Running head: Significant others trigger bivalent-priming

Love you? Hate you? Maybe it's both: Evidence that significant others trigger bivalent-priming

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Abstract

Psychoanalytic theory, clinical practice, and intuition all suggest that human beings can be profoundly ambivalent about significant others. However, experimental psychology has commonly assessed automatic evaluations as either positive or negative, but not both simultaneously. Experiment 1 showed that activating the mental representation of a significant other facilitated the processing of both positive *and* negative information (*bivalent-priming*). In contrast, replicating past work, activating the mental representation of an object facilitated classification of only valence-congruent targets and inhibited classification of valence-incongruent targets (*univalent-priming*). Experiment 2 demonstrated that these results were not attributable to alternative accounts, such as arousal. The results support the long-held proposition that significant others automatically facilitate coactivation of positive and negative and that commonly used relative (good vs. bad) measures of automatic evaluation may not capture this affective complexity.

KEYWORDS: Automatic evaluation, Priming, Significant Others, Ambivalence, Cognitive Processes

"*Dogs love their friends and bite their enemies, quite unlike people, who are incapable of pure love and always have to mix love and hate.*" Sigmund Freud quoted by Anna Freud (1939)

Western and Eastern literature, psychoanalytically-oriented theorists (e.g., S. Freud, 1911; Klein, Heimann, & Money-Kyrle, 1966), modern clinical practice (e.g., Linehan, 1993; Miller, Rathus, & Linehan, 2007), and human intuition have long supposed the simultaneous presence of love and hate towards personally significant individuals (e.g., parent, partner, close friend). However, commonly used implicit measures typically assess automatic evaluations on a continuum ranging from negative to positive, but not both simultaneously (e.g., Priester & Petty, 1996). Although *relative* (good vs. bad) measures of automatic evaluations have high validity, they are not designed to address the proposition that mental representations of significant others may automatically trigger both positive *and* negative reactions. The present research provides the first empirical test of this hypothesis.

The proposition that the same mental representation can be linked in memory with both positive and negative evaluations is consistent with several theories that view the human mind as being highly attuned to both rewarding and punishing aspects of the environment (e.g., Carver & White, 1994; Gray, 1987; Metcalfe & Mischel, 1999). According to the evaluative space model (e.g., Cacioppo & Bernston, 1994), evaluation of positivity and negativity reflect two distinct and separable neural systems: one that is sensitive to appetitive cues and the other to aversive cues. These initial evaluations occur in parallel and independently.

One implication of this independence is that positive and negative evaluations can be activated simultaneously by an event, place, or object (e.g., Norris, Gollan, Berntson, & Cacioppo, 2010). For example, Grabenhorst, Rolls, Margot, da Silva, and Velazco (2007) showed that an odor with both pleasant *and* unpleasant attributes simultaneously activated the separable neural circuitries involved in positive and negative evaluations. This pattern of activation occurred even though the overall subjective evaluation of the mixed odor was positive.

Significant others may be a natural class of stimuli that is likely to trigger simultaneous activation of both positive *and* negative evaluations. A significant other can be trusted, admired,

liked, and loved, but at times this same person may elicit feelings of fear, disrespect, dislike, and even hate. And although a significant other can be a source of reward, comfort, and approval (e.g., Depue & Morrone-Strupinsky, 2005; Harlow, 1958), the same person, even if beloved, is commonly also a source of pain, discomfort, and disapproval (e.g., Downey & Feldman, 1996; Murray & Holmes, 2009).

Naturally, both relationship research and clinical psychology have theorized that the residue of these affectively complex interactions are encoded in memory (e.g., Andersen & Cole, 1990; Murray, 1999; Murray, Holmes, & Pinkus, 2010; Zayas, Günaydýn, & Shoda, 2014). Surprisingly, however, to date, the proposition that the mental representation of a significant other activates both positive *and* negative automatic evaluations has not been directly tested. This gap in the literature is understandable for a number of historical, methodological, and theoretical reasons.

