Automatic and Self-Reported Attitudes in Romantic Relationships

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Automatic and Self-Reported Attitudes in Romantic Relationships

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*Two studies used response latency measures to assess automatic attitudes that individuals are unwilling or unable to reveal about their partners. In Study 1, participants (*n *= 51) in dating relationships completed two response latency measures (Time 1) and several relationship self-reports (Times 1 and 2). Participants who faced high barriers to exiting (BTE) their relationship generally showed a negative association between their relationship self-reports and automatic attitudes, and there was some evidence that automatic attitudes at Time 1 predicted relationship satisfaction at Time 2. Study 2 (*n *= 41 couples) replicated the BTE finding and showed that image-based response latency measures may assess automatic attitudes more effectively than word-based measures. A negative correlation between self-reported and automatic attitudes among high-BTE participants suggests that they may overreport relationship positivity to quell feelings of doubt about a relationship they cannot feasibly dissolve.*

Keywords: *implicit; automatic; attitudes; romantic; relationships; intimate*

Happiness is frequently sought and attained in romantic relationships. Unfortunately, many other emotional states are achieved (if not sought) in relationships, among them anger, sadness, and regret (Bloom, Asher, & White, 1978). Relationship success or failure may be predicated on finding Mr. or Mrs. Right—the person who embodies all of the qualities characterized by one's ideal partner (Murray & Holmes, 1993). That real and ideal rarely meet in practice is an observation probably not lost on the roughly 11 million Americans who experience divorce each year (Munson & Sutton, 2005). People are not perfect, or perfectly compatible, and even the most well-intentioned partners are liable to transgress or exhibit negative behaviors at some point in the relationship (Braiker & Kelley, 1979). Thus, intimates often are caught between the conflicting realities of an imperfect partner and a strong desire to believe they are in the right relationship with the right person, and thus poised to achieve happiness and security (Murray, Holmes, Dolderman, & Griffin, 2000).

A growing body of evidence suggests that intimates deal with this conundrum by ignoring, denying, or rationalizing negative qualities of their partner and the relationship. For example, people tend to simply ignore a partner's negative attributes (Brehm, 1992; Holmes & Boon, 1990) or deny that a partner's apparently negative behavior reflects an underlying disposition or trait (Murray & Holmes, 1993). In a related sense, considerable research has shown that intimates idealize romantic partners (i.e., see them in the most positive possible light) to insulate them from the harmful effects of conflict and doubt (Murray & Holmes, 1994; Murray,

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Holmes, & Griffin, 1996a). Even when a seemingly negative trait or behavior must be acknowledged, intimates may construct stories about the partner that allow them to see virtues in faults (Murray & Holmes, 1993). Taken as a whole, these and related findings present a compelling case for the existence of benevolent biases in the judgment and perception of romantic partners. However, the findings share a common liability in that they all rely on intimates' conscious self-reports. If there are attitudes or feelings intimates refuse to admit, or to which they simply do not have conscious access, self-reports would be unable to reveal them.

Fortunately, there may be ways to assess the possibly negative sentiments that intimates are unable or unwilling to reveal. Several response latency (RL) measures have been developed to tap attitudes that people cannot or will not self-report, mainly in sensitive domains such as ethnic prejudice (e.g., Wittenbrink, Judd, & Park, 2001). Generally, these measures require participants to respond in the absence of conscious mediation on what is being assessed, thereby allowing researchers to gauge automatic associations between targets and evaluative concepts (e.g., Caucasian and good).

The present research uses modified versions of these response latency measures to assess attitudes and feelings (i.e., partner associations) in relationships that may be inaccessible using standard questionnaires. The notion that people may be unwilling or unable to report on significant aspects of their lives, even those involving close romantic relationships, is not a new one (Wilson, 2004). Baldwin and colleagues have assessed automatic relationship schemas (i.e., beliefs about the relationship itself; see Baldwin, 1992), and Etcheverry and Le (2005) recently used response latency measures to assess the accessibility of commitment in close relationships. However, to date, we are aware of no published efforts to assess positive and negative evaluations of a relationship partner using response latency techniques.

Response Latency Measures

Response latency measures generally begin from the neural network assumption that target concepts (e.g., racial categories, evaluative terms) are linked in the brain and that the activation of one target facilitates the activation of related targets in a hierarchical manner, such that more closely related concepts are activated more quickly and strongly than are weakly related concepts (Farnham, Greenwald, & Banaji, 1999; Fazio & Towles-Schwen, 1999; Neely, 1977). Moreover, the activation of a particular concept can inhibit responses to evaluatively incongruent targets (Klinger, Burton, & Pitts, 2000), such as when the activation of the self-concept inhibits responses to negative target words. The routine pairing of two or more concepts builds and strengthens the associations between them (Bargh, 1989; Greenwald, McGhee, & Schwartz, 1998; Shiffrin & Schneider, 1977). Generally, response latency measures employ means aimed at preventing participants from exerting control over their responses, thus allowing pure associations between targets to emerge. In other words, as an individual perceives more and more negativity in the partner, the measured association between unpleasant and partner should strengthen (Fazio & Towles-Schwen, 1999; Olson & Fazio, 2001, 2002). This relationship should hold irrespective of a person's conscious efforts to maintain a particular impression of their partner (Greenwald & Banaji, 1995). In this sense, the automatic attitudes revealed by response latency measures may be a more unbiased estimate of relationship quality.

Barriers to Exit

The usefulness of response latency measures arises partly from the premise that intimates attempt to convince either themselves or others that their relationship is better than it really is. Whether this bias is primarily conscious (Schlenker & Pontari, 2000) or unconscious (Paulhus & Reid, 1991) remains an open discussion (and one that outreaches the scope of this research), but in any event, we hope to identify those individuals for whom the bias is most pronounced. The intimates most likely to rationalize negative aspects of the relationship may be those who believe that rationalization is their only option. In other words, rationalization may be most pronounced among intimates who believe it would be prohibitively difficult for them to leave their relationship or to find a suitable alternative to their current partner. Several lines of research have demonstrated that people exhibit a tendency to rationalize poor decisions (e.g., Johnson, Kelly, & LeBlane, 1995) or place a positive spin on a negative situation when those decisions and situations appear intractable (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998). In the present case, rationalization would be operationalized as a tendency to overreport relationship satisfaction in the face of a relatively unfavorable relationship situation, as evidenced by one's automatic attitudes.

In the realm of relationships, Rusbult (1983; Rusbult, Martz, & Agnew, 1998) has observed that high investments and poor alternatives can trap an individual in an unhappy, unsatisfying relationship. Individuals entrapped in this type of relatively unrewarding relationship have shown commitment to their partner that rivals or exceeds the commitment levels of individuals in more rewarding relationships (Rusbult et al., 1998). Negativity in this type of relationship is particularly

threatening because the individual essentially has nowhere else to turn. Caught in an unfavorable relationship with formidable barriers to exit (BTE), intimates may search for—or diligently fabricate—the proverbial silver lining (e.g., Brickman, 1987; Murray & Holmes, 1993). Thus, on average, the self-reports of high-BTE individuals will remain considerably positive even if their relationship situation—as revealed by their automatic attitudes—is not especially favorable. Our key prediction is that high-BTE individuals, relative to those facing low BTE, are expected to exhibit a stronger dissociation between their relationship self-reports and their automatic attitudes. Specifically, at high BTE, individuals who exhibit relatively negative automatic attitudes will nevertheless report high relationship positivity as they attempt to rationalize their situation. Individuals who face low BTE—and thus are less pressured to rationalize an unfavorable relationship situation—will simply show a direct association between their automatic attitudes and their self-reports. That is, as their automatic attitudes become more negative, so will their reports of relationship quality.

