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Implicit Self-Evaluations Predict Changes in Implicit Partner Evaluations



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Abstract

Do people who feel good about themselves have better relations with others? Although the notion that they do is central to both classic and modern theories, there is little strong evidence to support it. We argue that one reason for the lack of evidence is that prior research has relied exclusively on explicit measures of self- and relationship evaluation. The current longitudinal study of newlywed couples used implicit measures of self- and partner evaluation, as well as explicit measures of self-, relationship, and partner evaluation, to examine the link between self-evaluations and changes in relationship evaluations over the first 3 years of marriage. Whereas explicit self-evaluations were unrelated to changes in all interpersonal measures, implicit self-evaluations positively predicted changes in implicit partner evaluations. This finding adds to previous research by highlighting the importance of automatic processes and implicit measures in the study of close interpersonal relationships.

Keywords

implicit measures, self-esteem, automatic processes, marriage, romantic relationships, IAT, open data, open materials

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If you don't love yourself, you cannot love others.

—Dalai Lama (quoted in Lindsay & Creswell, 2014)

The idea that evaluating oneself positively is a prerequisite for having meaningful and fulfilling interpersonal relationships has been a point of discussion for centuries. Not only is this idea a component of the Dalai Lama's influential philosophy, as reflected in the opening quote, but writers such as Kant, Calvin, and Nietzsche also expounded on the connection between self-love and love of others. This idea is also evident in various classic psychological theories. A premise of several psychoanalytic and humanistic perspectives (Fromm, 1939; Jung, 1931/1954; Maslow, 1970; Rogers, 1951), for example, is that the failure to fully accept oneself is the root of numerous, if not most, psychological problems, including interpersonal ones.

It is thus not surprising that self-evaluations play an important role in several modern theories of close relationships (e.g., Aron & Aron, 1996; Murray, Holmes, & Collins, 2006). According to Murray and colleagues' (2006) risk-regulation model, for example, people project

their self-evaluations onto their partners, which shapes important downstream interpersonal processes. Whereas people who evaluate themselves positively trust that their partners also evaluate them positively and thus feel secure and ultimately behave constructively in their relationships, people who evaluate themselves less positively doubt their partner's regard and thus feel less secure and behave less constructively.

Nevertheless, although numerous studies support the specific processes outlined by these theoretical perspectives (e.g., Aron & Aron, 1996; Murray, Holmes, & Griffin, 2000; Murray, Rose, Bellavia, Holmes, & Kusche, 2002; but see Baker & McNulty, 2013), there is no strong evidence that positive self-evaluations are actually directly linked to subsequent positive relationship evaluations. Several studies have documented positive cross-sectional associations between self-esteem and relationship satisfaction (e.g., Murray, Holmes, & Griffin, 1996; Murray

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et al., 2000; Shackelford, 2001), but the causal direction of cross-sectional associations involving self-esteem is notoriously ambiguous (Baumeister, Campbell, Krueger, & Vohs, 2003). Indeed, several theoretical perspectives can be used to argue that such cross-sectional associations emerge because positive relationship evaluations increase self-esteem (e.g., Leary, Tambor, Terdal, & Downs, 1995; Shackelford, 2001).

Further, although self-esteem has been negatively associated with relationship dissolution in one study of dating couples (Hendrick, Hendrick, & Adler, 1988) and positively associated with changes in relationship satisfaction in another (Murray et al., 2000), other studies raise questions about the long-term interpersonal effects of self-esteem. For example, Fincham and Bradbury (1993) reported that a positive association between initial self-esteem and subsequent relationship satisfaction was reduced to nonsignificance after controlling for depression. Further, a meta-analysis of several longitudinal studies of marriage (Karney & Bradbury, 1995) documented a rather small association between self-esteem and changes in marital satisfaction.

Why has self-esteem failed to reliably predict subsequent relationship evaluations in prior longitudinal research? One reason may be that prior studies have relied exclusively on self-report measures of self-esteem. As several authors (e.g., Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003; Zeigler-Hill, 2006) have pointed out, self-report measures of self-esteem are vulnerable to self-presentational biases that may allow other personality and motivational factors, such as narcissism, to masquerade as high self-esteem. Given that such defensively high reports of self-esteem negatively predict relationship outcomes (e.g., Campbell, Foster, & Finkel, 2002), any variance in self-reported self-esteem reflective of such defensive self-esteem may mask any benefits of authentic positive self-evaluations for relationship evaluations.