First, research in this tradition has typically focused on ambivalence as an uncommon (and at times pathological) psychological state, *not* as a normative (typical) process. For example, ambivalence has been shown to be elicited by members of one's social network towards whom one is aware of holding mixed feelings, such as a volatile or unsatisfying partner (e.g., Berk & Andersen, 2008; Holt-Lunstad, Uchino, Smith, Olson-Cerny, & Nealey-Moore, 2003; Uchino, Holt-Lunstad, Smith, & Bloor, 2004). Moreover, much of the research has shown that ambivalent responding is experienced by only a small subset of the population, such as individuals with anxious attachment (e.g., Ainsworth, Blehar, Waters, & Wall, 1978; Pietromonaco & Barrett, 1997), borderline personality disorder (e.g., Linehan, 1993), low self-esteem (e.g., Graham & Clark, 2006), or history of physical and emotional abuse (e.g., Berenson & Andersen, 2006).

Second, work on bivalent responding has relied primarily on *explicit* self-report measures to assess consciously felt evaluations (e.g., Pietromonaco & Barrett, 1997). Explicit self-reports, however, do not necessarily assess *automatic* evaluative processes operating in the initial stages of perception, which may or may not be subjectively felt (e.g., Ross & Nisbett, 1991). Indeed, dissociations between explicit and automatic evaluations are especially likely for attitudes about

highly sensitive matters, such as significant others (e.g., McNulty, Olson, Meltzer, & Shaffer, 2013; Murray, Gomillion, Holmes, Harris, & Lamarche, 2013b).

Third, much of the research has assessed evaluations on unidimensional indices that generate a single index based on the contrast between positive and negative evaluations, rather than two separate indices representing positive and negative evaluations independently. This practice likely reflects the prevalence of unidimensional theoretical models in which others are judged as warm vs. cold, trustworthy vs. untrustworthy, or supportive vs. rejecting (e.g., Abele & Wojciszke, 2007; Fiske, Cuddy, & Glick, 2007; Peeters & Czapinski, 1990). Consequently, studies have operationalized ambivalence as a series of alternating positive and negative states (e.g., Mikulincer, Shaver, Bar-on, & Ein-dor, 2010) or as incongruity between emotions and behaviors (e.g., Berenson & Andersen, 2006).

The use of unidimensional indices is not limited to explicit measures. Relationship science uses unidimensional implicit to assess automatic evaluations of significant others as good vs. bad (e.g., Banse, 1999, 2001; Banse & Kowalick, 2007; Dewitte, De Houwer, & Buysse, 2008; Fincham, Garnier, Gano-Phillips, & Osborne, 1995; Imhoff & Banse, 2010; McNulty et al., 2013; Murray et al., 2010; Murray et al., 2013; Scinta & Gable, 2007; Zayas & Shoda, 2005). One exception is work by Lee et al. (2010) that separately assessed automatic associations between partner and good, and partner and bad. However, their implicit measure did not include a relatively neutral prime to serve as a reference point from which to assess whether a concept *activates* or *inhibits* (decreases) an evaluation in memory. Thus, although Lee et al. (2010) showed that individuals with strong negative (and weak positive) automatic evaluations were more likely to breakup, it was not possible to ascertain whether the results reflect that these individuals showed *greater activation* or *less inhibition* of negative evaluations.

Finally, a few experimental social psychological studies have sought to assess coactivation of positive and negative elicited by the same stimulus. But, these studies too do not directly address the primary question of the present work. For example, de Liver et al. (2007; Study 2) used a sequential priming paradigm (SPP; Fazio, Sanbonmatsu, Powell, & Kardes, 1986) to investigate the automatic evaluations elicited by objects about which participants had

conscious experiences of ambivalence, such as those for which they explicitly acknowledged possessing strong mixed feelings. Moreover, they used a SPP designed to assess the evaluation→concept link, rather than the concept→evaluation link. Specifically, in typical SPP, a *prime* stimulus representing the concept of interest is presented first, and it is quickly replaced by a generic unambiguously valenced *target* stimulus. Participants' task is to classify targets as either good or bad. In de Liver and colleagues' study, the prime-target ordering was reversed, such that valenced attributes served as primes and the concept of interest (ambivalent stimuli) served as target words to be classified as good or bad. Thus, de Liver et al.'s work did not directly examine the phenomenon that the same concept can automatically and simultaneously activate positive and negative evaluations (the concept→evaluation link).

