
Missing a romantic partner: A prototype analysis

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Abstract

In this study, a prototype analysis of romantic missing was conducted. College-age participants in the United States generated features of missing a partner (Study 1) and rated their centrality (Study 2). In a reaction time task, participants made category judgments for central features more quickly than for noncentral features (Study 3). In recognition and recall tasks, central features were more salient in participants' memory, and participants evaluated individuals experiencing central features in vignettes as missing their partners more (Study 4). A prototype-based measure of missing administered to individuals in long-distance relationships (Study 5) correlated with commitment and attachment dimensions but only weakly with loneliness. Finally, level of missing differed based on whether individuals were in a geographically distant (vs. proximal) relationships (Study 6).

Where you used to be, there is a hole in the world, which I find myself constantly walking around in the daytime, and falling in at night. I miss you like hell.

—Edna St. Vincent Millay (1952)

Whether it is the expected separations that define commuter marriages, unavoidable military deployment of a partner, spring break for college students, or periodic work-related travel, romantic partners will at some point face geographic separation. The occurrence of partners' separations may give rise to *miss-*

ing, which we broadly define as the individual experience resulting from physical separation between partners, such that one's partner is not immediately physically available when proximity is desired. Surprisingly, empirical investigations of the experience of missing romantic partners are nonexistent. In this article, we report on a six-study prototype analysis of this heretofore ignored aspect of interpersonal relationships. Our primary goal was to understand individuals' experience of missing their partners. Additionally, based on the empirically derived prototype of missing a partner,

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we created a measure of the experience of missing a romantic partner. Thus, the secondary goal of this research was to establish the validity of the new measure.

Although many situations cause physical separation between partners, the most commonly researched context for separation in the adult relationship literature is long-distance relationships. Approximately 25%–50% of college students' romances are long distance (Sahlstein, 2004; Stafford, 2005; Van Horn et al., 1997), and 70% of students become involved in a long-distance romantic relationship at some point while in college (Guldner & Swensen, 1995). As a result, undergraduates provide an excellent sample through which to gain an understanding of the construct of missing a romantic partner. Furthermore, long-distance relationships are an ideal context for studying how people experience missing because it is a time period in which individuals learn how to manage stress within romantic relationships (Nieder & Seiffge-Krenke, 2001). Indeed, geographic separation affects communication between partners (Baxter & Bullis, 1986; Holt & Stone, 1988) and certainty about the future of the relationship (Van Horn et al., 1997). Although long-distance relationships are not necessarily lower in relationship quality or have a heightened risk for dissolution (e.g., Dainton & Aylor, 2002; Stafford & Merolla, 2007), geographic separation has been associated with increased levels of depression (Guldner, 1996).

Perhaps, more than any other construct, loneliness would, on the surface, appear to have the most conceptual, semantic, and phenomenological overlap with the experience of missing. Nonetheless, we believe that the actual overlap is minimal. Loneliness is the psychological experience resulting from a discrepancy between one's perceived and desired level of social integration (Cacioppo et al., 2000; Peplau & Perlman, 1982). In contrast, the psychological experience of missing a romantic partner is related to a specific other. Therefore, an individual could be lonely without missing any specific person or could miss their romantic partner without feeling lonely. It is possible that the experience of missing does involve some degree of loneliness; how-

ever, we undertook this research with little expectation that loneliness and missing would be redundant concepts.

Extant theoretical frameworks and the experience of missing a partner

Although several prominent theorists in the field of close relationships have directly or indirectly alluded to the experience of missing, previous work offers no formal definition or explanation of its components. For example, the experience of romantic missing has strong parallels within the child and adult attachment literature, particularly individual responses to separations (Ainsworth, Blehar, Waters, & Wall, 1978; Mikulincer & Shaver, 2007). Bowlby (1973), in his seminal work on separation, noted that "*missing* [emphasis added] someone who is loved and longed for is one of the keys we need, and that the particular form of anxiety to which separation and loss give rise is not only common but leads to great and widespread suffering" (p. 30). Clearly, Bowlby viewed separation, and the concomitant activation of the attachment system, as a significant event. Indeed, impending separations from their romantic partner affect individuals' psychological and behavioral responses depending on their specific attachment orientations. In their study of airport separations between adult romantic partners, Fraley and Shaver (1998) reported that women's attachment anxiety was positively associated with distress prior to separation from their partners, whereas avoidance increased behaviors typifying withdrawal. Fraley and Shaver framed their findings within the description of the attachment system by Shaver and Hazan (1988), such that the appraisal system influences attachment-related anxiety, whereas a behavioral system (i.e., avoidance) affects individuals' strategies for managing separation distress.

Because the experience of missing likely serves as a way of maintaining cognitive proximity via reminders of the partner, one would expect more anxious individuals to demonstrate a greater propensity to miss a specific other. On the other hand, avoidance coincides with an interest in noninterpersonal goals and increased independence (Collins & Allard,

2001). Therefore, more avoidant individuals should report experiencing less missing of their partners when separated because of their efforts to suppress any distress associated with the geographic separation.

Interdependence theory (Thibaut & Kelley, 1959) may also elucidate the construct of missing a romantic partner. Interdependence theory follows from the assumption that sequences of interactions between partners yield outcomes, and to the extent that a person perceives those outcomes to be positive and uniquely provided by the specific other, partners begin to rely on one another for fulfillment of needs as relationships develop (Le & Agnew, 2001). In particular, dependence occurs when an individual perceives that the outcomes obtained from a particular partner cannot be obtained from alternative sources. Accordingly, commitment, or the subjective experience of dependence (Rusbult & Buunk, 1993), relates to the occurrence of meaningful and fulfilling interactions between partners, and the desire for those interactions to continue. In the context of geographic separation, more committed individuals should miss their partners to a greater extent when separated because these individuals have lost an important source of need fulfillment.

In sum, we believe that the experience of missing a partner is distinct from loneliness and that the experience of missing is consistent with well-established and diverse theoretical approaches for understanding relationship processes and outcomes. Yet, none of these perspectives offers a definition of the construct of missing romantic partner. Thus, we undertook a prototype analysis of the experience of missing as a critical first step toward understanding this construct.

We note that our analysis of the experience of missing a partner focuses on the specific context of geographic separation between romantic partners. This is clearly not the only setting in which individuals may experience missing another person. For example, they may miss romantic partners during brief separations (e.g., during a trip to the grocery store); indeed, an individual may even miss a partner while still in the presence of the partner (e.g., when thinking about an upcoming trip). Furthermore, romantic dyads constitute only one

relationship type in which missing may occur. Friends can miss friends, family members can miss family members, and so on. Thus, our focus on the experience of romantic missing resulting from geographic separation constitutes an initial exploration into this phenomenon and does not provide a comprehensive analysis of the general experience of missing. Given the pervasiveness of the experience of missing and the important role of romantic relationships in individuals' lives (Kelley, 1979), we deemed it critical to identify the features individuals associate with this form of missing, with the expectation that this initial investigation would lay the groundwork for a host of fascinating studies into the experience of interpersonal missing more broadly.

The prototype approach to the experience of missing a romantic partner

Prototype analyses identify those features common, but not essential, to a construct (Rosch, 1973). The prototype therefore represents a "fuzzy set" of elements associated with the dimension of interest. We assumed that individuals may experience missing their romantic partners differently and that the constituent features of the experience may be somewhat idiosyncratic. If so, the construct of missing would consist of a constellation of characteristics. In the current work, we use a prototype approach because it allows for idiographic variation in experiences of missing such that individuals may define the construct differently based on their own aggregation of specific component features. As the first empirical work to examine the phenomenon of missing a partner, we decided that it would be advantageous to use a prototype analysis that allows us to gather a wide range of emotions, cognitions, and behaviors that together comprise individuals' experiences of missing romantic partners when geographically separated.

