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# Transference and Attachment: How Do Attachment Patterns Get Carried Forward From One Relationship to the Next?

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*This research investigated how working models of attachment are carried forward from one relationship to the next. A two-part study was conducted in which participants learned about two potential dating partners: one that was constructed to resemble a romantic partner from their past and one that resembled a partner from another participant's past. Results showed that people applied their attachment representations of past partners to both targets but did so to a greater degree when the target resembled a past partner. People also tended to feel more anxious and less avoidant toward the target that resembled their past partner. Overall, the findings were consistent with the hypothesis that working models of attachment are transferred in both general and selective ways in new relationships.*

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**Keywords:** *adult attachment; transference; social cognition; cognition and affect*

As people forge new romantic relationships, they sometimes discover that they have re-created—often unintentionally—the same kinds of relationship patterns that characterized their relationships from the past. According to adult attachment theory (Bowlby, 1973; Fraley & Shaver, 2000; Hazan & Shaver, 1987, 1994), previous relationship patterns can reemerge because the working models (i.e., mental representations) people hold of past relationships are highly accessible and are used to guide interpersonal behavior in novel circumstances. In fact, this process is thought to partially explain the continuity of attachment patterns across time and context (Collins, 1996; Fraley, 2002; Fraley & Brumbaugh, 2004).

The assumption that existing representations are carried forward from one relationship to the next is fundamental to attachment theory, yet we know little about the psychological processes through which this takes place.

The objective of this research was to investigate these dynamics from a social-cognitive perspective. Specifically, we adopted Andersen's transference paradigm (e.g., Andersen & Cole, 1990) to explore some of the ways in which existing attachment representations may be activated and applied to new relational contexts. Andersen and her colleagues define *transference* as the process by which existing mental representations of significant others resurface to influence new social interactions (Andersen & Cole, 1990). Over the past decade and a half, Andersen and her colleagues have developed a useful methodological paradigm for investigating transference (Andersen & Baum, 1994; Andersen & Berk, 2000; Hinkley & Andersen, 1996). They have shown that when a representation of a significant other is primed, perceivers respond to novel individuals in ways that are congruent with the primed representation. For example, Andersen and Cole (1990) conducted a study in which participants learned about a variety of targets, one of which was designed by the experimenters to partly resemble participants' significant others. When asked to remember personal attributes of the targets, participants tended to remember attributes that were true of their significant other but not true of the target when that target bore some resemblance to their significant other. In a similar study, Andersen and Baum (1994) demonstrated that people were more likely to experience negative

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affect when they were about to meet someone who resembled a significant other from their past with whom they had negative experiences. The Andersen and Baum study is particularly important from an attachment theoretical perspective because it suggests that people not only “go beyond the information given” when forming impressions of new people but that people also experience the same kinds of feelings—both positive and negative—that they experience with important people in their lives.

According to Andersen (e.g., Andersen & Baum, 1994), one reason people may experience new relationships in ways that are congruent with those from their past is that representations of those previous relationships, when primed or activated, can influence the social perception process. Thus, if there is some degree of overlap between the features of a novel social target and one’s significant other, the significant other representation becomes active and guides the way the new person is understood. One of the critical elements of Andersen’s framework is that the same kinds of mechanisms (e.g., priming, construct accessibility) that play a role in everyday social cognition (e.g., heuristics, person perception, stereotyping) may help elucidate the kinds of psychodynamic observations that traditionally have been explained with distinct theoretical constructs. Indeed, a number of cognitive psychologists have called attention to the ways in which basic cognitive processes may be capable of explaining phenomena that were previously in the exclusive domain of psychoanalysis, such as defensive projection (Newman, Duff, & Baumeister, 1997), repression (Greenwald, 1992), and so-called Freudian slips (e.g., Motley, 1985). Bowlby (1969, 1980) originally developed attachment theory partly as a means for re-vamping classic psychodynamic theories in light of scientific advances in ethology and cognitive science. In the spirit of that tradition, in this article we adopt contemporary cognitive models and methods to investigate the ways in which attachment patterns from the past can be reexperienced in the present.