Prediction of Future Relationship Status

Despite decades of research on the subject, our ability to quantify relationship quality and predict relationship stability leaves ample room for improvement (Karney & Bradbury, 1995; Kurdek, 1993; MacDonald & Ross, 1999). Part of the problem is a reliance on intimates' self-reports, which, as the opening section attests, are riddled with illusions and rationalizations. If response latency measures reveal negativity that intimates are unwilling or unable to self-report, they might successfully forecast relationship outcomes. Though the individual may effectively downplay or ignore negative thoughts and feelings about their partner or relationship for a period of time, gradually it is expected to take a toll on the relationship, especially when the negativity is unusually strong (Thompson & Holmes, 1996). Thus, increased negativity on RL measures—which is relatively immune to illusions and rationalizations—should correspond to diminished relationship satisfaction at a future point.

Indirect evidence corroborating this hypothesis comes from work by Murray, Holmes, and Griffin (1996b), which showed that despite attempts to idealize a partner, certain realities penetrate intimates' defenses as romances develop. The authors suggested that undesirable attributes individuals once ignored (or failed to see) in their partners predicted changes in reported satisfaction. The aim here is to use response latency measures to identify those individuals at risk for eventual disappointment.

STUDY 1

Method

Participants. Fifty-one participants (36 women, 15 men) were recruited from the University of California, Los Angeles (UCLA) psychology participant pool. They received course credit for their participation at Time 1 and a chance to win one of eight $50 awards for their participation at Time 2. All participants were required to be in an exclusive dating relationship of at least 8 weeks in length (*Mdn* = 12.5 months). Participants had been involved in an average of three partnerships in their lifetimes.

Self-report measures. The questionnaire packet included the four Rusbult Investment Model scales (Rusbult, 1980), each measured on a 9-point Likert-type scale anchored by 1 (*agree not at all*) and 9 (*agree completely*). Specifically, the four measures assessed commitment (7 items, e.g., "I want our relationship to last a very long time"; $\alpha = .91$), satisfaction (5 items, e.g., "Our relationship makes me very happy"; $\alpha = .90$), investment (5 items, e.g., "I have put a great deal into our relationship that I would lose if it ended"; $\alpha = .80$), and quality of alternatives (5 items, e.g., "If I weren't dating my partner, I would do fine—I would find another appealing"; $\alpha = .87$). The single item Inclusion of Other in Self scale (Aron, Aron, & Smollan, 1992) was included as a measure of closeness.

Also administered were a feeling thermometer that asks participants to rate how warmly or coldly they feel toward their partner using a 100° thermometer and the 22-item Interpersonal Qualities scale (Murray et al., 1996a), which measures various attributes of one's current partner (e.g., "understanding," "intelligent," "childish") on a scale ranging from 1 to 9. An overall positive attributes composite was formed by averaging the positively valenced qualities, and the same was done with the negatively valenced qualities to produce an overall negative attributes composite.[1] Finally, the packet included two items assessing whether the individual expects to remain with their partner at two future points in time (still together this year and next year).

BTE. The BTE construct was defined by the participant's self-reported investments in the relationship and their perceived quality of alternatives. This variable was computed by adding participants' mean investment scale score to the inverse of their mean alternatives scale score.[2] Thus, a higher score equated more formidable BTE (e.g., high investment, poor alternatives) and a lower score equated less formidable BTE (low investment, good alternatives; $M = 12.53$, $SD = 2.74$, range = 5 to 17.80).

TABLE 1: Overall Correlations Between Response Latency Scores and Self-Report Responses in Study 1

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1. IAT	—	–.185	.245	.051	.120	–.061	–.187	.054	–.063	–.005	–.019
2. SPT_{NEG}		—	.018	–.067	.099	–.224	–.112	–.065	–.062	.113	–.146
3. SPT_{POS}			—	–.150	.220	–.201	.067	–.202	–.041	–.057	–.040
4. Sat				—	–.407**	.510*	.612*	.491*	.512*	.447**	–.220
5. Alt					—	–.206	–.343*	–.550***	–.331*	–.444**	.388**
6. Inv						—	.282*	.459**	.516***	.242	–.067
7. Therm							—	.385**	.329*	.527***	–.498**
8. Next								—	.486***	.541***	–.297*
9. IOS									—	.466**	–.132
10. Pos										—	–.568***
11. Neg											—

NOTE: $n = 51$. IAT = Implicit Association Test; SPT_{NEG} = negative sequential priming task contrast; SPT_{POS} = positive SPT contrast; Sat = satisfaction; Alt = quality of alternatives; Inv = investments; Therm = feeling thermometer; Next = predictions about staying together next year; IOS = Inclusion of Other in Self; Pos = positive partner attributes; Neg = negative partner attributes.
*$p < .05$. **$p < .01$. ***$p < .001$.

Response latency measures. There were two response latency measures in this study—the Implicit Association Test (IAT; Greenwald et al., 1998) and a sequential priming task. In the IAT, participants decided whether a word flashed on a computer screen fit into one of four categories (romantic partner, not romantic partner, pleasant, and unpleasant). In each of two experimental blocks, a series of items belonging to each of the four categories were flashed on the screen sequentially. In the first block, if the word belonged to the partner or pleasant category, then the participant pressed the "a" key on the keyboard; if the word belonged to the not partner or unpleasant category, then the participant pressed the "5" key (the two keys were symmetrically across from one other). This will be referred to as the congruent block because, on average, partner-pleasant and not-partner-unpleasant are expected to be more evaluatively congruent than vice versa. In the next experimental block, henceforth referred to as the incongruent block, the pairings were switched (partner was paired with unpleasant and not partner with pleasant). The categories assigned to the "a" and "5" keys were randomized. Two practice blocks of 10 trials each preceded the first experimental block and familiarized the participant with the category stimuli. In the experimental block that followed, six words for each of the four categories were flashed on the screen in a random order (for a total of 24 trials). A single practice block of 10 trials in which the keys assigned to the partner and not partner categories were switched preceded the second experimental block (see Table 1). Half of the participants began with partner and pleasant assigned to one key and not partner and unpleasant assigned to the other, whereas the other half began with the pairings reversed.

The participant is said to have positive automatic associations to their partner if they finish a trial more quickly when partner is paired with pleasant and negative automatic associations if they finish a trial more quickly when partner is paired with unpleasant. The partner words were collected at the beginning of the experimental session and consisted of the partner's first name (or nickname), last name, and a general term (e.g., *boyfriend;* see the appendix). There were six positive stimuli (love, closeness, trust, loyalty confidence, intelligence) and six negative stimuli (betrayal, jealousy, neglect, hate, moody, coldness) for the pleasant and unpleasant categories, respectively.