Past prototype analyses in relationship research

Prototype analyses are employed regularly in research examining interpersonal relationship

dimensions (Fehr, 2005). For example, Fehr's research on love and commitment (Fehr, 1988, 1994; Fehr & Russell, 1991) identified the features central to these concepts (e.g., trust and caring for love; loyalty and responsibility for commitment) and demonstrated that love and commitment are independent, yet overlapping constructs. Researchers have subsequently embraced the prototype approach to examine other important interpersonal processes, including jealousy, forgiveness, respect, and quality (Frei & Shaver, 2002; Friesen & Fletcher, 2007; Hassebrauck, 1997; Hassebrauck & Aron, 2001; Kearns & Fincham, 2004; Sharpsteen, 1993).

Conducting a prototype analysis of a psychological dimension involves, minimally, two studies. In the first study, participants generate a set of features related to the dimension of interest via a free listing procedure. Next, a second sample rates the prototypicality of the features that the first sample generated, allowing researchers to rank order features as a function of centrality (e.g., Fehr, 1988; Hassebrauck, 1997). After identifying central and noncentral features, researchers typically validate the content of the prototype in subsequent studies, such as demonstrating that central features are more salient in memory and have shorter response latencies compared to noncentral features (Fehr, 1988; Fehr & Russell, 1991; Hassebrauck, 1997; Kearns & Fincham, 2004). Specific to prototype analyses in close relationship research, participants perceive (a) violations of central features of relationship enhancing constructs (e.g., love) to be detrimental to relationships and (b) central features as present in relationships characterized with the construct of interest (Fehr, 1988; Kearns & Fincham, 2004). Furthermore, researchers have constructed feature-based measures of relationship constructs from prototypical features (Aron & Westbay, 1996; Fehr, 1994; Frei & Shaver, 2002).

Overview of studies and hypotheses

We took an approach inspired by past researchers using the prototype framework. The goal of Study 1 was to gather a list of

features related to the experience of missing a romantic partner, and in Study 2, a new sample of participants rated the centrality of each feature so that we could identify the prototypical features of the experience of missing a romantic partner.

The goal of Studies 3 and 4 was to validate the structure of the prototype using cognitive methods. Specifically, the prototype of the experience of missing a romantic partner should affect cognitive processes related to the experience, including response latencies for decisions about category membership, as well as recall and recollection for features contained within the prototype (Fehr & Russell, 1991; Kearns & Fincham, 2004). Activation of the construct of missing should increase the accessibility of features that are central to the construct. Increased accessibility of central features compared to noncentral features should produce differences in reaction time for judgments about the features as well as enhanced recall and false recognition for central features. Therefore, we tested the following hypotheses:

H1: Participants' judgments of category membership for central features of the experience of missing a romantic partner will be faster than participants' judgments of category membership for noncentral features of the experience.

H2: In a free recall task, participants will remember more central features of the experience of missing a romantic partner than noncentral features of the experience of missing.

H3: In a recognition task, participants will falsely recognize more central features of the experience of missing a romantic partner than noncentral features of missing.

In Study 4, participants read vignettes describing individuals separated from their partners using either central or noncentral features of the experience of missing and rated the extent to which these individuals missed their partners (Kearns & Fincham, 2004). Characterizing relationships as including central features of the prototype of the experience of missing should impact participants' judgments

of the extent to which the overarching construct describes the hypothetical relationship experiences:

H4: Participants will rate individuals described as experiencing the central features of the experience of missing a romantic partner as missing their partners to a greater extent than individuals described as experiencing noncentral features of missing.

Finally, geographically separated relationships, such as long-distance relationships, provide an ideal context to investigate the experience of missing a romantic partner. Congruent with the idea that the experience of missing a romantic partner is an idiosyncratic phenomenon, individuals in long-distance relationships should vary in the extent to which they miss their partners. Following from Studies 1 to 4, we constructed and administered a prototype-based measure of the experience of missing a romantic partner to a sample of participants in long-distance relationships. One goal of Study 5 was to validate the content of the prototype of the experience of missing a romantic partner as distinct from loneliness. We also assessed the extent to which the experience of missing a partner correlated with attachment dimensions and relationship commitment:

H5: The experience of missing will be weakly, but positively, associated with loneliness.

Commitment is greater to the extent that individuals' relationships are higher in interdependence (Rusbult & Buunk, 1993). Therefore, the following:

H6: The experience of missing will be positively associated with relationship commitment.

Adult attachment orientation should also demonstrate associations with the experience of missing a romantic partner. Fraley and Shaver (1998) reported that for women, attachment anxiety predicted greater distress and

avoidance predicted distancing behaviors when partners faced an upcoming separation. We expected a similar pattern with regard to associations with the experience of missing a romantic partner:

H7: Self-reports of the extent to which individuals miss their partners will be positively associated with attachment anxiety and negatively associated with attachment avoidance.

Finally, the validity of the prototype-based measure of the experience of missing a partner is bolstered if the geographically separated (i.e., in long-distance relationships) differ in the extent to which they miss their partners compared to those in proximal relationships (Study 6):

H8: Individuals in long-distance relationships will report missing their partners more than those in geographically close relationships.

Study 1

Method

Participants. Seventy-six introductory psychology students (63% female) at a highly selective small private undergraduate college¹ in the Northeastern United States participated in a study of “the psychology of interpersonal closeness and separation” as partial fulfillment of course requirements. The majority of participants self-identified as Caucasian (79%; 12% Asian American, 1% African American, and 8% other), and the mean age of participants was 18.67 years ($SD = 0.95$). Forty-two percent of participants were involved in romantic relationships.

1. Data for Studies 1–4 were collected at Haverford College, a nonsectarian institution with Quaker (i.e., Religious Society of Friends) origins. Only a small proportion of students attending Haverford at the time of this research (approximately 5%–6%) self-identified as Quakers.

Procedure. Adapting the instructions of Fehr (1988), we provided the following prompt to elicit features associated with the experience of missing a partner when geographically separated:

Below, we ask about what it means to you to “miss” someone. We “miss” someone when we are apart from him or her for some reason, even though we know we will see this person again. For example, we might miss someone if she or he is on a business trip or attends college in another country. Think for a moment about what it means to “miss” a romantic partner. Please list as many features or characteristics of “missing” a romantic partner as come to mind. For example, you might want to list things including what you feel like, think about, or things you do when you miss someone. Even if you’ve never missed a romantic partner, you can still write things relevant to what you think it might be like to miss a romantic partner. There are no right or wrong answers. Please do not take more than about 3 minutes to complete this task.

Results and discussion

Participants listed 605 features ($M = 7.96$, $SD = 3.68$). Using the methods of Fehr (1988) and Rosenberg and Sedlak (1972), two teams of research assistants working in pairs transcribed and independently coded the responses. The coding consisted of removing duplicate entries as well as combining semantically related terms (e.g., “feeling incomplete” and “losing a piece of yourself”). The coding teams compared their efforts, with any discrepancies in their coding resolved via discussion.