In the current experiment we used Andersen’s methodology to study the way in which attachment-specific feelings, defenses, and expectations (i.e., attachment styles) can be transferred from one relationship to another. In the first research session of a two-part experiment we asked participants to describe the personal attributes of a former romantic partner. We also assessed the security of the participant’s working models of that relationship. Next, 1 to 2 weeks later the same participants took part in an ostensibly unrelated study. In this session, each participant learned about two targets by reading personal ads from a bogus online dating service. One of the targets was ideographically constructed to resemble the partner that the participant had described

in Session 1; the other target was a yoked control that corresponded to another participant’s former partner. Participants reported their attachment-related thoughts and feelings with respect to each target.

This experiment allowed us to address three key questions regarding the transference of attachment representations. The first was whether working models of attachment are activated and applied to new relational contexts in general or selective ways. This is an important question in contemporary attachment research because there is debate surrounding the issue of whether working models are trait-like in the way they function (i.e., applied to a broad array of interpersonal situations) or highly sensitive to context (i.e., activated and applied selectively in certain circumstances) (see Baldwin, 1999; Baldwin, Keelan, Fehr, Enns, & Koh-Rangarajoo, 1996; Pierce & Lydon, 2001; Rowe & Carnelley, 2003). It is possible that working models are applied in a general manner through a process such as stimulus generalization. For example, a person’s attachment representations may become active when he or she is interacting with a potential mate, and those representations may guide the nature of the interaction to some degree regardless of whether they are appropriate. If working models are applied in such a general manner, we would expect people who were secure in their previous relationships to feel secure with novel interpersonal targets—even when those targets were not experimentally constructed to resemble significant others from their past (i.e., the yoked control targets). In contrast, if working models are applied in a selective manner, as implied by the Andersen approach to transference, we would expect people who were secure in their previous relationships to feel secure with a novel interpersonal target only when that target resembles their previous partner. When the target resembles someone else’s previous partner, we should not find an association between security with the previous partner and security experienced with the target. Of course, these alternatives are not mutually exclusive, and it may be the case that working models are applied in both general and selective ways. If both processes are in play, we would expect a positive association between security with a past partner and security with both the experimental and control targets; however, we would also expect the association to be stronger in the experimental than control condition.

A second issue that we sought to address was the relative role of global working models (i.e., abstract representations of attachment relationships that are not specific to any one significant other) and relationship-specific models (i.e., representations of a specific person from the past, e.g., a romantic partner) in the transference process. In the majority of the adult attachment literature, researchers assess the way people generally

think about close relationships, not the way they think about any one relationship in particular (for an in-depth discussion of the distinction between global and relationship-specific working models, see Collins, Guichard, Ford, & Feeney, 2004; Collins & Read, 1994). The transference paradigm was designed to prime working models for a specific past relationship (i.e., a relationship-specific representation); nonetheless, it may be the case that this priming procedure activates global working models too and that these representations are also recruited to guide the interpretation of new relationship partners. Although attachment researchers have come to draw a sharp distinction between the different kinds of attachment representations that exist, we still know little about the relative contribution of relationship-specific and global attachment models to interpersonal behavior.

The third question we sought to address was whether the characteristics of participants' past romantic relationships (i.e., the length of the relationship, time passed since the dissolution of the relationship, whether the relationship was a "first love") would affect the extent to which attachment representations were transferred. It might be the case for example that representations of relationships from the distant past are less likely than representations of more recent relationships to influence the way people perceive potential dating partners. To the best of our knowledge, these kinds of questions have never been addressed in the empirical literature on transference or attachment.

