

Psychological Science

<http://pss.sagepub.com/>

Assessing the Seeds of Relationship Decay : Using Implicit Evaluations to Detect the Early Stages of Disillusionment

Soonhee Lee, Ronald D. Rogge and Harry T. Reis

Psychological Science 2010 21: 857 originally published online 11 May 2010

DOI: 10.1177/0956797610371342

The online version of this article can be found at:

<http://pss.sagepub.com/content/21/6/857>

Published by:



<http://www.sagepublications.com>

On behalf of:



[Association for Psychological Science](http://www.sagepub.com/content/21/6/857)

Additional services and information for *Psychological Science* can be found at:

Email Alerts: <http://pss.sagepub.com/cgi/alerts>

Subscriptions: <http://pss.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.com/journalsPermissions.nav>

>> [Version of Record](#) - Jun 16, 2010

[Proof](#) - May 11, 2010

[What is This?](#)

Assessing the Seeds of Relationship Decay: Using Implicit Evaluations to Detect the Early Stages of Disillusionment

Soonhee Lee, Ronald D. Rogge, and Harry T. Reis

University of Rochester

Abstract

Using two longitudinal samples, we sought to identify the beginnings of relationship decay by validating the partner-focused go/no-go association task (partner-GNAT), an implicit measure assessing evaluations of romantic partners. In Study 1, we assessed positive and negative attitudes using generic positive and negative stimulus words (e.g., *gift* and *death*, respectively) as targets, whereas in Study 2, we used relationship-specific positive and negative stimulus words (e.g., *accepting* and *attacking*, respectively) as targets. Results from both samples showed that positive implicit partner evaluations were associated with a reduced risk of breakup over the following 12 months, even after controlling for self-reported relationship satisfaction, hostile conflict, and neuroticism. This suggests that the earliest seeds of relationship decay might be found within attitudes that subjects might be unaware of or are unable or unwilling to report. Both studies also offered support for the importance of negative implicit partner evaluations. In Study 1, this support was in the form of an interaction (revealing that individuals with both low positive and high negative evaluations were at greatest risk for breakup). In Study 2, this support was in the form of a main effect (negative implicit partner evaluations marginally predicted increased risk of breakup).

Keywords

relationship, couples, implicit, instability, satisfaction

Received 8/3/09; Revision accepted 10/14/09

When love blossoms, people typically describe their partners in glowing terms. Couples in love tend to overlook potential pitfalls in their relationship and to underestimate each other's shortcomings or defects. However, when the blush of romantic love begins to fade and the day-to-day reality of a committed relationship becomes apparent, these rosy views may deteriorate. Researchers often find it difficult to identify changes in people's attitude toward their romantic partner, because people may have difficulty admitting their changing feelings to themselves or may be unwilling to reveal them to others. We conducted two studies to develop an implicit measure of partner regard, which appears to be useful in predicting relationship breakup before people will, or perhaps can, reveal their changing feelings on more standard explicit measures of relationship quality.

Although researchers have taken varied approaches to predicting and understanding the causes of romantic-relationship breakup, studies of affect predominate. Years of research have led investigators to the conclusion that deterioration in how partners feel about each other and their relationship is an influential proximal predictor of breakup (e.g., Caughlin & Huston, 2006; Karney & Bradbury, 1995). In other words, all other

things being equal, the risk of breakup increases when partners feel dissatisfied with each other and with their relationship. This conclusion is so ubiquitous that researchers wishing to establish the validity of other predictors routinely control for ratings of relationship satisfaction.

Almost without exception, relationship satisfaction is assessed explicitly by asking partners to self-report their perceptions of various behavioral and affective aspects of their relationship. These data are subject to the well-known limitations of self-reports (Stone et al., 2000), which include impression management, motivated distortion, and the limits of self-awareness. By contrast, implicit measures circumvent these limitations by allowing researchers to assess automatic affective associations that may exist outside of the subject's awareness or deliberate control. In relationships that are functioning well, people may associate their partners with good

Corresponding Author:

Ronald D. Rogge, Clinical and Social Sciences in Psychology, University of Rochester, 462 Meliora Hall RC, Box 270266, Rochester, NY 14627-0266
 E-mail: rogge@psych.rochester.edu

things and not with bad things, but in deteriorating relationships, these associations may begin to reverse. Both explicit and implicit evaluations can provide insight into relationship quality, but implicit evaluations may help researchers detect relationship deterioration independently of, or earlier than, explicit evaluations.

We based our studies on existing research about implicit attitudes. Implicit attitudes are regarded as stable evaluative representations of an attitude object residing in long-term memory (Wilson, Lindsey, & Schooler, 2000), “introspectively unidentified (or inaccurately identified) traces of past experience” (Greenwald & Banaji, 1995, p. 8), or associative processes characterized by automatic affective reactions (Gawronski & Bodenhausen, 2006). Studies suggest that implicit and explicit attitudes tend to be inconsistent when explicit attitudes are formed through cognitive elaboration such as negation, suppression, rationalization, and justification (Gawronski & Bodenhausen, 2006), or, in more general terms, when the individual is motivated to present particular self-impressions.

