Relationship-Specific Identification and Spontaneous Relationship Maintenance Processes

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Attractive alternative partners pose a relational threat to people in romantic relationships. Given that people are often limited in their time and energy, having the capacity to effortlessly respond to such relational threats is extremely useful. In 4 studies, we explored how people's identity in terms of their romantic relationship—their relationship-specific identity—affects their relationship-protective behaviors. We predicted that once a relationship becomes a part of one's sense of self, relationship maintenance responses are exhibited in a relatively fluid, spontaneous manner. In Study 1, we assessed the convergent and divergent validity of relationship-specific identification, demonstrating how it is associated with other relationship constructs. In Study 2, we found that less identified participants mentioned their relationship less than those high in relationship-specific identification, but only when interacting with an attractive member of their preferred sex. In Study 3, using a dot-probe visual cuing task, we found that when primed with an attractive member of their preferred sex, those low in relationship-specific identification gazed longer at attractive preferred-sex others compared to those high in relationshipspecific identification. In Study 4, we found that relationship-specific identification was associated with relationship survival 1-3 years after the initial assessment. The present results demonstrate that relationship-specific identification predicts relatively spontaneous, pro-relationship responses in the face of relational threat.

Keywords: romantic relationships, relational identity, automatic relationship maintenance, attractive alternatives, identity.

Relationships are a ubiquitous part of human life. They are considered by many theorists to be a basic human need (Baumeister & Leary, 1995; Deci & Ryan, 2000) and even necessary for human survival (e.g., Buss, 1994; Shaver, Hazan, & Bradshaw, 1988). Indeed, the development and maintenance of close relationships have been shown to be an important contributor to psycho-

This article was published Online First July 4, 2011.

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This research was part of Lisa Linardatos's doctoral dissertation, completed under the supervision of John E. Lydon. Some of the data from this article are reported in a broader package of studies in a theoretical chapter to appear in *The 12th Ontario Symposium: The Science of the Couple.* Additionally, parts of these results have been presented as conference presentations at the annual meetings of the Society for Personality and Social Psychology from 2007 to 2011.

This research was supported by grants and fellowships from the Social Sciences and Humanities Research Council of Canada.

We gratefully acknowledge Mark W. Baldwin and Richard Koestner for their helpful comments on these studies and earlier versions of the manuscript. Additionally, a special thanks to the many undergraduates and research assistants who worked on these projects: Meaghan Blake, Andrée-Anne Bouvette-Turcot, Paxton Butler, Humara Edell, Alexandra J. Hardyment, E. Gaëlle Hortop, Robin L. Nobleman, Katherine Pascuzzo, Sascha Smith, and Christian Webb.

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logical (Diener, Suh, Lucas, & Smith, 1999) and physical well-being (House, Landis, & Umberson, 1988; Kiecolt-Glaser & Newton, 2001; Uchino, Cacioppo, & Kiecolt-Glaser, 1996). However, maintaining relationships is a difficult task. Divorce rates are high, and more people than ever live alone (e.g., Putnam, 2000). Given the vital yet tenuous nature of relationships, it is essential to gain a comprehensive understanding of the mechanisms that promote relationship survival.

One of the greatest potential threats to the stability of a romantic relationship is attractive others of one's preferred sex (Kelley & Thibaut, 1978; Simpson, Gangestad, & Lerma, 1990). The availability of attractive alternatives is thought to reduce relationship commitment, relationship satisfaction, and dependency, thereby increasing the risk of relationship dissolution (Drigotas & Rusbult, 1992; Kenrick, Neuberg, Zierk, & Krones, 1994; Lydon, 2010). Moreover, research has shown that the availability of attractive alternatives predicts the rate of relationship breakup (Felmlee, Sprecher, & Bassin, 1990; Simpson, 1987), and several epidemiological surveys have revealed that one of the most commonly reported causes of divorce, if not the most common, is infidelity (e.g., Amato & Previti, 2003; Ambert, 2009).

Of course, some people are able to resist the temptation of attractive alternatives. As might be expected from a motivated cognition approach to close relationships (Lydon, Burton, & Menzies-Toman, 2005; Lydon, Meana, Sepinwall, Richards, & Mayman, 1999), individuals in committed romantic relationships will sometimes devalue attractive others. For example, as compared to singles, heterosexual individuals in dating relationships rated attractive opposite-sex others in advertisements as less phys-

ically and sexually attractive (Simpson et al., 1990). Similarly, when the level of threat was calibrated with participants' level of commitment, committed daters not only rated alternatives as less attractive in terms of physical characteristics but also spent less time browsing through pictures of them (Miller, 1997) and devalued them in terms of personal qualities (e.g., sense of humor; D. J. Johnson & Rusbult, 1989) and desirability as a romantic partner (Lydon, Fitzsimons, & Naidoo, 2003). Indeed, level of commitment has been shown to predict actual instances of emotional and physical infidelity (Drigotas, Safstrom, & Gentilia, 1999).

When people are mentally drained or under time pressure, however, even individuals with the best of intentions have difficulty warding off attractive alternative threats. For example, when self-regulatory resources were low, individuals in dating relationships were just as likely as those not involved in a relationship to rate pictures of attractive preferred-sex others as potential partners (Ritter, Karremans, & van Schie, 2010). Moreover, the pull of attractive alternatives seems to be relatively automatic. People shown pictures of faces were able to perceive beauty quickly and outside of conscious awareness (Olson & Marshuetz, 2005), and once attention had been directed toward an attractive member of the preferred sex, perceivers found it difficult to disengage (e.g., Maner, Gailliot, & DeWall, 2007), a phenomenon called attentional adhesion. Indeed, both men and women have been shown to look longer at pictures of attractive preferred-sex faces versus unattractive preferred-sex faces (Maner et al., 2003; Shimojo, Simion, Shimojo, & Scheier, 2003) and gaze longer into the eyes of an attractive person as opposed to an unattractive person while conversing with them (van Straaten, Holland, Finkenauer, Hollenstein, & Engels, 2010), possibly because this activates rewardrelated systems in the brain (Kampe, Frith, Dolan, & Frith, 2001). Additionally, some studies have shown that even individuals who were committed to their relationship were unable to avoid attending to attractive alternatives at early stages of attentional processing (Maner, Gailliot, & DeWall, 2007; Maner, Gailliot, & Miller, 2009).

Given that people are likely to face attractive alternatives in their everyday lives (e.g., a coworker) and are often limited in the time and energy they have to manage these threats, it would seem beneficial to be able to engage in relationship maintenance responses (RMRs) in an efficient, effortless manner. What leads to such behavior? In the present set of studies, we build on the notion that one's identity can be intimately tied to significant relationships, thereby influencing relationship-relevant cognitions, motives, and behaviors (see Chen, Boucher, & Tapias, 2006; Cross, Hardin, & Gercek-Swing, in press, for reviews). We hypothesized that when a relationship becomes a well-internalized, core part of the self, a threat to the relationship becomes a threat to the self (Burton & Lydon, 2004; Lydon, Menzies-Toman, Burton, & Bell, 2008) and relationship-protective behaviors are therefore exhibited in a fluid, relatively spontaneous manner.

Relationship Identification

Social psychologists have long explored the many ways in which humans are shaped by their relationships and how, by being tied to the self, relationships and relationship partners have the ability and perhaps even "privileged status" (Agnew & Etcheverry, 2006, p. 275) to influence affect, cognition, motivation, and be-

havior (e.g., Andersen, Reznik, & Chen, 1997; Baldwin & Holmes, 1987; Shah, 2003). Aron and colleagues, for example, have developed a comprehensive body of work on self-other integration (see Aron et al., 2004, for a review), demonstrating that individuals who score high on the Inclusion of Other in the Self (IOS; Aron, Aron, & Smollan, 1992) Scale incorporate their partner's traits, perspectives, and resources into their self-concepts, treating them as their own (Aron & Aron, 1986, 1996). Moreover, research has shown that the influence of relationships on the self, particularly on one's cognitions and behaviors, may be relatively automatic, giving self-regulatory direction outside of one's awareness. Both the relational schema (Baldwin, 1992) and relational self approaches (see Chen et al., 2006, for a review), for example, have demonstrated that priming a significant other causes participants to feel the way they would feel and behave the way they would behave when with that significant other, even in the other's absence (e.g., Andersen, Reznik, & Manzella, 1996; Baldwin, Carroll, & Lopez, 1990). Furthermore, in the self-regulation domain, studies have shown that when participants are primed with a close relationship, the goals associated with that relationship are activated and pursued nonconsciously (e.g., Fitzsimons & Bargh, 2003; Shah, 2003).