The sequential priming procedure is another measure that, similar to the IAT, relies on response latency as an indicator of associative strength between target and evaluation. This particular procedure is patterned after evaluative priming paradigms employed in prior research (e.g., Wittenbrink et al., 2001) to measure the automatic activation of attitudes. Participants were seated at a desktop computer, where they were informed that their task was to determine whether a sequence of letters on the screen is good or bad in meaning. They were to press the "a" key if the word was good in meaning and the "5" key if it was bad in meaning. They were told to make this decision as quickly as possible while minimizing errors. The task itself was divided into discreet trials that each follow the same general sequence. First, an orienting stimulus ("XXXX") appeared in the center of the screen for 1 s, alerting the participant that the target is about to appear. Next, the priming stimulus appeared for 27 ms, which is long enough to activate the prime concept in long-term memory but too quickly for conscious perception (Bargh & Chartrand, 2000; Fazio, 1990).[3]

The partner primes were the partner's first name (or nickname), last name, and a general term (e.g., *boyfriend*). The neutral primes were the words *house* and *tree* and

the nonword letter sequence *sqgywn*. The order of all primes was randomized. Each prime was immediately followed by a masking stimulus ("@&@&@&") for a 200-ms interval and then a blank screen for 50 ms. The blank screen was followed by the target, resulting in a stimulus onset asynchrony (SOA) of 250 ms. The target was a positive or negative word and it remained on the screen until categorized as good or bad in meaning with a key stroke. The response latency was automatically recorded by the program. After each target was categorized, the orienting stimulus reappeared to mark the start of the next trial. There were 10 negative target words (e.g., *hate*), 10 positive target words (e.g., *love*), and two relatively neutral, ambiguous words (e.g., *sociable*; see the appendix for a complete list). Each word followed each of the six primes once (three partner and three neutral), thus resulting in a total of 132 trials (22 words × 6 primes). The presentation of partner and neutral primes was randomly distributed across the trials.

If participants respond more quickly to positively valenced target words when the romantic partner category is activated than when a neutral category is activated, it is assumed that there is an automatic association between a positive evaluation and the partner. The faster the response, the stronger the association. The same is true of negatively valenced target words.

Procedure. Participants were run individually. After completing the partner information sheet, participants were seated at a desktop computer for the sequential priming task, which was administered via DirectRT (Jarvis, 2003). This measure always preceded the IAT because of a concern that the IAT might cue the participants to what is being measured (i.e., the pairing of positive and negative evaluations with the partner concept). The participant then completed the 132 trials of the sequential priming task (SPT), which took between 5 and 7 minutes. After completing the SPT, the participant then completed the five blocks of the IAT, which comprised 78 total trials (30 practice, 48 data collection) and required between 4 and 6 minutes.

After finishing the two response latency measures, the participants moved on to the self-report questionnaire. The completion of this questionnaire marked the end of the Time 1 assessment. Approximately 10 to 12 weeks after the initial experimental session, participants were contacted to complete the follow-up self-report questionnaire. Those who agreed were e-mailed the questionnaire and provided instructions on how to return it via an anonymous e-mail address created specifically for this experiment. The follow-up questionnaire was an abridged version of the self-report questionnaire administered at Time 1.

Results

Data reduction (IAT). On average, the error rate across all trials for the IAT (i.e., incorrectly categorizing a stimulus) was less than 5%, which is similar to the acceptable rates reported in prior studies (e.g., Greenwald et al., 1998). Data from these trials were discarded. The data from the first 7 participants were lost because of an error in the response latency program, resulting in 44 usable observations (these 7 individuals did not differ from the rest of the sample on any of the variables). Following the recommendations of Greenwald et al. (1998), responses shorter than 300 ms and longer than 3,000 ms were recoded as 300 and 3,000 ms, respectively. Likewise, the individual latencies for each trial were log transformed before averaging the mean latencies across each experimental block. Analyses were conducted using these transformed data because this conversion stabilizes latency variance and normalizes the distribution (Fazio, 1990). However, all data reported in tables and figures represent the raw data prior to transformations. An IAT score was calculated for each participant by subtracting the mean response latency for congruent trials (partner-pleasant vs. not partner-unpleasant) from the mean latency for incongruent trials (partner-unpleasant vs. not partner-pleasant). Average response latency (in ms) was considerably faster for congruent blocks ($Mdn = 790.67$, $SD = 212.57$) than for incongruent blocks ($Mdn = 1376.51$, $SD = 425.46$), indicating that participants responded more quickly when partner and pleasant were paired together than when partner was paired with unpleasant, $t(43) = 10.557$, $p < .001$.

Data Reduction (SPT). The average error rate across all trials was 1.25%, which is less than or equal to the rate reported in similar studies (e.g., Kawakami, Dion, & Dovidio, 1998). As with the IAT, data from these error trials were discarded, response latencies shorter than 300 ms and longer than 3,000 ms were recoded as 300 and 3,000 ms, respectively, and individual latencies were log transformed. For each participant, we calculated how long it took them to respond to individual positive and negative target words (e.g., *love*, *coldness*) following both the partner primes and the neutral primes. We then computed the average response facilitation by type of prime (partner, neutral) and valence of target (positive, negative) to establish a mean response latency for each prime-word pairing. A two-way within-subjects ANOVA of prime (partner, neutral) and target (positive, negative) revealed only a significant main effect of target, such that participants responded faster when responding to positive targets ($M = 730.28$, $SD = 134.92$) than negative targets ($M = 746.91$, $SD = 135.57$), $F(1, 50) = 6.075$, $p = .017$. However, to more closely examine these effects we

TABLE 2: Key Statistics for Multiple Regression Analyses Involving the IAT and Relationship Self-Report Variables in Study 1

Variable	R^2	β_1	β_2	β_3
Satisfaction	.455***	.524***	.207	–.349**
Thermometer	.217*	.390**	–.109	–.122
Still together	.553***	.662***	.197	–.245*
IOS	.351***	.418**	.085	–.358*
Pos attribute	.231*	.404**	.098	–.206*
Neg attribute	.094	–.296	–.064	.044

NOTE: $n = 44$. β_1 refers to the standardized coefficient for the barrier to exit (BTE) construct; β_2 refers to the coefficient for the Implicit Association Test (IAT) response latency score; β_3 refers to the multiplicative interaction term between BTE and the response latency score; still together = predictions about staying together next year; IOS = Inclusion of Other in Self; Pos attribute = positive partner attributes; Neg attribute = negative partner attributes.
*$p < .05$. **$p < .01$. ***$p < .001$.