## METHOD

### *Participants*

In this study, 415 undergraduates (119 men and 296 women) participated to fulfill a requirement for introductory psychology. We selected this sample size based on pilot studies to ensure statistical power of 80% for our key analyses. The mean age of participants was 19 years ( $SD = 2.52$ ). All participants were required to have been in at least one romantic relationship in the past and not to be involved in a romantic relationship at the time of the study. The median relationship length reported was 15 months (the 25th and 75th quartiles were 9 and 26 months, respectively). The median time passed since the dissolution of the relationship was 6 months (the 25th and 75th quartiles were 3 and 12 months, respectively).<sup>1</sup> Each individual participated in two ostensibly unrelated sessions that were spaced 1 to 2 weeks apart. Postexperimental interviews were conducted to determine whether participants were aware that the two sessions were related. Those who reported suspicions of the connection between the two sessions were excluded from

the analyses ( $n = 44$ ), leaving 371 participants (105 men and 266 women) for the analyses reported here.

### *Session 1: Describing a Past Romantic Partner*

During the first session, participants completed a global measure of attachment that assessed how they generally feel in emotionally close romantic relationships. All attachment questionnaires administered throughout the study were based on items adapted from the Brennan, Clark, and Shaver (1998) Experiences in Close Relationships questionnaire (ECR) and were rated on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale. Alpha reliabilities for all of the ECR measures ranged from .89 to .92. The ECR contains items designed to tap the two fundamental dimensions thought to underlie adult attachment patterns: attachment-related anxiety (sometimes called model of the self) and attachment-related avoidance (sometimes called model of others) (see Brennan et al., 1998; Fraley & Shaver, 2000). Attachment-related anxiety refers to variation in the degree to which people are vigilantly attuned to attachment-related concerns (Fraley & Shaver, 2000). A highly anxious person, for example, may worry that one's attachment figure is unresponsive, whereas a less anxious person may feel relatively secure about attachment-related matters. Attachment-related avoidance corresponds to variation in people's tendencies to use avoidant versus proximity-seeking strategies to regulate attachment-related behaviors, thoughts, and feelings. People on the high end of this dimension tend to withdraw from close relationships, whereas people on the low end of this dimension are more comfortable opening up to others and relying on others as a secure base (Fraley & Shaver, 2000). Variation in anxiety and avoidance is thought to reflect variation in the working models that people hold in their close relationships. By definition, highly secure adults are low on both the anxiety and avoidance dimensions. In the sections that follow we will use the term *security* to refer both to individual differences in attachment organization more generally and to refer to the secure ends of the anxiety and avoidance dimensions.

Participants also completed a questionnaire pertaining to their most significant past romantic relationship. This questionnaire was designed to assess information about the former relationship (i.e., the length of the relationship, the recency of the breakup, the importance of the relationship, whether the relationship was a first love).<sup>2</sup> Participants then wrote 14 sentences to describe their past romantic partner and rank ordered the sentences from 1 to 14 to indicate their importance for describing the person. After completing these rankings, participants completed a slightly reworded version of the ECR that was designed to assess anxiety and

**TABLE 1: Descriptive Statistics and Correlations Pertaining to Global and Specific Attachment Representations**

<i>Attachment Dimension</i>	1	2	3	4	5	6	7	8
1. Global anxiety	—							
2. Relationship-specific anxiety	.68*	—						
3. Experimental target anxiety	.53*	.46*	—					
4. Control target anxiety	.45*	.35*	.62*	—				
5. Global avoidance	.12*	.04	-.01	.08	—			
6. Relationship-specific avoidance	.05	.08	.07	.06	.61*	—		
7. Experimental target avoidance	-.02	.04	-.07	-.10	.33*	.29*	—	
8. Control target avoidance	.12*	.12*	-.04	-.06	.31*	.17*	.15*	—
<i>M</i>	3.96	3.83	3.59	3.37	2.82	2.63	3.58	3.70
<i>SD</i>	1.08	1.25	1.20	1.18	0.91	1.06	1.06	1.14

\* $p < .05$ .

avoidance with the former partner in particular (i.e., a relationship-specific measure of working models) rather than in close relationships more generally. Specifically, this version of the ECR instructed participants to think about how they felt when they were with the former partner and to rate the statements in terms of how they felt in the close relationship at that time. The correlations among all attachment measures are shown in Table 1. Finally, participants classified the descriptiveness of 30 trait adjectives by selecting 10 as being good descriptors, 10 as being poor descriptors, and 10 as being irrelevant descriptors (neither descriptive nor nondescriptive) of their former partner. At the end of Session 1, participants were partially debriefed about the nature of the study.

