive coping, distancing, escape-avoidance, and planful problem solving (Folkman & Lazarus, 1988). Secondary appraisal has been shown to have a major impact because situations deemed controllable are more likely to elicit problem-focused coping in comparison to situations that are perceived as beyond an individual's control (Conway & Terry, 1992; Endler & Parker, 1990; Folkman, 1984; Folkman & Lazarus, 1988; Lazarus & Folkman, 1984). Thus, the Ways of Coping

Questionnaire has confirmed that individuals tend to vary their approach to coping with stressful situations depending on both primary and secondary appraisal.

Partner-specific social support was measured using the Partner or Spouse Source-Specific Social Support Scale (SPS; Cutrona, 1989; see Appendix C). This self-report measure is comprised of 12 items designed to assess for the presence of six social provisions in regard to one's relationship with a spouse or romantic partner. These six provisions, articulated by Weiss (1974), are guidance, reassurance of worth, social integration, attachment, nurturance, and reliable alliance. Each provision was measured by two SPS items. Participants responded to whether each item was present in their relationship on a 3-point scale ranging from 1 (*no*) to 3 (*yes*). Sample items from the scale include the following: "Does your relationship with your partner provide you with a sense of emotional security and well-being?" and "Could you turn to your partner for advice if you were having problems?" After reverse scoring half of the items, responses were summed to arrive at a total scale score ranging from 12 to 36 with higher scores representing a greater degree of social support.

Cutrona (1989) reported acceptable psychometric properties for the relationship-specific version of her Social Support Scale. The full-scale internal consistency of the 12-item scale (Cronbach's  $\alpha$ ) was reported to be .78. In the current study, the internal consistency for the SPS was found to be quite similar to that reported in prior research ( $\alpha = .76$ ). Evidence of validity was provided in a study examining depression in pregnant adolescents (Cutrona, 1989). Relationship-specific social support was negatively related to depression 6 weeks postpartum ( $r = -.16$ ), although the author noted that cognitive dissonance on the part of the adolescent girls may have diminished the strength of this

relationship. In other words, the girls may have wanted to believe that their partners were more supportive than they truly were. Evidence of such dissonance could be seen in much stronger negative correlations between male partners' ratings of the social support they provided and girls' depression scores at pregnancy and at 6 weeks and 6 months postpartum.

Quality of romantic attachment was measured using the Experiences in Close Relationships Scale (Brennan, Clark, & Shaver, 1998; see Appendix D). This 36-item self-report measure can be used to categorize an individual's romantic attachment style as secure, fearful, preoccupied or dismissive. Respondents are assigned to one of the four attachment categories by using Brennan et al.'s (1998) "classification coefficients" derived from their sample of 1,082 participants (see Appendix D). However, given the reduction in power inherent in making such categorizations, the authors encourage the use of continuous scores on the scales' two 18-item subscales of anxiety and avoidance. Respondents answered each item on a 7-point Likert scale ranging from 1 (*disagree strongly*) to 7 (*agree strongly*). Total scores on each subscale were calculated by reverse scoring half of the items and then summing across responses. Total subscale scores range from 18 to 126 with higher scores indicating more anxiety and avoidance in romantic relationships (Brennan, Clark, & Shaver, 1998). Examples of items from the avoidance and anxiety scales respectively are "I prefer not to show a partner how I feel deep down" and "I worry about being abandoned."

Brennan, Clark and Shaver (1998) report excellent internal consistency reliability using a sample of over 1,000 undergraduates. Cronbach's alphas for the avoidance and anxiety subscales were .94 and .91 respectively. The internal consistency of the two

subscales was also excellent in the current study. For avoidance of intimacy the alpha was .91, whereas it was .89 for the relationship-centered anxiety subscale. With regard to validity, the authors calculated correlations between their measure and scores on 60 other attachment subscales. Such correlations, along with factor analyses, point strongly to the validity of the authors' 2-factor approach to attachment (Brennan, Clark, & Shaver, 1998). Further, the authors note that the prevalence of the four different attachment styles in their sample was similar to the pattern found by Bartholomew and Horowitz (1991). Brennan and colleagues (1998) reported that their measure resulted in a sample classified as 30% secure, 24% fearful, 24% preoccupied, and 21% dismissing. In the current study, the proportions were the following for the LDR sub-sample: 56.4% secure, 10.5% fearful, 29.3% preoccupied, and 3.8% dismissing. For the PR sub-sample, the proportions of the four attachment categories represented were the following: 52.7% secure, 7.0% fearful, 32.8% preoccupied, and 7.5% dismissing. The proportions for the LDR and PR sub-samples were not statistically different from each other. Brennan et al.'s (1998) proportions were based on a random selection of undergraduates who were not required to be involved in romantic relationships. This makes comparisons with this study's participants, all of whom were involved in a romantic relationship, difficult to make.

Relationship satisfaction was measured using the Relationship Assessment Scale (RAS; Hendrick, 1988; see Appendix E). The RAS is a 7-item self-report instrument designed to measure global satisfaction in one's current romantic relationship. Participants responded to each item on a 5-point scale ranging from 1 to 5 with higher numbers generally representing greater relationship satisfaction (with the exception of

two items which are reverse-scored). A total satisfaction score was arrived at by summing responses to the seven items after reverse scoring the two negatively worded items. Total scores range from 7 to 35 with higher scores indicating greater relationship satisfaction. Scale anchors differ depending on the questions. For example, sample items include the following: “In general, how satisfied are you with your relationship?” (1 = *unsatisfied*, 3 = *average*, 5 = *extremely satisfied*) and “How much do you love your partner?” (1 = *not much*, 3 = *average*, 5 = *very much*). In two studies using 239 participants, Hendrick (1988) found strong evidence for a single-factor structure for the RAS.

Hendrick (1988) also reported good psychometric properties for the RAS. Hendrick reported an internal consistency reliability alpha of .86 for the brief scale. Guldner and Swensen (1995) reported identical internal consistency coefficients for the RAS, as well as high test-retest correlations over a 2-day period (.86 to .90). Internal consistency in the current study was found to be .85. There is also ample evidence for the validity of the RAS. First, scores on the RAS correlated significantly in the expected direction with six different measures of love, and with relationship commitment and investment. Second, scores on the RAS were strongly correlated ( $r = .80$ ) with scores on the Dyadic Adjustment Scale (Spanier, 1976), a psychometrically sound 32-item marital adjustment measure. Finally, the RAS actually outperformed the DAS in predicting whether couples would be together or apart at a future date. The RAS correctly identified 91% of the couples who remained together and 86% of the couples who terminated their relationships.

*Procedure*

Individuals were solicited to participate in a number of ways. First, the e-mail addresses and first names of all graduate students listed in the University of Maryland directory were obtained from the University's Office of the Registrar. This method resulted in 1290 e-mail addresses. The experimenter then sent a personalized e-mail to each graduate student asking him or her to participate in the study if eligible. See Appendix F for an example of the e-mail message. Twenty-two of the 1290 messages were returned as undeliverable for various reasons. A second round of e-mail messages was sent to these same 1290 individuals two weeks later to encourage them to participate if they had not done so already. Second, the experimenter sent a less formal e-mail message (see also Appendix F) to chairs or program directors of all 96 graduate and graduate certificate programs at the University of Maryland at College Park, asking that they please forward the request to their graduate students via their program listserv (assuming they had one). The student experimenter also posted this same informal message on three listserves of which he is a member. These listserves were the University of Maryland Counseling Psychology graduate student listserv, the American Psychological Association Division 17 graduate student listserv, and a listserv for new psychologists (or those in training to become psychologists). Finally, word of mouth was used to obtain some participants. Specifically, all e-mail messages contained the request that students pass the message to acquaintances whom they thought might qualify.

Participants were asked to read all instructions and items carefully before responding as honestly as possible. No compensation was offered in return for participation in this study; however, participants were informed that this research may

eventually help researchers understand better the challenges of graduate students' relationships. Informed consent for this study (see Appendix G) included the provision that confidentiality could not be completely guaranteed if participants chose to complete the survey online. In electronic submissions, there is always a very small chance that a transmitted message could be intercepted and read by a third party. Given that the current study was not advertised widely and the limited value of the data to a third party, it seemed unlikely that the data would be a target for interception. When a participant completed his or her survey online, the responses were automatically e-mailed to the experimenter and did not include the respondents e-mail address. This technique further safeguarded confidentiality.

Graduate students were the focus of the current research because nearly all of the psychological studies in the long-distance literature have been based on samples of undergraduate students. Although undergraduate students are very frequently involved in LDRs, results of such studies may not generalize to others involved in LDRs (Hillerbrand, Holt, & Cochran, 1986). Further, it could be argued that relationships among undergraduates are, in general, less mature and less developed than relationships later in life. Finally, the strains of graduate school or the world of work may be more intense than those typically experienced by undergraduate students. This may make distress, attachment styles, and coping more salient in the current research sample.

Participants could take as much time as they needed to complete the survey. Most should have been able to complete the survey in 15-20 minutes. After completing the measures, participants were presented with debriefing information, which described briefly the goal of the study. Included in the debriefing form (see Appendix H) was the

student researcher's name and contact information which participants could refer to if they had any questions or concerns following participation. Also provided was the student experimenter's faculty advisor's name and contact information. Participants were also asked to respond to two questions on the debriefing form. First, they were asked if they wanted to receive results of the current study when available. Participants were also asked if they were willing to be contacted in one year for a single follow-up question. If respondents answered yes to either question, they were asked to enter their e-mail address. This information was presented on the debriefing form so that any e-mail addresses would be submitted separate from their responses to the rest of the survey. The rationale for this was to further safeguard confidentiality.

### *Design*

This study represented a passive, descriptive design, using quantitative and qualitative methods to address the questions of interest. The independent variables were gender, romantic attachment, and coping (including use of social support). The dependent variable was relationship satisfaction.

### *Analyses*

Prior to conducting analyses related to the hypotheses and research questions listed below, internal consistency reliability was calculated for each of the measures used in this study. Also, an ANOVA and discriminant analysis were conducted to compare LDR and PR participants on all the variables of interest. Finally, *t*-tests were also used to determine whether individuals in same-sex and non-monogamous relationships differed in important ways from the rest of the sample.



**Hypothesis 1: There will be a significant, negative correlation between relationship satisfaction and avoidance of intimacy for those in LDRs.**

A Pearson's correlation was calculated between avoidance of intimacy and relationship satisfaction.

**Hypothesis 2: There will be a significant, negative correlation between relationship satisfaction and anxiety in close relationships for those in LDRs.**

A Pearson's correlation was calculated between relationship-centered anxiety and relationship satisfaction.

**Hypothesis 3a: Relationship satisfaction of those in LDRs will differ according to attachment category. Specifically, secure individuals should report higher levels of satisfaction than both preoccupied and fearful individuals in LDRs.**

To test this hypothesis and other questions, a 2 (male or female) x 4 (secure, dismissing, fearful or preoccupied attachment style) MANOVA was conducted using data from LDR participants. Dependent variables were level of relationship satisfaction, coping approaches used, and levels of partner-specific social support.

**Hypothesis 3b: Dismissing individuals in LDRs should report higher levels of satisfaction than both preoccupied and fearful individuals in LDRs.**

The same MANOVA used to test hypothesis 3a was used to test this hypothesis.

**Hypothesis 3c: Relationship satisfaction of those in PRs will differ according to attachment category. Specifically, secure individuals will be more satisfied than individuals in any other category.**

To test this hypothesis and other questions, a second 2 (male or female) x 4 (secure, dismissing, fearful or preoccupied attachment style) MANOVA was conducted using only PR participants' data. Dependent variables were the same as in the first

MANOVA: level of relationship satisfaction, coping approaches used, and levels or partner-specific social support.

**Hypothesis 4a: Secure and preoccupied individuals in LDRs will be more likely than dismissing and fearful individuals to report using higher levels of partner-specific social support.**

The same MANOVA mentioned in Hypothesis 3a was used to test this hypothesis.

**Hypothesis 4b: Secure and preoccupied individuals in LDRs will be more likely than dismissing and fearful individuals to report using higher levels of global social support.**

The same MANOVA mentioned in Hypothesis 3a was used to test this hypothesis.

**Hypothesis 4c: Secure individuals in PRs will be more likely than individuals in any other attachment category to report using higher levels of partner-specific social support.**

The same MANOVA mentioned in Hypothesis 3c was used to test this hypothesis.

**Hypothesis 4d: Secure individuals in PRs will be more likely than individuals in any other attachment category to report using higher levels of global social support.**

The same MANOVA mentioned in Hypothesis 3c was used to test this hypothesis.

**Hypothesis 5: The majority of LDR participants will list educational or employment goals as the main reason they currently live apart from their partner.**

To evaluate this hypothesis, qualitative data was gathered from the prompt “Please describe briefly how you and your partner came to live apart.” After reading all the answers to this prompt, the student experimenter derived four categories that appeared to capture all responses. The student experimenter and a second graduate student in counseling psychology then placed each participant response into one or more of these four categories. The two raters worked together on the first few responses before completing the remainder independently. Inter-rater reliability was then calculated using the kappa statistic, which takes into account expected agreement by chance. Inter-rater agreement for these classifications was 92.8%; the value of the kappa statistic was .809,  $p < .001$ .

**Hypothesis 6: LDR participants who are unable to see each other at least once monthly will report less satisfaction in their relationships than those who are able to see each other at least once monthly.**

To test this hypothesis a oneway ANOVA was used with relationships satisfaction scores of those in LDRs as the dependent variable and frequency of visits as the independent variable. There were four levels of the independent variable: once weekly or more, two to three times per month, once monthly and less than once monthly.

**Research Question 1: Are there differences among the relative proportions of the four different romantic attachment categories represented in long-distance relationships compared to those in proximal relationships?**

Participants were assigned to attachment categories by using Brennan et al.’s (1998) “classification coefficients” derived from their sample of 1,082 participants (see Appendix D). Once participants were classified, relative proportions were arrived at by

simply dividing the number of participants in each attachment category by the total number of participants in their sub-sample (PR or LDR). Chi-square tests were used to determine whether or not attachment proportions differed among those in PRs and LDRs.

**Research Question 2a: How will approaches to coping differ according to LDR participants' romantic attachment styles?**

The same MANOVA mentioned in Hypothesis 2a was used to explore this question.

**Research Question 2b: How will approaches to coping among those in PRs differ from those used by participants in LDR?**

The same MANOVA mentioned in Hypothesis 2b was used to explore this research question.

**Research Question 3: How will the following variables contribute to relationship satisfaction of those in PRs and LDRs: adaptive coping (planful problem solving, positive reappraisal, and general and partner-specific social support both general and partner-specific); maladaptive coping (confrontive, escape-avoidance, and distancing); relationship-centered anxiety; avoidance of intimacy; and financial burden?**

A stepwise, hierarchical regression was computed to test this research question. Relationship satisfaction was entered as the criterion variable, and all other variables listed were entered as predictors. Two regression equations were calculated—one for the PR group and one for the LDR.