Susan Cross and colleagues have added significantly to this domain with their work on the *relational-interdependent self-construal*, hereafter called the *relational self-construal* (Cross, Bacon, & Morris, 2000). Persons with a highly relational self-construal tend to think of themselves in terms of their close relationships (Cross et al., 2000), and their sense of self includes representations of their significant relationships (e.g., friendships, siblings) in addition to representations of other self-defining characteristics (e.g., studious, easygoing; Cross & Gore, 2004). Although it has been found that persons with a highly relational self-construal are more committed to a specific close relationship (r = .22; Cross et al., 2000), relational self-construal is a more global relationship orientation, thereby influencing relationshipmaintaining cognitions and behaviors throughout one's social network.

Across a variety of situations, individuals with a highly relational self-construal are likely to think and behave in a relationship-promoting manner. Those who score high in relational self-construal experience greater well-being to the extent that they perceive their relationships as close and meaningful (Cross & Morris, 2003), are more likely to consider the needs and wishes of others when making a decision (Cross et al., 2000); are more likely to self-disclose, which is associated with their roommates' positive evaluation of the relationship (Gore, Cross, & Morris, 2006); and evaluate conflicts of interest more positively when the outcome benefits a close other as well as the self (Gore & Cross, in press).

Additionally, those who score high in relational self-construal have been shown to automatically process information in ways that support the maintenance of their close relationships (Cross, Morris, & Gore, 2002), suggesting that their relationship-promoting tendencies may occur without much deliberation. Participants who scored high in relational self-construal were more likely to have positive associations for relationship-oriented terms, were more likely to have well-organized networks of relationship concepts, showed better attention to and recall of relational information in a surprise recall task, and tended to cluster information in memory in terms of relationships, leading to better recall of this information

compared to information not organized in terms of relationships (Cross et al., 2002). In other words, those with a highly relational self-construal are chronically tuned in to relationships, perhaps without conscious awareness.

Relational self-construal is an individual-difference variable that assesses people's identification with relationships in general. However, working models of the self in relation to others can occur at various levels of specificity, including a global working model at the top tier, relationship-domain models (i.e., models for family, for friends) at the middle tier, and relationship-specific models at the bottom tier (Chen et al., 2006; Collins & Read, 1994; Overall, Fletcher, & Friesen, 2003). Building on Cross and colleagues' work, we reasoned that even those without a general disposition to identify with their relationships may nevertheless identify with a specific relationship, because of meaningful experiences within that relationship, and come to internalize its associated expectancies, goals, and motives (Baldwin, Lydon, McClure, & Etchison, 2010; Ryan & Deci, 2000; Sheldon & Elliot, 1998). Tommy, for example, may not identify with relationships in general, but after being in a romantic relationship with Gina for 2 years, he comes to include her and their relationship as an important part of his identity. Consequently, he readily thinks of Gina when he thinks of himself, and he behaves in a way to promote their relationship. We refer to this construct, the focus of the present research, as relationship-specific identification.

Relationship-Specific Identification and Relationship Commitment

Although we share the theoretical perspective of the relational self-construal (Cross et al., 2000), our close-relationships perspective emphasizes that relationship-specific identification should arise not only from the top-down dispositional tendency to identify with relationships in general but also as a result of data-driven experiences within the romantic relationship. For example, we expect that individuals who experience a great deal of intimacy in their relationship will be more identified and satisfied with, as well as committed to, their partners. As such, we expect relationship-specific identification to share some statistical variance with the more global relational self-construal, as well as with other relationship-specific constructs, such as relationship commitment and satisfaction.

Given that relationship commitment has been shown to be a particularly robust predictor of positive relationship behaviors (e.g., Drigotas et al., 1999; Finkel, Rusbult, Kumashiro, & Hannon, 2002; D. J. Johnson & Rusbult, 1989; Menzies-Toman & Lydon, 2005; Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991), it is especially important to address its association with relationship-specific identification. From a close-relationships perspective, relationship commitment represents a general overarching motivation to think and act in ways to maintain a relationship (Lydon & Zanna, 1990). Most methods of measuring commitment subscribe to a multiple-component view, with some definitions including satisfaction and intrinsic motivation as a basis of commitment (e.g., Rusbult, 1991) and others tapping into more introjected, ought-based motives (e.g., Frank & Brandstatter, 2002; M. P. Johnson, 1991; Lund, 1985). Still other researchers have proposed an identity-based understanding of commitment (e.g., Lydon, 1996), including relational identity and a sense of "weness" in their definitions (e.g., Agnew, Van Lange, Rusbult, & Langston, 1998; M. P. Johnson, 1991) or have conceptualized commitment as a vehicle for fulfilling one's identity goals (e.g., Brickman, 1987; Burke & Reitzes, 1991; Gollwitzer & Kirchhof, 1998; Kanter, 1972; Wicklund & Gollwitzer, 1982).

It is likely that all three of these motives contribute to relationship persistence via commitment, but each serves distinct functions. Identification-based commitment, which reflects an individual's enduring values and beliefs (Burton, Lydon, D'Alessandro, & Koestner, 2006; Sheldon & Elliot, 1998), may be especially crucial to sustaining relationships in the face of adversity. Satisfaction-based commitment, on the other hand, may be vulnerable to adversity because negative events are a direct challenge to the foundation of such commitment. Presumably, if Gina is in a relationship because it is fun and enjoyable, the fate of her relationship may be in question if it becomes not so fun and enjoyable. Moreover, drawing from the literature on self-determination theory (Deci & Ryan, 2000), introjection and ought-based commitments may help keep relationships intact out of a sense of duty and obligation but have a negative impact on well-being (Ryan & Connell, 1989), possibly by fostering resentment (Strauman & Higgins, 1988).

Similarly, we propose that relationship-specific identification serves a precise function in relationship maintenance; in particular, it fosters relatively spontaneous RMRs in the face of relational threat. First, it is assumed those high in relationshipspecific identification have identified, internalized motives when it comes to the maintenance of their relationship. As such, it is likely that they pursue their relationship goals volitionally (Gore & Cross, 2006) and are thus able to efficiently, perhaps even automatically, protect their relationship in the face of threat. Indeed, we have preliminary data suggesting that relationship-specific identification is more highly associated with identified motives than with intrinsic and introjected (e.g., ought-based) motives. Second, a person who is highly identified with his or her relationship should have a highly accessible and elaborated representation of self in relation to other that is activated by relational threat, possibly in the form of an "if relational threat, then protect" contingency (Lydon et al., 2008), and that allows for relatively quick, fluid responses. In other words, we conceptualize relationship-specific identification as a self-representation with motivational qualities that are conducive to relatively automatic relationship-protective behaviors.

Commitment, on the other hand, is a meta-motive (Karremans & Van Lange, 2008), and in addition to including an identified motivational basis, it also likely includes other motives (e.g., introjected) that do not directly influence relatively spontaneous RMRs. Relationship-specific identification should therefore outperform commitment in predicting spontaneous relationship maintenance in the face of relational threat. However, given that commitment encompasses a variety of motivations, it should outperform the more specific relationship-specific identification when it comes to a more downstream effect of relationship maintenance processes, namely, relationship longevity (Le, Dove, Agnew, Korn, & Mutso, 2010). In essence, commitment has greater bandwidth because it represents multiple motives that all contribute to relationship functioning, and so, it should outperform individual motivational bases in predicting relationship persistence.

Overview and Hypotheses

We add to the literature on relational identity and examine the motivational, relationship-protective properties of relationship-specific identification. In Study 1, we tested the convergent and divergent validity of relationship-specific identification, by assessing its associations with relational self-construal, relationship commitment (hereafter referred to as *commitment*), and relationship satisfaction (hereafter referred to as *satisfaction*). We predicted that relationship-specific identification would be correlated, but not redundant, with relational self-construal, as measured by the Relational-Interdependent Self-Construal (RISC) Scale (Cross et al., 2000; Hypothesis 1a), as well as with relationship-specific constructs, specifically commitment (Hypothesis 1b) and satisfaction (Hypothesis 1c). We also expected that relationship-specific identification would account for unique variance in commitment beyond relational self-construal and satisfaction (Hypothesis 1d).

In line with research demonstrating that one's global (Cross et al., 2002) and specific self-other cognitive representations have a relatively automatic influence on one's affect, cognition, motivation, and behavior (e.g., Baldwin et al., 1990; Berk & Andersen, 2000; Karremans & Aarts, 2007; Shah, 2003), we also predicted that one's relationship-specific identity should be highly accessible and therefore able to influence relationship maintenance in a relatively effortless and maybe even automatic fashion. More specifically, consistent with the theorizing of Lydon and colleagues suggesting that immediate relational threats can elicit spontaneous RMRs in the form of an "if relationship is threatened, then protect relationship" contingency (Lydon et al., 2008), we assumed that relationship-specific identification is a powerful, upstream predictor of relationship-protective "if . . . then" scripts in response to relational threats.