### *Session 2: Perusing the Personals*

Next, 1 to 2 weeks later, the same participants completed the second ostensibly unrelated session, which was held in a different room and conducted by a different experimenter. Participants were led to believe that they would be viewing two personal ads from a legitimate Internet dating service for students. In reality, the ads were constructed such that one profile contained the moderately descriptive information supplied by the participants in the first session of the study regarding their past partner (i.e., the descriptor sentences ranked from 6 to 10; Andersen, Glassman, Chen, & Cole, 1995). The information was paraphrased to reduce the possibility of participants explicitly recognizing their own descriptions of their former partner. The ad also included 4 randomly selected trait adjectives of the 10 that the participants had rated as irrelevant for describing their past partner in the first session as well as some neutral information that was characteristic of personal dating ads. The other profile was a yoked control—a profile that contained paraphrased information that partially described someone else's former partner as well as 4 filler items that had been marked by someone else as

irrelevant for his or her past partner. This procedure ensured that any one profile was constructed both as an experimental stimulus for one participant and a control stimulus for another. The order in which participants viewed the ads was randomized across participants.<sup>3</sup> Participants were given 1 minute to view each ad. After reading each profile, participants were asked to imagine the kinds of thoughts and feelings they would have in a relationship with each potential dating partner. They were asked to rate on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale whether each target seemed like someone they could date. Participants were also asked to complete an attachment questionnaire (a modified version of the ECR) regarding how they thought they would relate to each target if they were involved in a dating relationship with each of them. The anxiety and avoidance scores on this measure were used as our primary dependent variables in the following analyses.

Although our primary interest in this research was in studying the transference of attachment-related thoughts and feelings, we also sought to replicate the standard Andersen transference effects. Following Andersen and Cole (1990), participants were given a surprise memory test for the personality traits and interests of the targets to assess the transference of trait attributions. Specifically, participants were asked whether they recognized 15 statements for each ad. Of these statements, 4 were actually presented in the ad, 8 were not presented in the ad but were listed by the participant in the first session (the critical false positive items used to assess transference), and 3 statements were irrelevant fillers that were not presented in the ads. Participants rated on a 1 (*not at all certain*) to 4 (*very certain*) scale how certain they were that each statement had been present in the ad in question. The memory tests for each ad were given in the order in which the ads were originally presented. The results that we present next were not significantly moderated by gender; as such, we do not focus on gender per se.

## RESULTS

*Replication of the Classic Transference Effect*

We were able to replicate Andersen's basic transference effect. Specifically, participants had higher certainty ratings for representation-consistent statements that were not presented in the ad when the target in the ad resembled the participants' past romantic partner ( $M = 2.13$ ,  $SD = .72$ ) than when the target in the ad was a yoked control ( $M = 2.04$ ,  $SD = .69$ ),  $t(370) = 3.45$ ,  $p < .01$ ,  $d = .13$ . In other words, people were slightly more likely to make false positive recognition errors (i.e., recognizing something that was true of their past partner but not true of the target) for the experimental than control target. Attachment representations did not moderate this effect.

*Transference of Relationship-Specific Attachment Representations*

If people tend to rely on their existing attachment representations to make sense of novel relationship targets, we should observe a positive association between the security of existing working models and the security experienced with those targets. Moreover, if this transference process is general (i.e., if previous working models are broadly applied across novel relational situations), we should find positive associations of comparable magnitude between the existing representation and both the experimental and control targets. If the transference process is more selective, we should observe a positive association in the experimental condition but not in the control condition. Finally, if some combination of these processes is at work, we should find positive associations across both conditions but also find the association in the experimental condition to be stronger than that observed in the control condition.