During the early stages of a committed romantic relationship, implicit and explicit attitudes toward one’s partner may diverge. Disillusionment is common (e.g., Huston, Caughlin, Houts, & Smith, 2001) as the novelty of a committed relationship fades and partners come to terms with mundane reality. Given the extraordinary emotional investment and high expectations typically associated with committed relationships, there may be substantial reasons why partners are not explicitly aware of their inner doubts and disappointment. In addition, social desirability may make people feel that it would be unkind to describe their partner to other people in anything but relatively positive terms. Thus, shifts in how partners perceive each other may begin earlier than explicit self-reports can identify. An implicit measure may allow researchers to assess these early signs of relationship decay.

Few studies have used implicit measures to investigate romantic relationships. Fincham, Garnier, Gano-Phillips, and Osborne (1995) used a response-latency measure to show that implicit evaluations were associated with the degree to which positive behavior was expected in an upcoming discussion with a romantic partner. Zayas and Shoda (2005) found that implicit evaluations of romantic partners in an undergraduate student sample, as indexed by performance on a partner-focused Implicit Association Test (IAT), were related to secure feelings of attachment to those partners. Banse and Kowalick (2007) used a similar IAT-based procedure to examine differences in implicit evaluations of partners among several groups of women, including victims of battering. Scinta and Gable (2007) used an IAT and a sequential priming task (SPT) and found that negative implicit evaluations of partners, as measured by the SPT, predicted lower relationship satisfaction 10 to 12 weeks later. The partner-focused IAT failed to demonstrate comparable predictive validity. To our knowledge, no longitudinal studies have examined the ability of implicit evaluations to predict relationship stability.

We conducted two studies to examine the ability of implicit partner evaluations to predict trajectories of relationship stability over 1 year. Our measure of implicit evaluations was a partner-focused go/no-go association task (partner-GNAT). Drawing on studies of implicit self-esteem (e.g., Greenwald & Banaji, 1995; Koole, Dijksterhuis, & van Knippenberg, 2001; Pelham, Mirenberg, & Jones, 2002) and studies of partner attitudes, the GNAT used partner’s first name, partner’s pet name (an affectionate name likely to be used in private), and partner’s public nickname (or some other distinctive personal characteristic) as focal stimuli. Personalized (idiographic) stimuli such as these may offer stronger effects than generic stimulus words (e.g., *partner*, *spouse*; see Greenwald & Farnham, 2000). We chose the GNAT (Nosek & Banaji, 2001) over other implicit measures (e.g., IAT; Greenwald, McGhee, & Schwartz, 1998) when we developed our measure of implicit attitudes toward romantic partners because its time pressure limits cognitive resources, its versatility permits a single category task, and it was the only appropriate measure available at the time our project was launched.

We hypothesized that performance on the partner-GNAT would demonstrate unique predictive validity for relationship stability over and above self-reported (i.e., explicit) measures of neuroticism, hostile conflict, and satisfaction. Specifically, we proposed that higher levels of accuracy in pairing partner stimuli with good words (the partner-good trials) would be associated with lower risk of relationship instability and that higher levels of accuracy in pairing partner stimuli with bad words (the partner-bad trials) would be associated with higher risk of relationship instability. We also hypothesized that the interaction of performance on the partner-good trials and partner-bad trials might predict relationship stability; for example, strong performance on partner-bad trials might be especially predictive of subsequent breakup when paired with weak performance on partner-good trials. In addition, we hypothesized that shifting the positive and negative stimuli used in the partner-GNAT from general words (e.g., *gift*, *death*) to more relationship-specific words (e.g., *accepting*, *attacking*) might increase the sensitivity of the partner-GNAT for predicting relationship instability.

Method

Subjects were recruited through referrals from psychology instructors at several universities (Study 1: 23%; Study 2: 31%), referrals from other participants (Study 1: 20%; Study 2: 31%), online forums (Study 1: 21%; Study 2: 8%), online search engines (Study 1: 24%; Study 2: 23%), and miscellaneous other methods (Study 1: 12%; Study 2: 7%).

Initial assessments consisted of a partner-GNAT followed by self-report questionnaires. After the initial assessments, respondents were provided with feedback on dimensions of personality and relationship functioning as the primary recruitment incentive. Participants were asked to provide e-mail addresses for follow-up assessments and were sent up to three

e-mail invitations for each follow-up survey. (These e-mails consisted of an initial invitation and up to two additional reminder e-mails for participants who did not complete the follow-up assessment within 1 week after the invitation.) These surveys occurred at 1, 2, 3, 4, 6, and 12 months for Study 1 and at 3, 6, 9, and 12 months for Study 2. They assessed the stability (i.e., intact vs. broken up) of participants' romantic relationships. Each study was conducted separately, but both were conducted online.