There are both empirical and conceptual reasons to believe that implicit rather than explicit measures of self-evaluation may capture the extent to which self-evaluations predict interpersonal evaluations. From an empirical standpoint, measures of implicit self-evaluation are less sensitive to the self-presentational biases that may contaminate measures of explicit self-evaluation (Olson, Fazio, & Hermann, 2007). Indeed, some research demonstrates that implicit self-evaluations predict behavior better than do explicit self-evaluations (Spalding & Hardin, 1999). Further, from a conceptual standpoint, implicit measures, particularly those based on automatic activation effects (e.g., Fazio, Sanbonmatsu, Powell, & Kardes, 1986), are more sensitive to the automatic, affective components of people's self-evaluations (Fazio & Olson, 2003), and several studies suggest that it is these automatic aspects of self-evaluation that drive interpersonal processes and

evaluations (Gramzow & Gaertner, 2005; Murray, Derrick, Leder, & Holmes, 2008). Indeed, Fazio's (1990) MODE (Motivation and Opportunity as DEterminants) model of the attitude-behavior relation posits that people's automatic evaluations will predict their behaviors when their motivation or ability to control their impulses is low. Certainly, over the course of a long-term relationship, people will more than occasionally lack the motivation or self-regulatory resources to control such spontaneous responses (see Buck & Neff, 2012; Bushman, DeWall, Pond, & Hanus, 2014).

For similar reasons, implicit measures of relationship evaluation may better capture the extent to which self-evaluations predict relationship evaluations as well. Like explicitly measured self-evaluations, explicitly measured relationship evaluations are susceptible to perceptual and motivational biases (McNulty & Karney, 2001). And like implicitly measured self-evaluations, implicitly measured relationship evaluations appear to be less susceptible to such biases (Scinta & Gable, 2007). For this reason, implicitly measured relationship evaluations may better track the processes that unfold over the course of a relationship. Indeed, Murray, Holmes, and Pinkus (2010) demonstrated that partners' behaviors toward each other early in their marriages predicted spouses' automatic but not explicit evaluations of the relationship 4 years later. Notably, these automatic evaluations can eventually disrupt partners' more conscious explicit evaluations of the relationship (e.g., McNulty, Olson, Meltzer, & Shaffer, 2013; Murray et al., 2011). For example, McNulty et al. (2013) demonstrated that although spouses' implicitly measured partner evaluations were unrelated to their explicit reports of marital satisfaction at the beginning of marriage, the former better forecasted the trajectory of marital satisfaction over the first 4 years of marriage than the latter did.

In sum, several theories suggest that positive self-evaluations should positively predict relationship evaluations. Yet research using explicit measures has not demonstrated consistent associations between self-evaluations and subsequent relationship evaluations. Given that this prior research has relied exclusively on explicit measures that may be contaminated by self-presentational concerns and other motivated biases, and given that implicit measures may better reflect the processes that drive such an association, we used implicitly measured self- and relationship evaluations to test the prediction that self-evaluations positively predict subsequent relationship evaluations.

Overview of the Current Study

Just after their weddings, a sample of newlywed couples completed one explicit self-evaluation and two explicit

interpersonal evaluations—one of their relationship and the other of their partner. These couples also attended a laboratory session at which they completed a priming measure of implicit self- and partner evaluations. Three years later, a portion of these couples once again completed the same self-report and implicit measures. We examined the extent to which the explicit and implicit self-evaluations predicted changes in the explicit and implicit interpersonal evaluations.

Method

Participants

We targeted 112 newlyweds (56 couples) who were participating in a broader longitudinal study of 270 newlyweds (135 newlywed couples). The broader study was limited to these 270 individuals because they were the only ones who completed the baseline portion of the study within the 1-year recruitment time frame. The current analyses were limited to 112 of these newlyweds because they were the only ones who completed the laboratory portion of the sixth wave of assessment, which was the only assessment that included a second set of implicit evaluations. The individuals involved in the broader study who did not complete this wave of measurement (a) had divorced ($n = 22$), (b) had discontinued their participation ($n = 16$), (c) were unable to schedule a laboratory session (e.g., because they had moved from the study location) but completed questionnaires through the mail ($n = 34$), or (d) did not respond to the solicitation ($n = 86$). The individuals who participated at this wave of data collection did not differ from those who did not participate on any of the primary baseline measures examined here.