There were positive associations between the amount of attachment-related anxiety experienced with the past partner and both the experimental target ( $r = .46$ ,  $p < .05$ ) and the control target ( $r = .35$ ,  $p < .05$ ). The fact that both of these correlations were positive is consistent with the prediction that working models are applied in a general or broad way. The association, however, was significantly stronger in the experimental condition than in the control condition ( $z = 2.71$ ,  $p < .05$ ), as might be expected if working models were being applied selectively. A similar pattern of associations was observed for the avoidance dimension. Specifically, there was a positive association between the levels of avoidance experienced with the past partner and the experimental target ( $r = .29$ ,  $p < .05$ ) and a positive association between the amount of avoidance experienced with the past partner and the control target ( $r = .17$ ,  $p < .05$ ). Again, the difference between these two correlations was marginally sig-

nificant ( $z = 1.85$ ,  $p < .10$ ). In summary, people tended to relate to potential partners in ways that were consistent with their representations of previous partners. Importantly, people did so even in situations in which the new partner was not crafted to resemble their previous partner. However, transference was more likely when there was some degree of overlap between the potential partner and the past partner. This finding suggests that both general and selective processes were driving the application of working models to potential partners.

*Global Working Models of Attachment*

We also examined the transference of attachment with respect to people's global attachment style as opposed to their relationship-specific attachment representations. In short, people who were generally anxious with respect to attachment felt anxious with targets that resembled their previous partners ( $r = .53$ ,  $p < .05$ ) and targets who did not ( $r = .45$ ,  $p < .05$ ). The difference between these correlations was significant ( $z = 2.09$ ,  $p < .05$ ). People who were higher in global attachment-related avoidance tended to feel a similar degree of avoidance with both the experimental ( $r = .33$ ,  $p < .05$ ) and control targets ( $r = .31$ ,  $p < .05$ ;  $z = .47$ , *ns*).

*The Relative Contribution of Global and Relationship-Specific Models of Attachment*

To determine which types of working models of attachment best predicted attachment-related thoughts and feelings toward the experimental target, we conducted a series of hierarchical regression analyses. In our first set of analyses, we entered relationship-specific attachment anxiety first and global attachment anxiety second as predictors of the difference in anxiety experienced between the experimental and control targets.<sup>4</sup> In our second set of analyses, we reversed the order of entry of predictors such that global anxiety was entered first, followed by relationship-specific anxiety. These analyses revealed that the effects of global and relationship-specific anxiety were largely interchangeable. In other words, when relationship-specific anxiety was entered first ( $\beta = .13$ ,  $p < .05$ ), global attachment anxiety did not predict transference ( $\beta = .03$ , *ns*). When global attachment anxiety was entered first ( $\beta = .10$ ,  $p < .05$ ), relationship-specific anxiety did not predict transference ( $\beta = .11$ , *ns*). It is noteworthy that when both measures of anxiety were entered simultaneously, as they were in the second step of the regressions, neither measure significantly predicted the transference of anxiety. This finding suggests that it is the variance that is common to the two measures—the variance that is being statistically removed in a simultaneous regression analysis—that is responsible for the transference effect.

**TABLE 2: Summary of the Regression Analysis for the Impact of First Love on Attachment-Related Anxiety**

Variable	$\beta$
Anxiety with the past partner	.13*
Past relationship was a first love	.05
Past Partner Anxiety $\times$ First Love	.14*
	$R = .19^*$

NOTE: The dependent variable is the difference between anxiety experienced in the experimental versus control condition. Because the predictor variables were standardized, the unstandardized weights were the same as the standardized weights, but the intercept term (representing the difference in anxiety experienced in the experimental vs. control conditions) was .22.

\* $p < .05$ .

We conducted a similar series of analyses to study attachment-related avoidance. In these analyses, we found that relationship-specific avoidance was more influential than global avoidance on the difference in participants' feelings toward the experimental and control targets. Specifically, even after global attachment avoidance was entered first ( $\beta = .02$ , *ns*), relationship-specific avoidance was able to predict the transference of avoidant thoughts and feelings ( $\beta = .12$ ,  $p < .05$ ). When relationship-specific avoidance was entered first ( $\beta = .09$ , *ns*), global avoidance again had no impact on transference ( $\beta = -.06$ , *ns*). In summary, attachment-related reactions to the experimental target were predicted by both global and relationship-specific attachment patterns; however, relationship-specific models of attachment better predicted avoidance toward the experimental target than did global models.