In Study 1, 78 respondents provided e-mail addresses, 53 completed at least one follow-up survey, and 8 reported that their relationship had ended. In Study 2, 70 respondents provided e-mail addresses, 63 completed at least one follow-up survey, and 11 reported that their relationship had ended. Attrition analyses in each study examined differences in age, education, relationship length, hostile conflict, relationship satisfaction, and partner-GNAT performance. Participants who completed the follow-up surveys did not differ on most of these constructs, but they tended to have slightly higher levels of education in Study 1, $F(1, 119) = 10.44, p < .003$, and performed slightly better on the partner-bad trials of the partner-GNAT in Study 2, $F(1, 98) = 5.93, p < .02$.

Participants

Participants were at least 18 years old and currently in a romantic relationship. One hundred sixty-nine participants initially responded to Study 1, and 128 participants initially responded to Study 2. Removing respondents who failed to complete the GNAT, who demonstrated markedly inattentive responding on the self-report measures, or who were identified as multivariate outliers left a sample of 122 respondents (87% female and 13% male; mean age = 25 years; 79% Caucasian and 21% other) in Study 1, and 100 respondents (86% female and 14% male; mean age = 23 years; 77% Caucasian and 23% other) in Study 2. In Study 1, 29% of the subjects were married (for an average of 3.3 years), 13% were engaged (and had been together for an average of 2.7 years), and 58% were in committed, exclusive dating relationships (for an average of 2.4 years). In Study 2, 10% of the subjects were married (for an average of 3.6 years), 12% were engaged (and had been together for an average of 3.2 years), and 78% were in committed, exclusive dating relationships (for an average of 1.8 years).

The GNAT

The GNAT is a word-sorting task in which stimuli are presented one at a time in random order. At the start of the survey, participants responded to basic demographic questions. They were then taken to a new Web page that presented the GNAT via a Macromedia Flash program that was written for this project. To reduce distraction, we set the background of this page to black and presented instructions and stimuli in light colors and in large fonts (20–40 point). For each block of trials,

specific types of stimuli (e.g., good words; see Table S1 in the Supplemental Material available online) were assigned as targets; the remaining stimuli served as distractors. Participants were instructed to press the space bar when a target appeared and to refrain from pressing the space bar when a distractor appeared. Stimuli were presented for 600 ms each, with an intertrial interval of 400 ms. After each trial, a green *O* (for a correct response) or a red *X* (for an incorrect response) flashed on the screen for 100 ms.

Before the start of the task, participants were asked to provide three different stimuli representing their partners (first name, pet name, nickname or distinctive characteristic). To maintain comparable levels of exposure and habituation, we selected three positive and three negative words with similar word-frequency norms (Zeno, Ivens, Millard, & Duvvuri, 1995) from lists of good and bad words used for other word-sorting tasks (Greenwald et al., 1998). We chose eight additional positive and eight additional negative words from Greenwald et al. (1998) for two practice trial blocks. In Study 1, the good and bad words were chosen to be generic (e.g., *peace, vacation, gift* vs. *death, accident, tragedy*), whereas in Study 2, the good and bad words were chosen to be relationship-specific (e.g., *understanding, sharing, accepting* vs. *attacking, nagging, criticizing*).

The GNAT had four blocks comprising 172 trials (see Table S1 in the Supplemental Material). Throughout two practice blocks of 16 trials each, participants were asked to simply sort good stimuli from bad stimuli. These trials were followed by two complex 70-trial blocks, in which participants had to discriminate among three sets of stimuli (good, bad, and partner words). In one 70-trial block, both good stimuli and partner stimuli were identified as targets; in the other 70-trial block, bad stimuli and partner stimuli were targets. The order of the complex blocks was counterbalanced across respondents. One-way analyses of variance (ANOVAs) for both samples failed to identify significant differences in GNAT partner-good or GNAT partner-bad performance across the two sequences.

To control for inflated hit rates resulting from indiscriminant responding, we used d' to represent performance quality. We obtained d' values by subtracting the false alarm rate from the hit rate after they were standardized with a probit function. Extreme cell values (0 or 1) were corrected following recommendations by Banaji and Greenwald (1995).

Self-report measures

Relationship satisfaction. In both studies, relationship satisfaction was assessed with the Couples Satisfaction Index (CSI; Funk & Rogge, 2007). The 32-item CSI assesses global evaluations of romantic relationships. Items were rated on 6- and 7-point Likert scales, and ratings were summed; higher scores indicated higher levels of satisfaction. These items demonstrated excellent internal consistency (Cronbach's $\alpha = .98$ and $.97$ in Studies 1 and 2, respectively). In Study 1, relationship

satisfaction was also assessed with the Marital Adjustment Test (MAT; Locke & Wallace, 1959), a 15-item measure of satisfaction. Ratings were summed using the original weighted scoring system; higher scores indicated higher satisfaction, and the scale demonstrated reasonable internal consistency (Cronbach's $\alpha = .76$).