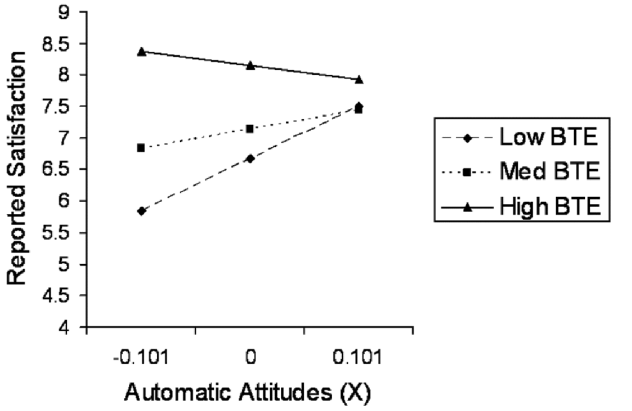

Figure 1 Association between self-reported relationship satisfaction and automatic relationship attitudes (IAT) as a function of barriers to exit (BTE) in Study 1.

conducted planned contrasts comparing the response facilitation to positive and negative words as a function of partner and neutral primes. These analyses revealed that participants responded significantly faster to positive targets ($M = 730.78$, $SD = 130.39$) than negative targets ($M = 750.47$, $SD = 133.53$) when the target was preceded by a partner prime, $t(50) = 2.528$, $p = .015$. By contrast, there was no difference between the response latency to positive ($M = 729.79$, $SD = 143.86$) and negative ($M = 743.35$, $SD = 139.94$) targets for neutral primes, $t(50) = 1.577$, $p = .121$. The absence of a significant interaction suggests that the difference between these two contrasts was not particularly strong, but our principle interest lies in how these response latencies are moderated by barriers to exiting the relationship.

A negative contrast score for each participant was created by subtracting the neutral-negative response latency from the partner-negative latency. Higher scores on this variable represented less negative associations to the partner (i.e., the extent to which partner primes slowed responses to negative target words relative to a neutral baseline). Similarly, a positive contrast score was created by subtracting the partner-positive response latency from the neutral-positive latency, such that higher scores represented more positive associations to the partner (i.e., the extent to which the partner primes facilitated responses to positive target words relative to a neutral baseline).

Overall correlations. Pearson correlations were computed between the three response latency measures (IAT, SPT-Positive contrast, SPT-Negative contrast) and each of the self-report measures. The results of these analyses are shown in Table 1. As is commonly seen in the literature, the relationship between the response latency measures and the self-report measures across all participants was not significant (Hoffman, Gawronski, Gschwendner, Le, & Schmitt, 2005).

BTE analyses. The BTE hypothesis was tested by entering a centered BTE score, response latency score, and their multiplicative interaction term in a regression equation predicting each of the key self-report variables (satisfaction, feeling thermometer, partner attributes, Inclusion of Other in Self [IOS], and predictions about staying together).[4] This equation allowed us to examine how the association between relationship self-reports and automatic attitudes (as indexed by response latency scores) changed as a function of BTE. We predicted that at low levels of BTE we would observe a positive association between self-reports and automatic attitudes but that as BTE increased we would observe a progressively stronger dissociation between the two measures.

IAT. As seen in Table 2, significant interaction coefficients emerged for the regression analyses involving self-reported satisfaction, the IOS scale, predictions about staying together, and ratings of the partner's positive attributes. To further examine the nature of these interactions, we calculated the simple regression of self-reported attitudes on automatic attitudes at different levels of BTE (Aiken & West, 1991). At low levels of BTE (1 *SD* below the mean), the coefficient for the association between automatic and self-reported attitudes tended to be positive. Thus, among those who were not entrapped in their relationship, higher self-reported positivity corresponded to more positive automatic attitudes. As BTE increased, the association between self-reports and automatic attitudes tended to become less positive. That is, among participants facing high BTE (1 *SD* above the mean), as automatic attitudes became less positive, self-reported attitudes became more positive.

For example, as seen in Figure 1, at 1 *SD* below the mean on BTE, the association between relationship

TABLE 3: Unstandardized Coefficients for Simple Regression of Self-Reported Satisfaction on Automatic Attitudes at 1 or 2 *SD*s From the *M* of BTE (Study 1)

Criterion	*–1* SD	*+1* SD	*–2* SD	*+2* SD
Satisfaction	7.53 (.0034)	–1.986 (*ns*)	12.285 (.0024)	–6.743 (.025)
Thermometer	1.064 (*ns*)	–16.416 (*ns*)	9.777 (*ns*)	–25.148 (*ns*)
Still together	100.292 (.008)	–11.920 (*ns*)	156.400 (.008)	–68.026 (*ns*)
IOS	5.481 (.021)	–3.415 (.048)	9.928 (.01)	–7.862 (.011)
Pos attribute	2.584 (*ns*)	–0.942 (*ns*)	4.346 (.08)	–0.467 (*ns*)
Neg attribute	–0.249 (*ns*)	–1.377 (*ns*)	1.442 (*ns*)	–3.068 (*ns*)

NOTE: $n = 44$. –1 *SD* = unstandardized simple regression coefficient of self-report score regressed on automatic attitude at 1 *SD* below the *M* of barriers to exiting (BTE); +1 *SD* = unstandardized simple regression coefficient of self-report score regressed on automatic attitude at 1 *SD* above the mean of BTE. One-tailed *p* values indicating whether simple regression differs significantly from 0 are shown in parentheses. Still together = predictions about staying together next year; IOS = Inclusion of Other in Self; Pos attribute = positive partner attributes; Neg attribute = negative partner attributes.

satisfaction and automatic attitudes was significantly positive, $t(40) = 2.86$, $p = .0034$, one-tailed. At the mean of BTE, the association between relationship satisfaction and automatic attitudes was diminished but remained significantly positive, $t(40) = 1.703$, $p = .048$. At 1 *SD* above the mean on BTE, the association between satisfaction and automatic attitudes was nonsignificantly negative, $t(40) = –0.986$, $p = ns$. At 2 *SD*s above the mean, the association became significantly negative, $t(40) = –2.017$, $p = .025$. Generally, the association between self-reports and automatic attitudes was positive for all of the analyses at low levels of BTE and negative for all analyses at high levels of BTE (see Table 3). Furthermore, the presence of a significant interaction term, as described above, indicates that the simple regressions of self-reports on automatic attitudes were significantly different at low and high BTE (Aiken & West, 1991). Controlling for relationship length did not alter the significance of the regression coefficients.

SPT. Contrary to expectations, there were no significant results involving the SPT contrasts. However, all of the analyses showed a trend such that the association between self-reports and automatic attitudes was more strongly positive among low-BTE participants. A possible explanation for the nonsignificant trend in the predicted direction follows in the discussion.

Time 2 analyses. Time 2 questionnaires were received from 26 of the original 51 participants (51%). There were two significant differences between the respondents and the nonrespondents on the Time 1 relationship variables. Respondents had reported significantly higher levels of intimacy ($p = .004$) and passion ($p = .042$) than did nonrespondents. We evaluated the hypothesis that automatic associations would predict relationship satisfaction by entering mean Time 1 satisfaction and the SPT negative contrast (both centered) into a simultaneous regression equation predicting mean Time 2 satisfaction. As predicted, response latency scores at Time 1 were a significant predictor of Time 2 relationship satisfaction, both when controlling for Time 1 satisfaction ($\beta = .427$, $p = .033$) and when not controlling for Time 1 satisfaction ($\beta = .432$, $p = .028$). In other words, the weaker a participant's automatic association between their partner and negativity at Time 1, the more relationship satisfaction the participant reported at Time 2. Response latency scores for the IAT did not predict Time 2 satisfaction ($p > .05$).