Also relevant, Petty et al. (2006; Study 1) focused on evaluations triggered by stimuli that were artificially created to elicit positive and negative evaluations. Specifically, they created initial evaluations toward an unknown person, subsequently presented information that contradicted (or not) the initially created evaluations, and finally used a SPP to assess the automatic evaluations elicited by the unknown person. After being primed with the unknown person, participants who had received mixed information classified subsequently presented positive and negative targets equally as fast, whereas participants who had received consistent information classified valence-congruent targets faster than valence-incongruent targets. The RTs for participants in the consistent information condition were then used as a benchmark for inferring whether participants in the mixed information condition showed activation (if RTs were similar to RTs to congruent targets in the consistent information condition) or inhibition (if RTs were similar to RTs to incongruent targets in the consistent information condition). The results were consistent with the possibility that in the mixed information condition the same prime (an unknown person) activated both positive and negative evaluations. However, because Petty et al. did not use a neutral prime as a reference point and instead inferred activation by comparing RTs *across* participants, alternative explanations are possible. For example, being exposed to conflicting information may increase arousal, which in turn might have led to faster RTs to *any* target words (not just valenced targets) (Blascovich, 1992).

Present Research

Despite the richness of the literature, the question remains: Does activating the mental representation of a significant other in turn activate both positive *and* negative automatic evaluations? The present research aimed to directly test this question. To our knowledge, no study has demonstrated that the same stimulus activates, compared to a neutral stimulus, the classification of both positive and negative targets. Moreover, we reasoned that such a pattern of automatic coactivation should not be a rare occurrence—i.e., a state experienced only by a few people or elicited only under unusual circumstances. Rather, reflecting the ubiquity and complex nature of relationships with significant others, we predicted that a pattern of coactivation of positive and negative automatic evaluations was normative (common) in two respects. First, we predicted that bivalent responding would be triggered not only by a clearly disliked significant person, but also by a clearly and unequivocally liked significant person. Second, we predicted that if ambivalence is a common, typical occurrence (rather than a unique, and possibly pathological state), then coactivation of positive and negative should occur for majority of individuals in our samples.

Experiment 1

Using the SPP (Fazio et al., 1986), we primed participants with names of significant individuals who were liked or disliked, or with names of significant objects that were liked or disliked. We assessed the extent to which primes subsequently facilitated (vs. inhibited) the processing of positively and negatively valenced targets, compared to trials involving letter string primes. Given past work (e.g., Fazio et al., 1986), object primes were expected to trigger univalent-priming, i.e., facilitate the classification of valence-congruent targets and inhibit the classification of valence-incongruent targets. In contrast, we predicted that significant other primes would trigger bivalent-priming, i.e., facilitate the classification of both positive and negative targets.

Method

Participants and Design

Thirty-seven participants (22 females) were randomly assigned to either the significant object (n=17) or significant other (n=22) condition.[1] The experimental design was a 2(prime type: significant other vs. object) × 2(prime valence: liked vs. disliked) × 2(target valence: positive vs. negative) mixed-model with the last two factors within-subjects.

Procedures

Participants provided the name of a *liked object/person* and the name of a *disliked object/person*. In the object condition, participants were instructed to "think of one object in your life that you hold ***strong positive [negative] feelings*** towards, that you like very much [do not like very much], and that you feel very good about [do not feel very good about]." In the significant other condition, participants were instructed to "think of one "significant person" that *you like most [least]. A person in your life you feel very good [do not feel very good] about, and hold* ***positive [negative] feelings*** *towards*." The types of people participants named as significant others (either liked or disliked) were mothers, fathers, partners, friends, and ex-partners. Examples of objects were sunset, tennis, spiders and liver.

In a separate sample, we confirmed that participants did not possess mixed explicit feelings towards the significant others as assessed by self-reported attitudes. Specifically, after generating names of a liked object/person and a disliked object/person, they responded to the following questions: "How strong are your POSITIVE feelings about this person [object]?" and "How strong are your NEGATIVE feelings about this person [object]?" (1="*not at all*"; 5="*somewhat*"; 9="*extremely*"). Self-reported attitudes of significant others showed no evidence of conscious awareness of possessing both positive and negative evaluations. Specifically, participants explicitly endorsed strong positive feelings (M=8.49) and weak negative feelings (M=1.90) towards liked persons, and strong positive feelings (M=8.10) and weak negative feelings (M=2.57) towards liked objects. These values were all significantly (ps<10^{-9}) different from the scale midpoint.[2] Similarly, participants explicitly endorsed strong negative feelings

(*M*=7.20), and weak positive feelings (*M*=3.83) towards disliked persons, and strong negative feelings (*M*=8.07), and weak positive feelings (*M*=1.90) towards disliked objects. These values were again significantly (*p*s<.001) different from the scale midpoint.