Hostile conflict. The 15-item Conflict subscale of the Marital Coping Inventory (MCI-C; Bowman, 1990) and the 12-item Aversive Interaction Scale (AIS; Rodriguez & Rogge, 2010) were used to assess hostile and attacking relationship conflict in Studies 1 and 2, respectively. Items were rated on 5-point (MCI-C) or 8-point (AIS) Likert scales, and ratings were summed; higher scores indicated higher levels of hostile conflict, and both the MCI-C and the AIS demonstrated excellent internal consistency (Cronbach's $\alpha = .93$ and $.92$ in Studies 1 and 2, respectively).

Neuroticism. We used the 23-item Neuroticism subscale of the Eysenck Personality Questionnaire (EPQ-N; Eysenck & Eysenck, 1975) to assess trait negativity in both studies. Ratings were summed, with higher scores indicating higher levels of neuroticism. These items demonstrated good internal consistency (Cronbach's $\alpha = .88$ and $.85$ in Studies 1 and 2, respectively).

Attention and effort. We used the Attentive Responding Scale (ARS; Maniaci & Rogge, 2010) in both studies to identify respondents failing to provide sufficient attention and effort. The Inconsistency subscale of the ARS consists of seven pairs of highly similar items (e.g., "I am an active person," "I have an active lifestyle"), with one member of each pair presented at the beginning of the survey and the other member of the pair presented at the end of the survey. Absolute differences between paired responses were summed, with higher scores indicating greater inconsistency. The Infrequency subscale of the ARS consists of eight items with extremely skewed response distributions (e.g., "I enjoy receiving telemarketers' calls"). Responses to these items were summed, and higher scores indicate increasingly unlikely (i.e., inattentive) responding. Participants scoring above 10 on either scale were considered to have not paid sufficient attention and were excluded from remaining analyses.

Analytic strategy

Twenty-eight (17%) of the initial 169 participants in Study 1 and 15 (12%) of the initial 128 participants in Study 2 were excluded for providing invalid partner words (e.g., "none") or no word at all. Eighteen (13%) of the remaining participants in Study 1 and 12 (11%) of the remaining participants in Study 2 were removed for below-chance performance on the partner-GNAT. One Study 1 participant was excluded as a multivariate outlier using Mahalanobis distances (Tabachnick & Fidell, 2001), and one Study 2 participant was excluded for paying

insufficient attention. Eliminated participants did not differ significantly from the retained participants in age, education, ethnicity, length of relationship, or relationship satisfaction in Study 1. The participants eliminated in Study 2 were somewhat older, $F(1, 126) = 11.28, p < .01$, and more educated, $F(1, 126) = 6.87, p < .02$, than retained participants were.

Discrete-time hazard modeling in hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002) was used to predict relationship breakup, taking advantage of the multiwave nature of this data. A two-level intercept-slope model was built. Repeated measurements of relationship stability over time were modeled at Level 1, and differences between individual respondents (e.g., GNAT performance, relationship satisfaction) were modeled at Level 2. The term (π_0) representing initial levels of relationship dissolution was set as a fixed effect because all respondents' relationships were intact at the beginning of the study. The slope coefficient (π_1) estimating increasing risk of breakup over time was set as a random effect (r_1) so that individuals' trajectories of risk could differ. This analytic strategy resulted in the following equations:

$$\text{Level 1} \quad \text{Probability of dissolution} = 1/(1 + e^{-\text{logit}})$$

$$\text{logit} = \pi_0 + \pi_1(\text{time})$$

$$\text{Level 2} \quad \pi_0 = \beta_{00}$$

$$\pi_1 = \beta_{10} + \beta_{11}(d' \text{ partner-good}) +$$

$$\beta_{12}(d' \text{ partner-bad}) + \beta_{13}(\text{satisfaction}) +$$

$$\beta_{14}(\text{neuroticism}) + \beta_{15}(\text{hostile conflict}) +$$

$$\beta_{16}(d' \text{ Partner-Good} \times d' \text{ Partner-Bad}) + r_1$$

Differences in gender and relationship stage (i.e., married, engaged, dating) were tested for main effects on partner-GNAT performance when possible, but these variables failed to demonstrate significant differences.

Results and Discussion

Study 1

As expected, participants showed better performance in pairing partner stimuli with good words than with bad words, $t(121) = 6.33, p < .001, d = 0.57$ (see Table S2 in the Supplemental Material available online). This result indicates that participants on average had positive implicit evaluations of their partners. Performance on the GNAT partner-good block was correlated with performance on the partner-bad block, $r = .46, p < .001$, a result suggesting shared method variance, likely reflecting common mechanics of the word-sorting task (e.g., general levels of ability, effort expended on the task, sustained attention). To control for this shared variance, we entered GNAT performance indices pair-wise in all multivariate (HLM) analyses. This approach has been shown to effectively control for shared method variance, yielding stronger links between implicit and explicit assessments when performance indices from opposing blocks of trials (e.g., target

stimuli paired with positive vs. negative stimuli) in implicit tasks are entered as simultaneous predictors in the same multivariate analysis (Boldero, Rawlings, & Haslam, 2007). After controlling for partner-bad performance, partner-good performance was associated with higher relationship satisfaction, partial $r = .20, p < .04$, and with lower hostile conflict, partial $r = -.21, p < .03$, but the reciprocal partial correlations for partner-bad performance (controlling for partner-good performance) were not significant.