This method resulted in a total of 77 distinct features being identified as associated with the experience of missing a romantic partner (Table 1 provides the 20 most commonly listed features in *italics* in the “Study 1—% of participants” column, sorted by centrality ratings from Study 2). Consistent with our expectation that there would not be a singular defining characteristic of the experience of

missing, no single feature appeared in all participants’ lists. In fact, the most common feature appeared on only half of the participants’ lists and only three features appeared on a third of the participants’ lists (“feeling lonely” [50%], “feeling sad” [42%], “corresponding with partner” [32%]). Furthermore, the features generated included a diverse set of characteristics such as affective experiences (e.g., “feeling depressed”), behaviors (e.g., “look at pictures of partner”), and cognitions (e.g., “wonder what partner is doing”). While many of these features appear to be negatively valenced (e.g., “crying”), a handful were seemingly positive (e.g., “feeling love”). Furthermore, in support of the possible theoretical underpinnings of the construct of missing a romantic partner, participants generated features associated with attachment (e.g., “feeling insecure” and “feeling anxious”) and interdependence (e.g., “feeling dependent” and “thinking about the future”).

Notably, while we believe that the experience of missing a partner and loneliness are distinct constructs, half of Study 1 participants listed “feeling lonely” when generating features related to the experience of missing; however, frequency of listing is not the defining factor regarding inclusion in the prototype. Instead, it is important that a second sample rates features for centrality to the prototype (Fehr, 1988). Thus, the purpose of Study 2 was to determine the centrality of the features generated in Study 1.

Study 2

Method

Participants. We recruited 138 undergraduates (52% female) from the same small undergraduate college in the Northeastern United States where we conducted the first study via advertisements posted around campus and participated in a study about “beliefs about relationships.” The mean age of participants was 19.41 years ($SD = 1.40$), and the majority of participants self-identified as Caucasian (79%; 7% Asian American, 3% African American, 1% Hispanic/Latino, and

Table 1. Features of the experience of missing generated in Study 1 and sorted by Study 2 centrality ratings

Feature	Study 1	Study 2			
	% of participants	<i>M</i>	<i>SD</i>	Minimum	Maximum
Thinking about partner	19.74	6.17	1.07	2	7
Wanting to be with partner	23.68	6.15	1.22	1	7
Wanting to talk to partner	7.89	6.13	1.06	3	7
Corresponding with partner (e.g., calling, writing)	31.58	6.06	1.38	1	7
Wanting to touch partner	17.11	6.03	1.21	1	7
Thinking	2.63	5.96	1.20	1	7
Reminiscing	21.05	5.95	1.26	1	7
Wondering what partner is doing	10.53	5.85	1.19	1	7
Feeling separated	3.95	5.75	1.36	1	7
Look at things that remind you of your partner	5.26	5.75	1.45	1	7
Longing for partner	19.74	5.73	1.41	1	7
Feeling sad	42.11	5.70	1.32	1	7
Sexual desire	15.79	5.70	1.34	2	7
Talking about your partner	5.26	5.70	1.23	1	7
Wondering if partner is thinking of you	2.63	5.69	1.49	1	7
Dreaming about partner	9.21	5.59	1.31	1	7
Looking at pictures of partner	10.53	5.59	1.44	1	7
Feeling nostalgic	7.89	5.57	1.18	1	7
Imagining	6.58	5.56	1.39	1	7
Thinking about the future	5.26	5.55	1.33	1	7
Wonder about the relationship	5.26	5.49	1.36	1	7
Listening to music	9.21	5.41	1.59	1	7
Feeling lonely	50.00	5.38	1.65	1	7
Appreciating partner	1.32	5.37	1.49	1	7
Anticipation	7.89	5.34	1.56	1	7
Try to have fun	3.95	5.30	1.44	1	7
Wanting a hug	3.95	5.27	1.71	1	7
Yearning	3.95	5.22	1.55	1	7
Waiting for partner	5.26	5.17	1.54	1	7
Heartache	3.95	5.15	1.71	1	7
Feeling emotional	3.95	5.13	1.36	1	7
Talk to friends as a way to distract yourself	6.58	5.07	1.69	1	7
Worrying	11.84	4.86	1.67	1	7
Want support	1.32	4.81	1.61	1	7
Feeling depressed	13.16	4.80	1.58	1	7
Feeling love	3.95	4.75	2.10	1	7
Feeling hopeful	3.95	4.74	1.46	1	7
Compare current partner to alternative partners	1.32	4.69	1.87	1	7

(continued)

Table 1. (continued)

Feature	Study 1	Study 2			
	% of participants	<i>M</i>	<i>SD</i>	Minimum	Maximum
Lack of concentration	3.95	4.65	1.69	1	7
Feeling frustrated	3.95	4.62	1.69	1	7
Feeling of loss	2.63	4.60	1.77	1	7
Moping	2.63	4.53	1.72	1	7
Obsessing about partner	6.58	4.46	1.83	1	7
Watching movies	2.63	4.46	1.53	1	7
Uncertainty	3.95	4.45	1.73	1	7
Restlessness	3.95	4.41	1.67	1	7
Feeling incomplete	<i>17.11</i>	4.40	1.87	1	7
Feeling bored	<i>9.21</i>	4.39	1.66	1	7
Want understanding	1.32	4.38	1.70	1	7
Feeling insecure	6.58	4.36	1.73	1	7
Feeling anxious	<i>11.84</i>	4.33	1.67	1	7
Bittersweet	1.32	4.27	1.67	1	7
Feeling empty	<i>15.79</i>	4.27	1.62	1	7
Feeling vulnerable	2.63	4.25	1.80	1	7
Feeling irritable	1.32	4.24	1.62	1	7
Feeling forgotten	1.32	4.21	1.81	1	7
“Sinking” feeling in stomach	5.26	4.18	1.96	1	7
Buying gifts for partner	3.95	4.17	1.76	1	7
Being unproductive	2.63	4.15	1.67	1	7
Feeling dependent	1.32	4.07	1.74	1	7
Being quiet	2.63	4.03	1.65	1	7
Feeling tired	5.26	4.01	1.67	1	7
Independence	1.32	4.00	1.71	1	7
Crying	<i>11.84</i>	3.99	2.00	1	7
Writing	2.63	3.99	1.82	1	7
Lack of excitement	2.63	3.95	1.65	1	7
Watching romantic movies	2.63	3.88	1.95	1	7
Feeling helpless	7.89	3.86	1.61	1	7
Feeling lost	1.32	3.81	1.78	1	7
Feeling uncomfortable	2.63	3.80	1.76	1	7
Loss of self-esteem	2.63	3.71	1.79	1	7
Apathy	2.63	3.56	1.69	1	7
Hopelessness	3.95	3.56	1.86	1	7
Feeling angry	5.26	3.47	1.77	1	7
Feeling liberated	2.63	3.39	1.76	1	7
Drawing	2.63	2.77	1.74	1	7
Relief	1.32	2.59	1.47	1	7

Note. Percentages for the 20 most frequent features in Study 1 are given in italics. Study 1, $N = 76$; Study 2, $N = 138$.

11% other). Forty-five percent of participants were romantically involved.

Procedure. Participants rated the centrality² of the 77 features extracted in Study 1 using a 7-point scale (1 = *extremely atypical feature of missing a romantic partner*, 7 = *extremely typical feature of missing a romantic partner*). Specifically, we instructed participants that:

We are interested in your thoughts about the experience of “missing” a romantic partner (i.e., how you feel when you are separated from a romantic partner). In particular, listed below are a series of characteristics, or “features,” that may be associated with the experience of missing a romantic partner. We are interested in how central each of these features is to the experience of missing someone (i.e., if you think that each of these is a key component of the experience of missing). Using the provided scale, please rate how central (i.e., typical vs. atypical) each of the following features is to the experience of “missing” someone.

Results and discussion

Table 1 provides the centrality ratings of all 77 features identified in Study 1, with the most central features of the experience of missing a romantic partner being “thinking about partner,” “wanting to be with/see partner,” and “wanting to talk to partner.” In addition, there was some correspondence between frequency of listing in Study 1 and centrality ratings in Study 2 (e.g., “wanting to be with/see partner”). Specifically, treating each feature as its own case, the frequency of generation by Study 1 participants and the centrality ratings from Study 2 were correlated ($r = .45, p < .01$). Likewise, the correlation between the

Study 1 and the Study 2 rank orderings based on participants’ ratings (Spearman’s $r = .55, p < .01$) indicated that more frequently listed features were rated as more central (Fehr, 1988; Kearns & Fincham, 2004).