The first relatively spontaneous, on-the-spot RMR we examined was language use. Individuals can use language to promote their relationships in fairly straightforward ways, such as expressing support of their partner when their partner is feeling anxious (e.g., Simpson, Rholes, & Nelligan, 1992), or more subtly by using the pronoun we to convey relationship closeness (Agnew et al., 1998; Fitzsimons & Kay, 2004). In Study 2, we examined how individuals use language to ward off the threat of an attractive alternative and, in particular, how it is used to subtlety communicate that one is romantically unavailable. Using Instant Messenger (IM), a realtime text-based chat program, we assessed relatively spontaneous relationship maintenance behaviors in response to subtle advances from an attractive alternative. It was assumed that (a) fairly automatic processes govern one's responses over IM given that the nature of the interaction does not allow for a great deal of deliberation about one's responses and (b) one way to protect a romantic relationship in light of advances from an attractive alternative is to vocalize that one is in a romantic relationship. Spontaneous pro-relationship responding was therefore operationalized as whether participants mentioned their partner while conversing with an attractive alternative over IM. We first examined whether participants mentioned their partner at all, reasoning that a mention of one's partner even once communicates that one is unavailable and uninterested in other romantic pursuits. Second, we examined how many times participants mentioned their partner. Presumably, every additional partner mention further emphasizes one's unavailability and disinterest. We predicted that participants high in relationship-specific identification would be more likely to mention their partner or their relationship when interacting with an attractive member of their preferred sex (relational threat condition), thereby implying their lack of availability, but not when interacting with an attractive member of their nonpreferred sex (control condition), controlling for the degree to which they identify with their relationships in general and their level of commitment (Hypothesis 2).

Although language use is often assumed to represent a relatively spontaneous behavior (Swann, Stein-Seroussi, & Giesler, 1992), it is arguably not as spontaneous as behaviors that occur at early, lower order stages of attentional processing. As mentioned above, recent research has demonstrated that once attention has been directed toward an attractive member of the preferred sex, perceivers find it difficult to disengage (e.g., Maner, Gailliot, & DeWall, 2007), unless recently prompted to think of their love for their partner (Maner, Rouby, & Gonzaga, 2008). Thus, in Study 3, we explored whether those high in relationship-specific identification would be less likely to exhibit attentional adhesion compared to those low in relationship-specific identification. We used an experimental manipulation of threat similar to that in Study 2 to act as a trigger for an "if relationship is threatened, then protect relationship" contingency. We predicted that, when faced with a relational threat, participants high in relationship-specific identification would be more likely to decrease attentional adhesion to an attractive member of their preferred sex, controlling for the degree to which they identify with their relationships in general and their level of commitment (Hypothesis 3).

Finally, in Study 4, we sought to examine whether the effects of relationship-specific identification on RMRs would be reflected in relationship longevity. In a longitudinal sample, we predicted that the degree to which individuals incorporated a specific romantic relationship into their sense of self would be associated with relationship survival (still together vs. broken up) 1–3 years after the initial assessment (Hypothesis 4). However, we also predicted that commitment would be a more robust predictor of relationship survival based on the assumption that commitment encompasses a variety of motivations for staying in a relationship, such as satisfaction-based reasons or feelings of obligation (Hypothesis 5).

Study 1: Correlates of Relationship-Specific Identification

The present study examined the convergent and divergent validity of relationship-specific identification, particularly how it relates to similar constructs, such as relational self-construal, commitment, and satisfaction. We predicted that relationship-specific identification would be moderately correlated with relational self-construal (Hypothesis 1a), commitment (Hypothesis 1b), and satisfaction (Hypothesis 1c). We also expected that relationship-specific identification would account for unique variance in commitment, controlling for the variance accounted for by satisfaction and relational self-construal (Hypothesis 1d).

Method

Participants. Three hundred and thirty-eight (95 male, 243 female) participants from McGill University (Montréal, Québec, Canada) participated in three different studies across 3 academic

years. They were recruited from introductory-level courses and through newspaper advertisements, online classified advertisements, and campus posters. All participants, except those participating for extra course credit, were paid \$10 for their participation. Each study involved deception, so 19 participants were excluded because they were suspicious of the cover story, while nine were excluded for not following instructions and 20 were excluded for not meeting eligibility criteria (e.g., they were not in a dating relationship). A total of 48 participants were excluded, leaving us with 290 participants (84 male, 206 female). On average, participants were 20.55 years old (SD = 3.13) and had been dating for 19.96 months (SD = 22.38). Participants were exclusively dating (n = 271), engaged (n = 12), or married (n = 7).

Materials. Only measures relevant to the present study are described.

Relational self-construal. Cross et al.'s (2000) RISC Scale (Cronbach's $\alpha = .86$) assesses the degree to which people incorporate their relationships in general into their sense of self. On a 7-point Likert-type scale (endpoints: $1 = strongly\ disagree$, $7 = strongly\ agree$), participants rated their level of agreement with 11 different statements assessing relational self-construal, such as "My close relationships are an important reflection of who I am," "I think one of the most important parts of who I am can be captured by looking at my close friends and understanding who they are," and "Overall, my close relationships have very little to do with how I feel about myself" (reverse scored).

Relationship-specific identification. We modified the RISC Scale to create a measure of relationship-specific identification (S-RISC Scale; Cronbach's $\alpha=.90$). For example, the statement "My close relationships are an important reflection of who I am" was changed to "My *current romantic relationship* is an important reflection of who I am." Participants rated their level of agreement with 11 different statements assessing relationship-specific identification on a 7-point Likert-type scale (endpoints: 1=strongly disagree, 7=strongly agree). The measure can be seen in the Appendix.

Assessment of relationship commitment. The Assessment of Relationship Commitment (ARC) Scale is a six-item measure assessing commitment (Cronbach's $\alpha=.90$; Gagné & Lydon, 2003; Lydon et al., 2008). Interspersed among these items are three additional items assessing satisfaction (Cronbach's $\alpha=.87$). On a 9-point Likert-type scale (endpoints: 1=not at all, 9=completely), participants indicated the extent to which each item applied to their relationship. Examples of these items include "To what extent are you devoted to your relationship?" (commitment item) and "To what extent are you satisfied with your relationship?" (satisfaction item).

Background information. Participants were asked various questions about their background, such as their age, ethnicity, sexual orientation, relationship length, and relationship status.

Procedure. The measures were included in three different studies across 3 academic years. Data from the relevant measures were aggregated across surveys. Other measures included varied from survey to survey. Fifty-one percent of participants completed the relationship-specific identification measure first in an online survey and the other measures approximately 14 days later in a separate lab session. Forty-nine percent of participants completed relational self-construal, commitment, and satisfaction first in an online survey but the relationship-specific identification measure

approximately 8 days later in a separate lab session. Relationship-specific identification and relational self-construal did not differ between these two settings, but commitment was significantly higher, and satisfaction marginally higher, when administered first, F(1, 258) = 4.01, p = .05, $R^2 = .02$; F(1, 258) = 3.39, p = .07, $R^2 = .01$, respectively, although their correlations with relationship-specific identification did not differ by administration.

Results

A set of Pearson's correlation coefficients was first computed to examine the relationship among relationship-specific identification, relational self-construal, commitment, and satisfaction (see Table 1). In support of our hypotheses, relationship-specific identification was significantly correlated with relational self-construal, commitment, and satisfaction. Although relationship-specific identification was significantly correlated with these three related variables, the correlations were not so high as to suggest that they are completely overlapping constructs.²

Given our conceptualization of commitment as a multifaceted construct, with relationship-specific identification as one possible basis of commitment, we examined whether relationship-specific identification could uniquely predict commitment beyond the dispositional measure of relational self-construal and beyond a traditionally large correlate of commitment, namely, satisfaction (see Table 2). Relationship-specific identification, relational selfconstrual, and satisfaction were entered as predictor variables, with commitment as the criterion. Both satisfaction ($\beta = .69, p < .001$) and relationship-specific identification ($\beta = .30, p < .001$) were positively associated with commitment. Although the association between relational self-construal and commitment had been positive, this association became negative ($\beta = -.12$, p < .01) when controlling for satisfaction and relationship-specific identification. Presumably, those who are highly identified with relationships in general and committed to their relationship are also likely highly identified with their specific relationship, leaving a smaller group of high RISC Scale participants who are low on the S-RISC Scale and likely low in commitment.