Across multiwave follow-up analyses, we collected 277 points of stability data from 53 subjects. An analysis using only explicit measures revealed that higher initial self-reports of relationship satisfaction were associated with lower risk for breakup over time, $b = -0.05, p < .05$, and this coefficient remained unchanged when the implicit measures were added to the model, $b = -0.05, p < .07$. This result indicates that any predictive variance accounted for by the implicit measures is largely independent of the prediction by explicit measures. As Table 1 shows, the risk of breakup increased over time, $b = 2.21, p < .001$, and better performance on the partner-good trials was associated with lower breakup risk over 12 months, $b = -1.75, p < .002$. Performance on the partner-bad trials was not significantly associated with breakup risk, $b = 0.38, p > .685$.

These results were qualified by a significant interaction between partner-good and partner-bad performance, $b = -1.67, p < .048$. As Figure 1a shows, above-average performance (+1 *SD*) on the GNAT partner-good trials was associated with low probabilities (< 10%) of breakup regardless of performance on partner-bad trials (simple slope for partner-bad performance = 0.38, $p > .68$). However, below-average performance (-1 *SD*) on partner-good trials was associated with an increasing probability of breakup as performance on partner-bad trials improved (simple slope for partner-bad performance = 7.06, $p < .10$). Thus, after controlling for other model variables, the results showed that participants with below-average performance in partner-good blocks and above-average performance in partner-bad blocks were most likely to separate over the

next year (a 75% chance, compared with < 14% among other groups).

Study 1 supported our hypotheses about the ability of implicit partner evaluations to predict relationship decay, indicating that global positive and negative implicit evaluations of romantic partners (assessed using generically positive and negative stimuli) are linked to relationship outcomes. However, Neff and Karney (2005) demonstrated that with explicit measures of relationship quality, it is possible to obtain more precise and predictive information by shifting from global questions (e.g., "How satisfied are you with your partner?") to behaviorally specific prompts (e.g., "How well does your partner listen to you?"). Therefore, in Study 2, we sought to increase the sensitivity of the partner-GNAT by shifting the positive and negative stimuli from general words (e.g., *gift*, *death*) to relationship-specific words (e.g., *accepting*, *attacking*).

Study 2

Participants again showed better performance in pairing partner stimuli with good words ($d' = 2.40$) than with bad words ($d' = 1.91$), $t(99) = 4.85, p < .001, d = 0.49$, and the two performance indices were again positively correlated, $r = .45, p < .001$. In contrast to the results in Study 1, partial correlations (controlling for the other index) between partner-GNAT performance and self-reports of relationship satisfaction were not significant.

Multiwave follow-up analyses resulted in 186 points of stability data from 63 individuals. The explicit measures failed to predict breakup over this time frame with or without the implicit measures in the model, which suggested that any predictive variance accounted for by the implicit measures would be independent of explicit measures. As Table 1 shows, the risk of breakup increased over time, $b = 2.69, p < .001$, and better performance on the partner-good trials was associated with lower breakup risk over 12 months, $b = -1.03, p < .007$. Participants with below-average performance in partner-good blocks (-1 *SD*) had a 44% chance of ending their relationships

Table 1. Prediction of Relationship Breakup Over 1 Year

Predictor	Study 1				Study 2			
	<i>b</i>	<i>SE</i>	<i>p</i>	Odds ratio	<i>b</i>	<i>SE</i>	<i>p</i>	Odds ratio
Initial status								
Intercept 1	-4.14	0.36	< .001	0.02	-3.84	0.34	< .001	0.02
Predicting breakups over 1 year								
Intercept 2	2.21	0.51	< .001	9.12	2.69	0.48	< .001	14.75
<i>d'</i> (partner-good trials)	-1.75	0.55	< .002	0.17	-1.03	0.37	< .007	0.36
<i>d'</i> (partner-bad trials)	0.38	0.93	> .685	1.46	0.86	0.47	< .074	2.35
Relationship satisfaction	-0.05	0.03	< .065	0.95	-0.03	0.04	> .363	0.97
Neuroticism	0.10	0.10	> .342	1.10	0.13	0.11	> .232	1.14
Hostile conflict	-0.07	0.07	> .317	0.93	-0.03	0.04	> .399	0.97
<i>d'</i> Partner-Good × <i>d'</i> Partner-Bad	-1.67	0.83	< .048	0.19	-0.22	0.61	> .717	0.80

Note: Coefficients significant at $p < .10$ are highlighted in boldface.