**Research Question 4: How will LDR and PR participants' responses to the open-ended question "What makes your current relationship work?" differ or agree?**

Using the same categorization method described in Hypothesis 4, the student experimenter and a fellow graduate student categorized all participant responses into 12 domains. Inter-rater reliability was calculated, followed by chi-square analyses to compare the relative proportions of responses from LDR and PR participants. Inter-rater agreement for these analyses was 85.8% ( $\kappa = .84, p < .001$ ) for the LDR sample and 85.4% ( $\kappa = .83, p < .001$ ) for the PR sample.

**Research Question 5: How will participants in LDRs and PRs cluster on the variables of interest? Will these cluster sizes and types differ depending on relationship type?**

To explore this research question, a non-hierarchical (k-means) clustering procedure was used. First, a number of variables of interest were chosen that might contribute to relationship satisfaction. These included all of the coping variables, partner-specific social support, the two attachment variables of avoidance and anxiety, and several demographic variables (e.g., age, time together, time apart, financial burden, etc.). In order to prepare the data for cluster analysis, all scores on the variables of interest were standardized to z-scores. This is a necessary first step to ensure that variables with larger values (e.g., income) do not contribute disproportionately to the clustering solution. Because cluster analysis is also sensitive to outliers, individuals with scores three or more standard deviations above or below the mean on any of the variables of interest were eliminated from the clustering procedure. Initial attempts at clustering revealed several variables that did not contribute to differentiating between clusters. These were

predominantly demographic variables, which were then eliminated from subsequent analyses.

A non-hierarchical clustering procedure was conducted on the remaining cases and variables. For the LDR sub-sample, 102 cases were clustered using the following variables: relationship satisfaction, partner-specific social support, financial burden, the six Ways of Coping subscales, avoidance of intimacy and relationship-centered anxiety. The k-means clustering approach first calculates the means of each variable (called the cluster center) and then assigns each case to “the closest cluster, based on its distance from the cluster centers” (Norusis, 2003, p. 378). Once all cases have been clustered in this manner, new cluster centers are calculated and cases are reassigned. This iterative process continues until there is no appreciable change in cluster centers. Once the iterative process ends, the final cluster centers are used to classify all cases (Norusis, 2003).

Solutions from eight to four clusters were explored in search of a solution that contained an adequate number of clusters to capture differences in the data without creating clusters of only a few cases each. Similarly, cluster solutions that resulted “in a loss of substantive differences because of the combination of clusters” (Fals-Stewart, Schafer, and Birchler, 1993, p. 316) were ruled out in favor of a more heterogeneous solution. For the LDR sub-sample, the final solution contained six clusters.

For the PR sub-sample, 191 cases were clustered using the same variables as used in the LDR clustering procedure except for the demographic variable of financial burden, which did not apply to PR participants. The final clustering solution for PR participants also resulted in six clusters.

After the clustering procedures were completed for the LDR and PR participants, two oneway ANOVAs were constructed to determine how participants in the six clusters differed on the variables used in the clustering procedure. Post hoc Tukey pairwise comparisons were used to control for family wise Type I error.

**Research Question 6: Did LDR participants differ in how important they rated their relationship stressor or how distressing they found it based on their romantic attachment type?**

In seeking to answer this question, a oneway ANOVA was constructed with the four attachment categories as the independent variable and the two coping variables of how upset the individual was and how important he or she deemed the stressor as the dependent variables.

In addition to these hypotheses, a correlational matrix was also constructed to explore relationships among all variables.

## Chapter 5—Results

Before addressing individually the results of this study's hypotheses and research questions, this section reviews relevant demographic data and the reliability of the measures used. An alpha level of .05 was used as the criterion for significance in all statistical tests.

### *Demographic Data*

A number of demographic questions addressed different characteristics of long-distance relationships both to gather more information about these relationships and to compare them, when possible, to proximal relationships. Table 1 summarizes the data pertaining to the LDR sub-sample.

Although all 133 of these individuals affirmed the statement "My partner lives far enough away from me that it would be very difficult or impossible to see him or her every day," 15 participants (11.3%) disagreed with the statement "I consider this a long-distance relationship." Of these 15 participants, the mean distance from their partner was 665.33 miles ( $SD = 1771.20$ ), and median distance apart was 130 miles. Range of distance from partner for this small subgroup was from 35 to 7000 miles. It must be noted that the first statement was used as the criterion for being in a long-distance relationship, as it has been in past research (e.g., Guldner & Swenson, 1995). The second statement was included only to ascertain how participants defined their relationships in their own terms.



Table 1

*Demographic Data for those in Long-Distance Relationships (n = 133)*

Variable	Mean	Standard Deviation	Median	Minimum Value	Maximum Value
Age in years	25.63	4.01	25	21	51
Time together in months	38.64	30.65	31	6	264
Time apart in months	18.66	24.52	11.5	1	240
Miles apart	1236.79	2287.45	350	35	13000
Income (\$)	18,735	12,946	17,000	0	100,000
Money (\$) per month	348	349	200	0	2,000
Burden	2.32	1.22	2	1	5
Motive	3.25	.97	3	1	5
Want close relationship	4.66	.66	5	1	5
Plan to live locally in months	11.81	9.95	7	2	48

Money = Average monthly amount of extra money those in LDR spend on expenses that they would not have to spend if they were in a PR (e.g., travel costs, telephone bills, etc.)

Burden = Amount of burden these extra expenses represent (1 = no burden, 5 = extreme burden)

Motive = Who was motivated more to live apart (1 = my partner, 3 = mutual, 5 = myself)

Want close relationship = How strongly participant wants to live in a geographically close relationship with this partner (1 = not strongly, 5 = very strongly)

Plan to live locally = Estimated number of months before the participant plans to reunite permanently with partner (if known)

Results of independent samples *t*-tests to explore potential differences among these 15 participants who did not consider their relationships LDRs and the remainder of the LDR sample revealed a statistically significant difference on only one demographic variable. Specifically, those who did not consider their relationship an LDR expected to live locally with their partners sooner (mean = 8.55 months) than those who did consider their relationship an LDR (mean = 12.25 months). The value of the test statistic for this result was  $t(81) = 2.079, p = .05$ . Because these two groups did not differ on any other variables of interest, these 15 participants were retained for all subsequent analyses.

In terms of frequency of visits and modes of travel for those in LDRs, individuals often used more than one mode of transportation to visits their partners. Over 78% of the sample reported driving, 63.9% flying, 35.3% traveling by train, and 32.3% using buses. The median frequency of visits was once monthly. This frequency accounted for 23.3% of the LDR sample. Participants who visited once a week or more represented 17.3% of the sample, two to three times per month made up 30.1% of those in LDRs, and those who visited their partners less than once monthly comprised 29.4% of the sample.

#### *Comparison of the LDR and the PR Sample*

Independent samples *t*-tests were used to determine if the LDR and PR samples differed on any of the variables of interest. Four variables significantly differentiated the two samples. Participants in the PR sample were older,  $t(332) = 3.170, p = .002$ , lived closer to their romantic partners,  $t(332) = -6.099, p < .001$ , used more confrontation coping than their LDR counterparts,  $t(332) = 2.429, p = .016$ , and displayed more avoidance of intimacy,  $t(332) = 1.933, p = .05$ .

Descriptive statistics for the PR participants' demographic data are presented in Table 2.

Means and standard deviations of the non-demographic variables of interest for the PR and LDR samples are presented in Table 3. Variables with mean differences at or below the  $\alpha$  level of .05 are marked with an asterisk.

Six of the LDR participants classified their relationship as same-sex (4.5%), in comparison to 18 of the PR participants (9.0%). These proportions were not significantly different,  $\chi^2(1, N = 24) = 2.220, p = .14$ .

A discriminant analysis was also conducted between the two sub-samples. It too revealed significant differences between the LDR and PR participants on the variables of age,  $\lambda = .970, p = .002$ , miles apart,  $\lambda = .851, p < .001$ , and use of confrontation coping,  $\lambda = .979, p = .01$ . The canonical discriminant function was significant,  $\lambda = .766, p < .001$ , and successfully classified 75.1% of the original cases and 71.6% of the cross-validated cases.

#### *Reliability of Measures*

Internal consistency Cronbach's alphas were calculated for each of the measures used in this study. The results of these analyses are presented in Table 4.

Internal consistency values ranged from a low of .58 for the Distancing subscale of the Ways of Coping (PR sample) to a high of .92 for the Avoidance subscale of the Experiences in Close Relationships scale (LDR sample). The internal consistency values for the Ways of Coping subscales used in this study are quite comparable to those reported by Folkman and Lazarus (1988). It should be noted that the lowest alpha reported by those authors was also found on the Distancing subscale ( $\alpha = .61$ ). Internal

Table 2

*Demographic Data for those in Proximal Relationships (n = 201)*

Variable	Mean	Standard Deviation	Median	Minimum Value	Maximum Value
Age in years	27.2	4.68	26	21	52
Time together in months	36.39	28.00	30	6	137
Miles apart	6.20	12.35	0	0	70
Income (\$)	20,460	14,647	17,000	0	90,000

Table 3

*Means and Standard Deviations on the Variables of Interest for LDR and PR participants*

	LDR Sample (n=133)		PR Sample (n=201)	
	Mean	SD	Mean	SD
ECR Avoidance*	2.09	.90	2.28	.88
ECR Anxiety	3.32	1.02	3.33	1.05
RAS	30.62	4.25	30.66	4.30
SPS—Partner Specific	32.70	3.21	32.77	2.96
PPS COPE	.97	.61	.92	.64
Positive Reappraisal COPE	.64	.58	.60	.55
Social Support COPE	.88	.73	.83	.75
Confrontation COPE*	.78	.55	.93	.56
Escape Avoidance COPE	.51	.53	.46	.45
Distancing COPE	.67	.53	.59	.47
Total COPE	4.44	2.30	4.32	2.10
Adap COPE	2.48	1.56	2.34	1.53
Maladap COPE	1.95	1.10	1.98	.96

\* Values of the LDR and PR means differ at  $p = .05$  or less for these variables

Table 4

*Internal Consistency of Instruments Used (Cronbach's  $\alpha$ )*

	LDR Sample (n=133)	PR Sample (n=201)	Full Sample (N=334)
ECR Avoidance	.92	.90	.91
ECR Anxiety	.89	.90	.89
RAS	.84	.86	.85
SPS—Partner Specific	.76	.75	.76
PPS COPE	.62	.70	.67
Positive Reappraisal COPE	.74	.75	.75
Social Support COPE	.78	.80	.80
Confrontation COPE	.66	.64	.65
Escape Avoidance COPE	.76	.71	.73
Distancing COPE	.63	.58	.61
Total COPE	.86	.83	.85
Adap COPE	.85	.84	.85
Maladap COPE	.76	.66	.71

ECR = Experiences in Close Relationships

RAS = Relationship Assessment Scale

SPS = Social Provisions Scale—Partner Specific

PPS COPE = Planful Problem Solving subscale of Ways of Coping

Total COPE = Total of all 6 Ways of Coping subscales

Adap COPE = PPS COPE + Positive Reappraisal COPE + Social Support COPE

Maladap COPE = Confrontation COPE + Escape Avoidance COPE + Distancing COPE

consistency alphas for the other measures used in this study are also quite comparable to those reported by the authors of their scales (see Chapter 4).

*Results Related to the Hypotheses of Interest and Research Questions*

The remainder of this chapter will report the results of the hypotheses of interest and research questions, followed by a presentation of the correlational matrix of the variables of interest.

**Hypothesis 1: There will be a significant, negative correlation between relationship satisfaction and avoidance of intimacy for those in LDRs.**

This hypothesis was supported by the data. The Pearson's correlation between relationship satisfaction and avoidance of intimacy was  $r = -.52, p < .001$ .

**Hypothesis 2: There will be a significant, negative correlation between relationship satisfaction and anxiety in close relationships for those in LDRs.**

This hypothesis was supported by the data. The Pearson's correlation between relationship satisfaction and relationship-centered anxiety was  $r = -.40, p < .001$ .

**Hypothesis 3a: Relationship satisfaction of those in LDRs will differ according to attachment category. Specifically, secure individuals should report higher levels of satisfaction than both preoccupied and fearful individuals in LDRs.**

This hypothesis was supported by the data. Results of the MANOVA showed a positive effect for attachment style, Wilks'  $\Lambda = .590, F(24, 343) = 2.848, p < .001, \eta^2 = .410$ . Multivariate test results for this MANOVA are summarized in Table 5. The effect of sex was not significant, nor was there a significant sex by attachment interaction effect. Post hoc comparisons using Tukey's HSD to control for family wise error revealed that secure individuals were more satisfied in their relationships than participants in any other attachment style.

**Hypothesis 3b: Dismissing individuals in LDRs should report higher levels of satisfaction than both preoccupied and fearful individuals in LDRs.**

This hypothesis was not supported by the data. The same post hoc comparisons described in hypothesis 3a revealed that preoccupied individuals reported more satisfaction than fearful individuals and the same level of satisfaction as dismissing individuals. There was no difference in mean satisfaction scores between fearful and dismissing individuals.

**Hypothesis 3c: Relationship satisfaction of those in PRs will differ according to attachment category. Specifically, secure individuals will be more satisfied than individuals in any other category.**

This hypothesis was supported by the data. Results of the MANOVA, which are summarized in Table 6, revealed a positive effect for attachment style, Wilks'  $\Lambda = .660$ ,  $F(24, 540) = 3.466$ ,  $p < .001$ ,  $\eta^2 = .340$ . There was no main effect for sex, but there was a significant sex by attachment style interaction effect. The statistic for this interaction effect was Wilks'  $\Lambda = .815$ ,  $F(24, 540) = 1.649$ ,  $p = .028$ ,  $\eta^2 = .185$ . Post hoc comparisons using Tukey's HSD to control for family wise error revealed that secure individuals were more satisfied in their relationships than participants in any other attachment style. There were no differences in relationship satisfaction among the three insecurely attached categories. Due to limited power, these same post hoc comparisons did not reveal any significant differences among the groups for the interaction effect.

**Hypothesis 4a: Secure and preoccupied individuals in LDRs will be more likely than dismissing and fearful individuals to report using higher levels of partner-specific social support.**

This hypothesis was partially supported by the data. Both secure and preoccupied participants were more likely to rely on their partners for social support than were fearful participants. However, there was no difference between dismissing individuals and any other attachment group in terms of partner-specific social support.

**Hypothesis 4b: Secure and preoccupied individuals in LDRs will be more likely than dismissing and fearful individuals to report using higher levels of global social support.**

In terms of global social support in LDRs, there were no differences among the four attachment styles.

**Hypothesis 4c: Secure individuals in PRs will be more likely than individuals in any other attachment category to report using higher levels of partner-specific social support.**

This hypothesis was supported by the data. In terms of partner-specific social support, secure individuals in PRs were more likely than individuals in any other category to rely on their partners for social support.