Discussion

Overall, the results provide encouraging support for the hypotheses tested. The general correlation between response latency scores and self-reports was nonsignificant, which is consistent with reviews of implicit and explicit associations in socially sensitive domains (Blair, 2001). More important, the results provided tentative support for the BTE hypothesis, which proposes that there will be a stronger dissociation between automatic attitudes and relationship self-reports as barriers to exiting the relationship grow stronger. The regression analyses generally revealed that at low BTE, the association between self-reports and automatic attitudes was positive, whereas at high BTE this same association was negative. Thus, as high-BTE participants said they were more satisfied with their partner and their relationship, their response latency scores actually indicated more negative automatic associations to the partner.

Another notable finding was that SPT negative contrast scores at Time 1 predicted relationship satisfaction at Time 2 (as seen in a significant negative partial correlation), even when controlling for Time 1 satisfaction. A possible implication of this is that the negativity downplayed or ignored by intimates (as indicated by automatic negativity on the SPT) has a pernicious influence on relationship well-being at a later time. The hypotheses were only weakly supported using the sequential

priming task scores as an index of automatic partner associations. One possible explanation for the nonsignificant trend exhibited by the SPT measure is the use of partner-oriented words as subliminal primes. First, larger effects for image-based primes relative to lexical primes have been found in prior research (e.g., Mikulincer, Hirschberger, Nachmias, & Gillath, 2001). Second, the lexical stimuli used to represent the partner in Study 1 may not have been unique. For example, a participant's partner might not be the only person he knows named Sarah, and thus associations other than those involving the partner might be activated by the prime. A better method might be to use actual photographs of one's romantic partner as subliminal primes. Study 2 examined this possibility by contrasting image and lexical-based priming stimuli.

STUDY 2

The main objective of Study 2 was to replicate the BTE finding from Study 1, only this time using image-based primes for the SPT (in addition to the lexical prime version from Study 1). Response latency scores were assessed using SPT methods similar to those in Study 1, except half of the participants in Study 2 completed the word-based (lexical) version of the SPT used in Study 1 and half completed an image-based SPT that used partner photographs as priming stimuli instead of names.

Method

Participants. Participants were 41 heterosexual dating couples (82 individuals) recruited from the UCLA community via flyers, a departmental Web page, and a classified advertisement in the student newspaper. Participants received either course credit or $10 ($20 per couple) for their participation. All participants were required to be in an exclusive dating relationship of at least 8 weeks (*Mdn* = 11 months). They had been involved in an average of three partnerships in their lifetimes. The data for one male participant was discarded because he failed to answer more than half of the self-report questions, leaving a usable sample of 81 participants (41 women, 40 men).

Self-report measures (participants). The self-report questionnaire administered to participants was nearly identical to the one used in Study 1, save for one addition. We added the Hatfield and Rapson (1987) Passionate Love scale, which includes 15 items measured on a 9-point Likert-type scale ($\alpha = .90$, e.g., "Just seeing my *partner* excites me").

Response latency measures (lexical). Couples were randomly assigned to either the image or lexical SPT condition. The lexical SPT used in Study 2 was identical to the one employed for Study 1. Partner and neutral stimuli were again collected using a partner information sheet and positive and negative target stimuli remained unchanged from Study 1.

Response latency measures (images). As with the lexical SPT, the image-based SPT required participants to decide whether a word flashed on the center of the computer screen was good or bad in meaning. The task itself differed only in the nature and presentation of the priming stimuli. Whereas the lexical SPT used letter string primes and foveal presentation (i.e., primes appearing in the center of the visual field), the image-based SPT used image primes and parafoveal presentation (i.e., primes appearing in the periphery of the visual field). Not-partner photographs were color headshots against a white backdrop taken from the Internet. Partner photographs were color headshots against a white backdrop taken at the time of the experiment using a Canon S110 digital camera. All photos were resized to a width and height of 200×225 pixels (roughly 4×4.5 cm). Although the partner and not partner stimuli were images, the positive and negative stimuli were the same positive and negative words used in the lexical version of the SPT. Parafoveal priming was chosen because it proved more effective than foveal priming in maintaining subliminal presentation with images. Based on the distance between the participant's eyes and the computer screen (50 cm), the parafoveal field was computed as lying between 1.75 and 5.25 cm from the center of the screen (Bargh & Chartrand, 2000). Based on these calculations and the results of pilot testing ($N = 9$), prime images were presented randomly for 17 ms in one of four quadrants 4.5 cm from the center of the screen. Primes were followed by a masking image (blue tiles) for 200 ms and then a blank screen for 50 ms before the appearance of the positive, negative, or neutral target word. Each SPT consisted of 132 randomized trials: 30 partner-positive, 30 partner-negative, 6 partner-neutral, 30 neutral-positive, 30 neutral-negative, and 6 neutral-neutral.

Procedure. Couples entered the experiment together but completed the response latency and relationship self-report measures in separate rooms, with the sequential priming tasks always preceding the self-report assessment. Two headshots were taken of each participant using a 2.1-megapixel digital camera, and these were then loaded into the response latency programs while the participants completed a frequency of contact sheet. Relationship partners completed their tasks separately but the procedure for both was the same.

TABLE 4: Overall Correlations Between Response Latency Scores (SPT) and Self-Report Responses in Study 2

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1. SPT_{NEG}	—	.158	.030	.014	–.022	.117	.101	–.022	.154	–.050	.117
2. SPT_{POS}		—	–.037	–.032	.003	.083	–.151	.048	–.129	.210	–.052
3. Sat			—	.412***	.352**	.684***	.553***	.434***	.735***	–.516***	.728***
4. Alt				—	–.369***	–.548***	–.449***	–.357**	–.403***	.410***	–.544***
5. Inv					—	.299*	.288*	.531***	.255*	–.057	.505***
6. Therm						—	.608***	.570***	.628***	–.314**	.700***
7. Next							—	.353**	.512***	–.258*	.559***
8. IOS								—	.329**	–.113	.524***
9. Pos									—	–.655***	.678***
10. Neg										—	–.388**
11. Pass											—

NOTE: $n = 81$. SPT = sequential priming task; . SPT_{NEG} = negative SPT contrast; SPT_{POS} = positive SPT contrast; Sat = satisfaction; Alt = quality of alternatives; Inv = investments; Therm = feeling thermometer; Next = predictions about staying together next yar; IOS = Inclusion of Other in Self; Pos = positive partner attributes; Neg = negative partner attributes; Pass = passionate love.
$^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Results

Data reduction (SPT). The average error rate across all trials for both the lexical ($n = 42$) and image-based ($n = 40$) SPTs was considered acceptable (less than 2%). Data for both SPTs were cleaned and prepared as in Study 1. For both SPT tasks (lexical, image), a two-way within-subjects ANOVA did not yield a significant interaction between prime (neutral, partner) and target valence (positive, negative). To more closely examine these effects we conducted planned contrasts using the results from the image SPT (which we expected to yield stronger effects than the lexical SPT). As in Study 1, these analyses revealed that participants responded significantly faster to positive targets than negative targets when the target was preceded by a partner prime, $t(39) = 2.495$, $p = .017$. By contrast, there was no difference between the response latency to positive and negative targets for neutral primes, $t(39) = 1.145$, $p = .259$. To examine the effects of BTE, negative and positive contrast scores were created using the log-transformed response latencies as in Study 1.