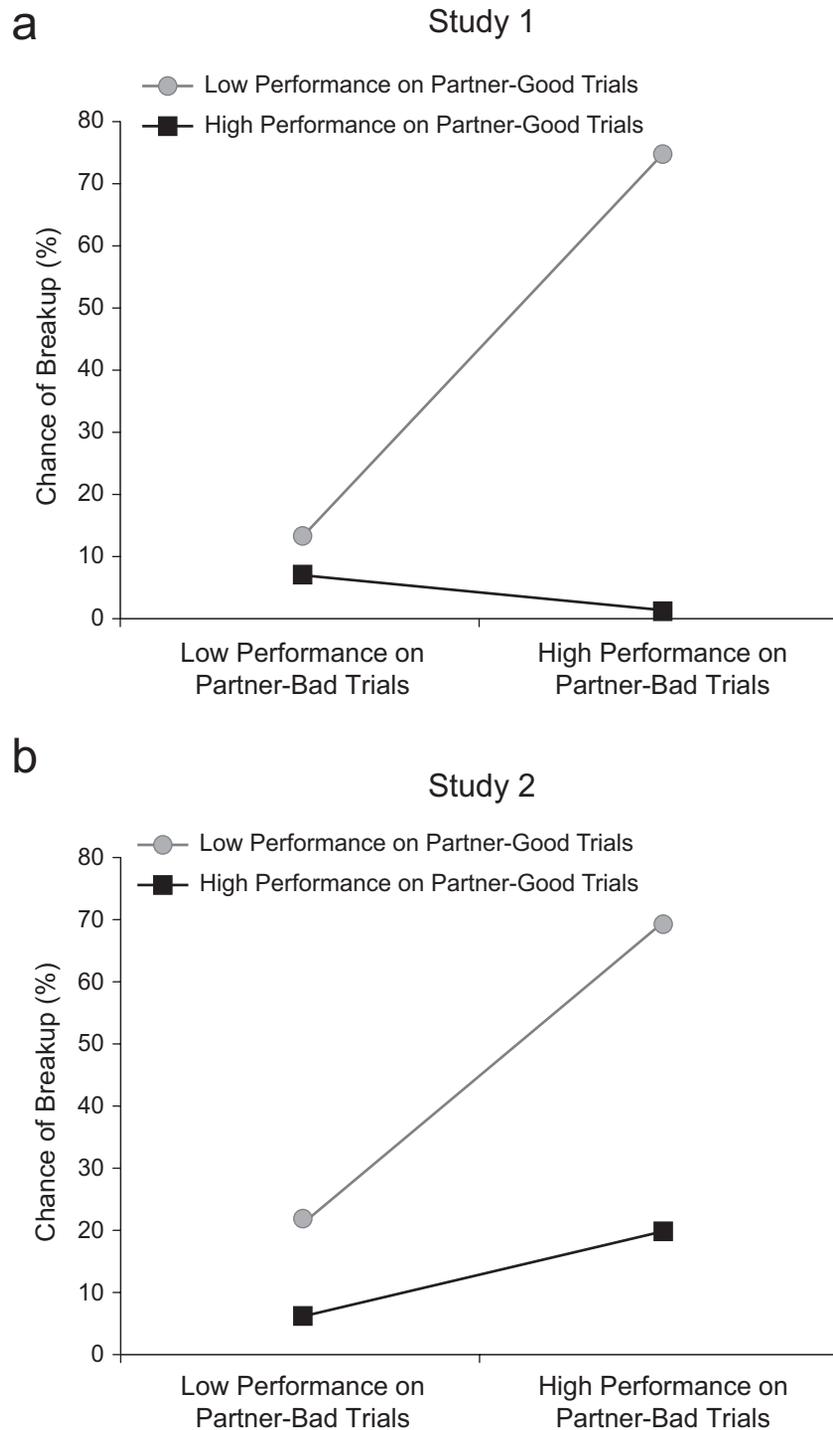


Fig. 1. Percentage chance of relationship breakup within 1 year in (a) Study 1 and (b) Study 2. The estimated chance of breakup is shown for respondents with low (-1 SD) and high ($+1$ SD) performance on partner-good trials and with low (-1 SD) and high ($+1$ SD) performance on partner-bad trials.

in the following year, whereas participants with above-average performance in partner-good blocks ($+1$ SD) had only an 11% chance of breaking up.

Results also demonstrated a trend supporting our hypothesis that better performance in partner-bad blocks would be

associated with greater breakup risk, $b = 0.86$, $p < .074$. There was a 43% chance that the relationships of participants with above-average performance in partner-bad blocks ($+1$ SD) would end, but there was only a 12% chance that the relationships of participants with below-average performance in

partner-bad blocks ($-1 SD$) would end. Because Study 2 used relationship-specific constructive and destructive target categories, these results suggest that people develop negative implicit evaluations within specific relationship domains (e.g., conflict behavior) before developing more globally negative implicit evaluations (and are consistent with the findings of Neff and Karney, 2005, regarding global and specific explicit measures).