There were also numerous instances of features lacking correspondence between frequency (Study 1) and centrality (Study 2). Most notably, “feeling lonely,” which was the most frequently listed feature in Study 1, did not rank as one of the most central features (ranking 23rd of 77 features; $M = 5.38, SD = 1.65$). When comparing the features of the experience of missing a romantic partner to the prototype of a lonely person (Horowitz, French, & Anderson, 1982), we found very little overlap. For example, the prototype of a lonely person includes features such as feeling depressed, angry, worthless, and inadequate (e.g., lack of self-esteem), and behaviors such as being quiet. Although Study 1 participants also generated these features, for the most part, they rank relatively low on centrality. In addition, there are several features in the loneliness and missing prototypes that directly contradict each other. Whereas the prototype of being lonely includes feeling unloved, participants listed feeling love as a feature of the experience of missing. The prototype of loneliness includes avoiding social contact; however, the prototype of the experience of missing includes features associated with promoting social relationships (e.g., talking to friends, corresponding with the partner). Finally, the prototype of loneliness includes “works (or studies) hard and for long hours” (Horowitz et al., 1982, p. 188), whereas participants listed being unproductive as a feature of missing a romantic partner.

The strongest commonalities between the two prototypes occurred within the experience of feeling sad, which ranked as central for both. In addition, both prototypes include aspects of feeling separated; however, for loneliness, it is separation from others in general (Horowitz et al., 1982), whereas for the experience of missing, it is separation from a specific other (i.e., the partner).

Study 2 provides insight into the content of the prototype by identifying those features particularly central to the experience of missing

2. We also collected valence ratings for the features (i.e., ratings of the positivity/negativity of each feature). These results are available from the authors upon request.

a romantic partner. We designed Study 3 as a laboratory study to validate the cognitive underpinnings of the prototype by assessing reaction times to verify category membership (i.e., deciding if a feature of the experience of missing belongs in the category of missing). We predicted that judgments of category membership for central features of the experience of missing a romantic partner would be faster than that for noncentral features (H1).

Study 3

Method

Participants. We recruited 48 undergraduate students (56% female) from the same small undergraduate college in the Northeastern United States where we conducted the first two studies with advertisements for a study of “thoughts about relationships” posted around campus and paid US\$10 for their participation. The majority of participants self-identified as Caucasian (71%; 15% Asian American, 2% Hispanic/Latino, and 13% other), and the mean age of participants was 20.27 years ($SD = 0.96$). Fifty-two percent of participants were involved in romantic relationships.

Procedure. Each participant sat at a computer and viewed a series of slides in a randomized order. Each slide presented the category (e.g., “Missing includes...”), followed by a central or noncentral feature (e.g., “thinking about your partner”). We presented the 15 most central features identified in Study 2 in addition to a set of noncentral features matched for character length when possible (i.e., so that the length of the features was similar). We could not match a few features because of syntax, but when matching was not possible, we kept the character count of central features longer than the character count of noncentral features (i.e., working against supporting the hypothesis). The mean length of features presented was 22.13 characters for central features (including spaces; $SD = 9.61$) and 18.60 characters for noncentral features ($SD = 8.21$). In addition, so that participants remained engaged in the task and could not

anticipate the upcoming category or theme of features, we included the category of “forgiveness” (Kearns & Fincham, 2004), along with 15 central and 15 noncentral features of forgiveness in the trials. We paired the features of the experience of missing a romantic partner with the category of forgiveness, and paired features of forgiveness with the category of the experience of missing, in a fully crossed and randomized set of trials.

The category remained on the screen for 2 s, at which point a feature varying in centrality appeared on the screen. Using the keyboard, we instructed participants to indicate whether or not the category included each feature (*yes* or *no*); *A* indicated *yes* (the listed feature is a component of the experience of missing) and *L* indicated *no* (the listed feature is not a component of the experience of missing). We measured response latencies from onset presentation of the feature until the participants keystroke (i.e., the amount of time to read, decide, and indicate whether the category included the feature).

We examined the response latencies for both central and noncentral items for outliers, with participants’ reaction times on each item compared to the overall mean latency (in milliseconds) for that item. We recoded response latencies slower than 3 SD above the mean as missing data (Etcheverry & Le, 2005). This procedure resulted in the elimination of 2.36% of the total number of responses from the entire sample.³

Results and discussion

We predicted that judgments of category membership for central features of the experience of missing a romantic partner would be faster than that for noncentral features of the experience (H1). To test this hypothesis, while also examining any potential effects of participant sex, relationship status, and long-distance status, we performed a mixed analysis of variance (ANOVA), with feature centrality (central vs. noncentral) as the within-subject factor, and

3. We removed 2.22% of central features and 2.50% of noncentral features as outliers. These rates did not significantly differ based on feature centrality.

participant sex, relationship status (i.e., in a relationship vs. not), and long-distance status (i.e., in a long-distance relationship vs. not) as between-subject factors. As predicted, participants responded significantly faster for central features ($M = 1,665$ ms, $SD = 385$) than for noncentral features ($M = 1,990$ ms, $SD = 486$) when making judgments about the category of the experience of missing a partner (i.e., “Missing includes...”), $F(1, 42) = 17.33$, $p < .01$, $d = -0.82$. There were no other significant main effects or interactions.

Importantly, when we paired the central and noncentral features of the experience of missing a romantic partner with the category of forgiveness (i.e., “Forgiveness includes...”), there was not a significant difference in response latencies (central: $M = 1,915$ ms, $SD = 479$; noncentral: $M = 1,934$ ms, $SD = 445$), $F(1, 42) = 0.08$, $p > .05$, $d = -0.04$. In addition, there were no other significant main effects or interactions. These results suggest that the central and noncentral features of the experience of missing are unique to the context of missing a partner rather than other interpersonal domains.

To summarize, lending support to the content of the prototype of the experience of missing, participants judged central features as part of the category of missing a romantic partner more quickly than noncentral features. Building on Study 3, we next investigated individuals’ abilities to recall and recognize central and noncentral features of the experience of missing a romantic partner. We expected that participants would recall (H2) and falsely recognize (H3) more central features of the experience of missing a romantic partner than they would recall and falsely recognize less central features of the experience.

In Study 4, participants also rated how much they thought individuals in hypothetical relationships missed their partners, depending on the presence of central or noncentral features of the experience of missing. Based on past prototype work (Kearns & Fincham, 2004), we expected that participants would rate individuals described as experiencing more central features as missing their partners to a greater extent than individuals described as experiencing less central features of missing

(H4). Support for H2 through H4 would further serve as a laboratory validation for the content of the prototype of the experience of missing a romantic partner identified in Studies 1 and 2.

Study 4

Method

Participants. We recruited 92 introductory psychology students (76% female) from the same small undergraduate college in the Northeastern United States where we conducted the first three studies to participate in a study of “thoughts about relationships” as partial fulfillment of course requirements. The majority of participants self-identified as Caucasian (67%; 17% Asian American, 3% African American, and 12% other), and the mean age of participants was 18.65 years ($SD = 0.83$). Forty percent of participants were involved in romantic relationships.