Table 5

*Multivariate Results of the MANOVA for LDR Participants*

<b>Effect</b>	<b>Value of Wilks' <math>\Lambda</math></b>	<b>F</b>	<b>Hypothesis df</b>	<b>Error df</b>	<b>Significance (<math>p</math>)</b>
Intercept	.029	502.288	8	118	< .001
Sex	.969	.464	8	118	.88
Attachment	.590	2.848	24	343	< .001
Sex * Attch	.820	1.010	24	350	.45

Table 6

*Multivariate Results of the MANOVA for PR Participants*

<b>Effect</b>	<b>Value of Wilks' <math>\Lambda</math></b>	<b>F</b>	<b>Hypothesis df</b>	<b>Error df</b>	<b>Significance (<math>p</math>)</b>
Intercept	.015	1560.152	8	186	< .001
Sex	.946	1.329	8	186	.23
Attachment	.660	3.466	24	540	< .001
Sex * Attch	.815	1.649	24	540	.03

**Hypothesis 4d: Secure individuals in PRs will be more likely than individuals in any other attachment category to report using higher levels of global social support.**

This hypothesis was not supported by the data. For those in PRs, there were no differences among the four attachment styles in their reported use of global social support.

**Hypothesis 5: The majority of LDR participants will list educational or employment goals as the main reason they currently live apart from their partner.**

This hypothesis was supported by the data. First, inter rater agreement for the two raters categorizing responses to this question was 92.8%; the value of the kappa statistic was .809,  $p < .001$ . Of the LDR sample, 78.2% listed school or work as the primary reason they were apart from their romantic partner. This was followed by the category “always apart,” which accounted for 16.5% of cases. This category referred to couples who began their relationship as long-distance and have never had a proximal relationship. Relationships often began as long-distance after individuals met over the Internet or met while visiting a friend. Wanting to live close to family was the main reason that 2.3% of LDR participants gave for currently living apart. A final category (“other or unspecified”) accounted for 0.8% of responses.

**Hypothesis 6: LDR participants who are unable to see each other at least once monthly will report less satisfaction in their relationships than those who are able to see each other at least once monthly.**

This hypothesis was not supported by the data. The value of the test statistic of the ANOVA was  $F(3,129) = .852, p = .47$ .

**Research Question 1: Are there differences among the relative proportions of the four different romantic attachment categories represented in long-distance relationships compared to those in proximal relationships?**

There were no differences among the proportions of four attachment styles represented in the LDR and PR samples. Table 7 represents the percentages of the four different attachments styles found in the LDR and PR sample along with the chi-square values comparing the percentages in the two sub-samples.

**Research Question 2: How will approaches to coping differ according to LDR participants' romantic attachment styles?**

For ease of interpretation, please refer to Table 8, which displays differences in coping behaviors based on attachment style for the LDR and PR participants.

Relationships are based upon Tukey's HSD post hoc pairwise comparisons. Pairs not listed are not significantly different. There were significant differences in the use of different coping behaviors for individuals possessing different romantic attachment styles. For those in LDRs, the differences were in the areas of partner-specific social support, escape-avoidance coping, and total coping.

**Research Question 2b: How will approaches to coping among those in PRs differ from those used by participants in LDRs?**

Again, please refer to Table 8. For those in PRs there were differences in coping behaviors according to attachment styles for the following approaches: partner-specific social support, escape-avoidance coping, planful problem solving, confrontation, distancing, and total coping.

Table 7

*Percentage of Four Attachment Styles in LDR and PR Samples*

Attachment Style	LDR (n = 133)	PR (n = 201)	Chi-square value (1df)	p-value
Secure	56.4%	52.7%	.197	.66
Fearful	10.5	7.0	1.211	.27
Preoccupied	29.3	32.8	.575	.58
Dismissing	3.8	7.5	1.833	.18

Table 8

*Comparison of Coping Behaviors used by those in LDRs and PRs According to Attachment Styles*

Coping Behavior	LDR Sample (n=133)	PR Sample (n=201)
Partner-Specific Social Support	Secure > Fearful Preoccupied > Fearful	Secure > all others
Escape-Avoidance	Fearful > Secure Preoccupied > Secure Fearful > Dismissing	Fearful > Secure
Planful Problem Solving	No differences	Dismissing > Secure
Confrontation	No differences	Fearful > Secure
Distancing	No differences	Fearful > Secure Fearful > Preoccupied
Global Social Support	No differences	No differences
Positive Reappraisal	No differences	No differences
Total Coping	Preoccupied > Secure	Preoccupied > Secure

**Research Question 3: How will the following variables contribute to relationship satisfaction of those in PRs and LDRs: adaptive coping (planful problem solving, positive reappraisal, and general and partner-specific social support both general and partner-specific); maladaptive coping (confrontive, escape-avoidance, and distancing); relationship-centered anxiety; avoidance of intimacy; and financial burden?**

Results of multiple regression analysis for LDR participants can be found in Tables 9-11. The regression equation that best fit the data for LDR participants using the predictors above accounted for 61.1% of the variance in relationship satisfaction scores ( $R = .782$ ). The following four predictors met criteria for inclusion in the final model: partner-specific social support (50.9% of the variance), avoidance of intimacy (6.9% of the variance), use of confrontation coping (2.1% of the variance), and distancing coping (1.3% of the total variance). The equation for this regression was

$$RAS_{LDR} = 8.450 + .777*(SPS) - 1.435*Avoid - 1.105*Confront + .919*distancing.$$

As can be seen from this equation, partner-specific social support and distancing were positive predictors of relationship satisfaction, whereas confrontational coping and avoidance of intimacy were negative predictors.

Results of multiple regression analysis for PR participants can be found in Tables 12-14. The regression equation that best fit the data for PR participants using the predictors above accounted for 58.4% of the variance in relationship satisfaction scores ( $R = .764$ ). Only two predictors met criteria for inclusion in the final model for PR participants: partner-specific social support (54.0% of the variance) and avoidance of intimacy (4.3% of the variance). Partner-specific social support was a positive predictor

of relationship satisfaction, whereas avoidance of intimacy was a negative predictor. The equation for this regression was the following:  $RAS_{PR} = 1.903 + .953*(SPS) - 1.084*Avoid$ .

**Research Question 4: How will LDR and PR participants' responses to the open-ended question "What makes your current relationship work?" differ or agree?**

Results of qualitative analysis revealed 12 categories of responses to the above question. Inter-rater agreement for these analyses was 85.8% ( $\kappa = .84, p < .001$ ) for the LDR sample and 85.4% ( $\kappa = .83, p < .001$ ) for the PR sample. The 12 domains are listed in Table 15 along with the number of responses in each domain for LDR and PR participants. Because participants frequently provided responses that fell into several domains, columns sum to more than their respective sample sizes. Chi-square values were computed for each category to determine if there was a significant difference in the number of responses from LDR and PR participants. Chi-square values that meet significance ( $p < .05$ ) are labeled with an asterisk.

Table 9

*Coefficients for the Multiple Regression Analysis with LDR Participants*

<b>Model</b>	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Significance (p)</b>
1 Constant	-.253	2.661		-.095	.924
SPS	.944	.081	.714	11.657	.000
2 Constant	7.386	2.984		2.475	.015
SPS	.796	.082	.602	9.718	.000
Avoid	-1.348	.293	-.285	-4.594	.000
3 Constant	9.197	3.003		3.063	.003
SPS	.770	.081	.582	9.524	.000
Avoid	-1.387	.288	-.293	-4.821	.000
Confront	-1.117	.431	-.146	-2.591	.011
4 Constant	8.450	2.988		2.828	.005
SPS	.777	.080	.587	9.720	.000
Avoid	-1.435	.285	-.303	-5.035	.000
Confront	-1.105	.426	-.144	-2.596	.011
Distance	.919	.446	.114	2.059	.041

SPS = Partner-Specific Social Support, Avoid = Avoidance of Intimacy, Confront = Confrontation Coping, Distance = Distancing Coping

Table 10

*ANOVA for the Multiple Regression Analysis with LDR Participants*

<b>Model</b>	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Significance (p)</b>
1 Regression	1215.623	1	1215.623	135.897	.000
Residual	1171.821	131	8.945		
Total	2387.444	132			
2 Regression	1379.284	2	689.642	88.928	.000
Residual	1008.160	130	7.755		
Total	2387.444	132			
3 Regression	1429.162	3	476.387	64.129	.000
Residual	958.281	129	7.429		
Total	2387.444	132			
4 Regression	1459.891	4	364.973	50.365	.000
Residual	927.552	128	7.247		
Total	2387.444	132			

Model 1 = (Constant), Partner-Specific Social Support

Model 2 = (Constant), Partner-Specific Social Support, Avoidance

Model 3 = (Constant), Partner-Specific Social Support, Avoidance, Confrontation

Model 4 = (Constant), Partner-Specific Social Support, Avoidance, Confrontation, Distancing

Table 11  
*Model Summary of the Multiple Regression Analysis with LDR Participants*

Model	R	R Square	Adjusted R Square	Std. Error of Est.	R Square Change	F Change	Sig. F Change
1	.714	.509	.505	2.99	.509	135.897	.000
2	.760	.578	.571	2.78	.069	21.104	.000
3	.774	.599	.589	2.73	.021	6.714	.011
4	.782	.611	.599	2.69	.013	4.241	.041

Model 1 = (Constant), Partner-Specific Social Support

Model 2 = (Constant), Partner-Specific Social Support, Avoidance

Model 3 = (Constant), Partner-Specific Social Support, Avoidance, Confrontation

Model 4 = (Constant), Partner-Specific Social Support, Avoidance, Confrontation, Distancing

Table 12  
*Coefficients for the Multiple Regression Analysis with PR Participants*

Model	B	Std. Error	Beta	t	Significance (p)
1 Constant	-4.291	2.294		-1.870	.063
SPS	1.066	.070	.735	15.293	.000
2 Constant	1.903	2.578		.738	.461
SPS	.953	.071	.657	13.409	.000
Avoid	-1.084	.238	-.223	-4.549	.000

SPS = Partner-Specific Social Support, Avoid = Avoidance of Intimacy

Table 13  
*ANOVA for the Multiple Regression Analysis with PR Participants*

Model	Sum of Squares	df	Mean Square	F	Significance (p)
1 Regression	1998.699	1	1998.699	233.881	.000
Residual	1700.614	199	8.546		
Total	3699.313	200			
2 Regression	2159.594	2	1079.797	138.856	.000
Residual	1539.720	198	7.776		
Total	3699.313	200			

Model 1 = (Constant), Partner-Specific Social Support

Model 2 = (Constant), Partner-Specific Social Support, Avoidance of Intimacy



Table 14  
*Model Summary of the Multiple Regression Analysis with PR Participants*

Model	R	R Square	Adjusted R Square	Std. Error of Est.	R Square Change	F Change	Sig. F Change
1	.735	.540	.538	2.92	.540	233.881	.000
2	.764	.584	.580	2.79	.043	20.690	.000

Model 1 = (Constant), Partner-Specific Social Support

Model 2 = (Constant), Partner-Specific Social Support, Avoidance of Intimacy

Table 15

*Number of Responses to “What makes your relationship work?”*

<b>Response Category</b>	<b>LDR (n = 130)</b>	<b>PR (n = 195)</b>	<b>Chi-square value (1df)</b>	<b>p-value</b>
Communication (in general and specifically)	77	89	2.820	.09
Making time for visits and together time	35	28	6.352*	.01
Mutual support	12	28	1.667	.20
Love	39	30	7.848*	.01
Compatibility (of interests, values, goals, backgrounds)	23	101	23.776*	<.01
Knowing LDR is temporary; Having plans for the future	26	1	35.654*	<.01
Trust, respect, honesty	32	48	.000	1.00
Valuing independence	5	30	9.643*	<.01
Patience	8	2	6.667*	.01
Determination; hard work	1	7	2.521	.11
Long history together	14	17	.344	.56
Other	6	13	.561	.45

\* Refers to a significant difference at or below  $p = .05$

**Research Question 5: How will participants in LDRs and PRs cluster on the variables of interest? Will these cluster sizes and types differ depending on relationship type?**

For ease of interpretation, please refer to Tables 16 and 17, which list the clusters for LDR and PR participants respectively. Both LDR and PR participants were successfully classified into six clusters. These cluster structures will be discussed in detail in the final chapter. It is important to note that the column labels in these two tables (high to low scores) were based upon z-score values and not upon the ANOVAs and pairwise comparisons conducted after the clustering procedures. The specifics of this classification are found in the notes to Tables 16 and 17. Means of final cluster centers can be found in Tables 18 and 19.

Results of the two follow-up ANOVAs conducted to determine how clusters differed on the variables of interest revealed significant  $F$ -values for all six LDR and PR clusters on all the variables used in the cluster analysis. This result is to be expected because only variables that contributed to differentiating clusters were used in these analyses. Tukey post hoc pairwise comparisons revealed differences among clusters on many of the variables of interest. Due to the numerous comparisons conducted (15 for each variable), these results will not be presented in their entirety. Instead, statistically significant pairwise comparisons that help to clarify important cluster characteristics are noted in Tables 16 and 17 in the far right column.

Table 16 *Cluster Solution for LDR Participants (n = 102)*

<b>Cluster Name and Number</b>	<b>High Scores*</b>	<b>Above Average Scores*</b>	<b>Average Scores*</b>	<b>Below Average Scores*</b>	<b>Low Scores*</b>	<b>Sig. Differences†</b>
1. Anxious and confrontational but content (n = 18)	Confront <sup>a</sup>	Anxiety PPS Support Escape + Reapp	Burden RAS SPS Avoid Distance			a 1,4>2,3,5,6
2. All I need is my partner (n = 29)		RAS SPS		Burden Avoid Anxiety PPS Confront Support <sup>b</sup> Escape Distance + Reapp		b 2,5>1,3,4,6
3. Distancing and doing well (n = 13)	Distance <sup>c</sup>	RAS	Burden SPS Avoid PPS Support Escape + Reapp	Anxiety Confront		c 3>all others
4. Insecure, burdened, coping poorly and unsatisfied (n = 9)	Burden <sup>e</sup>	Avoid Anxiety Confront <sup>a</sup> Escape	Support Distance	SPS <sup>d</sup> PPS + Reapp	RAS <sup>d</sup>	a 1,4>2,3,5,6 d 4,5<1,2,3,6 e 4,6>1,2,3,5
5. I don't want to talk about it (n = 12)		Avoid	Anxiety Escape Distance + Reapp	Burden RAS <sup>d</sup> SPS <sup>d</sup> Support <sup>b</sup> PPS	Confront	b 2,5>1,3,4,6 d 4,5<1,2,3,6
6. Average (n = 21)		Burden <sup>e</sup>	RAS SPS Anxiety PPS Confront Support + Reapp	Avoid Escape Distance		e 4,6>1,2,3,5

Notes to Table 16

\*High scores refer to z-scores of 1 or above on that variable, above average scores are z-scores from .33 to .99, average scores are z-scores between -.32 and .32 below average scores are z-scores from -.33 to -.99, and low scores refer to z-scores of -1 or less.