#### *How Does Transference of Attachment Vary as a Function of Relationship Variables?*

Thus far, we have shown that people who hold insecure representations of former partners are more likely to feel insecure with a potential dating partner who resembles their past love than a potential partner who does not. There may be a variety of relationship factors, such as the length of the past relationship, that moderate the extent to which attachment-related transference takes place. To evaluate this possibility, we conducted regression analyses in which several relationship factors (i.e., relationship length, how long ago the relationship ended, importance of the relationship, and whether the relationship was a first love) were entered as predictors of the difference in attachment-related feelings experienced between the experimental and control targets. These analyses revealed that attachment-related anxiety was transferred primarily when the former relationship partner was a first love. The estimated coefficients for the full model are shown in Table 2. In short, people who

were highly anxious with their former first loves generally felt more anxious with the experimental target than with the control target ( $\beta = .21$ ,  $p < .05$ ). People reporting on past partners who were not first loves did not exhibit this effect ( $\beta = -.08$ , *ns*).

#### *The Experience of Attachment-Related Feelings*

Beyond questions concerning individual differences in attachment, it is of interest to know whether being exposed to someone who resembles a former partner has effects on the attachment-related thoughts and feelings that one experiences. To address this question we evaluated the main effect of the within-subjects manipulation (i.e., target type) on the security that people experienced with the targets. Overall, participants experienced slightly more anxiety with the experimental target ( $M = 3.59$ ,  $SD = 1.20$ ) than the control target ( $M = 3.37$ ,  $SD = 1.18$ ),  $t(370) = 4.02$ ,  $p < .05$ ,  $d = .18$ . After reading a personal ad that resembled a past partner, participants felt more susceptible to rejection and other attachment anxiety-related fears than they did after reading the control ad. With respect to attachment-related avoidance, there was a marginally significant tendency for participants to report feeling less avoidant with the experimental target ( $M = 3.58$ ,  $SD = 1.15$ ) than they did with the control target ( $M = 3.70$ ,  $SD = 1.14$ ),  $t(370) = 1.64$ ,  $p = .10$ ,  $d = .10$ . Thus, there was a trend such that participants felt a greater degree of closeness and intimacy with the target resembling their past partner than with another participant's past partner.

Finally, we examined the extent to which participants thought that the target was someone they would like to date. On average, participants were more interested in dating the target when the target resembled a former significant other ( $M = 4.49$ ,  $SD = 1.87$ ) than when the target resembled another participant's significant other ( $M = 4.06$ ,  $SD = 1.79$ ),  $t(370) = 3.13$ ,  $p < .05$ ,  $d = .23$ . When this finding is considered in the context of the previous results, it suggests that although people generally felt more anxious with the experimental target than the control target, they ironically found the experimental target more attractive as a dating partner.

#### GENERAL DISCUSSION

Attachment theory is based on the assumption that working models are carried forward across time and context. However, there is little research that has investigated the social-cognitive processes that allow attachment patterns to operate in this fashion. Our objective in this research was to take a closer look at the social-cognitive mechanisms underlying the transference of attachment representations. We found that participants applied their working models to new targets in ways that were both general and specific. For example, people

tended to experience the kinds of attachment-related thoughts and feelings that characterized their most important romantic relationship from the past with both the experimental (i.e., targets that were designed to partly resemble their former partners) and control targets (i.e., targets that were designed to resemble another participant's partner). This finding is noteworthy because it suggests that even when there is no overlap between the objective features of the target and those of the former partner, people rely on their representations of their former partners to guide the way they relate to others. If working models are transferred in a general way, this may help explain the clinical observation that people often re-create the same kinds of interpersonal dynamics that have characterized their relationships from the past—even in situations in which there is no obvious connection between the features of past and present partners (Johnson, 2004). Moreover, the fact that people tended to be more interested in dating the experimental targets than the control targets indicates that people may be compelled to seek new partners that resemble those from the past, possibly because they anticipate these types of people will confirm their self-concept (Swann, Stein-Seroussi, & Giesler, 1992). Taken together, these dynamics may lead highly insecure people to continue searching for or re-creating relationship patterns that ultimately contribute to their own unhappiness. On the positive side however, these processes may also play a role in sustaining security among people with a history of positive attachment experiences.