Procedure. Participants sat at computers displaying one feature of the experience of missing a romantic partner for 4 s before automatically advancing to the next feature, and we instructed them to pay attention to the features because they would be answering questions about them later in the study. The overall set of features contained the 20 most central features (e.g., “thinking about my partner”) and the 20 least central features (e.g., “feeling liberated”) identified in Study 2. From this set of 40 features (20 central and 20 noncentral), we created two conditions by randomly dividing the central and noncentral features in half, resulting in two subsets including 10 central and 10 noncentral features each. We randomly assigned participants to one of the subset conditions and presented them with 20 features (10 central and 10 noncentral) in a randomized order.

After viewing the 20 features, as a distraction task, we instructed participants to try to list the 50 United States and their capitals in alphabetical order in 4 min. Participants then had 4 min to recall the features of the experience of missing they had previously seen.

Next, participants completed a recognition task in which they selected the features they

had previously seen. We presented participants with 40 randomly ordered features: 20 features from their respective condition and 20 novel features from the other condition.

Following the recall and recognition tasks, participants read four vignettes describing individuals physically separated from their partners. We constructed the vignettes such that they were identical, except that we interchanged sets of central and noncentral features to make two experimental conditions such that each participant viewed four vignettes, with two vignettes including central features and the remaining two vignettes including noncentral features (e.g., “Antonio often wants to talk to his girlfriend” or “Antonio often feels liberated”). Central versus noncentral features within the two vignettes varied as a function of condition. Furthermore, two of the fictional relationships depicted temporary separations (e.g., a business trip) with either a male or a female target (one of each) and two described chronic separations (i.e., long-distance relationships) with either a male or female target. After reading each of the four vignettes, participants rated how much they thought that the individual described in the vignette “missed his or her partner” (7-point Likert scale; 1 = *not at all*, 7 = *very much*).

Results and discussion

We predicted that participants would recall more central features of the experience of missing a romantic partner than they would recall noncentral features (H2). To test this hypothesis, while also examining any potential effects of sex or relationship status, we performed a mixed ANOVA. Similar to the analytic strategy employed in Study 3, feature centrality was the within-subject factor, and participant sex, relationship status, and long-distance status were between-subject factors. As predicted, participants recalled significantly more central features ($M = 5.03$, $SD = 1.65$) than noncentral features ($M = 4.22$, $SD = 1.70$) of the experience of missing a romantic partner, $F(1, 86) = 17.24$, $p < .01$, $d = 0.42$. There were no other significant main effects or interactions.

We also expected that participants would falsely recognize more central features of the

experience of missing a romantic partner than noncentral features (i.e., they would recall having seen more central features relative to noncentral features that they did not actually view; H3). To test this hypothesis, we conducted a similar mixed ANOVA on the number of central terms falsely recognized. As predicted, participants falsely recognized significantly more central features ($M = 2.67$, $SD = 1.88$) than noncentral features ($M = 0.77$, $SD = 0.83$) of the experience of missing a romantic partner, $F(1, 86) = 62.36$, $p < .01$, $d = 1.08$. A significant Sex \times Centrality interaction qualified this main effect, $F(1, 86) = 6.06$, $p < .05$, such that the difference between false recognition for central and noncentral features was accentuated for male participants (central: $M = 2.86$, $SD = 1.91$; noncentral: $M = 0.59$, $SD = 0.73$) compared to female participants (central: $M = 2.61$, $SD = 1.88$; noncentral: $M = 0.83$, $SD = 0.85$). There were no other significant main effects or interactions. Interestingly, participants did not correctly recognize more central features ($M = 8.24$, $SD = 1.49$) than noncentral features ($M = 8.14$, $SD = 1.78$), $F(1, 86) = 0.04$, $p > .05$, $d = 0.06$, with no significant main effects or interactions in this analysis.

We also predicted that participants would rate individuals described as experiencing the central features of missing a romantic partner as missing their partners to a greater extent than individuals described as experiencing noncentral features of missing (H4). A mixed ANOVA with participant sex and condition (reflecting which two vignettes contained central vs. noncentral features) as between-subject factors and vignette as the repeated factor revealed a significant Condition \times Vignette interaction, $F(3, 264) = 163.02$, $p < .001$. No other interactions were significant (i.e., male and female participants did not differ in their ratings of missing for any of the vignettes). Table 2 includes means and standard errors for each vignette by condition. Follow-up analyses indicated that across conditions, participants perceived individuals in central feature vignettes as missing their partners more than in noncentral feature vignettes (all $ps < .01$).

Although the results generated in the laboratory in Studies 3 and 4 provide strong

Table 2. Participant ratings of missing for vignettes in Study 4 as a function of whether vignette included central or noncentral features

Vignette description	Average rating of missing	
	Characterized by central features	Characterized by noncentral features
Female target; college student; goes home over winter break	5.87 (0.15)	2.65 (0.28)
Male target; “left” by partner; chronic separation (long-distance relationship)	6.63 (0.09)	2.27 (0.15)
Male target; college student; goes somewhere different than partner for spring break	5.87 (0.14)	5.09 (0.26)
Female target; “left” by partner; chronic separation (long-distance relationship)	6.25 (0.13)	4.47 (0.25)

Note. Values reflect estimated marginal means, with standard errors in parentheses.

support for the prototype of the experience of missing a romantic partner, they rely on cognitive and vignette methods rather than assessing the prototype in actual romantic relationships. We designed Study 5 to examine the validity of the prototype by assessing the experience of missing a romantic partner in a sample of participants currently experiencing geographic separation.

Study 5

Method

Participants and procedure. Four hundred and fifty-seven individuals self-identified as being in long-distance romantic relationships completed an online questionnaire. We recruited participants via postings on Internet bulletin boards (e.g., <http://www.craigslist.org> and <http://www.facebook.com>; see Gosling, Vazire, Srivastava, & John, 2004, for a discussion of the merits of Internet data collection). To reduce problems associated with nonindependence of dyadic data, we excluded participants from the analyses ($n = 22$) who indicated that their partners had notified them of this study (i.e., their partners likely also participated in the study). The results presented are from this sample of 435 participants (85% female).

The majority of participants self-identified as Caucasian (75%; 10% Asian American, 4%

African American, 7% Hispanic/Latino, > 1% Native American, and 4% other) and 89% of participants self-identified as heterosexual, and the mean age of participants was 23.12 years ($SD = 6.24$, $Mdn = 21$). Ninety-one percent of participants reported residing in the United States, and 78% reported that their partners resided in the United States. Sixty-one percent of participants were college students, and 38% of their partners were college students; 27% of participants’ partners were in the military.

Fifty-seven percent of participants categorized their relationships as exclusively dating (5% married/lifelong commitment, 12% engaged, 23% about to be engaged or live together, 5% nonexclusively dating), with an average relationship duration of 22.79 months ($SD = 21.21$, $Mdn = 16$ months). On average, participants had been geographically separated from their partners for 16.47 months ($SD = 21.22$, $Mdn = 10$ months). Participants reported living, on average, an estimated 2,060 miles from their partners ($SD = 2,819$ miles, $Mdn = 886$ miles, range = < 20 to > 10,000 miles), and most reported seeing their partners “about once a month” (24%) or “once every few months” (31%; 2% “more than once a week,” 5% “about once a week,” 12% “several times a month,” 15% “several times a year,” 7% “about once a year,” 5% “less than once a year”). On average, the number of weeks

Table 3. Items assessing the experience of romantic missing and rotated factor loadings from Study 5