†Differences, based on Tukey's HSD, are significant at  $p < .05$

Burden = Financial burden, RAS = Relationship Satisfaction, SPS = Partner-specific social support, Avoid = Avoidance of intimacy, Anxiety = Relationship-centred anxiety, PPS = Planful problem solving, Confront = Confrontational coping, Support = Use of global social support, Escape = Escape-avoidance coping, Distance = Distancing coping, + Reapp = Positive reappraisal coping

Table 17 Cluster Solution for PR Participants ( $n = 191$ )

Cluster Name and Number	High Scores*	Above Average Scores*	Average Scores*	Below Average Scores*	Low Scores*	Sig. Differences†
1. Secure and satisfied ( $n = 43$ )		RAS SPS PPS	Confront Support + Reapp	Avoid <sup>a</sup> Anxiety <sup>b</sup> Escape Distance		a 1,3<2,4,5,6 b 1,6<2,3,4,5
2. Avoidant, confrontational and unsatisfied ( $n = 22$ )	Avoid <sup>d</sup>	PPS Confront	Anxiety Support Escape + Reapp	RAS <sup>c</sup> SPS <sup>c</sup> Distance		c 2<1,3,4,6 d 2>1,3,4,6
3. Anxious and confrontational but content ( $n = 21$ )	PPS <sup>e</sup> Support <sup>e</sup> + Reapp	Anxiety Confront	RAS SPS Escape Distance	Avoid <sup>a</sup>		a 1,3<2,4,5,6 e 3>all other
4. Tense and tuned out ( $n = 34$ )	Escape <sup>f</sup>	Anxiety	RAS SPS Avoid PPS Confront Support Distance + Reapp			f 4>all other
5. Insecure and very unsatisfied ( $n = 10$ )		Avoid Anxiety Distance	Escape	PPS Confront <sup>h</sup> Support <sup>h</sup> + Reapp	RAS <sup>g</sup> SPS <sup>g</sup>	g 5<all other h 5,6<1,2,3,4
6. A I need is my partner ( $n = 61$ )		RAS SPS	Avoid Distance	Anxiety <sup>b</sup> PPS Confront <sup>h</sup> Support <sup>h</sup> Escape + Reapp		b 1,6<2,3,4,5 h 5,6<1,2,3,4

\*High scores refer to z-scores of 1 or above on that variable, above average scores are z-scores from .33 to .99, average scores are z-scores between -.32 and .32 below average scores are z-scores from -.33 to -.99, and low scores refer to z-scores of -1 or less.

RAS = Relationship Satisfaction, SPS = Partner-specific social support, Avoid = Avoidance of intimacy, Anxiety = Relationship-centered anxiety, PPS = Planful problem solving, Confront = Confrontational coping, Support = Use of global social support, Escape = Escape-avoidance coping, Distance = Distancing coping, + Reapp = Positive reappraisal coping

†Differences, based on Tukey's HSD, are significant at  $p < .05$

Table 18  
*Means of Final Cluster Centers for Variables Used—LDR participants (n=102)*

Variable	Cluster Number					
	1	2	3	4	5	6
Burden	-.26594	-.71976	-.20266	1.01358	-.67721	.75246
Ras	.16854	.63341	.36148	-1.34678	-.73281	.28051
Sps	.14541	.42610	.21321	-.94340	-.52862	.31577
Avoid	-.13163	-.37680	-.12105	.95480	.76915	-.43614
Anxiety	.74122	-.67235	-.76839	.88878	.24585	-.13422
Pps	.58161	-.80910	.24129	-.39985	-.51310	.27315
Confront	1.10335	-.52005	-.33752	.56912	-1.17546	.14460
Soc Supp	.74291	-.82018	.01022	.09261	-.32817	-.19155
Escape	.79865	-.78616	-.03606	.93034	-.25486	-.36774
Distance	.12028	-.40477	1.18642	-.14255	-.16007	-.34780
Pos Reap	.75402	-.73177	.27933	-.74114	-.31978	-.15084

Means shown are z-scores. All variable means are zero with a standard deviation of one.

Burden = Financial burden, Ras = Relationship Satisfaction, Sps = Partner-specific Social Support, Avoid = Avoidance of Intimacy, Anxiety = Relationship-centered Anxiety, Pps = Planful Problem Solving, Confront = Confrontational Coping, Soc Supp = Global Social Support, Escape = Escape-Avoidance, Distance = Distancing, Pos Reap = Positive Reappraisal

Table 19  
*Means of Final Cluster Centers for Variables Used—PR participants (n=191)*

Variable	Cluster Number					
	1	2	3	4	5	6
Ras	.46374	-.97708	.14625	.15505	-1.94308	.43050
Sps	.44593	-.79682	.22178	.14666	-1.64324	.37030
Avoid	-.65228	1.01227	-.37897	-.11279	.84029	-.16363
Anxiety	-.70553	.10206	.36382	.83467	.78143	-.35925
Pps	.35011	.36882	1.53315	-.13590	-.54483	-.82824
Confront	.10622	.77407	.77664	.13563	-.67395	-.67541
Soc Supp	.12935	.23314	1.17884	.18719	-.41398	-.67407
Escape	-.44785	.17458	.21770	1.18965	-.28826	-.61305
Distance	-.35704	-.52237	.23741	.25723	.43624	-.02087
Pos Reap	.16889	.15218	1.58098	.05862	-.38502	-.77037

Means shown are z-scores. All variable means are zero with a standard deviation of one.

Ras = Relationship Satisfaction, Sps = Partner-specific Social Support, Avoid = Avoidance of Intimacy, Anxiety = Relationship-centered Anxiety, Pps = Planful Problem Solving, Confront = Confrontational Coping, Soc Supp = Global Social Support, Escape = Escape-Avoidance, Distance = Distancing, Pos Reap = Positive Reappraisal

For LDR participants, relationship satisfaction and partner-specific social support were equal in clusters four and five. These two clusters were significantly lower on these two variables than all other clusters. Financial burden associated with maintaining an LDR was highest for clusters four and six. Reported use of global social support was lowest for clusters two and five. Clusters one and four had the same levels of confrontation coping, however, cluster one was higher on this variable than all other clusters. Finally, use of distancing coping was highest in cluster three.

For PR participants, relationship satisfaction and partner-specific social support were lowest in cluster five. The next lowest levels of these two variables were found in cluster two. Clusters one and three had the lowest levels of avoidance of intimacy, whereas clusters one and six had the lowest levels of relationship-centered anxiety. Confrontational coping and global social support were lowest in clusters five and six for PR participants. Cluster two had higher levels of avoidance of intimacy than all other clusters with the exception of cluster five. Escape-avoidance coping was highest in cluster four. Finally, cluster three had the highest levels of both global social support and planful problem solving.

**Research Question 6: Did LDR participants differ in how important they rated their relationship stressor or how distressing they found it based on their romantic attachment type?**

There was a significant effect of attachment style on perceived importance of the stressor. The value of the test statistic was  $F(3,129) = 2.679, p = .05$ ; however, there was not enough power to detect a significant difference among the four groups on this variable (there were only 5 dismissing individuals in the LDR sample). The trend,



however, was in the direction of dismissing individuals rating their stressor as less important than individuals in any other attachment category.

### *Bivariate Correlations*

A review of the correlational matrix for LDR participants (see Table 20) reveals a number of significant correlations consistent with both theory and prior research. Some notable correlations will be presented in this section and discussed in the following chapter.

First, there was a positive correlation between length of relationship and distance apart ( $r = .30, p < .001$ ). There was a negative correlation ( $r = -.20, p = .02$ ) between the demographic variables of distance apart and desire to live locally. Similarly, there was a negative correlation between time apart and desire to live locally ( $r = -.29, p = .001$ ). There was a rather strong correlation ( $r = .50, p < .001$ ) between time apart and income, and a negative correlation between time apart and relationship-centered anxiety ( $r = -.21, p = .02$ ). There were two negative correlations between amount of time before the couple anticipated they would live locally and the avoidant coping strategies of escape-avoidance ( $r = -.30, p < .01$ ) and distancing ( $r = -.23, p = .04$ ). There was a positive correlation between amount of extra money spent on maintaining the LDR and financial burden ( $r = .41, p < .001$ ), and a negative correlation between extra money spent and avoidance of intimacy ( $r = -.18, p = .04$ ).

In terms of relationship satisfaction, this central variable correlated strongly with partner-specific social support ( $r = .71, p < .001$ ). Relationship satisfaction also correlated negatively with a number of variables, including relationship-centered anxiety ( $r = -.40, p < .001$ ), avoidance of intimacy ( $r = -.52, p < .001$ ), how important the participant felt his or her relationship stressor was ( $r = -.27, p < .01$ ), use of confrontation

coping ( $r = -.21, p = .01$ ), use of global social support ( $r = -.18, p = .04$ ), use of escape-avoidance ( $r = -.28, p = .001$ ), and total coping ( $r = -.17, p = .05$ ).

Partner-specific social support correlated negatively with relationship-centered anxiety ( $r = -.36, p < .001$ ) and with avoidance of intimacy ( $r = -.39, p < .001$ ). Partner-specific social support also correlated negatively with global social support ( $r = -.20, p = .02$ ) and with use of escape-avoidance coping ( $r = -.25, p < .01$ ).

Relationship-centered anxiety correlated positively with the following variables: how important the participant felt his or her relationship stressor was ( $r = .33, p < .001$ ), use of confrontation coping ( $r = .31, p < .001$ ), global social support ( $r = .27, p = .001$ ), escape-avoidance coping ( $r = .47, p < .001$ ), and with total coping ( $r = .36, p < .001$ ). Avoidance of intimacy also correlated positively with escape-avoidance coping ( $r = .19, p = .03$ ) and negatively with use of positive reappraisal ( $r = -.21, p = .02$ ).

Perceived importance of the relationship stressor had moderate to strong positive correlations with the following coping variables (please refer to matrix for values): planful problem solving, confrontation, global social support, escape-avoidance and positive reappraisal. There were also many inter-correlations among the Ways of Coping subscales.

The correlational matrix for PR participants is also presented (see Table 21), however, these results are not discussed in detail.

Table 20  
*Correlational Matrix for LDR Participants (n = 133)*

	Age	Timet	Mpart	Tapart	Livel	Wtpr	Mny	Burd	Mot	Incm	Ras	Sps	Anx	Avd	Imp	Pps	Conf	Socs	Esc	Dist	Posr	Totc
Age	1	.36†	.20*	.44†	-.02	-.05	.05	.08	-.10	.44†	-.02	-.02	-.13	.08	.08	.09	-.11	.05	-.12	.09	.02	.01
Timet		1	.30†	.72†	-.10	-.10	.14	.03	-.07	.31†	.07	.07	-.14	-.15	.09	.10	.07	.01	.02	.03	.04	.07
Mpart			1	.34†	-.08	-	-.10	.04	.08	.14	-.08	.05	.04	-.02	.04	.17	.01	-.02	.05	-.04	.21*	.10
Tapart				1	-.05	-	.01	-.11	-.03	.50†	-.03	.13	-	.00	-.04	.02	.03	-.05	-.11	.11	.01	.00
Livel					1	-.20	-.12	-	.11	-.20	.02	-.06	-.14	-.16	-.14	.03	.00	-.11	-	-	-.02	-.16
Wtpr						1	.13	.11	-.06	-	.22*	.16	.02	-	.08	.00	-.01	.06	-.01	-.06	.03	.01
Mny							1	.41†	-.07	.01	.17	.10	-.10	-	.05	-.03	.00	.02	.12	.06	.02	.04
Burd								1	.08	-.09	.04	-.02	.20*	-.05	.31†	.21*	.15	.23†	.22†	.08	.18*	.28†
Mot									1	-.08	-.12	-.07	.03	.11	.14	.00	.07	-.08	.16	-.16	-.03	-.09
Incm										1	-.06	.00	-.11	.12	-.08	.04	-.14	-.11	-.16	.15	-.04	-.07
Ras											1	.71†	-	-.52	-.27	-.06	-	-	-	.04	.03	-
Sps												1	-	-	-.14	-.03	-.12	-	-	-.08	.05	-.16
Anx													1	.36†	.39†			.20*	.25†			
Avd														1	.12	-.10	.00	.03	.19*	.11	-.21	.00
Imp															1	.28†	.36†	.53†	.42†	-.08	.39†	.50†
Pps																1	.26†	.45†	.23†	.23†	.51†	.71†
Conf																	1	.42†	.31†	-.01	.26†	.58†
Socs																		1	.33†	.18*	.50†	.78†
Esc																			1	.32†	.29†	.62†
Dist																				1	.13	.45†
Posr																					1	.71
Totc																						1

\* Correlation is significant at the .05 level † Correlation is significant at the .01 level

timet = time together, mpart = miles apart, tapart = time apart, livel = estimated time before living locally, wtpr = desire to live locally, mny = extra money spent due to LDR, burd = financial burden due to money spent, mot = motivation to live apart, incm = income, ras = relationship satisfaction, sps = partner-specific social support, anx = relationship-centered anxiety, avd = avoidance of intimacy, imp = importance of relationship stressor, pps = planful problem solving, conf = confrontational coping, socs = global social support, esc = escape-avoidance coping, distance = dist, posr = positive reappraisal, totc = total coping

Table 21  
*Correlational Matrix for PR Participants (n = 201)*

	Age	Timet	Mpart	Incm	Ras	Sps	Anx	Avd	Imp	Pps	Conf	Socs	Esc	Dist	Posr	Totc
Age	1	.28†	-.02	.39†	-.27†	-.27†	-.06	.16*	.25†	.15*	.03	.02	.01	-.17*	-.03	.02
Timet		1	-.16*	.09	.08	.12	-.24†	-.16*	-.05	-.07	-.11	-.07	-.11	-.03	-.04	-.12
Mpart			1	-.05	.04	-.05	.06	-.06	.05	.20†	.13	.11	.03	.17*	.09	.20†
Incm				1	-.12	-.08	.12	.18*	.09	.07	.05	.04	.09	-.04	-.04	.05
Ras					1	.74†	-.26†	-.45†	-	.01	-.20†	-.08	-.24†	.00	-.02	-.14
Sps						1	-.33†	-.35†	.36†	-.02	-.29†	-.09	-.22†	.03	-.02	-.15*
Anx							1	.18*	.15*	.09	.21†	.05	.39†	.19†	.20†	.28†
Avd								1	.18*	.09	-.01	-.07	.14*	.19†	-.01	.07
Imp									1	.30†	.16*	.43†	.33†	-.20†	.27†	.40†
Pps										1	.30†	.36†	.22†	.05	.55†	.72†
Conf											1	.34†	.27†	-.08	.32†	.60†
Socs												1	.28†	-.02	.40†	.71†
Esc													1	.20†	.24†	.56†
Dist														1	.06	.27†
Posr															1	.72†
Totc																1

\* Correlation is significant at the .05 level † Correlation is significant at the .01 level

timet = time together, mpart = miles apart, incm = income, ras = relationship satisfaction, sps = partner-specific social support, anx = relationship-centered anxiety, avd = avoidance of intimacy, imp = importance of relationship stressor, pps = planful problem solving, conf = confrontational coping, socs = global social support, esc = escape-avoidance coping, dist = distance, posr = positive reappraisal, totc = total coping

### *Summary of Results*

Results of quantitative and qualitative analyses confirm prior research into LDRs, provide new information about these relationships, and enable comparisons between LDRs and PRs. Results will be summarized here and discussed in detail in the final chapter.