Although the estimated interactive effect of partner-good and partner-bad performance was in the same direction as in Study 1 (see Fig. 1b), this coefficient was not statistically significant in this sample, $b = -0.22$, $p > .717$.

General Discussion

These studies indicate that the partner-GNAT predicts relationship instability over 1 year above and beyond the predictions of traditional self-report measures of relationship satisfaction, hostile conflict, and neuroticism. Partner-GNAT performance embodies information about current levels of relationship affect that participants are unaware of or are unable or unwilling to report explicitly. Using the partner-GNAT in relationship assessment may give researchers and practitioners a more complete picture of conscious and subconscious evaluations of relationships.

Our findings indicate that the seeds of relationship decay and dissolution may be evident in implicit affect, which cannot be assessed by traditional explicit measures. One explanation why these feelings cannot be measured explicitly is that, in deteriorating relationships, the negative associations people begin to form about their partner may be too subtle or threatening for them to recognize in themselves or too socially undesirable for them to report to others. Another possible explanation is that these relatively primitive implicit affective associations of a partner with “good” and “bad” may differ in their effects from the more deliberative kinds of judgment about relationship function and activity that are common in explicit measures (e.g., of relationship satisfaction or commitment). In this regard, our implicit and explicit measures were not exactly parallel. The implicit measure drew on associations of the partner with the constructs of good and bad, whereas the explicit measure assessed respondents’ judgments about their relationship. It will be important in future research to determine precisely what is measured by implicit and explicit evaluations of partners. Current theories suggest that “positive illusions”—assessing a partner’s traits more favorably than the partner does—are beneficial for long-term committed relationships and that the shattering of these ideal views (as positive behaviors and feelings fade during day-to-day interactions) contributes to relationship decay (e.g., Huston et al., 2001; Murray, Holmes, & Griffin, 1996). Implicit measures such as ours may offer early markers of such erosion.

Although our findings show clearly that implicit evaluations predict outcomes, these results do not speak to the mechanism by which this occurs. The effects of implicit evaluations are

probably mediated by a variety of relationship-maintenance behaviors. For example, implicit attitudes may be evident to partners through nonverbal communications, which in some studies have been shown to predict marital outcomes better than verbal communications do (e.g., Noller & Ruzzene, 1991). Implicit attitudes (good and bad) may also be expressed in responses to conflict, enjoyment of time spent together, and physical contact through affectionate touch and sex, all of which seem likely to be determined at least as much by automatic (spontaneous) responses to the partner as by deliberated responses. Identifying such behavioral mediators will be an important step toward understanding how implicit evaluations predict relationship stability.

Limitations and Conclusion

We note three limitations of our work. First, these studies included only one member of each relationship pair. Consequently, it was not possible to examine how each partner’s relative performance might predict relationship outcomes or how one partner’s GNAT performance might influence the other partner’s relationship quality. Second, our samples largely comprised individuals who were reasonably happy in their relationships. This might have contributed to the stronger link of partner-good than partner-bad performance to relationship outcomes. In a more distressed sample, partner-bad GNAT performance might have unique relevance and predictive validity. Third, there may be important individual, ethnic, cultural, and socioeconomic moderators of the impact of implicit evaluations on relationship outcomes. For example, implicit evaluations may be more influential in cultures in which marriage is primarily an affective bond than in cultures in which marriage is more of an economic arrangement between families.

These limitations notwithstanding, our results offer promising evidence that measures assessing implicit evaluations of relationship partners may provide unique insights that cannot be obtained through traditional self-report measures. Implicit measures like the partner-GNAT could offer critical insights into early stages of relationship decay. They could also help therapists identify hidden problems that clients may not wish or may not be able to reveal. Also, implicit measures would allow therapists to differentiate between couples whose relationships might be weakening because of the erosion of positive implicit evaluations (i.e., low scores in associating the partner with good stimuli) and couples whose relationships might be weakening because of the development of strong negative implicit evaluations (i.e., high scores in associating the partner with bad stimuli). Distinguishing between those types of relationship decay might be of use in developing distinctive interventions tailored to the needs of specific couples.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

Supplemental Material

Additional supporting information may be found at <http://pss.sagepub.com/content/by/supplemental-data>