Item	Factor		
	1	2	3
I thought about my partner	<i>0.760</i>	-0.384	-0.044
I imagined myself with my partner	<i>0.768</i>	-0.085	-0.136
I wanted to talk to my partner	<i>0.775</i>	-0.307	0.031
I wanted to correspond with my partner over the phone or in writing	<i>0.755</i>	-0.291	0.101
I found myself thinking	<i>0.495</i>	-0.067	0.246
I reminisced	<i>0.563</i>	0.163	0.064
I felt separated from my partner	<i>0.499</i>	0.164	<i>0.450</i>
I looked at things that remind me of my partner	<i>0.612</i>	0.371	-0.198
I felt sad	<i>0.438</i>	0.361	<i>0.409</i>
I talked about my partner to other people	<i>0.517</i>	0.159	-0.119
I wondered if my partner was thinking about me	<i>0.415</i>	<i>0.455</i>	0.209
I dreamed about my partner	<i>0.478</i>	<i>0.419</i>	-0.246
I had nostalgic feelings about being with my partner	<i>0.525</i>	0.237	0.055
I wanted to be with my partner	<i>0.884</i>	-0.134	-0.025
I wanted to touch my partner	<i>0.892</i>	-0.047	-0.036
I wondered about what my partner is doing	<i>0.652</i>	0.219	0.146
I longed for my partner	<i>0.825</i>	0.144	0.065
I felt sexual desire	<i>0.522</i>	0.054	-0.224
I looked at pictures of my partner	<i>0.508</i>	0.369	-0.349
I thought about the future	<i>0.641</i>	0.236	-0.083

Note. Factor loadings above 0.40 are given in italics.

since participants had last seen their partners was 17.61 ($SD = 31.93$, $Mdn = 3.57$ weeks).

Measures. Participants completed the Investment Model scale measure of commitment (Rusbult, Martz, & Agnew, 1998; Cronbach's α for interitem reliability = .86), the Experiences in Close Relationships measure (Brennan, Clark, & Shaver, 1998) of the attachment dimensions of avoidance ($\alpha = .91$) and anxiety ($\alpha = .91$), and the UCLA Loneliness Scale (Russell, 1996; 10 items, $\alpha = .91$).

To assess the experience of romantic missing, we constructed a prototype-based measure of missing a romantic partner using the 20 most central features from Study 2 (Table 3). We selected this number of items based on our desire to create a scale that was broad enough to encompass as many of the central characteristics of the experience of missing a partner as possible but still short enough to administer

easily. Although this strategy omits idiographic features, we chose this approach so that we could construct a relatively concise measure that could be useful in a range of research applications. Furthermore, other prototype-based measures of relationship constructs have been of similar length (e.g., Aron & Westbay, 1996; Frei & Shaver, 2002). We asked participants to "please indicate the extent to which each of these statements describes your experiences in the past day (24-hours). There are no right or wrong answers, so please try to answer each question as honestly and accurately as you can" using a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*).

Results

Factor analysis. We performed an exploratory factor analysis on the 20-item experience

of missing a romantic partner scale using the maximum likelihood method with a promax (oblique) rotation to extract factors. Supporting the content and validity of the prototype of the experience of missing a partner, all 20 items had factor loadings above 0.40 on a primary factor (see Table 3 for factor loadings; Factor 1: eigenvalue 8.81, 44.1% variance). Two additional factors with eigenvalues above 1.00 emerged. Factor 2 included two items with factor loadings above 0.40 (eigenvalue 1.75, 8.8% variance) including aspects of “wondering” or “dreaming” about the partner. Factor 3 included two items with factor loadings above 0.40 (eigenvalue 1.37, 6.9% variance; “I felt separated from my partner” and “I felt sad”). The next five eigenvalues ranged from 0.86 down to 0.62, and despite the few cross-loadings, an examination of the scree plot suggested a unidimensional factor structure (Cattell, 1966). Therefore, we averaged the 20 items in their entirety and used this average as our measure of the experience of romantic missing ($\alpha = .92$; $M = 5.94$, $SD = 0.90$; minimum = 1.40, maximum = 7.00). We named this new measure the Missing during Interpersonal Separation Scale (MISS).

Correlations between missing and study variables. Consistent with H5 and H6, respectively, the experience of missing was weakly, but positively, correlated with loneliness ($r = .19$, $p < .01$) and significantly correlated with commitment ($r = .40$, $p < .01$). In support of H7, attachment anxiety ($r = .21$, $p < .01$) and avoidance ($r = -.25$, $p < .01$) were associated with the experience of missing in predicted directions. The associations between self-reports of missing a romantic partner and relationship duration ($r = -.09$), separation distance (i.e., miles between partners' locations; $r = .08$), and participant age ($r = -.09$) were not significant (all $ps > .05$). This pattern of findings held when controlling for time since last seeing partner, which itself did not correlate with the experience of missing that partner ($r = .09$, $p > .05$). In addition, female participants reported higher levels of missing a partner than did male participants ($Ms = 5.98$ vs. 5.69 , $SDs = 0.87$ and 0.99 , respectively), $t(433) = 2.42$, $p < .01$, $d = 0.33$.

Secondary analyses. We conducted additional analyses to explore the association between the experience of missing and adult attachment. Specifically, Fraley and Shaver (1998) found that attachment anxiety was associated with increased distress prior to separation, whereas avoidance was related to increased withdrawal behavior. Based on their results, it is possible that affective components of the experience of missing might be responsible for the positive association between anxiety and the MISS, whereas the behavioral components of the experience of missing may be driving the negative association between avoidance and the MISS. Because we did not know a priori what features would constitute the prototype of the experience of missing a romantic partner, we did not advance specific hypotheses to test predictions derived from theory regarding activation of the attachment system. Nonetheless, the content of the experience of missing prototype affords a tentative test of these ideas.

We created face-valid subscales from the MISS, capturing the affective and behavioral components of the experience of missing a romantic partner. Our examination suggested that three items were particularly relevant to affect (“felt separated,” “felt sad,” and “longed for partner”; $\alpha = .69$) and four items assessed behavioral responses promoting proximity during separation (“want to talk,” “want to correspond,” “want to touch,” “want to be with”; $\alpha = .91$). If an appraisal system is responsible for attachment anxiety, then anxiety should positively correlate with an affective component of the experience of missing a romantic partner but not with a behavioral component. Likewise, if avoidance and a behavioral system are linked, then attachment avoidance should negatively correlate with behaviors but not with affective responses. Correlations supported these predictions: Anxiety was positively associated with the three-item affect subscale ($r = .34$, $p < .001$) but was not significantly associated with the four-item behavioral subscale ($r = .05$, $p > .05$). In addition, avoidance was negatively associated with the behavioral subscale ($r = -.23$, $p < .001$) but not significantly with the affect subscale ($r = .06$,

$p > .05$). Additional analyses indicated that the association between “affect” and anxiety was stronger than that between affect and avoidance ($Z = 4.43, p < .01$). Furthermore, the association between “behavior” and avoidance was stronger than that between behavior and anxiety ($Z = 4.28, p < .01$). These tentative results, which one should interpret with caution given that we pulled face-valid subscales from a unidimensional measure, are consistent with hypotheses derived from attachment theory (Fraley & Shaver, 1998).

Discussion

In Study 5, we validated the content of the prototype using a 20-item measure to assess participants’ experiences of missing their romantic partners. This prototype-based measure of the experience of missing a partner, the MISS, was largely distinct from loneliness. In addition, the MISS modestly correlated with relationship commitment, anxiety, and avoidance in theoretically meaningful ways. Furthermore, relationship duration, time since last seeing one’s partner, estimated distance between partners, and participant age were not significantly associated with the MISS, and female participants reported higher levels of missing their romantic partners than did male participants. This latter result may reflect the finding that women, compared to men, tend to define themselves in terms of their close relationships with others (Gabriel & Gardner, 1999). As a result, interpersonal separations may remain particularly salient for women compared to men, especially given men’s tendencies to use distraction as a coping mechanism (Tamres, Janicki, & Helgeson, 2002).