First, this study defined LDRs by a commonly used research criterion (e.g., Guldner & Swenson, 1995) of living too far from one's partner as to make daily visits very difficult or impossible. A follow-up question was also asked to understand how these participants self-defined their relationships. It was found that one LDR participant in nine did not label his or her relationship as a "long-distance relationship", despite meeting the definition used in this study. These individuals expected to live locally with their partners sooner than did their counterparts who did define their relationship as an LDR. A second notable finding from the demographic data is that both PR and LDR participants were, on average, involved in their current relationships for over three years. This suggests that the goal of recruiting participants in long-term, presumably committed, relationships was met. Third, the median LDR participant reported spending \$200 extra per month in money he or she would not have needed to spend if he or she lived close to his or her romantic partner, which represented 14% of their median income. The median respondent rated this extra expense as not much of a financial burden. Finally, over 78% of those in LDRs listed education or employment as the main reason they were currently living apart from their romantic partner. One surprising finding was that over 16% of LDR participants had always lived apart from their partner. This sub-group of LDRs is rarely mentioned in the psychological literature.

Similarities and differences among LDR and PR participants were found on a number of variables. First, results of independent samples *t*-tests and discriminant analysis revealed that the LDR sample was significantly younger, lived further apart from their partners, used less confrontation coping, and had lower levels of avoidance of intimacy than their PR counterparts.

As expected, there were significant negative correlations between the attachment variables of avoidance of intimacy and relationship-centered anxiety and relationship satisfaction for participants in LDRs. After assigning participants to one of four attachment styles based on their scores on avoidance and anxiety, it was found that for those in LDRs, secure individuals were more satisfied than participants in any other attachment category. Among those in LDRs who were insecurely attached, preoccupied individuals reported greater relationship satisfaction than fearful participants. For those in PRs, the only difference found was that secure individuals were more satisfied than those in any other attachment category. Similarly, secure and preoccupied individuals in LDRs relied on their partners and others for social support to a greater degree than did fearful participants. The only difference found among PR participants was higher use of both types of social support for secure individuals. Finally, there were no differences in the proportions of the four attachment styles represented in the LDR and PR sub-samples.

This study failed to replicate the finding that those in LDRs who visit their partner at least once monthly are more satisfied than those who visit less frequently (Holt & Stone, 1988). The current study found no differences in satisfaction among LDR participants based on how frequently they visited their partners. However, there was some correlational evidence to support the idea that as time apart and distance apart increase, the desire to live locally decreases.

There were several differences in the use of coping behaviors for those in different attachment categories (see Table 8). For the most part, fearful (and to a lesser extent preoccupied) individuals in LDRs tended to cope poorly. Different relationships were found among attachment styles and coping for those in PRs. These will be discussed in greater detail in the following chapter.

In terms of the best overall predictors of relationships satisfaction for those in LDRs and PRs, the single best predictor by far was the level of partner-specific social support. This was followed by avoidance of intimacy for both LDRs and PRs, and confrontational and distancing coping for LDRs only.

In terms of the open-ended question, “What makes your current relationship work?” LDR and PR participants gave a variety of responses. LDR participants were more likely to emphasize making time to be together, love, having future plans, and being patient. PR participants were more likely to stress compatibility and valuing independence. There were no differences between the two groups for the following responses: communication; mutual support; trust, respect, and honesty; determination; having a long history together; and “other.”

Finally, the cluster analysis revealed six distinct clusters in both the LDR and PR sub-samples (see Tables 8 and 9). These will be discussed in detail in the following chapter.

In conclusion, it is not a simple matter to summarize the similarities and differences present among those in LDRs and PRs. However, taking the time to scrutinize closely the results presented in this chapter is likely to reveal a number of interesting implications. Let us turn now to a closer look at these results.

## Chapter 6—Discussion

This discussion section seeks first to define long-distance relationships and to explore what makes them successful. This section is followed by a comparison of LDRs and PRs on a macro level, before examining in detail the results related to romantic attachment styles.

### *What Are Long-Distance Relationships and What Makes them Work?*

Based on this study's results, the typical graduate student involved in an LDR is 25 years old, has been involved in a monogamous relationship for the past 31 months and has lived 350 miles away from his or her partner for just under one year. He or she is likely to earn \$17,000 annually and to spend approximately \$200 each month on extra relationship-related expenses (14% of annual income). This individual and his or her partner are likely to visit each other once every three to four weeks. The reason for separation was likely due to educational or employment goals, and the decision to separate was a mutual one. This typical student is likely to want very much to live locally with his or her partner, and plans to do so in about seven months. Of course, such statistics (based on the median values of variables) do not begin to describe some of the more remarkable relationships uncovered, such as the 51-year-old student who has lived 13,000 miles away from her partner for the past 20 years.

There is no consensus on the apparently simple matter of how one should define an LDR. The current study used the following definition found in earlier research: an individual is said to be involved in an LDR if he or she “lives far enough away from his or her romantic partner that it would be difficult or impossible to see him or her on a daily basis” (Guldner & Swenson, 1995). Eleven percent of those who fit the LDR criterion described above, however, did not choose to define their relationship as an LDR.



This sub-group of individuals differed from the remainder of the LDR sample on a single demographic variable—the amount of time before they expected to live locally with their partner. Specifically, the 15 individuals who did not define their relationship as an LDR, expected to live locally with their partner an average of four months earlier than those who did define their relationship as an LDR (12 months versus 8). It may be that the time and distance apart that so often define the challenges of LDRs are less salient for this smaller sub-group of individuals. Perhaps the time when they will reunite with their partner feels so close at hand that they no longer choose to define their relationship in terms of separation, despite the fact that they live as far apart from their partner as those who did define their relationship as an LDR.

As for how LDRs originate, this study's results revealed a finding that is not often discussed in the psychological literature on LDRs. First, over three-quarters of the LDR sample reported that the main reason they currently lived apart from their partner was educational or vocational aspirations. This finding was expected, especially given that the sample was comprised entirely of graduate students. The rather unexpected finding in this area was that 16% of the LDR sample had always lived apart from their romantic partner. Common responses of such participants were the following: "I met my partner at a party while visiting friends in another state; we began our relationship as a long distance relationship" and "We met online, and due to school and work obligations, moving has not been an option for either of us." Given that nearly 11 percent of the LDR sample reported that having a long history with their partner prior to separating was one reason their relationship "worked," it would be interesting to know how relationships fare when the partners never have this foundation prior to separation. This could be a fruitful area of future research.

In terms of what makes their LDR “work,” participants gave thoughtful and diverse responses. The single most common variable that LDR participants attributed to a successful relationship was good communication (59.2%). Although most respondents referred to communication on a global level, others were much more specific. A response that would fit in both of these categories was the following: “We love each other, are able to communicate well with each other, and found a cell phone plan that lets us talk whenever we want.” Given that a large proportion of respondents reported talking to their partner daily by telephone (some for an hour or more), having affordable modes of communication (e.g., cell phone plans, web cameras and e-mail) appears to be an important facet of maintaining an LDR.

Second only to communication, those in LDRs reported that their relationships were successful due simply to mutual love (30%). One respondent put the matter this way when asked what made her relationship work: “I know this sounds corny, but Love.” Although one must presume that those in proximal relationships also love one another, they were significantly less likely to list love as a major factor in making their relationship a success. Similarly, those in LDRs were much more likely than those in PRs to focus on future plans (20% versus 0.5%) as a means of keeping their relationships vital, to report that “together time” was important (27% versus 14%), and to appreciate the value of patience (6% versus 1%).

In examining these differences, it is important not to overstate the findings. If asked directly, it seems all but certain that those in PRs would endorse love, together time, future plans, and patience as important to their relationships. The fact that they gave these responses less frequently than their LDR counterparts suggests, perhaps more than anything else, that such factors are simply more salient for those in LDRs. For

someone living apart from his or her romantic partner, together time, future plans, and patience are likely to sustain their relationship, not simply exist as a tacit part of their bond.

In terms of those in LDRs attributing love to their success more often than those in PRs, is it the case that distance makes the heart grow fonder? It is far beyond the scope of this study to tackle such an ineffable subject as love, however at least two possible explanations exist for the finding that those in LDRs were more likely than those in PRs to emphasize their love for each other. First, this may be the age-old psychological phenomenon of cognitive dissonance at work. Perhaps those in LDRs believe they are more in love due to the extreme nature of the challenges they are willing to undergo and still remain with their partner. In short, their rationale is “this *must* be love, otherwise why would I put up with so much suffering?” Past research does lend some credence to this possibility. For example, Stafford and Reske (1990) found that those in LDRs tended to idealize their relationships more than those in PRs.

A second possibility is that those in LDRs are, in fact, more in love than those in close relationships. In the current study, participants in LDRs reported less avoidance of intimacy than those in PRs. Avoidance of intimacy items refer to emotional closeness, communication, and alliance. Lower avoidance scores for those in LDRs suggest that such individuals feel more secure and confident in their ability to negotiate intimate relationships, and that they report a strong, loving bond with partners. It may be that individuals who decide to embark on LDRs do so, at least in part, because they believe themselves secure enough and capable enough to weather the trials inherent in such a relationship. This could result in a type of self-selection bias such that when the decision has to be made to terminate the relationship, stay together, or establish an LDR, those

who elect to maintain their relationship at a distance do so because they are more securely in love and more sure of themselves and of their partner.

As noted earlier, it is beyond the scope of this study to divine who is more in love with whom. However, the issue of whether those in LDRs are overly idealistic or grounded in reality is still an open question that could be addressed in future research.

Another interesting aspect of what participants attributed to a successful relationship was the finding that those in PRs were more likely to emphasize compatibility and both partners valuing independence than their LDR counterparts. This finding was, again, based on responses to the question “What makes your relationship work?” Again, the data do not allow a definitive conclusion on this matter, and there are at least two competitive explanations. First, the idea of salience again comes to mind. Perhaps those in LDRs focused more on issues apart from compatibility and independence simply because these are not currently central when they think about what makes their relationship successful. This seems especially plausible for the rather surprising finding that PR participants were more likely to value independence than those in LDRs. It may be that those in LDRs long for closeness with their partners to the extent that they do not think immediately of how distance and independence serve the relationship well. Those in close relationships, on the other hand, have to negotiate on a daily basis the amount of together time and independence. This may make them more aware of this facet of their relationship.

The same issue of perceived salience rather than actual importance may also apply to the discrepancy between the proportions of LDR and PR participants rating compatibility as important. One cannot dismiss, however, the possibility that those in PRs are indeed more compatible than those in LDRs. Those in LDRs endure the

challenges of such relationships precisely because they are unable to make their relationship goals compatible with other important life goals while remaining in the same geographical area. It may be that those in LDRs possess higher levels of career salience than those in PRs. Given that those in LDRs were, on average, younger than those in PRs, it may also be that age plays a role in shaping career and relationship values. Exploring further this issue of compatibility, especially as it pertains to career salience, could also be an interesting area of future research.

This study found that frequency of visits was not associated with relationship satisfaction for those in LDRs as hypothesized. Past researchers found equivocal evidence for the impact of visits on relationship satisfaction. Holt and Stone (1988) concluded that those in LDRs who manage to visit their partners at least once monthly were more satisfied with their relationships than those who had less frequent visits. More recent research, however, failed to find this same association (van Horn et al., 1997). Although it seems likely that those in LDRs would appreciate more frequent visits with their partners (as evidenced by nearly 27% of them stating that together time is important), the current study did not find that frequency of visits was a good predictor of relationship satisfaction.

Despite the failure to find any differences in satisfaction scores based on frequency of visits, there was a significant negative correlations between how much LDR participants wanted a close relationship and the length of time separated from their partner ( $r = -.20, p < .05$ ). Similarly, there was a significant negative correlation between how much LDR participants wanted a close relationship and the distance away from their partner ( $r = -.29, p < .05$ ). These correlations may suggest demoralization among those in LDRs as time and distance levels increase. It should be noted that time apart and

distance apart were not associated with different levels of relationship satisfaction, only with the desire to live locally. It could be that, rather than demoralization, that these correlations suggest a growing level of comfort with living apart as time and distance levels increase. Vormbrock (1993) discussed this phenomenon in her review of the attachment literature related to World War II veterans. Many of these veterans returned home to find that their wives and families had adapted in their absence by becoming more comfortable with independence. This adaptation often led to a difficult reunion and required a renegotiation of the relationship.

Finally, in commenting on what makes LDRs “work,” one factor that must not be overlooked is monogamy. This study found that those in non-monogamous LDRs were less satisfied with their relationship, had lower partner-specific social support, and higher levels of avoidance of intimacy, escape-avoidance coping and maladaptive coping than their monogamous counterparts. As with other correlational data presented here, it is not possible to determine causality in terms of monogamy and satisfaction. It could be that non-monogamous individuals in LDRs are less satisfied as a result of having an open relationship. However, the alternative explanation, that these individuals had an unsatisfactory, monogamous LDR which led them to find another partner, cannot be dismissed.

In summary, what makes LDRs succeed or fail cannot be answered in a simple way. It is hoped that the rich qualitative data provided by this study may fuel future research into the similarities and differences found between those in LDRs and PRs, thereby shedding light on important relationship dynamics.

*Further Comparisons of the LDR and PR Samples*

On a global level (not taking into consideration attachment dynamics at this point), quantitative analyses reveal a pattern of commonalities and differences between those in LDRs and PRs. Multiple regression analyses revealed that the single greatest predictor of relationship satisfaction for both LDR and PR participants was partner-specific social support. This variable alone contributed to nearly 51% of the variance in satisfaction scores for LDRs and over 54% of the variance for those in PRs. Similarly, avoidance of intimacy was a negative predictor of relationship satisfaction for both LDR and PR groups, contributing to nearly 7% and just over 4% of the respective variance in satisfaction scores.

That these two variables account for so much of the variance in satisfaction scores, and that coping behaviors contribute relatively little, appears logical when one considers what these two variables measure. Partner-specific social support is, in great part, a measure of alliance with one's partner. The 12 items that comprise the scale relate to issues of compatibility, respect, emotional closeness, and reliance. Similarly, avoidance of intimacy items refer to emotional closeness, communication, and alliance. As was seen in the qualitative data, these issues appear to be the foundation of well functioning relationships so it seems reasonable to assume that they would correlate strongly with relationship satisfaction and that they would be more potent predictors of satisfaction than how one coped with a single stressful situation.