Discussion

The results of this study establish some degree of convergent and divergent validity for the S-RISC Scale, as relationship-specific identification was correlated, but not redundant, with relational self-construal, commitment, and satisfaction. In addition, relationship-specific identification accounted for unique variance in commitment when controlling for relational self-construal and satisfaction, consistent with the hypothesis that relationship-specific identification is a distinct basis of commitment.

¹ Participants in Study 1 did not participate in Studies 2 or 3.

 $^{^2}$ In a similar study, relationship-specific identification was found to be significantly correlated with the IOS Scale (Aron et al., 1992), r(150) = .35, p < .001, but not so highly as to suggest these are completely overlapping constructs.

Study 2: Spontaneous Expressions of Relationship Status

The purpose of Study 2 was to test the relatively spontaneous relationship-protective properties of relationship-specific identification. We predicted that participants higher on relationship-specific identification would be more likely to mention their partner or relationship when interacting with an attractive alternative of their preferred sex (Hypothesis 2).

Method

Participants. One hundred and fifty-nine participants (50 male, 109 female) from McGill University were recruited for the present study ostensibly about how people interact with each other using various forms of technology. Data were collected in two waves during 2 different academic years. Participants were recruited from introductory-level courses and through newspaper advertisements, online classified advertisements, and campus posters. All participants, except those participating for extra course credit, were paid \$10 or \$153 for their participation. Only one member of a couple was permitted to participate. The data from 34 participants were excluded because they experienced technical difficulties (n = 4), did not meet eligibility criteria (e.g., they were not in a relationship; n = 9), or were suspicious of the cover story or confederate (n = 21), leaving a total of 125 participants (37) males, 88 females). On average, participants were 20.73 years old (SD = 3.24) and had been dating for 22.13 months (SD = 20.13). Participants were heterosexual and exclusively dating (n = 116), engaged (n = 3), or married (n = 6).

Materials.

Premeasures.

Relationship-specific identification. Participants completed the S-RISC Scale (endpoints: 1 = strongly disagree, 7 = strongly agree; M = 5.12, SD = 0.87) via an online survey.

Lab session.

Instant messaging task. The IM task was designed to assess relatively spontaneous relationship maintenance behaviors in response to subtle advances from an attractive alternative of one's preferred sex, operationalized as the number of times participants mentioned their relationship or their partner. Participants were led to believe that they were participating in a "Getting to Know You" task via MSN Messenger with another participant, who was actually a trained confederate. They were randomly assigned to interact with someone of the same (control condition) or opposite sex

Table 1 Means and Standard Deviations of, and Correlations Among, Variables Assessed in Study 1

Variable	М	SD	1	2	3	4
1. S-RISC	4.91	0.96	_			
2. RISC	5.10	0.87	.57*	_		
3. Commitment	7.93	1.10	.47*	.20*	_	
Satisfaction	7.52	1.30	.35*	.23*	.76*	_

 $\label{eq:Note.} \textit{Note.} \quad \textit{df} = 250-258. \; \text{S-RISC} = \text{specific relational-interdependent self-construal}; \; \text{RISC} = \text{relational-interdependent self-construal}.$

Table 2
Regressing Commitment Onto S-RISC, RISC, and Satisfaction

Predictor	В	SE	β	t	p
S-RISC	0.34	.06	.30	6.14	.000
RISC	-0.15	.06	12	-2.64	.009
Satisfaction	0.54	.03	.69	16.82	.000

Note. df = 246. $R^2 = .64$. S-RISC = specific relational-interdependent self-construal; RISC = relational-interdependent self-construal.

(relational threat condition). Participants were first instructed that they and their interaction partner would be introducing themselves to each other via webcam. For the confederate's introduction, the same prerecorded clip of either a male or female confederate was shown to all participants. Each confederate was selected by volunteers as the most attractive among a sample of six (three male, three female) confederates. During the introduction, the confederate hinted that he or she was single and enjoyed meeting new people.

After the introductions, the webcam was turned off, and the conversation over IM commenced. Participants were instructed that there were two conditions: a responder condition, in which one was required to answer and not ask any questions, and a questioner condition, in which one was required to ask and not answer any questions. The assignment to condition was fixed so that participants were always assigned to the responder condition. The interaction partner asked each participant the same set of 11 questions every session, which were designed to make it presumably more and more difficult as the interaction progressed for the participant to avoid mentioning his or her partner. For example, one of the first questions asked was "Where are you from," then, approximately at the halfway point, "What do you normally do on the weekends?", and toward the end of the conversation, "On your ideal trip, would you travel alone or is there someone you'd go with?" Descriptive statistics revealed that in response to these questions, participants tended to mention their partner, on average, 1.44 times (SD = 1.27).

Background information. At the end of the lab session, participants were asked various questions about their background, such as their age, ethnicity, sexual orientation, relationship length, and relationship status.

Postmeasures.

Relational self-construal. Participants completed the RISC Scale (endpoints: 1 = strongly disagree, 7 = strongly agree; M = 4.98, SD = 0.98) via an online survey.

p < .01.

³ The second wave of the study included more measures, so participants were given more money as compensation.

 $^{^4}$ A funnel debriefing technique was used (similar to that used in Chartrand & Bargh, 1996) to assess the degree to which participants believed our cover story for the study in general and for the specific tasks. Participants were asked general suspicion probes (e.g., "First, do you have any questions about the experiment?"), followed by more focused suspicion probes (e.g., "How did you find the interaction with the other participant?"). If participants indicated that they suspected their IM partner was a confederate (n=18), they were excluded. Only one participant expressed suspicion that we were interested in whether participants mentioned their partner.

Assessment of relationship commitment. Participants also completed the ARC Scale (endpoints: $1 = not \ at \ all, \ 9 = completely$), which assesses commitment (M = 7.97, SD = 0.83), in the same online postmeasure survey.

Procedure. Participants were invited to take part in a study examining how people interact with each other using various forms of technology. The purpose of the cover story was to ensure that participants did not suspect the study was about romantic relationships, so that they were not primed with their relationship before interacting with an attractive alternative. Approximately 10 days before the experimental session, participants completed the S-RISC Scale as a premeasure via an online survey. The S-RISC Scale was embedded among other nonrelationship measures, and participants were told they could skip this measure if they were not in a relationship. Once at the lab, the research assistant gave participants a brief introduction to the study, obtaining informed consent and ensuring the anonymity of their responses, and randomly assigned them to either the relational threat or the control condition. Participants then took part in the IM task and completed a background information questionnaire as their final task. At the end of the session, the research assistant explained the purpose of the study, provided a poststudy information letter, and answered questions. Approximately 10 days later, participants were e-mailed a set of postmeasures, consisting of the RISC Scale and the ARC Scale, to complete.

Preliminary Results

Preliminary analyses indicated no main effects or interactions involving gender, so we collapsed across gender in subsequent analyses. Additionally, relationship length did not correlate with relationship-specific identification or the number of times participants mentioned their partner or relationship (hereafter referred to as *number of mentions*).

Results

We hypothesized that participants high in relationship-specific identification would be more likely to mention their partner or their relationship when interacting with an attractive member of their preferred sex over IM. To test this prediction, a logistic regression analysis was conducted with relationship-specific identification, condition, and the Condition × Relationship-Specific Identification interaction term simultaneously entered as predictors, and whether participants mentioned their partner (0 = no, 1 =yes) as the criterion. Because six participants did not complete the S-RISC Scale, a total of 119 participants were included in the analysis, with 34 participants in the no category and 85 participants in the yes category. Relationship-specific identification was a significant predictor, but condition was not (Wald = 8.10, odds ratio [OR] = 2.22, p = .004; Wald = 0.02, OR = 1.04, p = .88, respectively). In addition, the Condition × Relationship-Specific Identification interaction effect was significant, Wald = 7.28. OR = 2.13, p = .007; $\chi^2(3, N = 103) = 19.21$, p < .001, for the model.

A test of simple slopes (Aiken & West, 1991) revealed that participants low in relationship-specific identification were less likely to mention their partner in the relational threat condition versus the control condition (B = 0.72, SE = 0.32, Wald = 5.15,

p=.02). On the other hand, participants high in relationship-specific identification were more likely to mention their partner in the relational threat condition versus the control condition (B=0.79, SE=0.41, Wald = 3.65, p=.06). In the relational threat condition, those high in relationship-specific identification were more likely to mention their partner compared to those low in relationship-specific identification (B=1.55, SE=0.47, Wald = 11.02, p<.001). In the control condition, those high and low in relationship-specific identification did not respond differently (B=-0.04, SE=0.31, Wald = 0.02, p=.89).

More concretely, when looking at the percentage of participants who mentioned their partner or relationship at least once, we see that, in the control condition, 75% of the high identifiers and 74% of the low identifiers mentioned their partner or relationship. However, in the relational threat condition, 90% of high identifiers and 42% of low identifiers mentioned their partner or relationship.