The correlation between commitment and the experience of missing is theoretically consistent with the abundance of research demonstrating the importance of commitment as a relationship maintenance mechanism (Rusbult, Olsen, Davis, & Hannon, 2001). It is possible that the experience of missing a partner promotes relationship maintenance during periods of geographic separation.

As hypothesized, loneliness and the experience of missing a partner were positively, but weakly, correlated. Although these constructs share some commonalities, they are largely

distinct from one another. This finding from Study 5 is consistent with Study 2, where participants did not rate loneliness as a particularly central feature of the experience missing a partner and the features central to the prototype of the experience of missing were largely independent from those included in the prototype of loneliness (Horowitz et al., 1982).

Finally, although the experience of missing correlated with adult attachment dimensions in predicted directions, our secondary analyses provide further support for the notion that the attachment system comprises two components, with one component (anxiety) associated with appraisals and affect (i.e., separation distress) and the other component (avoidance) affecting behavioral responses to separation (Fraley & Shaver, 1998; Shaver & Hazan, 1988).

Although the results of Study 5 support our predictions, the study sample consisted entirely of participants in long-distance relationships, making us unable to determine whether the MISS differentiated individuals from different types of relationships. Thus, we conducted an additional study allowing us to compare MISS scores for participants in long-distance relationships to those for participants in geographically proximal relationships.

Study 6

Method

Participants. One hundred and forty-three individuals (87% female) in romantic relationships completed an online questionnaire posted on the Internet (e.g., <http://www.craigslist.org> and <http://www.facebook.com>). The majority of participants self-identified as Caucasian (79%; 8% Asian American, 3% African American, 4% Hispanic/Latino, and 6% other) and 87% of participants self-identified as heterosexual, and the mean age of participants was 23.64 years ($SD = 6.34, Mdn = 21$). Sixty-two percent of participants were college students.

Procedure and measures. We asked each participant if his or her relationship was “a long-distance relationship”; 25% of respondents ($n = 36$) self-reported that their current relationships were long distance, and 75% ($n =$

107) indicated that they were geographically proximal to their partners. Fifty-six percent of participants categorized their relationships as exclusive dating (14% married/lifelong commitment, 8% engaged, 17% about to be engaged or live together, 5% nonexclusive dating), with an average relationship duration of 27.00 months ($SD = 30.37$, $Mdn = 17.25$ months). We assessed the experience of romantic missing with the MISS, the 20-item measure of missing a romantic partner developed and initially tested in Study 5 ($\alpha = .91$).

Results and discussion

As predicted (H8), participants in long-distance relationships reported missing their partners to a greater extent than did those in geographically proximal relationships ($M_s = 5.81$ and 5.27 , $SD_s = 1.19$ and 0.98 , respectively), $t(141) = 2.70$, $p < .01$, $d = 0.52$. Additional analyses controlling for relationship duration supported this finding, $F(1, 140) = 5.69$, $p < .02$. Interestingly, the effect size for the difference in the experience of missing between these samples was modest rather than large (Cohen, 1992). The observed means for our sample of individuals in proximal relationships suggest that these individuals were also missing their partners, albeit to a lesser degree than those in long-distance relationships. Why might this be the case? One possibility is that although these participants did not indicate being in a long-distance relationship, this does not mean that they were in the presence of their partner while completing the online survey. Thus, it is not surprising that those in proximal relationships were experiencing some missing. In retrospect, the best test would have been to also have a group of individuals complete the measure while in the presence of their partner. Despite this limitation, the degree of the experience of missing their romantic partners was greater for those in long-distance relationships relative to those in proximal relationships. Altogether, these results support the construct validity of the MISS in that it discriminates between those individuals geographically separated from their partners from those in geographically close relationships.

General Discussion

In a series of six studies, we identified and explored the characteristics of the experience of missing a romantic partner using a prototype analysis. Specifically, participants generated features of the experience of missing in Study 1 and rated them on centrality in Study 2. We then validated these features using reaction time, recall, recognition, and vignette paradigms in Studies 3 and 4. Finally, in Studies 5 and 6, we investigated the construct validity of the prototype using a prototype-based measure of the experience of missing a romantic partner (the MISS). Specifically, the MISS correlated weakly with loneliness and modestly with relationship commitment and the attachment dimensions anxiety and avoidance. In addition, participants in long-distance relationships reported missing their partners more than those in geographically proximal relationships.

The identification and validation of the features of the experience of missing a partner in Studies 1–4 represent a step forward in understanding the experience of geographic separation by showing a consistent pattern in the extent to which individuals are able to identify a common set of experiences that form the experience of missing a romantic partner. In addition, these studies highlight the fact that the central features of the experience of missing a partner are cognitively similar to each other and dissimilar from other features that are not central to the experience. The factor structure of the MISS, in addition to the pattern of correlations between the MISS and other relationship dimensions and group differences between geographically close and separated partners, further supports the distinctiveness of the experience of missing a romantic partner.

The results of these six studies suggest that the experience of missing a romantic partner is an interpersonal relationship phenomena composed of a range of feelings, behaviors, and cognitions that collectively define the experience. Although the features that constituted the items in the MISS loaded on a single factor, the affective, behavioral, and cognitive aspects of the experience of missing a partner are clear. For example, the affective experience of missing a partner includes

feelings of sadness, separation, and sexual desire. In addition, many behavioral strategies and goals are associated with the experience, including wanting to communicate with and touch the partner, talking about the partner with others, and looking at pictures of the partner. Finally, the prototype includes specific cognitions such as thinking about the future, wondering what the partner is doing, and reminiscing. Interestingly, our secondary analyses in Study 5 support the notion that these components may constitute separate mechanisms in that attachment avoidance was associated with behavioral aspects of missing a partner, whereas anxiety correlated with affective aspects.

Several findings from this series of studies are particularly noteworthy. First, despite apparent semantic overlap with the construct of loneliness, the experience of missing was only weakly positively associated with loneliness. This is not surprising because, as suggested, loneliness refers to a general mismatch between one's desired and actual level of social integration (Cacioppo et al., 2000), whereas the experience of missing refers to separation from a specific other.

Second, although the experience of missing occurs within the context of separation from a close other, the MISS was only modestly associated with attachment anxiety and avoidance. This finding suggests that individuals' levels of anxiety and avoidance may contribute to their experience of missing another, but missing is not merely a reaction to separation anxiety. Although the attachment system developed for purposes of survival (Mikulincer & Shaver, 2007) and translates into adulthood (Hazan & Shaver, 1987), we suggest that the underlying mechanisms responsible for the experience of missing likely developed from a preference for stability and environmental control and functions similarly regardless of target. For example, individuals can miss specific foods, pets, children, and friends, just as they miss romantic partners. We do not mean to imply that the specific affective, behavioral, and cognitive characteristics that make up the experience of missing are equivalent for each of these situations; rather, we suggest that the experience of missing is a more universal

phenomenon that extends beyond missing an attachment figure.

Finally, the association between commitment and the MISS suggests that the experience of missing a partner may reflect the level of interdependence between partners. As partners rely on one another for unique fulfillment of relational needs, they may subsequently experience missing more strongly when geographically separated. Consistent with the investment model (Le & Agnew, 2003; Rusbult et al., 1998) and the role that commitment plays in promoting relationship maintenance (Rusbult et al., 2001), it is possible that missing a partner serves to enhance relationships during times of separation. For example, commitment coincides with derogating alternative partners (Johnson & Rusbult, 1989); those missing their partners may also devalue or ignore other potential dating partners as a means of promoting couple well-being. Likewise, geographically separated partners might invest substantial time, energy, and money into their relationships, thus promoting commitment. Finally, one may maintain satisfaction via reminiscing and dreaming about the partner (two central features of the experience of missing in our studies), as well as by idealizing the partner (Stafford & Merolla, 2007; Stafford & Reske, 1990).