Two other variables predicted relationship satisfaction for those in LDRs but not for those in PRs—use of confrontation and distancing coping. It should also be noted that, on the whole, those in PRs tended to use more confrontational coping than those in LDRs. These two findings support the idea that coping in a confrontational manner is less common in LDRs than in PRs, and when it does occur in the former it is associated

with diminished relationship satisfaction. Confrontational coping is characterized by expressing anger, fighting for what one wants, and taking risks in an effort to deal with stress. It may be that PRs are more amenable to this type of coping behavior because there is more of an opportunity for reconciliation afterward. In this sense, perhaps those in successful LDRs refrain from some of the more confrontational coping behaviors as a means of buffering their relationships given that it may be more difficult to reconcile over the phone or by e-mail than in person. This explanation bolstered by the finding that distancing coping, an avoidant approach, was a positive predictor of relationship satisfaction for those in LDRs. Distancing coping is characterized by attempts to ignore or forget about a stressor. Again, it could be that those in LDRs make an effort to shelter their relationships from certain stressors by simply not becoming too upset or not displaying their level of distress in a confrontational manner.

An alternative explanation for the finding that confrontational coping was a negative predictor for LDR satisfaction whereas distancing was a positive predictor could be that individuals who are less confrontational and who use distancing are more likely to form LDRs. It may be that such individuals are more prone to form LDRs because they believe they will be successful using these coping approaches. Perhaps their tendency to confront little contributes to LDR formation in the sense that someone with higher levels of confrontation would use this coping behavior to insist that the relationship not become long-distance. Due to the correlational nature of the data, it is not possible to determine causality. In either case, such findings point to the importance of not assuming that certain approaches to coping are always adaptive or maladaptive. Depending on relationship type and interpersonal dynamics, certain coping behaviors may be adaptive for some and maladaptive for others.



In summary, a global look at LDRs and PRs reveals interesting similarities and differences. First, it seems reasonable that certain fundamental qualities of compatibility, alliance, love and respect should be the variables most strongly associated with relationship satisfaction for both groups. The intriguing finding that confrontational and distancing coping were associated with satisfaction only for LDR participants and in an opposite fashion, may point to those in LDRs treating each other gingerly in an attempt to avoid major conflicts that could be difficult to negotiate at a distance. Having taken a global look at these two relationship types, let us now explore more closely some of the attachment dynamics associated with both groups.

#### *The Role of Romantic Attachment*

Results in the area of romantic attachment styles reveal additional similarities and differences among those in LDRs and PRs. As predicted, relationship satisfaction was significantly negatively correlated with the attachment variables of avoidance of intimacy and relationship-centered anxiety for both LDR and PR participants. However, there were no differences in the proportions of the four attachment styles represented in the LDR and PR sub-samples. A closer look at these attachment categories revealed some interesting findings. First, secure participants in either type of relationship were the most satisfied in their relationship. Within the LDR sub-sample, preoccupied individuals were more satisfied than fearful participants. This finding was not predicted but makes sense when viewed in the context of other results. For example, fearful individuals in LDRs were also less likely to rely on their partners for social support than were secure and preoccupied participants (see Table 8). Given that partner-specific social support so strongly predicted relationship satisfaction scores, it seems reasonable that fearful individuals would be less satisfied than those who were preoccupied and secure.

The results presented in Table 8 also reveal that secure individuals in PRs were the most likely to rely on their partners for social support, with no differences among the three insecurely attached groups. This pattern mirrors exactly the results in the area of relationship satisfaction. That there were no differences in satisfaction scores among the three insecurely attached groups in close relationships, suggests perhaps a special need to rely on partners in LDRs. A look at the correlations between partner-specific and global social support for those in LDRs and PRs also supports the notion that those in LDRs may depend on their partners to the exclusion of seeking help from others. There was a negative correlation between partner-specific and global social support ( $r = -.20, p = .02$ ) for those in LDRs and no correlation between these variables for those in PRs.

Preoccupied individuals, a group that has little trouble relying on partners for social support, may cope with stress in this manner, whereas fearful individuals are less comfortable relying on others, which may result in their lower satisfaction levels.

There was no evidence for the prediction that dismissing individuals in LDRs would be as satisfied as secure individuals. This hypothesis was based on the notion that dismissing individuals, who tend to be counter-dependent, might appreciate the distance and time apart from their partners. This prediction was, admittedly, based on conjecture especially given that dismissing individuals tend to be rather unsatisfied in romantic relationships due to high avoidance of intimacy. It was clear from reading LDR participants' qualitative responses, that their relationships required a great deal of communication, compromise and emotional intimacy. If it was the goal of dismissing individuals to escape relationship demands by living at a distance from their partner, such a strategy was both ill conceived and unsuccessful.

Returning to the topic of coping behaviors (and to Table 8), there were additional differences in coping based on attachment styles and relationship types. For example, among those in LDRs, fearful and preoccupied individuals reported using more escape-avoidance coping than secure individuals. Fearful participants were also more likely to report using escape-avoidance than dismissing individuals. Escape-avoidance is an approach to coping typified by such behaviors as sleeping more than usual, using food or substances to mitigate distress, and engaging in denial. Apparently in coping with the challenges of an LDR, preoccupied and fearful individuals resort to some of the most maladaptive behaviors. This was not the case for dismissing individuals perhaps due to two-step appraisal process involved in coping (as described earlier). Individuals only tend to engage in the second phase of coping (evaluating their ability to cope with a stressor) when they appraise the stressor as relevant to their well-being (primary appraisal). If one's primary appraisal is that the stressor is relatively unimportant, one may not need to engage in secondary appraisal and coping. Perhaps dismissing individuals did not deem their relationship stressor as important enough to their well-being to require such drastic measures as escape-avoidance coping. This would fit their tendency to be counter-dependent. There was limited support for this hypothesis, with the trend in the direction of dismissing individuals rating their stressor as less important than individuals in any other attachment category. However, due to lack of power, post hoc comparisons could not definitely confirm this relationship.

Finally, preoccupied individuals in LDRs and PRs used more total coping than did secure participants. Total coping refers to the sum of all six Ways of Coping subscales. It thereby represents the total amount of coping resources the individual brought to bear on his or her stressor. This finding also fits well with what is known

about these two attachment styles. Preoccupied individuals, having a heightened concern over their relationships, would be good candidates for trying a number of different coping approaches in a desperate attempt to come to terms with a relationship stressor.

In summary, there were no differences in the proportions of attachment styles among those in LDRs and PRs, and there were significant negative correlations between relationship satisfaction and the two attachment variables for both groups. These similarities belie a number of differences in coping behaviors among those with different attachment styles in LDRs and PRs. First, secure individuals in either type of relationship were the most satisfied. Preoccupied individuals in LDRs were more satisfied than their fearful counterparts. This same pattern was mirrored in the use of partner-specific social support. It also appears that those in LDRs may rely on their partners more than those in PRs even to the exclusion of other sources of social support. This finding is supported by past research, which suggested that those in LDRs may feel somewhat isolated from others given that they may not be familiar with many other couples involved in similar relationships and that they may be very protective of their limited “together time” (Anderson, 1992; Anderson & Spruill, 1993; Govaerts & Dixon, 1988). Finally, fearful and preoccupied individuals in LDRs tended to engage in more escape-avoidance coping than secure or dismissing participants. Preoccupied individuals also used more total coping than participants with any other attachment style.

Due to the exploratory nature of this study, a cluster analysis was conducted on the LDR and PR sub-samples to examine whether or not individuals formed unique clusters on the variables of interest. Results of this analysis are addressed next.

### *Results of Cluster Analysis*

Cluster analysis is well suited for the exploration of patterns in data that might not otherwise be revealed by other forms of statistical analyses (Borgen & Barnett, 1987; Hair & Black, 2000). This technique is especially appropriate in the early stages of research into areas of interest.

Both the LDR and PR sub-samples formed six distinct clusters (see Tables 8 and 9), a few of which were rather similar in composition. The LDR and PR groups both formed a cluster that could be termed “All I need is my partner.” There were 29 LDR and 61 PR participants that fit into this cluster. Characteristics of this cluster were average to below average coping scores and above average relationship satisfaction and partner-specific social support. Such individuals appear to rely predominantly on their partners as the main approach to dealing with stress, a technique that apparently works well for them at least in terms of satisfaction with their relationship.

A second cluster found in both PR and LDR sub-samples was comprised of individuals who are quite unsatisfied with their relationships. In the LDR sample this cluster could be called “Insecure, burdened, coping poorly and very unsatisfied,” and was comprised of 9 members. An analogous cluster among PR participants was termed “Insecure, coping poorly and very unsatisfied,” and was comprised of 10 members. Although there were some minor differences in exact coping styles used by these two clusters, both tended to use maladaptive approaches to coping such as distancing and escape-avoidance, and both were above average on the two attachment variables of relationship-centered anxiety and avoidance of intimacy. Individuals in these clusters tended to rely on their partners very little for support and were very unsatisfied with their relationships. For PR participants, post hoc comparisons revealed that these individuals

had the lowest relationship satisfaction and partner-specific social support. LDR participants in this cluster had the added stressor of financial burden.

In contrast, there was no LDR equivalent of the PR cluster “Secure and satisfied.” The 43 members of this cluster had below average scores on the attachment variables of avoidance and anxiety, and were above average in relationship satisfaction and partner-specific social support. These individuals also tended to use low levels of avoidant coping and an above average amount of planful problem solving. There was another LDR cluster that matched this PR cluster in terms of relationship satisfaction, however, it possessed some notable differences on other variables. This cluster, termed “Distancing and doing well,” was made up of 13 individuals who used distancing as their primary means of coping with a relationship stressor. Indeed, post hoc comparisons revealed that individuals in this cluster reported using more distancing coping than LDR individuals in any other cluster. They had below average scores on relationship-centered anxiety and confrontational coping and average scores on all other variables. This LDR cluster confirms the results of the multiple regression analysis, which found that distancing coping was positively associated with relationship satisfaction. Perhaps the individuals in this cluster, not having very high levels of anxiety or avoidance, are confident enough in themselves and in their relationships to allow certain stressors to slide.

Another intriguing cluster found among LDR participants was named “Anxious and confrontational but content.” The 18 individuals in this cluster tended to use a great deal of confrontational coping and were also above average in relationship-centered anxiety. Post hoc comparisons revealed that individuals in cluster one used more confrontational coping than those in all other clusters except four. They used a mix of

coping approaches and were average on the variables of avoidance of intimacy, partner-specific social support and relationship satisfaction. This cluster fits fairly well with the attachment category of preoccupied. Such individuals have high levels of relationship-centered anxiety and relatively lower levels of avoidance. This cluster's characteristics also fit well with MANOVA results, which found that preoccupied individuals used relatively high levels of escape-avoidance and total coping. This cluster also supports past research, which found that preoccupied individuals work hard at their relationships and tend to be less satisfied relative to secure individuals (Collins & Read, 1990; Kirkpatrick & Davis, 1994).

A similar cluster of individuals in PRs was called "Anxious and confrontational but generally coping well." These individuals have average scores on relationship satisfaction, partner-specific social support, distancing and escape avoidance. They also have above average relationship-centered anxiety and levels of confrontational coping. Notable among these participants were quite high levels of three adaptive approaches to coping—planful problem solving, global social support, and positive reappraisal. Post hoc comparisons showed that planful problem solving and global social support were highest in this cluster. It may be that such high levels on these coping variables enable these individuals to cope in a generally effective manner and to have average levels of satisfaction.

There was also a cluster of what appear to be rather disengaged LDR participants. This group, referred to as "I don't want to talk about it," had above average avoidance scores, very low confrontational coping scores, and below average levels of partner-specific social support, relationship satisfaction, global social support, burden, and planful problem solving. Post hoc comparisons revealed that individuals in this cluster

had lower reported levels of global and partner-specific social support and lower levels of relationship satisfaction than all but one other cluster. Individuals in this cluster appear to be unsatisfied with their relationship and doing little to remedy the situation. Like the fearfully attached, they appear to be socially avoidant and have relatively high levels of avoidance of intimacy. Anxiety scores, however, were only in the average range.

Finally, there was a cluster of LDR participants whose scores all hovered in the average range. They tended to display below average avoidant coping behaviors and below average avoidance of intimacy. They also reported relatively above average financial burden. The remainder of all of their scores were in the average range, and so this cluster of 21 participants was termed “average.”

Returning to the PR participants, there were two additional clusters worth mentioning. One cluster, comprised of 22 individuals, was termed “Avoidant, confrontational, and unsatisfied.” These individuals had high levels of avoidance (like fearful and dismissing participants), and used a mix of adaptive and maladaptive approaches to coping. They were relatively unsatisfied in their relationships and rely little on their partners for social support. Post hoc comparisons revealed that individuals in this cluster had the second lowest levels of relationship satisfaction and partner-specific social support, as well as the second highest levels of avoidance of intimacy.

The final PR cluster had 34 individuals and was termed “Tense and tuned out.” These participants had average scores on all but two variables. Specifically, they had higher scores on escape-avoidance coping than all other PR clusters and above average relationship-centered anxiety scores. It may be that having most other coping scores in the average range resulted in average levels of satisfaction for individuals in this cluster.



In summary, results of cluster analysis for LDR and PR participants revealed a six-cluster solution for both groups. Only three of these clusters, “All I need is my partner”, “Insecure, coping poorly and very unsatisfied” and “Anxious and confrontational but content,” were very similar and found in both the LDR and PR subsamples. The latter cluster also contained the added variable of above average financial burden for LDR participants. Other clusters among those in PRs and LDRs fit well with results of quantitative analyses and shed more light on the variety of individuals who make up these two types of relationships. It is hoped that this cluster analysis, along with the quantitative and qualitative data presented above, help to provide a voice to the many individuals who participated in this research.

If these cluster typologies are replicated in future research, they could be excellent tools to guide the treatment of those in LDRs (or PRs for that matter), or those planning on embarking on an LDR. A university counseling center could assist students to identify in which relationship cluster they best fit as a first step of treatment. For example, those in LDR cluster two (“All I need is my partner”) could be taught other coping skills that they are not currently using in an effort to boost their overall relationship satisfaction. Similarly, those in cluster five (“I don’t want to talk about it”) could be targeted to learn assertiveness and communication skills, which would likely contribute positively to their relationship. Finally, LDR individuals in cluster four (“Insecure, burdened, coping poorly and unsatisfied”) could be helped perhaps by prioritizing the changes that need to occur in their relationship or by determining whether or not the current relationship is feasible. If such a relationship were terminated, the counselor and client could continue to use the cluster typologies to make steps toward improving future relationships.