At baseline, the husbands examined here were, on average, 26.5 years old ($SD = 4.6$) and had completed an average of 16.8 years of education ($SD = 2.4$). Seventy percent were employed full time, and 30% were full-time students. The median of the income range reported by these husbands was \$25,001 to \$30,000 per year. Wives were, on average, 24.4 years old ($SD = 3.8$) and had completed an average of 19.4 years of education ($SD = 2.1$). Fifty-four percent were employed full time, and 32% were full-time students. The median of the income range reported by these wives was \$10,001 to \$15,000 per year. Eighty-eight percent of husbands and 91% of wives self-identified as Caucasian.

Procedure

At baseline, all 270 newlyweds (135 couples) attended a laboratory session. Before that session, they were mailed a packet of questionnaires to complete at home and

bring with them to their appointment. This packet included a consent form approved by the local human-subjects review board and self-report measures of self-esteem, marital satisfaction, partner evaluations, and various individual-differences variables that served as covariates, as well as a letter instructing participants to complete all questionnaires independently of their partner and to bring their completed questionnaires to their upcoming laboratory session. At that session, both members of the couple were photographed and completed implicit measures of self- and partner evaluation. Couples were paid \$80 for participating in this phase of the study.

As part of the broader aims of the study, couples were recontacted by phone or e-mail every 6 months and asked to complete various self-report measures. The fifth of these follow-ups, which occurred approximately 3 years after baseline, was another laboratory session that resembled the first. Before that session, couples were once again mailed self-report measures of self-esteem, relationship satisfaction, and partner evaluation that they completed at home. At the session, couples were once again photographed and completed the same implicit self- and partner evaluations. Couples were paid \$80 for participating in this phase of the study.¹

Implicit measures. We used a priming procedure modeled after one used by Fazio, Jackson, Dunton, and Williams (1995) to implicitly measure individuals' self- and partner evaluations, as well as their evaluations of a set of opposite-sex strangers (as one of several covariates). Each spouse separately completed three blocks of 48 trials each. In each block, they indicated the valence of eight positive and eight negative words that appeared in random order. The first block was an orientation block, during which spouses responded to the stimulus words after being exposed to a neutral prime (a row of asterisks) that appeared for 315 ms before each word. The second and third blocks were the measurement trials, during which spouses responded to the same words, but this time, those words were preceded by a 300-ms photo prime. Three types of photos were used: (a) photos of the test-taker, (b) photos of his or her partner, and (c) photos of attractive opposite-sex strangers. Individuals appeared in one of four orientations in each photo: (a) a frontal view of the face, (b) a profile view of the face, (c) a frontal view of the entire body while standing, and (d) a frontal view of the entire body while sitting. During each of these test trials, one photo preceded each word; photos appeared in random order. Participants were asked to indicate as quickly as possible whether the stimulus word was positive or negative by pressing a designated key on the computer keyboard. The time it took them to respond was recorded.

An index of spouses' automatic attitudes toward themselves was formed by subtracting the average time it took them to respond to positive words from the average time it took them to respond to negative words after being exposed, in both cases, to pictures of themselves. Separate indexes were created in the same fashion for pictures of spouses' partners and attractive opposite-sex strangers. One wife at baseline and one wife at the 3-year follow-up experienced equipment failures that prevented data collection. Of the remaining 110 individuals, two husbands and three wives at baseline and one additional husband at the 3-year follow-up made errors on 20% or more of the trials (they incorrectly indicated the valence of the words) and were thus excluded a priori from analyses, which left a total of 104 individuals for all analyses.

Explicit measures. We assessed spouses' explicit self-evaluations with the 10-item Rosenberg (1965) Self-Esteem Scale. Reliability among responses to the 10 items was high both at baseline (husbands' $\alpha = .80$, wives' $\alpha = .84$) and at the 3-year follow-up (husbands' $\alpha = .88$, wives' $\alpha = .83$). We assessed spouses' explicit interpersonal evaluations with two different measures: a general measure of relationship satisfaction and participants' evaluations of their partner (the latter was meant to offer a more direct comparison with the implicit measure of partner evaluation). The measure of relationship satisfaction was the Quality Marriage Index (Norton, 1983). This instrument asked spouses to indicate their level of agreement with five items that described the general quality of the marriage (e.g., "We have a good marriage") using a 7-point scale (1 = *very strong disagreement*, 7 = *very strong agreement*), and to rate the overall quality of the marriage on a 10-point scale (1 = *very unhappy*, 10 = *perfectly happy*). Thus, scores could range from 6 to 45, with higher scores reflecting more marital satisfaction. Reliability among responses to the items on this measure was also high (baseline: husbands' $\alpha = .92$, wives' $\alpha = .88$; 3-year follow-up: husbands' $\alpha = .95$, wives' $\alpha = .94$).