Despite the general application of attachment representations, our findings also suggest some degree of specificity in the way attachment representations are applied. Namely, working models were applied to a greater degree when there was a resemblance between the past partner and the target. This has implications for current debates concerning whether attachment representations are trait-like or contextual in the way they function (see Baldwin, 1999; Fraley & Brumbaugh, 2004). If working models operate in both general and highly contextualized ways, attachment patterns will exhibit some trait-like qualities while also exhibiting the kind of specificity that has eluded theoretical models based entirely on trait perspectives. The fact that working models appear to function in both ways suggests that debates about the specificity of attachment models should not be framed in an either/or manner.

In addition to studying the transference of representations of specific partners (i.e., relationship-specific models), we also examined the way in which global attachment models (i.e., models that were not specific to any one relationship) influenced perceptions. We found that the two dimensions of global attachment operated in different ways. For anxiety, global and relationship-

specific anxiety were essentially interchangeable; no one kind of attachment representation appeared more dominant in influencing people's perceptions of the individuals described in the ads. Thus, it appears that when faced with a novel interpersonal situation, relationship-specific models of anxiety guide people to a similar degree as global models of anxiety. In contrast, for avoidance, our analyses revealed that relationship-specific avoidance was more influential than global models of avoidance. Why might these different constructs operate in distinct ways? One possibility is there may be a high degree of similarity in the attachment-related anxiety that people experience with different people in their lives, whereas the expression of avoidant strategies is much more differentiated across different relationships. Indeed, in some data we have collected in which we assessed avoidance and anxiety separately with respect to four distinct kinds of relationships (i.e., mother, father, partner, and friend), we found that there is more similarity in the anxiety that people feel with different people in their lives (average  $r = .37$ ) than there is for avoidance (average  $r = .28$ ) (Fraley, 2005). This suggests that there may be fewer distinctions to be made with respect to anxiety than there is with respect to avoidance, making global and relationship-specific anxiety more interchangeable with one another and relationship-specific and global avoidance less so. These ideas are obviously speculative, but we believe that future research should be able to clarify the conditions in which global and specific attachment representations contribute to interpersonal perception.

In general, our findings suggest that attachment style can be fairly stable across different romantic relationships. However, this does not imply that people's attachment styles cannot change. Prior research demonstrates that insecure people can become more secure when matched with a secure partner (e.g., Kirkpatrick & Hazan, 1994). These changes in security probably do not take place immediately because they require the establishment of trust within an ongoing relationship. Thus, it is possible that the kinds of transference processes that we have documented here may drive relationship dynamics more in the early phases of a relationship. As people become more interdependent with their partners however, the actual behavior of the partner probably plays a greater role in shaping the nature of the attachment, thereby allowing for greater change and attachment representations that are more deeply grounded in relationship-specific experiences.

Although our results indicate that working models are applied to novel targets in both general and specific ways, it is still not clear what kind of cognitive machinery is required to explain these findings. One possibility is that some kind of active but implicit template-matching

process is taking place. It might be the case for example that people implicitly compare new relational targets against existing working models of people from their past until an appropriate match is found. Once an adequate match is identified, that representation may be activated and applied to the new partner (Higgins, 1996). It might also be the case that the various working models that a person holds are all applied equally at first, but the one that is most appropriate becomes activated to a stronger degree while the other models are deactivated or inhibited. We are currently designing studies to tease apart these possibilities.