BTE. The BTE construct in Study 2 was identical to the one computed for Study 1 ($M = 12.72$, $SD = 2.66$, range = 5-17.40).

Overall correlations. Pearson product-moment correlations were conducted between the SPT response latency contrasts (image and lexical versions combined) and each of the self-report measures. The results of these analyses are shown in Table 4. Consistent with the findings of Study 1, the overall correlations between response latency and self-report scores were weak and nonsignificant. Furthermore, when analyzed separately, both the image and lexical response latency measures were not significantly correlated to participants' self-report responses.

BTE analyses. We analyzed the results separately for each type of SPT using the multiple regression technique reported for Study 1. Given the weak correlations between the SPT scores of each member of the partner dyad, we used the individual—not the couple—as the unit of analysis.[5] As expected, the BTE hypothesis was supported by the image SPT but not the lexical SPT. For the image-based SPT, the negative contrast yielded significant interaction coefficients for satisfaction ($\beta = –.364$, $p = .012$), the feeling thermometer ($\beta = –.334$, $p = .015$), predictions about staying together this year ($\beta = –.293$, $p = .050$) and next year ($\beta = –.331$, $p = .026$), IOS ($\beta = –.364$, $p = .012$), positive partner attributes ($\beta = –.332$, $p = .023$), and passion ($\beta = –.272$, $p = .034$). Only the regression predicting negative partner attributes was not significant, yet it nonetheless showed a trend in the predicted direction. The positive contrast yielded a significant interaction coefficient for satisfaction ($\beta = –.469$, $p = .001$) and marginally significant interaction coefficients for IOS ($\beta = –.282$, $p = .063$) and positive partner attributes ($\beta = –.256$, $p = .073$). The remaining equations yielded nonsignificant results in the predicted direction (see Table 5).

As in Study 1, to further illustrate these significant interactions we calculated the simple regression of self-reported attitudes on automatic attitudes as a function of BTE. Consistent with Study 1, the significant interaction term showed that, at low BTE, there was a positive association between relationship self-reports and automatic partner attitudes. At the mean of BTE, this association diminished. At high BTE, we again observed a negative association between self-reports and automatic attitudes (see Table 6).

For example, examining the negative contrast, the association between self-reported relationship satisfaction and automatic attitudes was nonsignificantly positive at 1 standard deviation below the mean of BTE,

TABLE 5: Key Statistics for Multiple Regression Analyses Involving the Image SPT Positive and Negative Contrasts and Relationship Self-Report Variables in Study 2

Variable	R^2	β_1	β_2	β_3
Negative contrast				
Satisfaction	.373***	.424**	–.201	–.364*
Thermometer	.427***	.514***	–.113	–.334*
IOS	.387***	.501***	–.056	–.320*
Pos att	.350***	.445**	–.012	–.332*
Neg att	.118	–.264	.173	.151
Next year	.299**	.418**	–.110	–.293*
Passion	.537***	.648***	–.028	–.272*
Positive contrast				
Satisfaction	.457***	.447***	–.046	–.469***
Thermometer	.385***	.523***	.176	–.186
IOS	.359***	.430**	.101	–.282
Pos att	.315**	.480**	–.074	–.256
Neg att	.136	–.283	.123	.203
Next year	.286**	.510***	–.257	.068
Passion	.506***	.641***	–.049	–.189

NOTE: $n = 40$. β_1 refers to the coefficient for the BTE construct; β_2 refers to the coefficient for the Implicit Association Test (IAT) response latency score; β_3 refers to the multiplicative interaction term between BTE and the response latency score; SPT = sequential priming task; IOS = Inclusion of Other in Self; Pos att = positive partner attributes; Neg att = negative partner attributes; Next year = predictions about staying together next year; Passion = passionate love.
*$p < .05$. **$p < .01$. ***$p < .001$.

TABLE 6: Unstandardized Coefficients for Simple Regression of Self-Reported Satisfaction on Automatic Attitudes at 1 or 2 *SD*s From the *M* of BTE (Study 2)

Variable	*–1* SD	*+1* SD	*–2* SD	*+2* SD
Positive contrast				
Satisfaction	6.690 (.08)	–21.289 (.006)	20.680 (.029)	–35.278 (.004)
Thermometer	79.150 (*ns*)	–153.26 (.016)	195.36 (.02)	–269.46 (.009)
Still together	202.18 (.09)	–381.92 (.026)	494.23 (.02)	–673.97 (.016)
IOS	12.354 (.033)	–17.154 (.028)	27.108 (.02)	–31.908 (.02)
Pos attribute	11.157 (.032)	–11.921 (.057)	22.696 (.013)	–23.460 (.025)
Neg attribute	0.475 (*ns*)	13.453 (*ns*)	–6.015 (*ns*)	19.943 (*ns*)
Passion	10.091 (.05)	–12.243 (.06)	21.259 (.02)	–23.411 (.03)
Negative contrast				
Satisfaction	15.114 (.016)	–18.826(.004)	32.083(.002)	–35.795(.001)
Thermometer	125.13 (*ns*)	3.683 (*ns*)	185.86 (.035)	–57.043 (*ns*)
Still together	–86.363 (*ns*)	–4.115 (*ns*)	–127.49 (*ns*)	37.010 (*ns*)
IOS	18.875 (.053)	–8.711 (*ns*)	31.613 (.041)	–22.550 (.062)
Pos attribute	5.687 (*ns*)	–11.081 (.055)	14.070 (*ns*)	–19.464 (.034)
Neg attribute	–2.57 (*ns*)	13.334 (*ns*)	–10.523 (*ns*)	21.287 (*ns*)
Passion	6.149 (*ns*)	–10.481 (.08)	14.465 (*ns*)	–18.787 (.06)

NOTE: $n = 40$. –1 *SD* = unstandardized simple regression coefficient of self-report score regressed on automatic attitude at 1 *SD* below the *M* of barriers to exiting (BTE); +1 *SD* = unstandardized simple regression coefficient of self-report score regressed on automatic attitude at 1 *SD* above the *M* of BTE. One-tailed *p* values indicating whether simple regression differs significantly from 0 are shown in parentheses. Still together = predictions about staying together next year; IOS = Inclusion of Other in Self; Pos attribute = positive partner attributes; Neg attribute = negative partner attributes.