The simple slopes analyses were repeated controlling for the variance accounted for by relational self-construal, as well as commitment. Because not all participants had completed the measure of commitment and relational self-construal, 114 participants were included in the present analyses (31 = no mentions, 83 = one or more mentions). The Condition \times Relationship-Specific Identification interaction remained significant in both cases (ps < .05), as did the test of simple slopes in the relational threat condition (ps < .05). The one additional result was that commitment predicted likelihood of mentioning the partner in the control condition (p < .05).

We also examined how many times participants referred to their significant other. A multiple regression analysis was conducted with condition, relationship-specific identification, and the Condition × Relationship-Specific Identification interaction term as the predictor variables, and number of mentions as the criterion. Condition was coded as 1 (relational threat condition) and -1(control condition), and the continuous predictor variable, relationship-specific identification, was standardized. In Step 1 of the analysis, condition and relationship-specific identification were simultaneously entered, revealing no main effect of condition, B =-0.07, SE = 0.09, $\beta = -.07$, t(115) = -0.73, p = .47, but a main effect of relationship-specific identification, B = 0.27, SE = 0.09, $\beta = .27$, t(115) = 3.01, p = .003. The Condition \times Relationship-Specific Identification interaction effect was entered at Step 2, proving to be significant, B = 0.18, SE = 0.09, $\beta = .18$, t(115) =2.02, p = .05.

To examine the interaction more closely, we conducted a test of simple slopes. Participants low in relationship-specific identification had fewer relationship mentions in the relational threat condition compared to those high in relationship-specific identification, B=0.45, SE=0.12, t(115)=3.60, p<.001, but there was no such difference in the control condition, B=0.08, SE=0.13, t(115)=0.64, p=.52 (see Figure 1). Lows mentioned their partner less in the relational threat condition compared to the control condition, B=-0.25, SE=0.13, t(115)=-1.95, p=.05, and there was no difference for those high in relationship-specific identification between the relational threat and the control condition, B=0.12, SE=0.13, t(115)=0.91, p=.36.

The test of simple slopes was repeated, first controlling for relational self-construal and again controlling for commitment. In the relational threat condition, relationship-specific identification predicted number of mentions controlling for the variance ac-

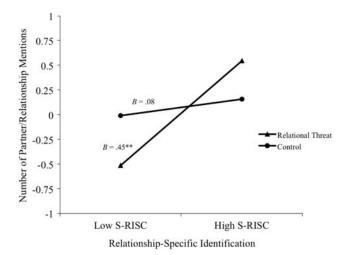


Figure 1. Interaction of condition (relational threat vs. control) and relationship-specific identification (low vs. high) on number of partner/relationship mentions. S-RISC = specific relational-interdependent self-construal. ** p < .001.

counted for by relational self-construal, B=0.34, SE=0.16, t(109)=2.15, p=.03, whereas relational self-construal was not a significant predictor, B=0.22, SE=0.15, t(109)=1.49, p=.14. Neither relationship-specific identification nor relational self-construal predicted the number of mentions in the control condition (ts<1). Similarly, in the relational threat condition, relationship-specific identification predicted number of mentions controlling for the variance accounted for by commitment, B=0.38, SE=0.13, t(109)=2.87, p<0.1, but was not a significant predictor in the control condition (t<1). Commitment, controlling for the variance accounted for by relationship-specific identification, was not a significant predictor in the relational threat condition (t<1) or in the control condition, B=0.17, SE=0.13, t(109)=1.27, p=0.21.

Our assumption is that the mentioning of one's partner or relationship in the present IM paradigm is a relatively spontaneous phenomenon. However, it is possible that those low in relationship-specific identification, in the relational threat condition, deliberately inhibited mentioning their partner or relationship, which would preclude a more spontaneous response. To test for this possibility, we examined the time it took participants to respond to the questions in the IM task.

As mentioned in the Method section, the questions in the IM task were designed to make it progressively more difficult for the participant to avoid mentioning his or her partner or relationship. Internal analyses revealed that if participants were to mention their partner or relationship, it was most likely after Question 4 (97% of mentions occurred after Question 4). Accordingly, the average time it took participants to respond to each question was calculated for Questions 1–3 (control time) and Questions 4–11 (target time). The mean of Questions 1–3 was used as a baseline control variable in the following analyses.

In a multiple regression analysis, condition, relationshipspecific identification, control time, and the Condition × Relationship-Specific Identification interaction term were simultaneously entered as predictor variables. Target time was entered as a criterion. Results revealed a nonsignificant Condition \times Relationship-Specific Identification interaction effect, B=22.14, SE=15.06, $\beta=.11$, t(113)=1.47, p=.14. In fact, the pattern of means revealed that the only hint of a difference in time to respond was in the control condition, such that those low in relationship-specific identification took less time to respond compared to those high in relationship-specific identification. None of the other pairwise comparisons approached significance. Based on these results, it is unlikely that participants low in relationship-specific identification and in the relational threat condition were more deliberative about their responses than participants in the other three groups.

Discussion

The hypothesized interaction between relationship-specific identification and threat showed that relationship-specific identification was only associated with mentions of one's partner when participants were ostensibly interacting with an attractive, available member of their preferred sex. Moreover, this finding remained significant controlling for the variance accounted for by commitment, suggesting that, under threat, it may be identification in particular that is crucial in motivating pro-relationship responding. Whereas the result for mentioning the partner at all was driven by both an increased probability for high identifiers and a decreased probability for low identifiers, the frequency of mentioning effect was due primarily to a decrease by low identifiers in the relational threat condition. We addressed the possibility that this reflected a relatively conscious, deliberative response by examining time to respond. Results demonstrated that participants were not likely extensively deliberating about their responses. Nevertheless, this paradigm is limited in its ability to test automatic pro-relationship responding, so we conducted Study 3 to address this issue using a well-validated, social cognitive paradigm.

Study 3: Attentional Adhesion to Attractive Alternatives

Although the demands of the IM paradigm require rather quick, spontaneous responses, they do not require the extremely fast responses characteristic of social cognitive reaction time measures. Thus, to push our test of relationship-specific identification further, we conducted a study of participants' attention to attractive alternatives. Our theoretical assumption, grounded in previous findings (Lydon et al., 2008), was that a relational threat may automatically motivate pro-relationship cognitions that influence behavior. In the present study, we used an experimental manipulation of relational threat similar to Study 2 and examined whether relationship-specific identification interacted with relational threat to predict automatic attention to attractive alternatives. We predicted that, when faced with a relational threat, participants high in relationship-specific identification would be more likely to decrease attentional adhesion to an attractive alternative (Hypothesis 3).

Method

Participants. Ninety participants (18 male, 72 female) from McGill University participated in a study ostensibly regarding the cognitive processes involved in social interaction. Participants

were recruited via newspaper advertisements, online classified advertisements, and campus posters. They were given \$15 in exchange for their participation. Only one member of a couple was permitted to participate. Eleven participants were excluded from the data analysis: One was no longer in a relationship, one incorrectly performed an experimental task, two were of the same couple, and seven were suspicious of the cover story. The final sample consisted of 79 participants (65 female, 14 male). On average, participants were 20.41 years old (SD = 2.32) and had been in a relationship for 22.32 months (SD = 16.84). All participants were heterosexual and either exclusively dating (n = 78) or married (n = 1).

Materials.

Premeasures.

Relationship-specific identification. Participants completed the S-RISC Scale (endpoints: 1 = strongly disagree, 7 = strongly agree; M = 4.78, SD = 1.02) via an online survey.

Lab session.

Seven female volunteers and six male Relationship threat. volunteers were recruited as potential attractive alternatives. The volunteers were asked to record videos as if they were introducing themselves to a stranger, but the contents of the introductions were fabricated, as each volunteer was given a script to read. The script was designed by surveying a group of individuals to determine what qualities would be attractive in a romantic partner. The script was held constant within sex, with minor between-sex variations. Independent viewers (n = 12; six male, six female) rated videos of the opposite-sex volunteers on various dimensions of attractiveness using a 10-point scale (1 = very unattractive, 10 = veryattractive). The highest rated male video and the highest rated female video in terms of physical attractiveness were chosen as the relational threat stimuli (male: M = 7.83, SD = 0.98; female: M =8.00, SD = 1.55).