The measure of partner evaluation was a 36-item version of the Interpersonal Qualities Scale (see Murray et al., 1996). Spouses reported how satisfied they were with the extent to which their partner fulfilled 36 desirable standards (e.g., "patient," "understanding," "responsive to your needs") on a scale from 1, *not at all*, to 7, *completely*. Reliability was again high (baseline: husbands' $\alpha = .93$, wives' $\alpha = .91$; 3-year follow-up: husbands' $\alpha = .96$, wives' $\alpha = .95$).

Covariates. Several potential confounds were assessed at baseline. Attachment insecurity was assessed using the 36-item Experiences in Close Relationships Scale (Brennan, Clark, & Shaver, 1998; for anxiety, husbands'

$\alpha = .91$, wives' $\alpha = .92$; for avoidance, husbands' $\alpha = .92$, wives' $\alpha = .94$). Personality was assessed using the 50-item Big Five Personality Inventory short form from the International Personality Item Pool (Goldberg, 1999; husbands—extraversion: $\alpha = .90$, agreeableness: $\alpha = .78$, conscientiousness: $\alpha = .80$, neuroticism: $\alpha = .77$, openness, $\alpha = .77$; wives—extraversion: $\alpha = .91$, agreeableness: $\alpha = .76$, conscientiousness: $\alpha = .88$, neuroticism: $\alpha = .72$, openness: $\alpha = .72$). Depressive symptoms were assessed with the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961).

Results

Preliminary analyses

Correlations among the variables assessed at baseline appear in Table 1. A few of these are worth highlighting. First, not surprisingly, explicit marital satisfaction was positively correlated with explicit partner evaluations among both husbands and wives. Second, also among both husbands and wives, neither explicit interpersonal evaluation (i.e., marital satisfaction and partner satisfaction) was significantly correlated with implicit partner evaluations. Third, explicit self-esteem was not significantly correlated with implicit self-evaluations, which is consistent with most other research (e.g., Bosson, Swann, & Penebaker, 2000). Fourth, among husbands, explicit self-esteem was significantly positively correlated with explicit marital satisfaction; among wives, explicit self-esteem was significantly positively correlated with explicit partner evaluations. Fifth, among wives, implicit self-evaluations were significantly positively correlated with implicit partner evaluations. Though in the same direction, this correlation did not reach significance among husbands. Finally, husbands and wives' reports of explicit marital satisfaction were positively correlated with one another.

Change in explicit and implicit self- and relationship evaluations

These data provided the opportunity to conduct two novel preliminary analyses. First, they allowed us to examine whether individuals demonstrated systematic changes in their implicit evaluations. Although previous research has shown that explicit self-esteem increases over time (e.g., Chung et al., 2014), whereas explicit marital satisfaction decreases over time (e.g., McNulty, O'Mara, & Karney, 2008), no previous research has examined changes over time in implicitly measured self- or partner evaluations. We examined change in explicit and implicit self- and relationship evaluations using multilevel models that regressed the raw difference formed by

Table 1. Correlations Among Variables at Baseline

Variable	1	2	3	4	5
1. Implicit self-evaluation	.13	-.16	.33*	-.13	.02
2. Explicit self-esteem	-.00	.13	-.20	.03	.28*
3. Implicit partner evaluation	.17	.01	.16	.05	.10
4. Explicit marital satisfaction	-.17	.40**	-.08	.47**	.55**
5. Explicit partner evaluation	.13	.23	-.04	.53**	.19

Note: Correlations for husbands appear below the diagonal, correlations for wives appear above the diagonal, and correlations between partners appear on the diagonal in boldface. Correlations involving the implicit measures are partial correlations for which we controlled for participants' reaction times to the positive and negative words during the orientation block (i.e., without the photo primes).