Participants performed two SPPs (using Inquisit software). In the significant other condition, participants performed one SPP in which primes were either the name of the liked person or a letter string, and another SPP in which primes were either the name of a disliked person or a letter string.[3] Although letter strings may not provide a true neutral point, they have been used effectively as a comparison condition in past research (e.g., de Liver et al., 2007; Fazio et al., 1986). Procedures in the object condition were identical, except that primes referred to liked and disliked objects.

Each trial consisted of a prime (200 ms), blank screen (100 ms), and target that remained on the screen until participants categorized the valence of the target as "pleasant" vs. "unpleasant" as quickly and as accurately as possible by pressing one of two computer keys. The intertrial interval was 700 ms. Following Fazio et al.'s (1986) original procedures, immediately after categorizing the target, participants recited the prime word into a microphone attached to their headphones. Each prime was displayed an equal number of times followed by a positively or negatively valenced target word randomly selected from a list of 10 positive (e.g., *lucky*) and 10 negative (e.g., *cancer*) words.[4] Each of the two SPPs consisted of an 18-trial practice block and four 30-trial data collection blocks.

Procedural Variables

The order in which participants generated liked and disliked concepts and performed the SPPs was counterbalanced across participants. For each participant, the order of response key assignment was reversed after the first SPP with the response key assignment order counterbalanced across participants. Letter string stimuli (i.e., "*BBBB,*" "*SSSS*") were counterbalanced across the two SPPs. In both experiments, none of these procedural variables produced statistically significant main effects or interactions.

Data Reduction Procedures

Following standard procedures (Greenwald, McGhee, & Schwartz, 1998), we excluded the first two trials of each block, trials that were incorrectly categorized, and trials with RTs outside the expected range (<150 ms or >4999 ms). On average, 3% of all trials were excluded in both experiments. RTs <300 ms and >3000 ms were recoded to 300 ms and 3000 ms, respectively. Statistical significance tests and effect sizes were computed using log-transformed RTs.

Results and Discussion

For each SPP, facilitation-inhibition of positive targets was computed by subtracting the average RT for *valenced prime→positive* trials from the average RT for *letter string→positive* trials (Fazio et al., 1986). Similarly, facilitation-inhibition of negative targets was computed by subtracting the average RT for *valenced prime→negative* trials from the average RT for the *letter string→negative* trials.

As expected, object primes produced univalent-priming (Figure 1, left panel). Namely, liked object primes facilitated the classification of positive targets, and inhibited the classification of negative targets, whereas disliked object primes facilitated the classification of negative targets and inhibited the classification of positive targets. This congruence effect was reflected in a significant prime valence × target valence interaction, $F(1,16)=9.02$, $p<.008$, $\eta^2=.36$.

In contrast, consistent with predictions, significant other primes facilitated the processing of *both* positive *and* negative targets (Figure 1, right panel). Specifically, significant other primes facilitated target classification even when the prime valence and target valence were incongruent (2nd and 3rd bars). Moreover, whereas liked object primes inhibited the processing of negative targets, liked significant other primes facilitated the processing of negative targets, $t(37)=2.24$ $p<.03$. Similarly, whereas disliked object primes inhibited the processing of positive targets, disliked significant other primes facilitated the processing of positive targets, $t(37)=2.08$, $p<.05$. The overall facilitation effects (i.e., averaged across all combinations of prime and target valence) for significant other primes was significantly greater than for object primes,

$F(1,37)=9.44$, $p<.005$, $\eta^2=.20$. Analyses of RTs on trials involving letter string primes revealed no main effect or interactions involving prime type.