Dot-probe visual cuing task. The dot-probe visual cuing task measures how quickly participants shift their attention away from one stimulus to classify another. A four-quadrant dot-probe task adopted from Maner, Gailliot, and DeWall (2007) was used. Four categories of target photos were shown to each participant on a 14-in. × 11-in. computer monitor: (a) attractive women, (b) attractive men, (c) average-looking women, and (d) average-looking men. Fifteen exemplars from each target category were shown, such that participants viewed a total of 60 color facial photographs. The photos had been rated on a 9-point scale (1 = very unattractive, 9 = very attractive) and grouped based on level of attractiveness before being incorporated into the dot-probe task (attractive women: M = 7.53, SD = 1.39; attractive men: M = 7.31, SD = 1.391.35; average women: M = 4.77, SD = 1.61; average men: M = 1.614.64, SD = 1.74).

At the start of each trial, a fixation cross (x) appeared in the center of the screen for 1,000 ms. This was followed by the appearance of a photo in one of the four quadrants for 500 ms. Subsequently, a black object appeared either in the same quadrant as the photo had occupied (filler trials)⁵ or in a different quadrant (attentional shift trials). The participant was told to quickly classify this object as either a circle or a square by pressing the a or the k key on the keyboard, respectively. Therefore, on attentional shift trials (the trials of interest), participants were required to disengage their attention from a target photo and direct it to a different location on the screen. The response latency (in milliseconds)

between the appearance of the categorization object and the participant's response is a reaction time measure of attentional adhesion: Larger response latencies suggest that it took the participant longer to disengage attention from the target photo (Maner et al., 2008).

Additional measures. As in the previous studies, participants completed the RISC Scale (endpoints: $1 = strongly \ disagree$, $7 = strongly \ agree$; M = 4.92, SD = 0.96) and the ARC Scale (endpoints: $1 = not \ at \ all$, 9 = completely), to assess commitment (M = 7.92, SD = 0.91), as well as a background information questionnaire.

Procedure. Participants were told that the study examined cognitive processes related to social interaction and the effects of social networking websites on first impressions and were therefore unaware that the study pertained to romantic relationships. Approximately 8 days prior to the lab session, participants completed the S-RISC Scale in an online survey. Once in the lab, participants watched a video of a confederate introducing him- or herself. In the relational threat condition, the video of the attractive confederate of the opposite sex was shown, and in the control condition, the video of the attractive confederate of the same sex was shown. Participants were told that the confederate was another participant who was randomly assigned to record an introductory video at the beginning of the experiment. To increase believability, participants were shown a list of questions and told that the other participant was asked to answer these questions while making the video. In the video, the male confederate, for example, introduced himself and described where he was from, what he liked to do in his spare time, and what he was majoring in. He also mentioned that he had recently transferred to McGill University, was presently single, and was enjoying meeting new people.

Participants were also told that they would later meet the other participant and that the researchers were interested in how gaining knowledge about a person via video would affect impression formation. The anticipation of meeting the attractive confederate was believed to exacerbate the threat level in the relational threat condition. After viewing the video of the confederate, participants completed the dot-probe visual cuing task, which was introduced as a measure of cognitive fluency. Participants then completed the RISC Scale and the measure of commitment. At the end of the study, they were debriefed using a funnel debriefing technique (see Footnote 4) and thanked for their time.

Preliminary Results

Initial analyses revealed that, in the relational threat condition, the association between relationship-specific identification and reaction times to the attractive opposite-sex photos in the dot visual cuing task was not linear, so relationship-specific identification was split at the median to create two groups: those high on the S-RISC Scale and those low on the S-RISC Scale. There were

⁵ Filler trials, in which the object to categorize appeared in the same quadrant as the preceding photo, were included to encourage participants to keep their attention focused on the photos until they disappeared (Fox, Russo, Bowles, & Dutton, 2001). Response times did not differ depending on condition or on photo type, suggesting that neither the prime nor the photo type influenced processing fluency (Maner, Gailliot, Rouby, & Miller, 2007).

no main effects or interactions involving gender, so we collapsed across gender in subsequent analyses, and relationship length did not correlate with relationship-specific identification or reaction times on the dot-probe visual cuing task.

Results

Trials greater than three standard deviations above the sample mean and below 200 ms were deleted (5.9% of data; Dandeneau, Baldwin, Baccus, Sakellaropoulo, & Pruessner, 2007). All analyses were based on the attentional shift trials (i.e., the trials in which the categorization object appeared in a different quadrant than had the preceding photo). The mean reaction times for the three control photo categories (attractive same-sex, average opposite-sex, and average same-sex) were averaged to create a baseline measure of attentional adhesion. To test the hypothesis that participants high in relationship-specific identification, when faced with a relational threat, would exhibit less attentional adhesion to an attractive alternative, a three-way mixed-model analysis of variance (ANOVA) was conducted that compared the baseline measure to the mean reaction times for the critical target photos (attractive opposite-sex) in each condition. Photos were a within-subjects factor. The three-way interaction from this 2 (relationship-specific identification: high vs. low) \times 2 (condition: relational threat vs. control) × 2 (photo: attractive opposite-sex target vs. baseline) mixed-model ANOVA was marginally significant, F(1, 73) = $3.00, p = .09, \eta = 0.20.^{6}$

Simple effects tests were performed to examine whether attention to attractive opposite-sex photos versus baseline photos differed for those low and high in relationship-specific identification. For each condition (relational threat and control), the difference between reaction times for attractive opposite-sex photos and baseline photos, for those low and high on the S-RISC Scale, were compared. In the relational threat condition, the effect was significant. As can be seen in Figure 2, those low in relationship-specific

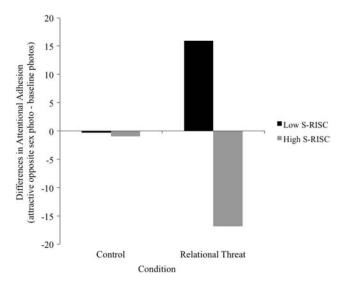


Figure 2. Mean attentional adhesion difference score (attractive oppositesex photos – baseline photos) for participants low and high in relationshipspecific identification in the control and relational threat conditions. S-RISC = specific relational-interdependent self-construal.

identification showed greater attentional adhesion toward the attractive opposite-sex photos relative to their baseline (mean difference = 15.95 ms) as compared to those high in relationshipspecific identification, who showed a decrease in attentional adhesion to the same photos relative to their baseline (mean difference = -16.81 ms), t(73) = 3.47, p < .01, r = .47. This difference held when controlling for relational self-construal, t(72) = 2.85, p = .006, r = .32, and relationship commitment, t(72) = 3.47, p < .001, r = .38. Neither relational self-construal nor commitment was a significant predictor of attentional adhesion in the relational threat condition (t < 1); t(72) = 1.65, p = .10, r =.19, respectively. Additionally, no significant difference was found between those low and high in relationship-specific identification in the control condition (t < 1). These results support the hypothesis that if the relationship is threatened, those who are highly identified will decrease attentional adhesion to attractive alternatives relative to those less identified.

Given the nonlinear relationship between relationship-specific identification and reaction times for the attractive opposite-sex photos in the threat condition, we wanted to confirm that our results were not simply due to an arbitrary median split. We examined the reaction times to the attractive opposite-sex photos (relational threat condition) at each quartile of S-RISC Scale scores. As expected, participants in the lowest quartile of S-RISC Scale scores showed attentional adhesion to attractive opposite-sex photos, but participants in the second quartile showed even greater attentional adhesion to the target photos. Moreover, the highest quartile (i.e., participants highly identified with their relationships) showed the reverse effect, as hypothesized, but the third quartile showed an even greater reversal of attentional adhesion. As a check, we compared the reaction times of those in the lowest S-RISC Scale quartile to those in the highest two quartiles and compared the highest quartile to those in the lowest two quartiles, and in both cases, the results were significant (ps < .05).

Discussion

The present results demonstrate that relationship-specific identification is associated with the relatively automatic, lower order attentional process known as attentional adhesion. Although the omnibus three-way interaction was marginal, focused tests revealed a highly significant two-way effect in the relational threat condition. Specifically, when faced with a relationship threat, those highly identified with their relationship spent less time looking at images of attractive alternatives, whereas those less identified gazed at these photos for a longer amount of time. These findings held when controlling for the more global relational self-construal, as well as when controlling for commitment.

Study 4: Relationship Survival

The purpose of Study 4 was to examine whether relationshipspecific identification was associated with a clear downstream

 $^{^6}$ We also conducted a 2 (relationship-specific identification: high vs. low) \times 2 (condition: relational threat vs. control) \times 3 (photo: attractive same-sex, average opposite-sex, average same-sex) mixed-model ANOVA to ensure that there were no differences among the three types of control photos. No effects proved to be significant, including the three-way interaction effect, F(2, 146) = 0.86, p = .43.

effect of relationship maintenance processes—relationship survival. We predicted that the higher participants were in relationship-specific identification, the greater the chances of their relationship remaining intact over time (Hypothesis 4). Additionally, based on the idea that commitment encompasses a range of motivations for staying in a relationship, we predicted that it would be a more robust predictor of relationship survival when compared with relationship-specific identification (Hypothesis 5).