References

- Banaji, M.R., & Greenwald, A.G. (1995). Appendix: Implicit gender stereotyping in judgments of fame. *Journal of Personality and Social Psychology, 68*, 181–198.
- Banase, R., & Kowalick, C. (2007). Implicit attitudes towards romantic partners predict well-being in stressful life conditions: Evidence from the antenatal maternity ward. *International Journal of Psychology, 42*, 149–157.
- Boldero, J.M., Rawlings, D., & Haslam, N. (2007). Convergence between GNAT-assessed implicit and explicit personality. *European Journal of Personality, 21*, 341–358.
- Bowman, M.L. (1990). Coping efforts and marital satisfaction: Measuring marital coping and its correlates. *Journal of Marriage and the Family, 52*, 463–474.
- Caughlin, J.P., & Huston, T.L. (2006). The affective structure of marriage. In A.L. Vangelisti & D. Perlman (Eds.), *The Cambridge handbook of personal relationships* (pp. 131–156). New York: Cambridge University Press.
- Eysenck, H.J., & Eysenck, S.B.G. (1975). *The Eysenck Personality Questionnaire manual*. London: Hodder & Stoughton.
- Fincham, F.D., Garnier, P.C., Gano-Phillips, S., & Osborne, L.N. (1995). Preinteraction expectations, marital satisfaction, and accessibility: A new look at sentiment override. *Journal of Family Psychology, 9*, 3–14.
- Funk, J.L., & Rogge, R.D. (2007). Testing the ruler with Item Response Theory: Increasing precision of measurement for relationship satisfaction with the Couples Satisfaction Index. *Journal of Family Psychology, 21*, 572–583.
- Gawronski, B., & Bodenhausen, G.V. (2006). Associative and propositional processes in evaluation: An integrative review of implicit and explicit attitude change. *Psychological Bulletin, 132*, 692–731.
- Greenwald, A.G., & Banaji, M.R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review, 102*, 4–27.
- Greenwald, A.G., & Farnham, S.D. (2000). Using the Implicit Association Test to measure self-esteem and self-concept. *Journal of Personality and Social Psychology, 79*, 1022–1038.
- Greenwald, A.G., McGhee, D.E., & Schwartz, J.L.K. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology, 74*, 1464–1480.
- Huston, T.L., Caughlin, J.P., Houts, R.M., & Smith, S.E. (2001). The connubial crucible: Newlywed years as predictors of marital delight, distress, and divorce. *Journal of Personality and Social Psychology, 80*, 237–252.
- Karney, B.R., & Bradbury, T.N. (1995). The longitudinal course of marital quality and stability: A review of theory, method, and research. *Psychological Bulletin, 118*, 3–34.
- Koole, S.L., Dijksterhuis, A., & van Knippenberg, A. (2001). What's in a name: Implicit self-esteem and the automatic self. *Journal of Personality and Social Psychology, 80*, 669–685.
- Locke, H.J., & Wallace, K.M. (1959). Short marital adjustment prediction tests: Their reliability and validity. *Marriage and Family Living, 21*, 251–255.
- Maniaci, M., & Rogge, R. (2010). *Development and validation of the Attentive Responding Scale*. Manuscript in preparation.
- Murray, S.L., Homes, J.G., & Griffin, D.W. (1996). The self-fulfilling nature of positive illusions in romantic relationships: Love is not blind, but prescient. *Journal of Personality and Social Psychology, 71*, 1155–1180.
- Neff, L.A., & Karney, B.R. (2005). To know you is to love you: The implications of global adoration and specific accuracy for marital relationships. *Journal of Personality and Social Psychology, 88*, 480–497.
- Noller, P., & Ruzzene, M. (1991). Communication in marriage: The influence of affect and cognition. In G.J.O. Fletcher & F.D. Fincham (Eds.), *Cognition in close relationships* (pp. 203–233). Hillsdale, NJ: Erlbaum.
- Nosek, B.A., & Banaji, M.R. (2001). The Go/No-go Association Task. *Social Cognition, 19*, 625–664.
- Pelham, B.W., Mirenberg, M.C., & Jones, J.T. (2002). Why Susie sells seashells by the seashore: Implicit egotism and major life decisions. *Journal of Personality and Social Psychology, 82*, 469–487.
- Raudenbush, S.W., & Bryk, A.S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks, CA: Sage.
- Rodriguez, A., & Rogge, R. (2010). *When you war with your partner, everyone loses: The impact of negative relationship behavior on individual and dyadic well-being*. Manuscript in preparation.
- Scinta, A., & Gable, S.L. (2007). Automatic and self-reported attitudes in romantic relationships. *Personality and Social Psychology Bulletin, 33*, 1008–1022.
- Stone, A.A., Turkan, J.S., Bachrach, C.A., Jobe, J.B., Kurtzman, H.S., & Cain, V.S. (2000). *The science of self-report: Implications for research and practice*. Mahwah, NJ: Erlbaum.
- Tabachnick, B.G., & Fidell, L.S. (2001). *Using multivariate statistics* (4th ed.). Boston: Allyn & Bacon.
- Wilson, T.D., Lindsey, S., & Schooler, T.Y. (2000). A model of dual attitudes. *Psychological Review, 107*, 101–126.
- Zayas, V., & Shoda, Y. (2005). Do automatic reactions elicited by thoughts of romantic partner, mother, and self relate to adult romantic attachment? *Personality and Social Psychology Bulletin, 31*, 1011–1025.
- Zeno, S.M., Ivens, S.H., Millard, R.T., & Duvvuri, R. (1995). *The educator's word frequency guide*. Brewster, NY: Touchstone Applied Science Associates.