The bivalent-priming effects triggered by significant other primes co-existed with the traditional prime valence × target valence interaction, $F(1,21)=10.32$, $p<.004$, $\eta^2=.33$, reflecting that a liked significant other facilitated the processing of positive targets more than negative targets, whereas a disliked person facilitated the processing of negative targets more than positive targets. There were no other statistically significant interactions with prime type.

Experiment 2

Experiment 1 showed that activating the mental representation of significant others facilitated the subsequent processing of both positive *and* negative information (bivalent-priming), consistent with the proposition that both positive and negative evaluations were activated. Alternatively, could the results be due to the name of a significant other triggering arousal or an alerting response, similar to hearing one's own name (e.g., Moray, 1959; Wood & Cowan, 1995), or producing social facilitation (e.g., Blascovich, 1992), all of which could speed up performance on a simple classification task?

Experiment 2 investigated these alternative explanations by examining the facilitatory effects of significant other primes on a gender categorization task. A gender categorization task affords such a test because if these alternative accounts apply, significant other primes should facilitate classification according to any attribute, including gender. For example, if the bivalent-priming effect observed in Experiment 1 arises because the name of a significant other results in higher arousal, then significant other primes should produce not only bivalent-priming but also bi-gender priming (i.e., facilitate classification of both gender congruent targets *and* gender incongruent targets). If, however, a significant other prime produces only bivalent-priming but not bi-gender priming, then this would be evidence against a general arousal, alerting response, or social facilitation account, and in favor of the hypothesis that significant others specifically facilitate the processing of positive and negative evaluations.

Method

Participants and Design

Forty participants (30 females) performed either two evaluative-SPPs (*n*=22) or two gender-SPPs (*n*=18).[5]

Procedures

All participants named four significant others: one female and one male liked significant other and one female and one male disliked significant other. Instructions were similar to those used in Experiment 1, except that now the gender of the significant other was specified. They then performed the SPPs. Participants in the evaluative-SPP condition performed one SPP in which primes were names of the liked male and female or two letter strings, and another SPP in which primes were names of the disliked male and female or two letter strings. For both of these evaluative SPPs, the targets were the positively or negatively valenced words used as targets in Experiment 1. Participants in the gender-SPP condition performed one SPP in which primes referred to the liked and disliked males or two letter strings, and another SPP in which primes referred to liked and disliked females or two letter strings. For both of these gender-SPPs, the target words were chosen to be unambiguously female (e.g., *woman*) or male (e.g., *man*) in meaning. Participants categorized the gender denoted by target words as *female* or *male*. In all SPPs, each prime was displayed an equal number of times followed by a target randomly selected from the two task-relevant word lists. After a 16-trial practice block, participants completed two SPPs, each consisting of two 40-trial data collection blocks.

Data Reduction Procedures And Data Analytic Strategy

Data reduction and computation of *facilitation-inhibition scores* were the same as those used in Experiment 1. To compare performance across the two classification tasks, we identified facilitation-inhibition scores as *congruent* when primes and targets shared either the same valence or same gender, or *incongruent* when primes and targets were of opposite valence or opposite gender. The facilitation-inhibition scores were analyzed using a 2(task type: evaluative vs. gender) × 2(prime: [liked/female] vs. [disliked/male]) × 2(target congruency: [liked/female] vs. [disliked/male]) mixed-model ANOVA with the first factor between-subjects.

Results and Discussion

The results provide evidence that significant others produce bivalent-priming, but do not simply facilitate classification of any target words. Replicating the findings of Experiment 1, on the evaluative-SPP, significant other primes facilitated the classification of positive *and* negative targets (Figure 2, left panel). In contrast, on the gender-SPP, even though the primes were names of the same significant people used in the evaluative-SPP, facilitation occurred only on congruent trials, and inhibition occurred on incongruent trials (Figure 2, right panel). Critically, on the evaluative-SPP, significant other primes produced facilitation even on incongruent trials, whereas on the gender-SPP, these same primes produced inhibition on incongruent trials. This difference in facilitation effects between the tasks on incongruent trials was statistically significant, $t(38)=3.70$, $p=.001$, $d=1.16$. So was the difference in the overall facilitation effect (i.e., averaged across all combinations of primes and targets), $F(1,38)=10.15$, $p<.003$, $\eta^2=.21$.