* $p < .05$. ** $p < .01$.

subtracting individuals' 3-year follow-up scores from their baseline scores onto a randomly varying intercept. Estimating change in multilevel models with random intercepts accounted for the nonindependence of couples' data. Given that any change in the implicit measure could have been due to change in spouses' automatic reactions to the positive or negative words, rather than to change in their automatic reactions to themselves or their partner, we controlled for spouses' baseline and 3-year follow-up reaction times to the positive and negative words during the orientation block in which a neutral prime (a row of asterisks) appeared before the words.

The results, as well as the means for each measure at each assessment period, are reported in Table 2. Consistent with prior research, these results showed that explicit reports on both measures of relationship satisfaction became more negative over time, whereas explicit self-esteem became more positive over time. But more novel are the changes in implicit evaluations: Implicit self- and partner evaluations both became more negative over time, as indicated by a faster response to negative than to positive words after seeing a photo of the self or partner, after we controlled for participants' reaction times to the positive and negative words themselves.

In our second preliminary analysis, we examined the test-retest reliability of the associative priming measure, an extensively used measure of implicit evaluations (Fazio & Olson, 2003) that has been criticized for its reliability (Cunningham, Preacher, & Banaji, 2001) but has never been evaluated across as substantial a period of time as 3 years. To estimate such correlations, as well as correlations between the baseline and 3-year follow-up reports on the explicit measures (for comparison purposes), we regressed standardized versions of the 3-year follow-up scores of each measure onto standardized versions of the corresponding baseline measure in a multi-level model that once again contained a randomly varying intercept. For the implicit measures, we once again controlled for any changes in spouses' reaction times to the positive and negative words alone by adding to the model their reaction times to these words in the orientation blocks that occurred at baseline and at the 3-year follow-up. Results are presented in the rightmost column of Table 2. Despite the fact that reports on all measures changed systematically over time, the correlations between the baseline and 3-year follow-up scores were significantly positive for all three explicit measures and for the implicit partner-evaluation measure. The

Table 2. Change in and Test-Retest Correlations of Explicit and Implicit Evaluations

Measure	Analysis of change					
	Mean baseline score	Mean 3-year follow-up score	Change	$t(103)$	d	r
Explicit marital satisfaction	42.18 (4.20)	39.00 (6.26)	-3.18 [-4.38, -1.98]	-5.76**	1.37	.44**
Explicit partner evaluation	6.11 (0.58)	5.90 (0.80)	-0.21 [-0.34, -0.08]	-3.20**	0.86	.58**
Implicit partner evaluation	49.24 (74.74)	35.67 (62.83)	-16.74 [-33.06, -0.42]	-2.05*	0.55	.20*
Explicit self-esteem	3.35 (0.45)	3.44 (0.49)	0.09 [0.001, 0.186]	2.01*	1.67	.54**
Implicit self-evaluation	61.99 (80.01)	35.67 (62.83)	-26.32 [-44.30, -8.34]	-2.93*	0.79	.06

Note: Standard errors for all means are given in parentheses. For the column showing change between baseline and follow-up scores, 95% confidence intervals are given in brackets.

* $p < .05$. ** $p < .01$.

Table 3. Explicit Self-Esteem as a Predictor of Change in Relationship Evaluations

Outcome and predictor	<i>b</i>	95% CI	Effect-size <i>r</i>
Explicit marital satisfaction at 3-year follow-up			
Baseline explicit marital satisfaction	0.44** (0.06)	[0.32, 0.56]	.74
Baseline explicit self-esteem	0.01 (0.09)	[-0.17, 0.19]	.02
Explicit partner evaluation at 3-year follow-up			
Baseline explicit partner evaluation	0.55** (0.09)	[0.37, 0.73]	.65
Baseline explicit self-esteem	0.03 (0.09)	[-0.15, 0.21]	.05
Implicit partner evaluation at 3-year follow-up			
Baseline implicit partner evaluation	0.20 (0.12)	[-0.04, 0.34]	.25
Baseline explicit self-esteem	0.08 (0.11)	[-0.14, 0.30]	.11

Note: Standard errors are given in parentheses. CI = confidence interval.

** $p < .01$.

test-retest correlation of the implicit self-evaluation measure did not reach significance.

Do explicit self-evaluations predict changes in interpersonal evaluations?