We also found some interesting patterns regarding the main effect of our manipulation. Specifically, people tended to feel more anxious and somewhat less avoidant toward targets who resembled a past partner. It may be the case that being implicitly reminded of the past partner (and consequently, of the breakup) made participants worried about whether the experimental target was trustworthy and reliable. At the same time, participants may also have felt more familiar with the experimental target because of the target's resemblance to someone they already knew. This familiarity may have made people feel more comfortable opening up to and depending on (i.e., thoughts and feelings characteristic of low avoidance) the experimental target relative to the control target. It was also noteworthy that participants could more easily imagine themselves dating the experimental than control target. This suggests that even though people may feel anxious with partners who implicitly remind them of past loves, they may be more drawn to such people, providing a means by which working models may sustain themselves across time and context. However, the stronger desire to date the experimental target could simply be a function of idiosyncratic preferences in mates and not necessarily of transference processes. For example, if both the past partner and the experimental target shared the characteristic of "good dancer," a participant's greater attraction to the experimental target may be related to the target's possession of that quality and not to the transference of a representation of a past partner who also shared the characteristic.

The relationship factors we examined (e.g., time passed since the breakup, length of the relationship, and whether the relationship was a first love) generally did not impact the transference process. The only relationship variable that had a noteworthy effect on the transference of working models was whether the relationship was a first love. Participants who had described a past partner who was their first love in the first session of the study felt especially anxious with the experimental target compared to the control target. Perhaps the feelings associated with that first loss were especially anxiety provoking and resurfaced more easily to influence

participants' feelings relating to abandonment when confronted with the target that resembled their first love. This finding also raises the possibility that first loves hold a special place in the representational models that people construct in the context of romantic relationships.

One of the limitations of the present research is the artificial nature of the setting in which participants got acquainted with the new potential dating partners. If participants had gotten to know new partners who resembled a past partner by interacting with them in a more direct and personal way, they might have applied their working models differently—perhaps in more obvious ways. Additional limitations stem from the way in which the ECR measures were administered. We did not counterbalance the order of presentation of the general and specific measure in Session 1 (i.e., the specific measure always followed the general measure). Therefore, the general measure may have influenced participants' subsequent responses on the specific measure. Furthermore, the accounts of attachment with the participants' past partners were retrospective by design. Past longitudinal data suggest that people have limited recall for their own prior feelings of attachment and tend to use current attachment to guide retrospective reports (e.g., Kirkpatrick & Hazan, 1994). Thus, the high correlations among the three sets of ECR measures may be due to the order of measure presentation or retrospective biases. Another limitation was that we were unable to study the transference of multiple working models for a given person. It might be the case that certain attachment representations (e.g., those for parents) are more dominant than others (e.g., those for past romantic partners). Future research could address this possibility by assessing working models of different kinds of people ideographically and comparing their differential role in person perception.

In closing, our data suggest that working models of attachment are applied in both specific and general ways to new relationship contexts. In combination, these kinds of processes may help sustain the quality of people's relationships across time and circumstance.

#### NOTES

1. We asked a subset of participants ( $n = 256$ ) whether they had other serious relationships after the one on which they reported; 79% of them had not.

2. An eight-item questionnaire assessing the conditions of the breakup also revealed that on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale, participants were moderately distraught by the breakup with their partner ( $M = 4.27$ ,  $SD = 1.22$ ). Also, 67% of participants were on a speaking basis with their ex-partners at the time of the study. Conditions of the breakup did not moderate any of the effects we report.

3. The order of presentation did not moderate any of the effects we report.

4. Regression models for studying main effects and interactions in a mixed design (i.e., situations in which one variable is manipulated

within-subjects and the other variable varies across subjects) are not well developed for situations in which the between-subjects variable is continuous rather than categorical. In these kinds of designs, Judd, Kenny, and McClelland (2001) recommended testing interactions by subtracting the two dependent variables (in this case, the anxiety/avoidance ratings provided in the experimental and control conditions) and regressing those differences on the continuous between-subjects variables and any interactions of interest.

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