Limitations and strengths

Although this set of studies includes a diverse range of methods, there are several limitations to note. First, these studies, particularly Studies 5 and 6, disproportionately sampled females. Nonetheless, although they made up a small proportion of the Study 5 sample, a sizeable number of males participated ($n = 65$). Second, the sample was not particularly ethnically or culturally diverse, and we must be cautious in generalizing to other populations (although the distribution in our sample was comparable to other published work; e.g., Rusbult et al., 1998). Furthermore, some participants in Studies 1 and 2 did not have experience with geographic separation from partners or were not currently in romantic relationships, so it is possible that they made their ratings based on stereotypes or assumptions about

the experience of geographic separation from a partner. Finally, our samples, particularly those in Studies 1 through 4, comprised mostly undergraduates. Although it would be advantageous to study more diverse populations, we believe that the undergraduate samples in these studies offer unique advantages. Undergraduate participants can be particularly fruitful in investigating relationship processes because of the importance of relationship development in young adults (Fehr, 1988). Furthermore, given the frequency of long-distance relationships among college students, this sample provides much first- and second-hand experience with the construct we were exploring. In addition, we chose to employ convenience samples in these studies because no clear sampling frame for dating and long-distance relationships existed for probability sampling and because it allowed us to recruit the large samples necessary for these types of analyses. Finally, we conducted our prototype analysis primarily on a sample of individuals attending a highly selective undergraduate college in the United States. Whether the causes and consequences of the experience of romantic missing differ in other cultural contexts remains an open empirical question.

Strengths of this work include our use of multiple methods, including collection and rating of open-ended data (Studies 1 and 2), social cognitive techniques (Studies 3 and 4), vignettes (Study 4), and self-report from large samples of participants in long-distance romantic relationships (Studies 5 and 6). Using these diverse methods, we were able to distinguish the experience of missing a romantic partner from semantically and conceptually related concepts. Most importantly, this work represents the first dedicated in-depth examination of the features associated with the experience of missing a romantic partner within the context of geographic separation and offers a foundation for further research on this topic.

Future directions and theoretical implications

These six studies provide a preliminary understanding of the subjective experience of missing a romantic partner, but we did not design

them to examine the genesis of the experience of missing: Why do we miss another person in the first place? Indeed, we deliberately limited any a priori theoretical analysis of the experience of missing because we believed it prudent first to understand the meaning of the construct to individuals prior to projecting a theoretical orientation or orientations on the experience. Nonetheless, based on the observed prototype of the experience of missing a romantic partner, we suggest that the Berscheid (1983) model of emotions in relationships may offer a mechanism for explaining how the experience arises. Specifically, Berscheid defined an emotion as a "state accompanied by physiological arousal and by the perception of that arousal" (p. 124). Perhaps, most relevant to the discussion of the experience of romantic missing is the explanation for what causes that arousal. According to Mandler (1975), individuals' daily lives consist of a series of behavior sequences or a set of anticipated activities in which an individual might engage. Importantly, the extent to which those anticipated activities implicate a close other will vary, and it is the facilitation or interruption of behavioral sequences that give rise to emotions (Le & Agnew, 2001). From this perspective, we suggest that it is the disruption of interdependent interactions between partners that may be the genesis of the experience of missing. The substantial positive correlation between the MISS and commitment supports this application of emotion (Berscheid, 1983) and interdependence theories (Thibaut & Kelley, 1959). High levels of commitment represent dependence between partners for the fulfillment of interactive needs and goals (Rusbult & Buunk, 1993). In short, committed partners have strongly intermeshed behavioral sequences and outcomes. Geographic separation necessitates a change in these sequences, and the experience of missing may be the resultant emotion.

Furthermore, examining the valence and cause of the experience of missing a partner may provide insight into the experience of geographic separation. For example, individuals would perceive the disruption of a behavioral chain as negative or positive as a function of perceived control over that event (Berscheid,

1983). If an individual has control over the conditions causing the interruption of the behavioral chain between partners, it is possible that the individual experiences the event as more positive. Conversely, control over the separation could produce negative feelings; individuals may experience guilt over leaving and becoming geographically separated from their partners. Likewise, the partner being “left” may feel rejected. Thus, two components of events tied to the experience of missing a partner are particularly relevant: the expectedness of the separation (e.g., planned conference vs. unexpected military deployment) and the predictability of a reunion with the partner (i.e., knowing when partner is returning vs. not knowing). To the extent that either of these components is known, the experience of missing should be less negative. This is not to say that the experience is less intense, rather, just that the subjective interpretation of the event as being positive or negative will vary. Likewise, an examination of the stability of the experience of missing a partner across a separation may prove fruitful. If the experience of missing does fluctuate over the course of a separation, what are the particular contexts or variables associated with variability in missing a partner? Clearly, these ideas are speculative, and there is still much to know about the role of the experience missing a partner plays in the daily experiences of the romantically involved.

There are undoubtedly forms of the experience of missing that stem from separation from others besides romantic partners, such as children, family, and friends. The perspective of Berscheid (1983) on emotions provides a strong explanation for the experience of missing these individuals as well. To the extent that behavioral sequences intermesh with these nonromantic partners, missing should be experienced following separation. Many of the features of the experience of missing may be common among a majority of these targets (e.g., thinking about the other); however, some are certainly target specific (e.g., sexual desire).

In Studies 5 and 6, we assessed the experience of missing a romantic partner within the context of ongoing long-distance relationships. Although individuals in long-distance

romantic relationships undoubtedly face unique challenges compared to temporary separations in proximal relationships (e.g., being apart for a weekend), we believe that the content of the prototype will be similar for short-term separations as well. This is an empirical question deserving of future study, but based on attachment and interdependence perspectives, the experience of missing should be an important construct in temporary and long-term separations.

Finally, although we have chosen to focus on interdependence and attachment theories (see analyses in Study 5) as frameworks providing unique insights into the experience of missing, we do not intend to suggest that these approaches represent an exhaustive list of relevant theoretical viewpoints. For example, the self-expansion model (Aron & Aron, 1997) may be useful in understanding the antecedents and outcomes of the experience of missing a romantic partner. To the extent that individuals are in a more self-expanding relationship, we would expect the experience of missing to increase during geographic separation because more of the “self” is temporarily lost (e.g., Lewandowski, Aron, Bassis, & Kunak, 2006). Furthermore, the fluctuations in the experience of missing a partner resulting from separations and reunions may induce excitement and arousal, thus potentially prolonging the rewards associated with a given romance (Aron et al., 2005).

Conclusions

The experience of interpersonal separation is a common interpersonal phenomenon, and one that has an impact on individuals across a wide range of relationship types. We focused on the experience of missing within the context of romantic relationships and offer, across six studies, an understanding of what it means and does not mean to miss a romantic partner through the lens of a prototype approach. In addition, we offer a measure to assess the extent to which partners experience romantic missing during geographic separation, the MISS, as a means of validating the content of the prototype. We believe that the experience of missing a romantic partner is a neglected topic and important interpersonal phenomenon within the

close relationships field, and one that has the potential to provide a wealth of information regarding the interconnections between individuals, their relationships, and their environments. For example, in a sociopolitical environment with increasing numbers of couples geographically separated by military deployment or other career necessities, understanding the experience of missing a partner may be paramount to considering mental and relational well-being, as well with the processes by which individuals cope with stress. As our understanding of the many processes at play in close, interpersonal relationships continues to expand, and we believe that the experience of missing a romantic partner will prove to be a critical emotional experience worthy of future study.

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