The primary analyses examined the extent to which each measure of baseline self-evaluation predicted changes in each measure of interpersonal evaluation. We first examined whether explicit self-esteem predicted changes in either explicit or implicit interpersonal evaluations. Specifically, we conducted three multilevel analyses in which each of the 3-year follow-up interpersonal evaluations (two explicit and one implicit) was separately regressed onto the corresponding baseline interpersonal evaluation and spouses' baseline explicit self-esteem score. Implicit evaluations were standardized for ease of interpretation. Each equation included a randomly varying intercept. Results are shown in Table 3. As can be seen, explicitly measured self-esteem was unrelated to changes in all three measures of interpersonal evaluation.

Do implicit self-evaluations predict changes in interpersonal evaluations?

Next, we examined whether the implicit measure of self-evaluation predicted changes in any of the interpersonal evaluations. This time, we regressed each 3-year follow-up interpersonal evaluation onto the corresponding baseline interpersonal evaluation and the baseline implicit self-evaluation. Again, implicit evaluations were standardized for ease of interpretation, and each equation included a randomly varying intercept. Results are shown in Table 4. As can be seen, whereas implicitly measured self-evaluations were unrelated to changes in both explicitly measured interpersonal evaluations, they were positively associated with changes in implicitly

measured partner evaluations. That is, spouses who felt more positively about themselves according to the implicit measure at baseline experienced less decline in their implicit evaluations of their partner over the first 3 years of marriage.

A subsequent test of the Implicit Self-Evaluation \times Sex interaction revealed that this association did not differ across men and women, $b = 0.02$, $SE = 0.27$, 95% confidence interval (CI) = [-0.52, 0.56], $t(44) = 0.09$, $p = .930$, effect-size $r = .01$, and remained significant (and was even stronger) when we controlled for (a) sex, (b) implicit self-evaluation score at the 3-year follow-up, (c) explicit self-esteem at baseline and at the 3-year follow-up, (d) orientation-block reaction times at baseline and at the 3-year follow-up, (e) explicit interpersonal evaluations at baseline and at the 3-year follow-up, (f) implicit evaluations of attractive opposite-sex strangers at baseline and at the 3-year follow-up, (g) attachment anxiety and avoidance at baseline, (h) each of the Big Five factors at baseline, and (i) depressive symptoms at baseline, $b = 0.30$, $SE = 0.10$, 95% CI = [0.10, 0.50], $t(24) = 3.00$, $p = .006$, effect-size $r = .52$.

General Discussion

The current longitudinal study provided long-awaited evidence that self-evaluations positively predict relationship evaluations; however, this association emerged only using implicit measures of self- and partner evaluations. Specifically, newlywed spouses who demonstrated more positive automatic reactions to 300-ms primes of photos of themselves just after their wedding demonstrated less decline in their positive automatic reactions to 300-ms primes of photos of their partners 3 years later. This association did not vary across husbands and wives and held after we controlled for numerous covariates, including methodological aspects of the implicit measure and potential confounds such as neuroticism and depression.

Table 4. Implicit Self-Evaluation as a Predictor of Change in Relationship Evaluations

Outcome and predictor	<i>b</i>	95% CI	Effect-size <i>r</i>
Explicit marital satisfaction at 3-year follow-up			
Baseline explicit marital satisfaction	0.44** (0.06)	[0.32, 0.56]	.73
Baseline implicit self-esteem	-0.02 (0.06)	[-0.14, 0.10]	.05
Explicit partner evaluation at 3-year follow-up			
Baseline explicit partner evaluation	0.56** (0.09)	[0.38, 0.74]	.67
Baseline implicit self-esteem	-0.02 (0.05)	[-0.12, 0.08]	.06
Implicit partner evaluation at 3-year follow-up			
Baseline implicit partner evaluation	0.11 (0.10)	[-0.09, 0.31]	.16
Baseline implicit self-esteem	0.26* (0.10)	[0.06, 0.46]	.35

Note: Standard errors are given in parentheses. CI = confidence interval.

* $p < .05$. ** $p < .01$.

Explicit self-esteem did not predict changes in explicit or implicit interpersonal evaluations.