### *The Need for Theory-Driven Research*

The exploration of LDRs is still in the early stages, and researchers have explored a great variety of variables in the hope learning more about these under-studied relationships. Although, such an approach has yielded a small trove of interesting information, much of the research on LDRs has not had solid theoretical underpinnings. The result of this is a rather scattered literature, which makes it difficult to obtain a clear understanding of LDRs. One goal of the current section was to use the attachment literature as a framework for understanding LDRs. Attachment is an appealing theory because it has a solid and extensive history in the psychological literature, and also because the time and distance inherent in LDRs activate attachment dynamics. Finally, attachment may represent a good framework for understanding LDRs because attachment is primarily a theory of affect regulation. This makes it easy to link attachment to the coping literature, which is also extensive.

The results of the current study suggest that both attachment and coping may be fruitful areas of future research. First, the attachment variables of relationship-centered anxiety and avoidance of intimacy both had rather high, significant negative correlations with relationship satisfaction for those in LDRs ( $r = -.40$  and  $-.52$  respectively). These correlations were higher among LDR participants than PR participants ( $r = -.26$  and  $-.45$ ). Such differences might be attributable to attachment dynamics being more salient for those in LDRs due to the distance between partners.

Second, there were differences in coping based on attachment styles for those in LDRs. Although secure individuals were the most satisfied group, preoccupied individuals reported more satisfaction than fearful LDR participants. These same fearfully attached LDR participants were least likely to use their partners to cope with a

relationship stressor, whereas secure and preoccupied LDR participants were equally likely to rely on their partners. Finally, preoccupied individuals in LDRs used more total coping than those in any other attachment category. Such a pattern based on attachment styles was not found in the PR sub-sample. These results also fit well with attachment theory, which suggests that preoccupied individuals work hard at their relationships and are likely to engage their partners for support. Fearful individuals, on the other hand, are both anxious and avoidant, making them less likely to seek social support. Again, the fact that this particular pattern of results appeared among those in LDRs and not those in PRs suggests that attachment dynamics might be a more at work in the typical LDR than in the average PR.

Third, there was evidence that those in LDRs seek support from their partners in lieu of support from others. There was a significant negative correlation between partner-specific social support and global social support for those in LDRs ( $r = -.20, p < .05$ ), whereas there was correlation between these two variables for those in PRs. This finding is also consistent with attachment theory. When attachment behaviors are enacted due to stress, those in LDRs seek proximity from their partners, even if this proximity comes over the phone, by e-mail or through other means.

Finally, there was the finding that as time and distance levels increased, those in LDRs were less likely to want to live locally with their partners. Given that time and distance apart were not correlated with satisfaction, this finding could represent an adaptation to living independently among those in LDRs that also fits with attachment theory. Following the first two attachment stages of protest and despair comes detachment during which an individual learns to regulate affect by relying more on

oneself. Perhaps this happens in LDRs especially as time apart and distance apart increase.

The findings presented in this section are intriguing and suggestive of attachment dynamics at work. It is unfortunate, however, that much of this study's data was correlational, which makes it impossible to establish causal relationships. Low statistical power for some of this study's analyses may also have led to a failure to uncover additional findings. Still, the results presented here provide ample support for using attachment and coping as a framework for additional research on LDRs. This is not to imply that other theories may not apply to LDRs. On the contrary, researchers should be encouraged to engage in additional theory-driven research in the hope of uncovering avenues for future exploration.

#### *Limitations of the Current Study*

Given the exploratory nature of this dissertation, results were limited in certain ways. First, this was not an experimental design, as there was no manipulation of an independent variable. Although significant relationships among the variables were present, it was not possible to conclude definitively which variables actually caused the effects detected. Further, because of the exploratory nature of this study, it was difficult to predict *a priori* relationships between the variables of interest.

Another limitation of the current study relates to the sample of participants and to how these participants were recruited. Past researchers (Hillerbrand et al., 1986) suggested the need to study different types of LDRs because individuals involved in these relationships may vary considerably. Specifically, the authors suggest at least three types of LDRs: (a) those involving new college students separated from a high school partner, (b) those involving at least one partner graduating from college, and (c) those involving

at least one partner returning to college. The current study included only graduate students separated from their partners. Because of the focused nature of this study, results can be generalized only to individuals involved in this specific type of LDR. Thus, little was added to the understanding of individuals involved in the other types of LDRs described by Hillerbrand et al. (1986). Also, given that 54 participants in the current study were recruited through psychology listserves, graduate students in psychology were overly represented. It could be that students in psychology differ in some ways from other graduate students. Unfortunately, this could not be explored due to the confidential nature of the data.

In terms of recruitment, participants were not selected randomly. It was also not possible to calculate a response rate because it was impossible to ascertain exactly how many potential participants received notice of the study and how many of these were eligible to participate but simply declined to do so. It may be that those who chose to participate differed from those who were eligible but declined to participate. It should also be noted that men were under-represented in both the PR and LDR sub-samples, which makes it difficult to generalize the results to men. Past research has found gender differences in attachment dynamics (Collins & Read, 1990; Kirkpatrick & Davis, 1994; Simpson et al., 1992; 1996). Therefore, it may be that the results of the current study could have been altered if men and women were equally represented.

Another potential problem with the LDR sub-sample in particular had to do with the unexpected findings that 15 participants did not define their relationships as an LDR and that 16 percent of LDR participants had always lived at a distance from their partners. These findings, which are intriguing and suggest future directions for research,

might also be problematic. Although these individuals did not differ from the remainder of the LDR sub-sample on any of the important variables of interest, such individuals could represent distinct subgroups of LDRs. For example, it seems reasonable to expect that those who have always had an LDR might have a qualitatively different relationship from individuals who were together for many months or even years prior to separation. It may be that there was not enough power to detect differences among these subgroups on the variables used in this study, or that these subgroups would differ on other variables not included in this study. In any case, future research could address the numerous different types of LDRs.

Also, the current study garnered responses from only one member of each relationship. Although individual responses are certainly valid, it is also true that they represent only one version of the “relationship reality.” It would have been very interesting to have results from both members of each relationship to explore differences in responses and to compare responses based on attachment pairings. It may well be that satisfaction levels differ depending on these attachment pairings as has been reported in past research (Kirkpatrick & Davis, 1994). For example, it could be that secure individuals are most satisfied when paired with secure partners because an insecure partner might require greater emotional caretaking.

A final limitation of the current study was rather low statistical power for some of the analyses. This was due to finding relatively few fearful and dismissing participants. Past reports of the percentages of attachment styles represented in college samples (Bartholomew & Horowitz, 1991; Brennan et al., 1998; Brennan & Morris, 1997) were based upon a random selection of undergraduate students. These reports may have

overestimated the prevalence of certain attachment styles because they did not assess whether those students were currently involved in relationships. If the current study is any indication of the actual state of affairs, it may be that fearfully attached and dismissing individuals are rarely found in romantic relationships, especially those that last at least six months. However, it may be that secure and preoccupied individuals were, for some reason, more likely to volunteer for the current survey.

#### *Implications of the Current Study and Ideas for Future Research*

The main goal of the current study was to explore romantic attachment styles and coping behaviors of graduate students involved in LDRs and to compare these relationships to their PR counterparts. It was hoped that this study would both shed light on these under-studied relationships and suggest interesting avenues for future research.

Perhaps the broadest implication of the current study is that LDRs and PRs, despite their many similarities, differ in important ways. These differences suggest the need for future research to understand better the factors that contribute to successful LDRs and to the well-being of those involved in them.

Results of the current study suggest that romantic attachment styles are a potentially fruitful area of LDR research. It was found that those in LDRs were, on the whole, less avoidant of intimacy than those in PRs. This finding, which may appear counter-intuitive at first blush, deserves future study, as it could provide information on why some couples decide to form LDRs whereas others continue to live locally or terminate their relationships.

It was found that preoccupied individuals in LDRs were more satisfied than fearfully attached participants. As discussed earlier, it could be that the latter, being less

likely to rely on their partners for social support, may feel isolated and helpless in coping with relationship stressors. Thorough research into these attachment dynamics would likely yield more definitive answers. Such research should recruit enough members of under-represented attachment groups (e.g., fearful and dismissing) to enable more powerful analyses.

Another finding worthy of future research is the matter of lower rates of confrontational coping and higher rates of distancing coping among those in LDRs compared to their PR counterparts. This finding implies that those in LDRs might be more satisfied when they distance themselves from certain stressors as opposed to being confrontational. It may be that these individuals have adopted this coping technique in an attempt to avoid arguments, which can be difficult to negotiate and reconcile at a distance. Future study could determine if this is indeed the case and might also investigate whether there are any negative consequences to adopting this avoidant style of coping.

Sixteen percent of the LDR sample began their relationship at a distance and had always lived apart. This finding came as a bit of a surprise and has not been addressed in the research published to date. Over 10% of the LDR sample noted that having a history or foundation with their partner helped them to negotiate their relationship when it became long-distance. This raises the question of how couples fare in the long-run when they start their relationship at a distance. This could be another potentially fruitful avenue for future research, especially with longitudinal designs.

Recruiting LDR couples for future research, although much more difficult than recruiting individuals, could also yield more detailed data and would allow for within



couple analyses of attachment dynamics and coping. Again, it would be interesting to compare couples' attachment styles to understand whether certain attachment pairings are more or less common in LDRs than in PRs. It would also be interesting to examine how couples coped and fared based on their paired attachment styles.

More research is needed into comparisons of different types of LDRs. As was noted earlier, Hillerbrand, and colleagues (1986) suggested the presence of at least three different types of LDRs. One can add to that list those separated due to military service and those who began their relationships at a distance. Other potentially important LDR subtypes include married versus single, monogamous versus non-monogamous, and heterosexual versus same-sex. To date, no one has published a study comparing the many different types of LDRs.

Finally, the question of whether those in LDRs idealize their relationships or are actually more secure and more in love than the average person in a PR has not been addressed in enough detail. A study addressing this topic might also compare compatibility levels among those in LDRs and PRs, as there was some evidence from the qualitative data that those in PRs emphasized compatibility much more than those in LDRs.

In summary, almost a decade after Rohlifing (1995) lamented the dearth of research on LDRs, this area of study remains ripe for future research. The current, rather exploratory, study did reveal some intriguing findings in the area of attachment styles and coping. Because research into LDRs is still in its infancy, these findings may have raised more questions than they answered. It is hoped that the current study will add to the

literature and motivate future researchers to explore in greater detail those who choose to share themselves from afar.

Appendix A  
Demographic Questionnaire

Please answer the following questions related to yourself and to your relationship. Remember that your responses are anonymous.

1. What is your current age (in years) \_\_\_\_\_ years
  
2. What is your sex?  
 Male  
 Female
  
3. What is your race/ethnicity (please check one)  
 Asian American/Pacific Islander  
 Asian Indian/Pakistani  
 Biracial/multiracial  
 Black/African American  
 Hispanic/Latino(a)  
 Middle Eastern/Arab  
 Native American/Native Alaskan  
 White/European American  
 Other race (please specify \_\_\_\_\_ )
  
4. For how many **MONTHS** have you been involved in your current romantic relationship?  
  
\_\_\_\_\_ **MONTHS**
  
5. How would you characterize your **current** romantic relationship:  
  
 Heterosexual  
  
 Same Sex  
  
 Other (please specify): \_\_\_\_\_
  
6. Approximately how far away does your partner live? (If you live together please answer 0)  
  
\_\_\_\_\_ miles.

7. Please respond to the following by **checking just one response**:

My partner lives close enough to me that I could see him or her every day if I chose to.

My partner lives far enough away from me that it would be very difficult or impossible to see him or her every day.

8. Do you consider your relationship to be a long-distance relationship?

Yes                       No

9. If your relationship is long-distance, for how many consecutive **MONTHS** have you and your partner lived apart? (IF YOUR RELATIONSHIP IS **NOT** LONG-DISTANCE, PLEASE SKIP AHEAD TO QUESTION # 18)

**MONTHS**

10. About how often do you see your partner? (please check only one response):

Once a week or more

Two to three times per month

Once a month

Less than once a month

11. How long do you think it will be before you and your partner will be able to live locally? (please answer in terms of **MONTHS** if you're not sure, please check that box):

**MONTHS**

**Not sure**

12. How strongly do you **personally** want to live locally with your partner? In your response to this question please indicate your **personal** desire to live locally without regard to your partner's desire.

<b>Not strongly</b>		<b>Mixed/Neutral</b>		<b>Very strongly</b>
1	2	3	4	5

13. Please estimate the percentage of the time **YOU** travel to see your partner (as opposed to your partner traveling to see you). For example, if you **always** travel to see your partner, enter 100%. If you **never** travel to see your partner (he or she travels to visit you), enter 0%.

Percentage of the time **YOU** travel \_\_\_\_\_ %

When **YOU** travel to see your partner what percentage of the time do you:

Drive \_\_\_\_\_ %

Take a train \_\_\_\_\_ %

Fly \_\_\_\_\_ %

Other (please specify) \_\_\_\_\_ %

14. How much **extra money** does it cost you and your partner to live apart? In other words, how much do you and your partner spend in **extra** rent, phone calls, travel, etc. that you would not have to spend if you lived locally. Please estimate an average **MONTHLY AMOUNT**.

\$ \_\_\_\_\_ Per **MONTH**

15. How much of a financial burden are these extra costs to your relationship?

<b>No real burden</b>		<b>Somewhat of a burden</b>		<b>A very great burden</b>
1	2	3	4	5

16. Please describe briefly (in a couple sentences or so) how you and your partner came to live apart.

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17. In deciding to live apart and have a long-distance relationship, who, if anyone, was more motivated to make the separation? If your relationship has always been long-distance, choose “mutual.”

<b>My partner</b>		<b>Mutual</b>		<b>Myself</b>
1	2	3	4	5

18. My relationship with my current partner is (PLEASE CHECK ONE):

Monogamous \_\_\_\_\_

Not monogamous \_\_\_\_\_

19. What is your gross **personal** annual income \$\_\_\_\_\_

20. Please describe briefly what makes your current romantic relationship work?

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## Appendix B

## Stressful Event Description

To respond to the statements in this questionnaire, you must have a specific stressful situation in mind. Take a few moments and think about the most stressful situation that you have experienced **with regard to your romantic relationship in the past 2-3 weeks.**

By “stressful” we mean a situation that was difficult or troubling for you, either because you felt distressed about what happened, or because you had to use considerable effort to deal with the situation. The situation should have been related to your current long-distance romantic relationship. Before responding to the statements, think about the details of the stressful situation, such as where it happened, who was involved, how you acted, and why it was important to you. While you may still be involved in the situation, or it could have already happened, it should be the most stressful situation with regard to your romantic relationship in the past 2-3 weeks.

Please use the lines below to describe your situation briefly.

Stressful situation regarding my romantic relationship: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

How UPSETTING was this experience for YOU? (Please circle ONE response.)