General Discussion

Research in relationship science and clinical psychology has long theorized that relationships with significant others are affectively complex and that, reflecting this affective complexity, mental representations of significant others are associated with positive *and* negative evaluations. Experiment 1 provides the first empirical evidence that mental representations of significant others prime both positive and negative automatic evaluations.

Experiment 2 replicates the bivalent priming effect and provides evidence against a number of alternative explanations. Specifically, the names of significant others used as primes were *identical* in both SPPs; the only difference between the tasks was that in one the target classification was positive vs. negative and in the other the target classification was male vs. female. Thus, if the bivalent-priming effect was the result of general facilitation (e.g., triggered by general arousal, social facilitation), significant other primes should have facilitated performance on both tasks regardless of prime-target congruence. This was not the case. Significant other primes did not produce overall facilitation of the target classification in the gender-SPP. Similarly, if the bivalent-priming effects reflected the fact that representations of significant others are central in a person's network and activate a number of other concepts,

significant others should have primed the processing of a variety of attributes, including gender. Again, this pattern was not observed. Finally, the results did not support a response-facilitation account, in which arousal enhances a dominant response (Allen, Kenrick, Linder, & McCall, 1989). If the dominant automatic evaluation associated with liked persons was univalently positive, then facilitation of this response would have led to greater *inhibition* of negative target words. Instead, liked significant others led to facilitation of negative targets.

Contributions to Literature

The present findings both complement and extend knowledge in diverse literatures.

Bivalent nature of significant other mental representations

In relationship science, implicit measures commonly assess *relative* (good vs. bad) evaluations (e.g., McNulty et al., 2013; Murray et al., 2010; Zayas & Shoda, 2005). This practice, however, does not afford a test of the longstanding hypothesis that activating the significant other representation in memory leads to the activation of positive *and* negative evaluations. By using an implicit measure that de-coupled positivity and negativity, the present research provides the first empirical evidence for this proposition. These findings highlight the independence of positive and negative evaluations, suggest that they are not necessarily activated in a reciprocal fashion, and underscore the benefit of assessing positive and negative evaluations separately.

The results also contribute to the attitudinal area. Past work has focused on the co-activation of positive and negative evaluations elicited by highly specialized objects (e.g., objects towards which individuals reported holding mixed feelings or persons that had been associated through experimental manipulations with positive and negative information; de Liver et al., 2007; Petty et al., 2006). Moreover, the priming procedures used in these studies allowed for alternative explanations. To our knowledge, the present work is the first to use the SPP to demonstrate that the *same* concept activates, compared to a neutral concept, the classification of both positive and negative targets.

Implicit bivalent priming as a normative process

Typically, implicit ambivalence has been studied as a rare occurrence, only experienced

by a few people or elicited under unusual circumstances. The present work offers empirical evidence that this may not always be the case. When it comes to significant others, bivalent priming appears to be a more normative (common) occurrence. Specifically, significant others who were nominated as clearly and unequivocally *liked* triggered both positive and negative automatic evaluations, and so too did significant others who were nominated as clearly disliked. The fact that a significant other who is clearly liked triggered bivalent priming suggests that the phenomenon does not simply characterize the mental representation of people towards whom one holds ambivalent, mixed feelings.

Furthermore, rather than being a unique (and possibly pathological) state experienced by a small subset of the population (e.g., anxiously attached), in our experiments, the majority of the sample showed evidence that significant persons elicited bivalent priming. In Experiment 1, liked significant person primes facilitated the classification of negative targets for 64% of participants and disliked significant person primes facilitated the classification of positive targets again for 64% of participants. Likewise, in Experiment 2, liked significant person primes facilitated the classification of negative targets for 64% of participants and disliked significant person primes facilitated classification of positive targets for 59% of participants. Thus, bivalent priming characterized the majority of the sample.

Implicit bivalent priming in the absence of subjectively experienced ambivalence

Much of past research on ambivalence has focused on subjectively experienced ambivalence in which participants were consciously aware of possessing mixed or ambivalent feelings (e.g., Berk & Andersen, 2008; de Liver, et al., 2007; Uchino et al., 2004). The present findings are notable because participants were not subjectively aware of possessing both positive and negative evaluative responses towards the significant other. This suggests the possibility that while subjectively experienced ambivalence may be relatively uncommon, *automatic* bivalent evaluations triggered by significant persons may be more common (though unnoticed).