$t(36) = 1.057$, $p = ns$ (see Figure 2). At 2 standard deviations below the mean of BTE, this association became significantly positive, $t(35) = 1.956$, $p = .029$. At the mean of BTE, the associated between self-reports and automatic attitudes was negative but nonsignificant, $t(36) = –1.484$, $p = .073$. As BTE increased to one value above the mean, the association between relationship satisfaction and automatic attitudes became significantly negative, $t(36) = –2.666$, $p = .006$. As seen in Figure 3, this same pattern held for the positive SPT contrast. The association between satisfaction and automatic attitudes was positive at low BTE, $t(36) = 2.224$, $p = .016$, nonsignificant at the mean of BTE, and negative at high BTE, $t(36) = –2.828$, $p = .004$.

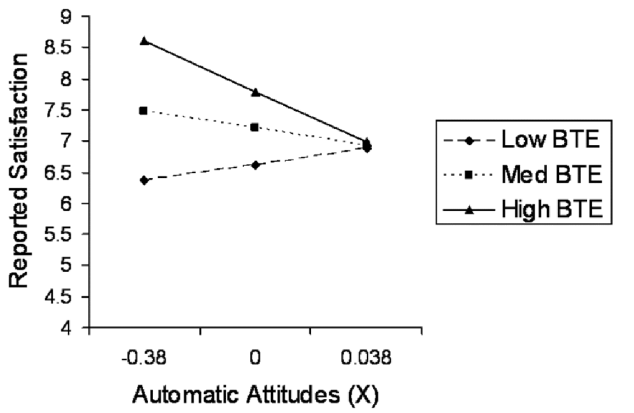

Figure 2 Association between self-reported relationship satisfaction and automatic relationship attitudes (negative sequential priming task contrast) as a function of barriers to exit (BTE) in Study 2.

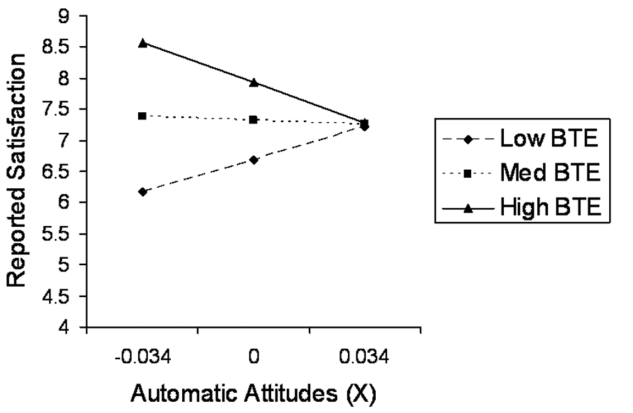

Figure 3 Association between self-reported relationship satisfaction and automatic relationship attitudes (negative sequential priming task contrast) as a function of barriers to exit (BTE) in Study 2.

Discussion

The results of Study 2 corroborate and extend the findings of Study 1. The association between automatic attitudes—as revealed by response latency scores—and relationship self-reports tended to vary as a function of BTE. Generally, at low BTE, the analyses yielded a positive association between self-reports and automatic attitudes. However, at high BTE, the association between key self-report measures (e.g., relationship satisfaction) and automatic attitudes tended to be negative. That is, as high-BTE participants reported more satisfaction with their relationships, their automatic attitudes became increasingly less positive. The dissociation effect was stronger for the image SPT than the lexical SPT, possibly because partner images are more precise primes of the partner concept than the partner-oriented words (e.g., *boyfriend*), although certainly more research is required to address this issue.

GENERAL DISCUSSION

The present studies are a preliminary, but important and encouraging, step toward understanding the nature and influence of automatic associations in romantic relationships. As expected, response latency scores, an index of automatic associations, showed only a weak overall correspondence with relationship self-reports. However, the results consistently demonstrated that the association between response latency scores and self-reports hinges on the individual's perception of the solubility of their partnership. Those who have invested heavily in the partnership and face poor alternatives to their current partner, and thus are confronted with high barriers to exiting the relationship, tended to exhibit an inverse association between the two types of measures. That is, as their response latency scores (i.e., automatic associations to the partner) decreased, their self-reports about the relationship became increasingly positive. By contrast, low-barrier participants exhibited a positive association between their automatic associations and their self-reported responses. These barrier effects were fairly robust, emerging across both studies (and a large pilot study; Scinta & Gable, 2004) and for three separate response latency indicators—the IAT, the SPT negative contrast, and to a weaker extent, the SPT positive contrast. The positive contrast showed that as the automatic association between partner and positive strengthened, self-reports tended to become more positive for low-BTE participants and less positive for high-BTE participants. The negative contrast showed that as the automatic association between partner and negative weakened, low-BTE participants showed more positivity and high-BTE participants showed less positivity on their self-reports. Given lemons, couples with little perceived recourse apparently rely on biased perceptions to stir up the figurative lemonade.

One particularly encouraging aspect of these BTE findings is the extent to which they correspond to prior research on dual process models of attitudes. In particular, Fazio's MODE model (Fazio & Towles-Schwen, 1999) offers a meaningful framework for understanding the responses of high-barrier participants in this study. MODE contends that a person's expressed attitude toward a social target can be defined by a mixture of both automatic and controlled, effortful components. More specifically, a person's initial automatic reaction to the target is coupled with or modified by a deliberate, motivated assessment of the target (provided the participant

has time to deliberate). Perhaps most important for our purposes, research testing MODE predictions has shown that a person's deliberate adjustments often can overcorrect for a perceived automatic bias (Dunton & Fazio, 1997).

In a representative study, participants with a strong motivation to control prejudiced responses exhibited an inverse association between their automatic prejudice (as assessed via a response latency measure) and self-reported ratings of African Americans (Olson & Fazio, 2004). Conversely, low-motivation participants showed a positive association between their automatic and controlled responses. The results suggest that driven by the goal to appear unprejudiced, high-motivation individuals recognize their potential automatic bias and adjust for it in their self-reported responses. Because the magnitude of an automatic bias is difficult to gauge, these participants actually overcorrect for the bias in their deliberate responses (Wegener & Petty, 1995).

These findings are analogous to the results of the present research. High-BTE individuals are particularly motivated to believe they are in a good relationship with the right partner. Sensing the possibility of negative automatic relationship attitudes, high-BTE individuals may overcorrect on their self-reports, yielding the inverse association between the key measures observed in these studies. In other words, as the negativity mounts in a relatively insoluble relationship, high-BTE individuals try harder and harder to justify the union.

This conclusion implies that the biases manifested on self-report measures are consciously motivated (see Farnham et al., 1999). An alternative possibility is that people are simply unaware of the magnitude or very existence of their biases. Several lines of research have demonstrated that individuals suffer from flawed introspection (Nisbett & Wilson, 1977) or an inability to access specific contents of long-term, or implicit, memory (e.g., Greenwald & Banaji, 1995). Presumably, this could happen if the individual does not consciously acknowledge negative aspects of the relationship or unconsciously sequesters the offending perceptions to a less accessible portion of long-term memory. Even if the process of self-deception is mediated by conscious awareness and intimates are aware of the negativity they wish to suppress, they may so effectively convince themselves it does not exist that they come to believe the overwhelming positivity of their own self-reports.