Method

Participants. Five hundred and fifteen participants who had participated in past studies over a 3-year period and who were eligible to participate (i.e., were in a romantic relationship and had completed the S-RISC Scale) were recontacted and asked to participate in the present study. They were contacted by e-mail and compensated with a \$10 Amazon gift certificate for their participation. At the time of their initial participation (Time 1), they had all been in an exclusive dating relationship, engaged, or married. Of those contacted, 54% agreed to participate and were included in the present analyses (277 total: 53 male, 224 female).

Materials. Only measures relevant to the present study are described.

Time 1 measures. At the time of their initial assessment, participants completed the S-RISC Scale (n = 277; M = 4.81, SD = 1.05), the RISC Scale (n = 118; M = 5.04, SD = 0.85), and the commitment (M = 7.89, SD = 1.06) subscale the ARC Scale (n = 117).

Time 2 measures.

Relationship status. Participants' relationship status was assessed with the following question, "Are you still in the romantic relationship you were in when you initially participated in a study/survey for the Lydon lab?" As a response, participants were given three options: "Yes—I am in the same romantic relationship," "No—I am no longer in the romantic relationship I was in when I initially participated in a study/survey for the Lydon lab," and "I was not in a romantic relationship when I initially participated in a study/survey for the Lydon lab." Four participants did not respond to this question, and eight indicated that they were not in a relationship when they initially participated in a study/survey for the Lydon lab.

Background information questionnaire. Participants were asked various questions about their background, such as their age, ethnicity, and sexual orientation, as well as relationship length and relationship status if in a relationship.

Procedure. Individuals who had participated in a study 1 to 3 years earlier were contacted via e-mail and asked to complete a follow-up survey. At the initial Time 1 assessment, they had completed the S-RISC Scale, the RISC Scale, and the ARC Scale, or some subset of these. If they agreed to participate in the Time 2 follow-up study, they were asked to fill out an online survey at their convenience and in a quiet place, free of distractions. The first section of the survey was filled out by all participants and included measures irrelevant to the present analyses, such as a measure of neuroticism. At the end of this section, they were asked whether they were in the same relationship they had been in at the time of their initial participation or if they had broken up with their partner. On the basis of their response, they subsequently completed questionnaires either about their relationship or about their

breakup. The last section of the survey consisted of demographic and background information questions, such as age, gender, sexual orientation, and relationship length if in a relationship. Once participants submitted a response, they were not able to go back and change it.

Results

To examine if relationship-specific identification predicted relationship survival, a logistic regression analysis was conducted with relationship-specific identification as the predictor variable and relationship survival as the criterion (0 = broken up, 1 = intact). Results revealed that relationship-specific identification predicted relationship survival, such that participants higher in relationship-specific identification were less likely to have broken up with their partner 1–3 years later, Wald = 9.69, OR = 1.50, p = .002; $\chi^2(1, N = 265) = 10.04$, p = .002, for the model (179 = intact, 86 = broken up).

Additional analyses were conducted to examine if the present results held controlling for relational self-construal and commitment. Because not all participants had completed the measure of relational self-construal and commitment at Time 1, 110 participants were included in these analyses (69 = intact, 41 = brokenup). In a logistic regression, relationship-specific identification and relational self-construal were simultaneously entered as predictor variables, and relationship survival was entered as the criterion. Relationship-specific identification accounted for significant variance beyond what was accounted for by relational self-construal, Wald = 6.17, OR = 2.00, p = .01; $\chi^2(2, N = 110) = 7.31$, p = .01.03, for the model, while relational self-construal was not a significant predictor (p = .32). When relationship-specific identification and commitment were simultaneously entered as predictors, relationship-specific identification did not predict relationship survival (Wald = 1.45, OR = 1.33, p = .23), whereas commitment did, Wald = 6.85, OR = 1.85, p = .009; $\chi^2(2, N = 110) = 13.97$, p = .001, for the model.

Given that commitment outperformed relationship-specific identification in predicting relationship survival and that identification is possibly one basis of commitment, a Sobel test (Sobel, 1982) was performed to examine whether the link between relationship-specific identification and relationship survival was mediated by commitment. Indeed, commitment was a significant mediator of the relationship between S-RISC Scale scores and relationship survival (Z=2.26, p=.02).

Discussion

In sum, these results demonstrate that the degree to which individuals identify with their relationships is associated with the survival of the relationship up to 3 years after the initial assessment, such that those higher in relationship-specific identification were less likely to have broken up with their partner. Additionally, relationship-specific identification predicted relationship survival, controlling for the variance accounted for by relational self-construal. Commitment, which has proven to be a robust predictor of relationship survival (e.g., Le et al., 2010), accounted for significant variance beyond what was accounted for by relationship-specific identification. In fact, commitment was found

to mediate the link between relationship-specific identification and relationship survival.

General Discussion

Summary of Results

The present set of studies provides convergent support for the idea that relationship-specific identification is associated with relationship maintenance behaviors, particularly those that are relatively spontaneous and occur in the face of relational threat, as well as relationship survival. In Study 1, it was shown that relationshipspecific identification is not statistically equivalent to other constructs that have been shown to predict relationship maintenance behaviors (i.e., relational self-construal, commitment, and satisfaction) and represents an aspect of commitment that is not simply positivity toward the relationship or the tendency to identity with relationships more generally. In Study 2, it was demonstrated that less identified participants were less likely to mention their relationship and mentioned their partner less often than those high in relationship-specific identification, but only when interacting with an attractive member of their preferred sex. When controlling for the variance accounted for by relational self-construal and commitment in tests of simple slopes, the results remained significant. In Study 3, to more stringently test the hypothesis that relationshipspecific identification is associated with relatively spontaneous RMRs in the face of relational threat, a dot-probe visual cuing task demonstrated that when threatened, those low in relationshipspecific identification showed greater attentional adhesion toward an attractive member of their preferred sex, whereas those high in relationship-specific identification showed less attentional adhesion. This result held when controlling for the variance accounted for by relational self-construal and commitment. Finally, in Study 4, it was demonstrated that those high in relationship-specific identification were more likely to still be in a relationship 1-3 years after the initial assessment, compared to those less identified, controlling for the variance accounted for by relational selfconstrual, but not commitment. Commitment, in fact, mediated the link between relationship-specific identification and relationship survival.

The Motivational Properties of Relationship-Specific Identification

We draw from several important theoretical perspectives regarding the influence of close others on the self (e.g., Agnew et al., 1998; Aron, Aron, Tudor, & Nelson, 1991; Baldwin, 1992; Chen et al., 2006; Cross et al., 2000). Similar to these approaches, we propose that relationship-specific identification involves a mental representation of the self in a relationship. Whereas Aron and colleagues emphasized how the acquisition of specific traits, perspectives, and resources from a partner lead to the altering of one's self-representation, our approach is closer to the various relational selves perspectives emphasizing the binding of oneself to the relationship, such that the change in self-representation is more about how the self is in relation to the partner. Tommy may have a representation of being patient and helpful in relation to Gina not necessarily because he has assimilated patience and altruism from Gina but because of relational experiences that motivate and elicit

such patterns of behavior from him. Consistent with this theoretical distinction, we found that relationship-specific identification was more strongly linked to relational self-construal and commitment than to the IOS Scale (see Footnote 2).

In the relationships domain, our work is likely most closely related to cognitive interdependence (e.g., Agnew et al., 1998). Previous work has demonstrated that this mental state, which involves thinking in a pluralistic way about the self in relation to others, is strongly correlated with commitment, and vice versa. We have extended this work by examining how a self—other self-representation is associated with RMRs, particularly relatively spontaneous, maybe even automatic ones. Moreover, we draw on the rich theoretical and empirical work of the relational self-construal to wed our relational perspective with a self-perspective and to emphasize the issue of internalization. The distinctiveness of relationship-specific identification relative to the more global relational self-construal illustrates how relational experiences can shape relationship-specific identification independent of one's disposition.

Although not directly taking a self-determination theory approach, we presume that relationship-specific identification is associated with identified motives as defined by self-determination theory. In particular, we believe relationship-specific identification, like the identified motives of self-determination theory, reflects personally valued goals as opposed to goals pursued for pleasure or out of feelings of obligation. Indeed, we have preliminary data suggesting that relationship-specific identification is more highly associated with identified motives, r(176) = .34, p < .001, than with intrinsic, r(176) = .14, p = .06, and introjected motives, r(176) = .11, p = .16. Presumably, if individuals highly identified with their relationship are acting on personally endorsed beliefs, they will be more motivated to protect their relationships when faced with a relational threat.