The fact that bivalent priming occurred in the absence of conscious awareness of ambivalence highlights the disassociation between the overall univalent affective tone of a significant other as reflected in self-reported attitudes, on the one hand, and the bivalent nature of

the automatic evaluations, on the other. One explanation for the observed dissociation is that implicit measures are more attuned to the realities of people's close relationships. Consistent with this possibility, in a longitudinal study by Murray et al. (2010), daily experiences in newly weds' marriages were reflected in implicit, but not explicit, evaluations of partners assessed four years later. Relatedly, the dissociation may reflect motivational processes in which people transform loved ones' faults into virtues (e.g., Murray, 1999; Murray et al., 2013b) or otherwise spontaneously inhibit negative evaluations (e.g., Cunningham et al., 2004). Even the most satisfying relationships disappoint, and even the most responsive partners are unavailable at times (Murray et al., 2013a) and the interdependence of close relationships often gives rise to doubt and feelings of uncertainty (e.g., Murray, 1999; Murray et al., 2013a). Thus, individuals employ cognitive mechanisms to construe their reality in the most positive light, which may contribute to dissociations.

Conclusion

Providing support for Freud's intuitions about the love/hate experience with significant others, the present research shows that activating the mental representation of significant others facilitates both positive and negative automatic evaluations.

Footnotes

[1]In both experiments, only participants with average RTs <2000 ms and error rates <10% were included in the analyses.

[2]These findings may appear inconsistent with other work showing that individuals are able to list positive and negative traits of a significant other (e.g., Andersen, Reznik, & Manzella, 1996). However, listing negative traits and holding explicit negative feelings are not the same. For example, one could list *spendthrift* as a negative trait, and evaluate the significant other positively.

[3]Evaluations of liked objects/persons were assessed separately from evaluations of disliked objects/persons to maximize the activation of the *specific* representation (vs. broader category to which both prime concepts belong).

[4]To ensure that the results were not due to the high frequency of prime presentation, we computed facilitation-inhibition scores for each block separately and entered block as a within-subjects factor. There was no main effect of, or interactions with, block (ps>.11).

[5]Participants completed both the evaluative- and gender-SPP with task order counterbalanced. The task order×prime valence×target valence interaction was statistically significant. Thus, only data from the SPP performed first are reported.