Future studies could test the distinction between self-deception (i.e., a nonconscious bias) and impression management (i.e., a conscious bias) through the application of a bogus pipeline technique (BPL; Jones & Sigall, 1971). The BPL is a form of demand reduction that pressures participants to offer more veracious self-reports by convincing them that their responses can be checked using a pseudo lie detector. The BPL technique is appealing because it reduces impression management but presumably has no effect on self-deception (Millham & Kellogg, 1980). The technique has proven successful, increasing admissions of racist attitudes, sexist attitudes, inconsistent attitudes, dislike for a handicapped confederate, and cheating behavior (Paulhus, 1991; Roese & Jamieson, 1993).

Regardless of whether the motivated biases observed here were due to conscious or nonconscious processes, they still need to be compared to findings consistently reported by Murray and her colleagues. Their research has shown that relationship well-being is linked to benevolent biases in the perception of the relationship and that idealizing a partner can have a self-fulfilling effect (e.g., Murray et al., 1996a, 1996b, 2000). Murray's research and our own begin on the same path—the prevalence of motivated biases in relationships—but then appear to stray in different directions. Whereas the Murray findings show that overlooking partner faults and accentuating strengths bodes well for future relationship state and fate, the present studies suggest that overreporting relationship positivity may not always be emblematic of the healthiest relationships.

However, Murray's research and our own may be more compatible than a cursory glance suggests. Depending on how idealization has been defined in Murray's research, it can have quite different portents. When idealization is conceptualized as a higher rating of the partner's attributes than the partner rates himself or herself, it bodes well for the long-term viability of the relationship. However, when idealization is defined as a closer match between ratings of one's current partner and ideal partner, the implications are less optimistic. For example, in a longitudinal study, perceptions that a partner fell short of an intimate's ideals predicted more destructive conflict styles at follow-up (Murray et al., 1996b). Furthermore, as stated in the introduction, Murray and colleagues have contended that denying or compartmentalizing a partner's faults may be a fragile, short-term solution that ultimately risks the well-being of the relationship. Thus, far from disagreeing with the present findings, the benevolent bias research of Murray and her colleagues may in fact complement these response latency results.

Limitations

One drawback of the present studies is that they relied on participant's self-reports of alternatives and investments to define the BTE constructs. Future assessments of the barrier hypotheses could rely on social network responses to classify participants as

facing either high or low BTE. Research has shown that members of a couple's social network (e.g., roommates, family) are more free of biases in their evaluations of the relationship, and at the same time they appear to offer reasonably veridical reports of relationship quality (Agnew, Loving, & Drigotas, 2001; Murray et al., 2000). Consequently, if one wants to know whether a relationship involves high BTE, the least biased source of information may be the couple's immediate social network.

Another area of concern involves the sequential priming measure. Neither of the present studies yielded conclusive simple effects attesting to the validity of the SPT. In other words, partner primes did not consistently facilitate responses to positive targets and inhibit responses to negative targets relative to neutral primes. However, in both studies, a planned contrast yielded evidence that participants responded significantly faster to positive words than negative words following a partner prime, but there was no difference between positive and negative words for neutral primes. These findings, coupled with the successful regression analyses, give us confidence that the SPT measure was working as intended.

Conclusion

To our knowledge, this is the first published research that uses response latency measures to assess automatic attitudes in romantic relationships. The findings indicate that response latency measures may have utility as a barometer of relationship quality and as a predictor of future relationship quality. Furthermore, these measures paint a clearer, more complete picture when one accounts for a person's perceived barriers to exiting their relationship.

This research began on the grounds that self-reports are unable to tell us everything that transpires in relationships and, perhaps more to the point, everything we want to know about how romantic pairings work. Based on the present findings, the contention could be made that measurements of automatic associations may be a new tool for helping us piece together the complicated puzzle of romantic relationships.

APPENDIX
PARTNER INFORMATION SHEET

The goal of this form is to give us a few words that represent your romantic partner. The best words of this kind are generally your partner's first and last name. If you refer to your partner by a nickname, this also would be good. The nickname could be a shortened version of your partner's first name ("Angie" instead of "Angelina") or it could be a term of affection that has nothing to do with your partner's real first name (for example, "Sweetie"). Do not list a word if you don't use it to refer to your partner. If you're not certain about a word, it's better to just leave it out. Remember, all of the information recorded here is *completely* confidential. We will destroy this form after we have conducted the study.

Please fill in the appropriate information for your romantic partner. If you do not know an answer, just leave that item blank.

First name _____

Last name _____

Nickname (if you have one) _____

How do you refer to your partner in general terms (circle one or add your own):

boyfriend girlfriend fiancée husband wife partner

other _____

Partner Information Sheet (page 2)

Listed below are popular first and last names. Your task is to choose a first name and a last name that do not at all represent your romantic partner. The names should be familiar but neither strongly liked nor disliked. In other words, try not to pick names that you have strong feelings about. If your father's name or a good friend's name is Michael, it would be a bad idea to choose Michael. Make sure you pick a name that belongs to the same gender as your romantic partner (if your partner is male, choose a male name).

First name (circle your choice)

Male:	Jose Joseph	Anthony Luis	David Juan	Daniel Gavin	Michael Miguel	Jacob Jalen	Tyler Devon	Joshua Donovan	Mathew John	Ethan
Female:	Jessica Emma	Stephanie Alexis	Jennifer Sarah	Ashley Jasmine	Kimberley Maria	Maria Makayla	Rachel Aaliyah	Emily Heather	Madison	Hannah

Last name
Smith Johnson Williams Jones Brown Garcia Lee Zhao Moore Taylor Rodriguez Lee Young King Lewis

Positive, Negative, and Neutral/Ambiguous Stimuli for the Sequential Priming Task Measure

Positive	*Negative*	*Neutral/Ambiguous*
Love	Hate	Sociable
Affection	Neglect	Intelligent
Loyalty	Betrayal	
Closeness	Conflict	
Intimacy	Coldness	
Trust	Jealousy	
Happiness	Sadness	
Dependability	Abandonment	
Confident	Moody	
Supportive	Critical	

NOTES

1. Our interest in maintaining positive and negative subscales is based mainly on research arguing for the separate activation of positive and negative evaluative processes. In this light, a measure of ambivalence might be particularly revealing (e.g., Maio, Fincham, & Lycett, 2000), but the present measures were not amenable to the creation of a proper ambivalence construct.

2. The correlation between investments and alternatives (reverse-scored) was positive but not significant in Study 1 ($r = .206$, $p > .05$) and highly significant in Study 2 ($r = .369$, $p = .001$).

3. Pilot testing ($N = 9$) established that participants were unable to consciously identify the content of the priming stimuli. The parameters used for the subliminal presentation of stimuli also were patterned after techniques used successfully in prior published research and the guidelines established by Bargh and Chartrand (2000). Finally, informal questioning of participants during the debriefing for both experiments revealed that they were not aware of the nature of the priming stimuli.

4. Examination of the variance inflation factor (VIF) revealed VIF scores for each analysis in both studies (1 and 2) that were considerably lower than the conventional criterion for indicating the presence of multicollinearity.

5. The intraclass correlation between the response latency scores for the male and female partner dyads was not significant for both the negative sequential priming task (SPT) contrast ($r = -.156$) and the positive contrast ($r = .066$).

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