Relationship-Specific Identification and Commitment

The present studies demonstrate that it is useful to look at the distinct functions and consequences of the different motivational bases of commitment. For example, relationship-specific identification outperformed commitment at capturing relatively spontaneous RMRs in the face of relational threat. On the other hand, commitment was shown to be a more robust predictor of relationship survival than relationship-specific identification, consistent with a recent meta-analysis demonstrating that commitment outperformed a wide range of relationship factors in predicting relationship survival (Le et al., 2010). On the basis of our findings, it seems that the specific relationship motive tied to a particular function will surpass the meta-motive of commitment in predicting that precise function. However, as each of these motives (e.g., intrinsic, identified, and introjected) and their associated functions contribute to relationship survival, commitment will outperform each of them as predictors of relationship survival given it represents an additive effect across motives.

Strengths and Limitations

Although RMRs are typically assessed using explicit, self-report measures (e.g., Fincham & Bradbury, 1992; Rusbult et al., 1991), relationships researchers are turning to relatively spontaneous,

behavioral measures to study relationship-promoting responses (e.g., Maner et al., 2008; Pronk, Karremans, Overbeek, Vermulst, & Wigboldus, 2010). Presumably, one of the main reasons for the interest in more automatic RMRs is the recognition that, in every-day life, people are often required to respond to situations as quickly and as effortlessly as possible (Bargh & Chartrand, 1999). Although research has looked at the influence of cognitive factors (e.g., Pronk, Karremans, & Wigboldus, 2011) and personality variables (e.g., Perunovic & Holmes, 2008), the present research demonstrates that a relationship-specific factor, particularly relationship-specific identification, predicts relatively automatic pro-relationship responding.

Our findings are based on the assumption that relationship-specific identification motivates the warding off of an attractive alternative threat. However, we were not able to definitively determine the direction of causality of the link between relationship-specific identification and relationship maintenance, although we measured relationship-specific identification before our experimental manipulations and assessments of RMRs. We expect that protecting a relationship against an attractive alternative will bolster one's relationship-specific identification, increasing its accessibility, although maybe not its extremity (Fazio, 1986). To reverse the direction of causality, one needs to ask what would motivate spontaneous RMRs in the absence of relationship-specific identification.

Future Directions

Given that relationship-specific identification is an important predictor of RMRs, it would be worthwhile to understand how it is cultivated. The present findings suggest that it is dispositional and relational in nature, but one might assess what sorts of relational experiences lead to relationship-specific identification. Is it intimate experiences (e.g., self-disclosure), shared experiences (e.g., child rearing), or generally positive experiences (e.g., vacations)? Indeed, self-disclosures and shared experiences have been shown to be associated with self-other integration (Aron, Melinat, Aron, Vallone, & Bator, 1997; Pinel, Long, Landau, Alexander, & Pyszczynski, 2006). Future research clarifying the mechanisms leading to the development of relationship-specific identification would be useful in its own right and also in potentially facilitating the development of experimental manipulations of relationship-specific identification.

As indicated by the present findings, a significant dispositional contributor to relationship-specific identification is the more general relational self-construal. An avenue for future research is thus to explore how these two related constructs influence each other. It is possible that identification with relationships in general guides behavior and perception in new relationships in a top-down fashion, promoting relationship-specific identification. However, it is also known from attachment research that mental representations of self in relation to a specific other can predict change in more global mental models over time, in a more bottom-up fashion (Pierce & Lydon, 2001). It is also possible that some individuals keep these two levels of relationship identity compartmentalized within the self-structure. For example, Tommy may be highly identified with his relationship with Gina, but in general, relationships are not an important part of how he defines himself. It may be worthwhile to look at changes in relationship-specific identification and relational self-construal over time to tease apart how these two constructs influence each other.

Similarly, it may also be worthwhile to explore how relationship-specific identification and commitment influence each other. We assume, as described in the introduction, that datadriven experiences within the relationship may cultivate identification and commitment. We also conceptualize relationshipspecific identification as one possible basis of commitment; however, we do not know, and were not able to test in this set of studies, if relationship-specific identification actually leads to commitment. Although the results of the mediational analysis in Study 4 would suggest that relationship-specific identification is an antecedent of commitment, future studies, perhaps longitudinal in nature or using a relationship-specific identification manipulation, would be needed to answer this question. Moreover, it would be important to test the reciprocal relationship between relationship-specific identification and commitment. One could imagine, for example, that satisfying experiences early in a relationship could lead to a preliminary tentative commitment that might in turn promote identification-building experiences that further fortify commitment.

Another interesting avenue for future research might be to explore the exact nature of a high identifier's response to a relational threat. Is it that high identifiers are more sensitive in detecting situations as threatening to their relationships, that they are more readily equipped with a highly accessible response, or both? Perhaps people's default way of responding when faced with an attractive alternative is to not mention their relationship, as there may be other contingencies in place, such as "if attractive person, then approach." This would be consistent with the finding in Study 2 that low identifiers did not seem to be deliberately inhibiting mentioning their partner or relationship when interacting with an attractive alternative during the IM task. Those highly identified with their relationship, on the other hand, may be able to quickly override this default way of responding to attractive alternatives. In fact, past research has shown that accommodative behaviors, which are associated with commitment, involve inhibiting normative destructive responses (Rusbult et al., 1991).

All this is not to say that relationship-specific identification comes without costs. Past research has shown that taking a rosy view of one's partner is associated with declines in satisfaction over time (McNulty, O'Mara, & Karney, 2008), and some people may internalize relationships that do not meet their needs (Slotter & Finkel, 2009), or overidentify and become subsumed by a relationship (Swann, Gómez, Huici, Morales, & Hixon, 2010). Moreover, there is a risk that one will endure maltreatment and even abuse for the sake of the relationship and a relational sense of self. For example, evidence suggests that individuals who are highly committed to their relationships experience more intimate partner violence (Arriaga, 2002). Future research should explore the potential downside of relationship maintenance and how being highly identified with one's romantic relationship can sustain an unhealthy relationship.

Another potential downside of relationship-specific identification is that, in many cases, the relationship that an individual is identified with will end. Research on self-other integration, as measured by the IOS Scale, has demonstrated that if a relationship ends, people experience self-content change and reduced selfconcept clarity (Slotter, Gardner, & Finkel, 2010). Additionally, we have preliminary data suggesting that at post-breakup, those who have been highly identified with their relationship experience lingering identification, in addition to more negative feelings and rumination about the relationship. Given that relationship dissolution is a significant predictor of personal distress (Davis, Shaver, & Vernon, 2003; Sbarra, 2006) and mental health issues (Monroe, Rohde, Seeley, & Lewinsohn, 1999), it would be worthwhile to further understand the effects of continuing to be identified with a former relationship, as well as how people can lessen the impact of an outdated relational identity.

Conclusion

Perhaps best stated by Horberg and Chen (2010), "who we our values, feelings, goals, behaviors, self-evaluations, and related attributes—depends in part on our significant others" (p. 77). In the present study, we examined what happens when a particularly important significant other, one's romantic partner, is linked to the self. What is the effect on the relationship? How are the relationship and one's behavior in it changed by the transformed self? We demonstrated that the degree to which individuals incorporate their relationship into their sense of self predicts how they will protect their relationship, in the form of relatively spontaneous behaviors, when faced with a relational threat. That is, when the relationship becomes a well-internalized, core part of the self, such threats become threats to the self, and motivated cognition is triggered in the service of relationship maintenance. By thinking in terms of we, relationship regulation becomes selfregulation.

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Appendix

S-RISC Scale

i icase use tii	c ronowing scar	c to rate the t	extent to wi	nen you agree	with the su	ucincins ociow.		
1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree		
 My current romantic relation of who I am.	onship is an im	portant refle	ec		, ,	rent romantic relation I feel about myself.	1	
 2. When I feel very close to a feels to me like he/she is an			_	-		antic relationship is ind of person I am.	unimportant to my	
 3. I usually feel a strong sen has an important accompli		en my partr	ner		sense of pri	de comes from know	ving who I have as	
 4. I think one of the most important parts of who I am can be captured by looking at my partner and understanding who he/she is.				11. When I establish a romantic relationship with som one, I usually develop a strong sense of identification with that person.				
 5. When I think of myself, I o	ften think of m	y partner als	so.	With	that perso			
6. If a person hurts my parti								
well.		•				Received C	October 23, 2010	
 7. In general, my current ron	nantic relation	ship is an in	m-			Revision received	d March 1, 2011	
portant part of my self-im	age.	-				Accepted	March 14 2011 ■	