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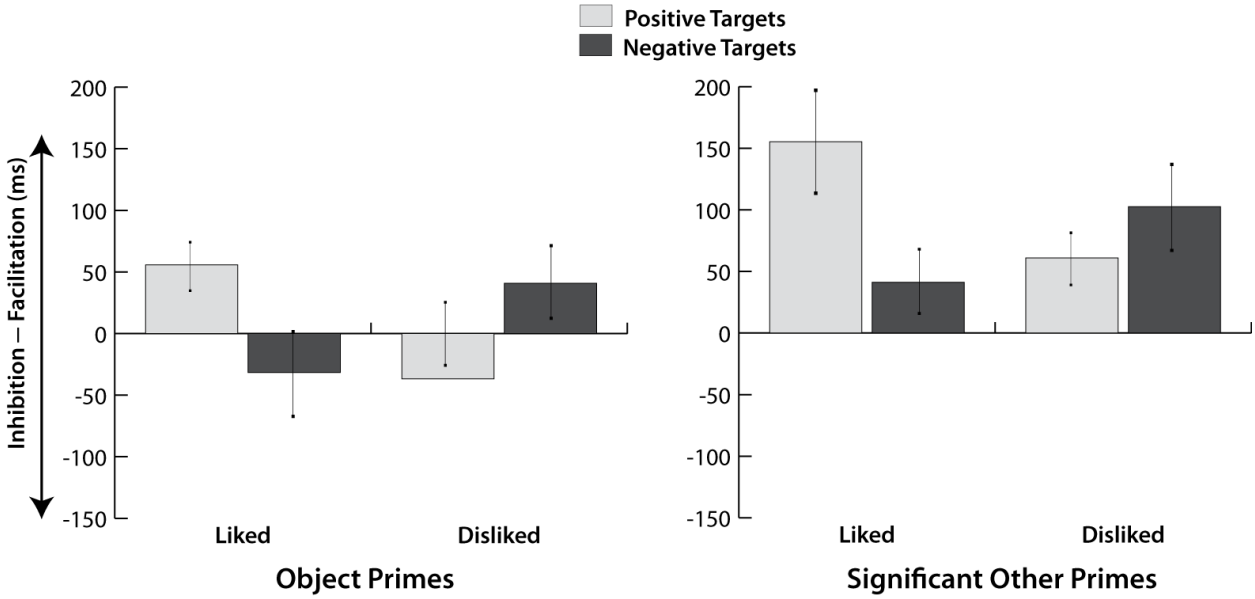
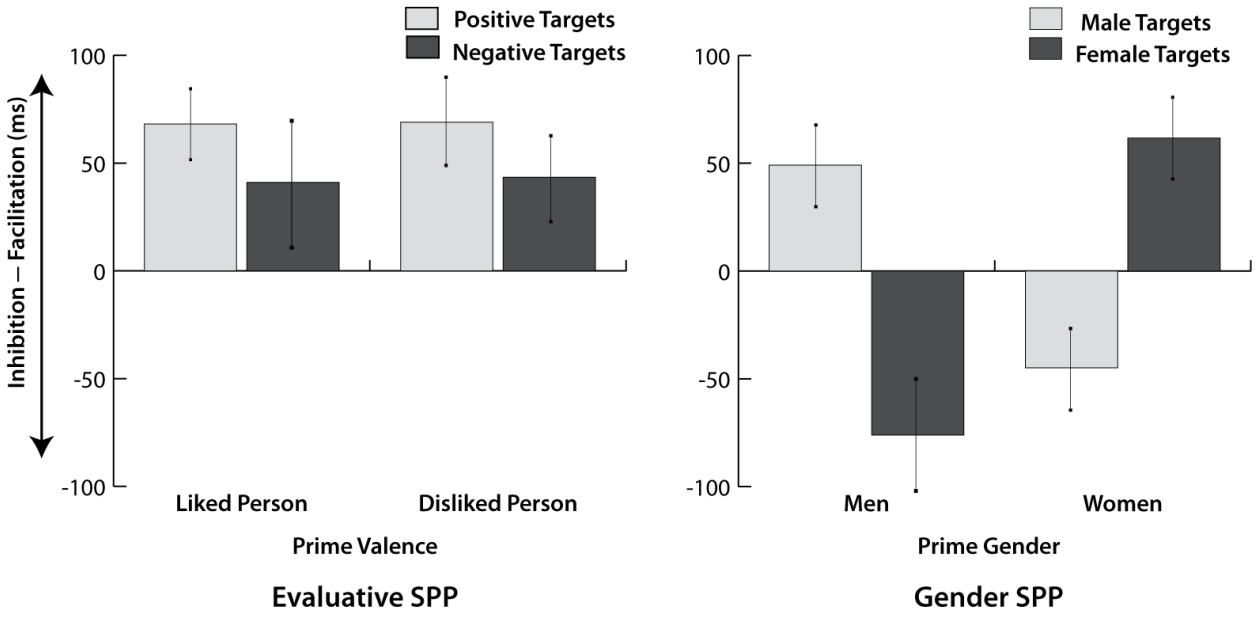
Figure 1. Bars represent the facilitation-inhibition scores (milliseconds) for object primes (left panel) and significant other primes (right panel) as a function of prime valence (liked vs. disliked) and target valence (positive vs. negative) (Experiment 1). Error bars represent ±1 SE.



Note. Positive numbers indicate that primes facilitated target classification. Negative numbers indicate that primes inhibited target classification. Means and SEs were computed using log-transformed RTs, and were transformed back to milliseconds for illustration.

Figure 2. Bars represent the facilitation-inhibition scores (milliseconds) for significant other primes in the evaluative sequential priming paradigm (SPP; left panel) and gender-SPP (right panel) as a function of prime category and target category (Experiment 2). Error bars represent ±1 SE.



Note. Positive numbers indicate that primes facilitated target classification. Negative numbers indicate that primes inhibited target classification. Means and SEs were computed using log-transformed RTs, and were transformed back to milliseconds for illustration.