These findings have several theoretical and empirical implications. Most important, they add to previous research by highlighting the importance of automatic processes for relationships (McNulty et al., 2013; Murray et al., 2008; Murray et al., 2011), a particularly important contribution given recent challenges to the theoretical and practical importance of automatic social processes (e.g., Arkes & Tetlock, 2004; Doyen, Klein, Pichon, & Cleeremans, 2012). Although individuals' automatically activated self-evaluations were unrelated to their explicit self-evaluations, those automatically activated self-evaluations were related to the development of their automatically activated partner evaluations over 3 years. Addressing the significance of such automatically activated partner evaluations, McNulty et al. (2013) reported that spouses' initial automatic partner evaluations, although unrelated to their explicit marital satisfaction at the start of marriage, predicted the trajectory of their marital satisfaction over the first 4 years of marriage, whereas their initial explicit evaluations did not.

Additionally, these findings provide evidence for an association that has been debated both within and outside psychology for centuries; newlywed spouses' positive implicit self-evaluations appeared to serve a beneficial role in their interpersonal relationships. Not only does this finding support an old and popular notion, but it is also consistent with several theories of close relationships, including Murray and colleagues' (2006) risk-regulation model and Aron and Aron's (1996) self-expansion theory.

Nevertheless, the specific mechanism of this effect remains unclear. According to the risk-regulation model, it is likely that spouses' positive self-evaluations provided them with the interpersonal confidence and trust necessary to behave in ways that promote intimacy and strengthen their relationships. Indeed, Fazio's (1990)

MODE model suggests that automatic attitudes, such as these automatic attitudes toward oneself, can shape the types of spontaneous behaviors likely to occur on a day-to-day basis over the course of a long-term relationship (see Murray et al., 2011). Of course, it is also possible that the association between self- and partner evaluations emerged independently of behavior. Indeed, Aron and Aron's (1996) self-expansion model suggests that people include their close relationship partners in their perceptions of themselves and thus that, for cognitive rather than behavioral reasons, people who view themselves more positively may evaluate their partners more positively because those partners are part of their positive self-evaluations. Future research is necessary to identify the exact mechanism of the effects that emerged here.

Finally, these findings provide some empirical evidence of the reliability and validity of the priming measure used here as a measure of both self- and partner evaluation. Although the measure has been used largely to assess racial prejudice (see Fazio et al., 1995), it has been extended to many other domains, including self-evaluation (see Bosson et al., 2000) and partner evaluation (McNulty et al., 2013; Scinta & Gable, 2007). The current study validates priming as a measure of these and other evaluations in at least two ways. First, addressing past criticisms (e.g., Cunningham et al., 2001), it suggests that the measure has some test-retest reliability, at least with regard to measuring partner evaluations. It is worth noting that although test-retest reliability was not as high as may be desired, the fact that the test and retest scores were correlated at all could be seen as impressive, given the length of the interval between assessments and the potentially unstable nature of the attitude. Second, the fact that the association between self- and partner evaluations emerged implicitly but not explicitly demonstrates that implicit measures can uncover both theoretically and practically important associations that explicit measures may miss.

Several strengths and limitations of this research should be considered when drawing conclusions. Its primary limitation is that the results are correlational, and thus any causal conclusions should be drawn with caution. It is possible that variables not assessed and controlled for here accounted for the associations that emerged. However, a major strength of this research is that it was longitudinal, which helps assuage concerns regarding the potential causal direction of the association we found. Further, we controlled for numerous third variables that could account for the association, which helps rule out the possibility that self-evaluations simply reflected some other underlying variable that affected evaluations of the partner.

Author Contributions

J. K. McNulty developed the study hypotheses, oversaw data collection, conducted the data analyses, and wrote the first draft of the manuscript. L. R. Baker contributed significantly to data collection, helped conceptualize the theoretical framing, and contributed to the writing. M. A. Olson designed the implicit measures and contributed to the writing.

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.

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Open Practices



All data and materials have been made publicly available via Open Science Framework and can be accessed at <https://osf.io/hdi8p/> and <https://osf.io/qfgn6/>, respectively. The complete Open Practices Disclosure for this article can be found at <http://pss.sagepub.com/content/by/supplemental-data>. This article has received badges for Open Data and Open Materials. More information about the Open Practices badges can be found at <https://osf.io/tvyxz/wiki/view/> and <http://pss.sagepub.com/content/25/1/3.full>.

Note

1. The implicitly measured partner evaluations completed at baseline were used to predict the trajectory of an explicit measure of marital satisfaction in McNulty et al. (2013). The current article, in contrast, describes the association between baseline self-evaluations and the changes in those implicitly measured partner evaluations that occurred across 3 years.

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