Not at all upsetting 1	Slightly upsetting 2	Fairly upsetting 3	Very upsetting 4	Extremely upsetting 5
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What was the MAIN or PRIMARY EMOTION that you experienced as a result of this event? Write the number 1 next to that emotion. If other emotions were also experienced, number them 2, 3, etc., in their order of importance.

- Anger, disgust
- Tension, fear, anxiety, worry
- Feelings of loss, depression ,or guilt

[ ] Other (please describe): \_\_\_\_\_

How important do you consider this event to be? (Please circle ONE response.)

Not at all  
important  
1

Slightly  
important  
2

Moderately  
important  
3

Quite  
important  
4

Extremely  
important  
5

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### Ways of Coping Questionnaire (6 subscales)

Note: The Ways of Coping Questionnaire is copyright protected, so it cannot be produced in its entirety here. Only the directions, answer key, and item numbers are included below. Please see the method section for sample items.

Directions: Now, please answer the questions below about how you dealt with the stressful situation described above. As you respond to each of the statements, please keep this stressful situation in mind. **Read each statement carefully and indicate, by circling 0, 1, 2, or 3, to what extent you used it in the situation.**

**Key:**

- 0 = Does not apply or not used**
- 1 = Used somewhat**
- 2 = Used quite a bit**
- 3 = Used a great deal**

Planful Problem Solving = Items 1, 16, 24, 32, 33, 35

Confrontation = Items 2, 3, 10, 17, 21, 30

Social Support = Items 4, 11, 14, 19, 27, 29

Escape Avoidance = Items 5, 9, 20, 25, 31, 34, 37, 38

Distancing = Items 6, 7, 8, 13, 26, 28

Positive Reappraisal = Items 12, 15, 18, 22, 23, 36, 39

## Appendix C

## Social Provisions Scale—Partner Specific

In answering the next set of questions, please think about your current romantic relationship with your **partner** (for example: spouse, fiancé(e), boyfriend, girlfriend).

		NO	SOMETIMES	YES
1	Can you depend on your partner to help you, if you really need it?	1	2	3
2	Do you feel you could <u>not</u> turn to your partner for guidance in times of stress?	1	2	3
3	Does your partner enjoy the same social activities that you do?	1	2	3
4	Do you feel personally responsible for the well-being of your partner?	1	2	3
5	Do you feel your partner does <u>not</u> respect your skills and abilities?	1	2	3
6	If something went wrong, do you feel that your partner would <u>not</u> come to your assistance?	1	2	3
7	Does your relationship with your partner provide you with a sense of emotional security and well-being?	1	2	3
8	Do you feel your competence and skill are recognized by your partner?	1	2	3
9	Do you feel your partner does <u>not</u> share your interests and concerns?	1	2	3
10	Do you feel your partner does <u>not</u> really rely on you for his or her well-being?	1	2	3
11	Could you turn to your partner for advice, if you were having problems?	1	2	3
12	Do you feel you <u>lack</u> emotional closeness with your partner?	1	2	3

## Appendix D

## Experiences in Close Relationships

The following statements concern how you feel in romantic relationships. We are interested in how you generally experience relationships, not just in what is happening in a current relationship. Respond to each statement by indicating how much you agree or disagree with it. Write the number in the space provided, using the following rating scale:

		Disagree Strongly			Neutral or Mixed			Agree Strongly
1	I prefer not to show a partner how I feel deep down.	1	2	3	4	5	6	7
2	I worry about being abandoned.	1	2	3	4	5	6	7
3	I am very comfortable being close to romantic partners. (R)	1	2	3	4	5	6	7
4	I worry a lot about my relationships.	1	2	3	4	5	6	7
5	Just when my partner starts to get close to me I find myself pulling away.	1	2	3	4	5	6	7
6	I worry that romantic partners won't care about me as much as I care about them.	1	2	3	4	5	6	7
7	I get uncomfortable when a romantic partner wants to be very close.	1	2	3	4	5	6	7
8	I worry a fair amount about losing my partner.	1	2	3	4	5	6	7
9	I don't feel comfortable opening up to romantic partners.	1	2	3	4	5	6	7
10	I often wish that my partner's feelings for me were as strong as my feelings for him/her.	1	2	3	4	5	6	7
11	I want to get close to my partner, but I keep pulling back.	1	2	3	4	5	6	7
12	I often want to merge completely with romantic partners, and this sometimes scares them away.	1	2	3	4	5	6	7
13	I am nervous when partners get too close to me.	1	2	3	4	5	6	7
14	I worry about being alone.	1	2	3	4	5	6	7
15	I feel comfortable sharing my private thoughts and feelings with my partner. (R)	1	2	3	4	5	6	7
16	My desire to be very close sometimes scares people away.	1	2	3	4	5	6	7

		Disagree Strongly			Neutral or Mixed			Agree Strongly
17	I try to avoid getting too close to my partner.	1	2	3	4	5	6	7
18	I need a lot of reassurance that I am loved by my partner.	1	2	3	4	5	6	7
19	I find it relatively easy to get close to my partner. (R)	1	2	3	4	5	6	7
20	Sometimes I feel that I force my partners to show more feeling, more commitment.	1	2	3	4	5	6	7
21	I find it difficult to allow myself to depend on romantic partners.	1	2	3	4	5	6	7
22	I do not often worry about being abandoned. (R)	1	2	3	4	5	6	7
23	I prefer not to be too close to romantic partners.	1	2	3	4	5	6	7
24	If I can't get my partner to show interest in me, I get upset or angry.	1	2	3	4	5	6	7
25	I tell my partner just about everything. (R)	1	2	3	4	5	6	7
26	I find that my partner(s) don't want to get as close as I would like.	1	2	3	4	5	6	7
27	I usually discuss my problems and concerns with my partner. (R)	1	2	3	4	5	6	7
28	When I'm not involved in a relationship, I feel somewhat anxious and insecure.	1	2	3	4	5	6	7
29	I feel comfortable depending on romantic partners. (R)	1	2	3	4	5	6	7
30	I get frustrated when my partner is not around as much as I would like.	1	2	3	4	5	6	7
31	I don't mind asking romantic partners for comfort, advice, or help. (R)	1	2	3	4	5	6	7
32	I get frustrated if romantic partners are not available when I need them.	1	2	3	4	5	6	7
33	It helps to turn to my romantic partner in times of need. (R)	1	2	3	4	5	6	7
34	When romantic partners disapprove of me, I feel really bad about myself.	1	2	3	4	5	6	7
35	I turn to my partner for many things, including comfort and reassurance. (R)	1	2	3	4	5	6	7
36	I resent it when my partner spends time away from me.	1	2	3	4	5	6	7

To classify respondents into the four categories of secure, fearful, preoccupied and dismissing (using SPSS), the following procedures are used (as found in Brenner, Clark & Shaver, 1998, p. 72):

First calculate mean avoidance and anxiety scores for each participant. These scores are arrived at by reverse scoring items marked with an (R) then summing responses to items on each subscale and dividing by the number of responses. Avoidance items are odd numbers. Even numbered items fall under the anxiety subscale. These average scores can be labeled as new variables “avoidanc” and “anxiety.” Next, the following four variables should be calculated using the classification coefficients below:

$$\text{SEC2} = \text{avoidanc} * 3.2893296 + \text{anxiety} * 5.4725318 - 11.5307833$$

$$\text{FEAR2} = \text{avoidanc} * 7.2371075 + \text{anxiety} * 8.1776446 - 32.3553266$$

$$\text{PRE2} = \text{avoidanc} * 3.9246754 + \text{anxiety} * 9.7102446 - 28.4573220$$

$$\text{DIS2} = \text{avoidanc} * 7.3654621 + \text{anxiety} * 4.9392039 - 22.2281088$$

If (SEC2 > max (fear2,pre2,dis2)) ATT2 = 1

If (FEAR2 > max (sec2,pre2,dis2)) ATT2 = 2

If (PRE2 > max (sec2,fear2,dis2)) ATT2 = 3

If (DIS2 > max (sec2,fear2,pre2)) ATT2 = 4

Value labels:

ATT2 1 = secure, 2 = fearful, 3 = preoccupied, 4 = dismissing

Appendix E  
Relationship Assessment Scale

*Please mark the letter for each item which best answers that item for you.*

1. How well does your partner meet your needs?

A	B	C	D	E
Poorly		Average		Extremely well

2. In general, how satisfied are you with your relationship?

A	B	C	D	E
Unsatisfied		Average		Extremely satisfied

3. How good is your relationship compared to most?

A	B	C	D	E
Poor		Average		Excellent

4. How often do you wish you hadn't gotten in this relationship? (reverse-scored)

A	B	C	D	E
Never		Average		Very often

5. To what extent has your relationship met your original expectations?

A	B	C	D	E
Hardly at all		Average		Completely

6. How much do you love your partner?

A	B	C	D	E
Not much		Average		Very much

7. How many problems are there in your relationship? (reverse-scored)

A	B	C	D	E
Very few		Average		Very many

## Appendix F

Example of first e-mail solicitation sent directly to 1290 e-mail addresses

Dear «NAME\_FIRST»:

Would you like to learn more about your romantic relationship and help out in a research project? The Department of Counseling and Personnel Services at the University of Maryland at College Park is conducting a study on graduate students' romantic relationships. Your participation would only involve completing a short online questionnaire, which should only take you about 15 minutes to complete and can be accessed by going to this website:

<<http://otal.umd.edu/gradstudentrelationships/>>

Little is known about the challenges and rewards of graduate student relationships, so your participation has the potential to add much to our understanding of them!

To qualify for this study, you must be an unmarried graduate student and currently involved in a romantic relationship for the past 6 months or longer. We are interested in both close and long-distance relationships, and relationships can be either heterosexual or same-sex.

If this sounds like you, we would be very grateful if you'd participate. If this is not you but sounds like someone you know, please pass the link along.

You will not be required to provide your name or your email address, and your answers will be confidential. Please help us in understanding better what makes graduate student relationships work.

Thank you!

Again, the study is at <<http://otal.umd.edu/gradstudentrelationships/>>

If you have any questions about participating, please feel free to contact Gary Freitas at <[gfreitas@umd.edu](mailto:gfreitas@umd.edu)>

Thank you so much for your time!

Gary Freitas, MA  
Doctoral Candidate in Counseling Psychology  
University of Maryland at College Park  
<[gfreitas@umd.edu](mailto:gfreitas@umd.edu)>

Note: This research project has been approved by the University of Maryland Institutional Review Board. This approval indicates that methods adequately protect the rights and welfare of the participants.



Example of less formal e-mail solicitation sent to listserves and forwarded by graduate program chairs

Dear all:

I am a doctoral candidate in Counseling Psychology at the University of Maryland at College Park. I am completing my dissertation research on the romantic relationships of graduate students. If you're a grad student involved in a romantic relationship for at least the past 6 months, PLEASE consider completing my online study. It should only take 15 minutes and would provide you with TONS of good RESEARCH KARMA! You might even learn something about your relationship.

Those eligible are GRADUATE students in any area of study at any university (includes law students, med students, those ABD, etc.), who are unmarried, involved in their current romantic relationship for at least 6 months and in EITHER a close or long-distance relationship. If this sounds like you, I would be very grateful if you'd participate. If this is not you but sounds like someone you know, please pass my link along.

The study is at <<http://otal.umd.edu/gradstudentrelationships/>>

Thank you so much for your time!

Gary Freitas

--

Gary J. Freitas, MA

Doctoral Candidate in Counseling Psychology

University of Maryland at College Park

<[gfreitas@umd.edu](mailto:gfreitas@umd.edu)>

## Appendix G

### Informed Consent for Present Study (online participants)

#### Romantic Attachment and Coping Behaviors in Graduate Students' Romantic Relationships

If you choose to participate in the current study, you will be asked to complete a survey about your current romantic relationship. It will take approximately 15 minutes to complete.

By clicking the Begin Survey link below you state that you are over 18 years of age and wish to participate in a program of research being conducted by Professor Mary Ann Hoffman and Gary J. Freitas M.A. in the Department of Counseling and Personnel Services at the University of Maryland, College Park.

The purpose of this research is to study the romantic relationships of graduate students.

1) The confidentiality of your responses will be closely protected. Your name will not be matched with your responses. Due to the public nature of the Internet, absolute confidentiality cannot be guaranteed. (The possibility of someone intercepting your data is highly unlikely, although theoretically possible nonetheless). Computerized data will be password protected and any potentially identifying information will be both password protected and locked in a file cabinet to which only the student experimenter has access.

2) Your participation in this research is entirely voluntary and you may choose to withdraw from the study at any point. You may also ask questions at any time.

3) If you do not exit or close your Internet browser when you have completed your survey it is possible that another person using your computer at a later time could view your responses. It is therefore important that you exit your browser after you have submitted your survey.

4) You should be aware that, although unlikely, your participation in this survey could elicit negative emotions (e.g., memories of negative experiences in your relationship).

5) The benefits of participation to you are that you may grow in your understanding of the unique challenges and rewards of your relationship. You will also be contributing to research on an important, understudied topic. This research may eventually help us understand how graduate students in romantic relationships can cope more effectively.

This research project has been approved by the University of Maryland Institutional Review Board. This approval indicates that methods adequately protect the rights and welfare of the participants. If you have any questions about participating in this project then please feel free to contact me (Gary J. Freitas at <gfreitas@wam.umd.edu>) or my faculty advisor (Professor Mary Ann Hoffman at <mh35@umail.umd.edu>). If you have questions about your rights as a research subject or wish to report a research-related

injury, please contact: **Institutional Review Board Office, University of Maryland, College Park, Maryland, 20742; (e-mail) [irb@deans.umd.edu](mailto:irb@deans.umd.edu); (telephone) 301-405-4212.**

Sincerely,

Gary J. Freitas, M.A.  
Doctoral Candidate in Counseling Psychology  
University of Maryland, College Park

Mary Ann Hoffman, Ph.D.  
Counseling Psychology Program  
University of Maryland

Begin Survey!

## Appendix H

## Debriefing Information

Thank you very much for participating in this study. The goal of this research is to get a better understanding of what contributes to relationship satisfaction in long-distance romantic relationships (LDRs). The two major variables of interest as potential contributors to satisfaction were coping strategies and romantic attachment style. Graduate students in close relationships were also asked to participate so that their relationships could be compared to LDRs.

If you have any questions or concerns about this study, please do not hesitate to contact the primary researcher listed below. You may also contact the primary researcher if you would like a copy of this study's results when they become available. Finally, if you are willing to respond to a follow-up question in 12 months please enter your e-mail address. If you agree to this follow-up question, the student investigator will e-mail you in one year to ask if you are still involved in your current romantic relationship.

Thank you once again for your participation!

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**Before continuing, please answer the following 2 questions:**

Would you like results of the study emailed to you when they are available? Yes No

Would you be willing to be emailed in one year to answer a single follow-up question?  
Yes No

**If you answered yes to either question above,** please provide an e-mail address where you can be contacted (your e-mail address is submitted separately from your responses to maintain confidentiality).

Please enter e-mail address here: \_\_\_\_\_

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