

The hidden sides of self-esteem: Two dimensions of implicit self-esteem and their relation to narcissistic reactions [☆]

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Abstract

Implicit, or nonconscious, self-esteem is often assumed to involve a unidimensional evaluation of the self. Our studies demonstrate that implicit self-esteem is in fact multifaceted and can be divided into at least two dimensions, which we term self-liking and self-attractiveness. Among participants for whom narcissistic thoughts and feelings were experimentally activated, we found that the two dimensions of implicit self-esteem were differentially associated with self-reported narcissism (Study 1) and feelings of aggressiveness (Study 2). In particular, narcissistic reactions were predicted by the combination of a high level of implicit self-attractiveness and a low level of implicit self-liking. These findings add to the growing understanding of the complexities of implicit self-esteem. Crown copyright © 2006 Published by Elsevier Inc. All rights reserved.

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Recent developments in the study of implicit processes, including implicit self-esteem, have typically proceeded on the assumption that such processes are relatively simplistic. Implicit self-esteem, which is regarded as a highly efficient evaluation of the self occurring automatically and outside of consciousness (e.g., Greenwald & Banaji, 1995), is generally portrayed as involving a simple good–bad judgment of, or reaction to, the self. This unidimensional formulation is dubious for at least two reasons. First, a substantial amount of research on explicit self-esteem has demonstrated that self-attitudes are composed of at least two dimensions, often centered on issues broadly defined as agency (e.g., dominance, competency) versus communion

(e.g., inclusion, attachment), which predict different thoughts, feelings, and behaviors (e.g., Kirkpatrick, Waugh, Valencia, & Webster, 2002; Leary, Cottrell, & Phillips, 2001; Tafarodi & Swann, 1995). Second, an important study comparing seven implicit self-esteem measures showed that none of them correlated significantly with each other (Bosson, Swann, & Pennebaker, 2000). While this latter finding might reflect assessment inadequacies or differences in method variance across assessments of a unitary construct, it might also reflect adequate measurement of a construct that is in fact complex and multidimensional (Bosson et al., 2000).

Research into the possibility that implicit self-esteem is multifaceted has likely been hampered by the difficulty in precisely measuring implicit constructs. Indeed, due to implicit self-esteem's nonconscious nature, its investigation requires indirect measures. For example, one standard method for measuring implicit self-esteem is based on the finding that people generally display a marked preference for their own initials compared to other letters (Nuttin, 1985, 1987). Consequently, a measure of implicit self-esteem based on individual differences in the magnitude of this

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effect was proposed by various researchers (e.g., Kitayama & Karasawa, 1997; Koole, Dijksterhuis, & van Knippenberg, 2001; Koole & Pelham, 2003), leading to the name-letter task (NLT) in which individuals rate each of the twenty-six letters of the English alphabet. Individuals' ratings of their initials versus other letters are then compared; those who rate their initials higher than other letters of the alphabet are considered to possess high implicit self-esteem. This approach assesses self-evaluations that may occur entirely outside of awareness, while simultaneously minimizing the social-desirability biases often present in explicit measures (Fazio & Olson, 2003). Nevertheless, although this and other measures of implicit self-esteem are predictive of behavior (e.g., Spalding & Hardin, 1999), it remains difficult to specify the thought processes underlying people's responses.

We adopted a novel experimental approach to test the possible multidimensionality of implicit self-esteem. Early on in the history of implicit measures, McClelland and colleagues devised an effective method for investigating what, specifically, an implicit measure is assessing (McClelland, Atkinson, Clark, & Lowell, 1953). In developing a scoring system for need for achievement themes in the Thematic Apperception Test (TAT), McClelland and colleagues activated an achievement motive in some participants by telling them that their performance on the current test would reveal their intelligence and leadership capabilities. Participants were then given a series of TAT picture cues to write stories about. Results showed that activating the achievement motive caused participants to generate stories that included many more allusions to "doing things better" than were found in the stories written by participants who had not had the achievement motive activated. Thus, by activating a particular state of mind, McClelland and colleagues were able to explore the effects that such a state of mind had on TAT storytelling, which consequently allowed them to devise a scoring system for the TAT sensitive to such themes.

We adapted the activation approach to examine the implicit constructs assessed by two different versions of the NLT. Interestingly, our initial review of studies revealed this name-letter task to have involved rating either the *attractiveness* of letters (e.g., Dijksterhuis, 2004) or the *liking* of letters (e.g., Bosson et al., 2000). Although judgments of attractiveness and liking bear some similarities, overall they are qualitatively different and are consequently not interchangeable. Indeed, we propose that "liking" and "attractiveness" reflect separate domains of implicit self-esteem. More specifically, we hypothesize that while the liking instructions might elicit an implicit communal-based self-evaluation that we term "self-liking," the attractiveness instructions might elicit an implicit agency-based self-evaluation that we term "self-attractiveness." If so, then using the two versions of this popular measure as if they are isomorphic indicators of a unidimensional construct would be unwise and might lead to inappropriate conclusions.

There are good reasons to suspect that self-ratings of attractiveness might tap into agentic concerns of status, dominance, and/or competency, relative to the more communal rating of self-liking. Past research examining the relationship between attractiveness and agency has revealed the so-called "attractiveness halo effect," whereby highly attractive individuals are ascribed positive traits such as intelligence and competence (for a review, see Zebrowitz, Hall, Murphy, & Rhodes, 2002). Furthermore, research examining the relationship between status and attractiveness in naturalistic long-term groups found physical attractiveness to be related to higher social status in men (Anderson, John, Keltner, & Kring, 2001). In addition, although the attractiveness version of the NLT has not been used as often as the liking version, results from an earlier pilot study conducted in our lab provide some initial evidence that the two versions of the NLT might indeed assess different dimensions of implicit self-esteem (Sakellaropoulou & Baldwin, 2003). Participants completed each of the two versions of the NLT twice, with a distracter task in between the two sets, along with various other measures including one assessing explicit self-competency. Although the two versions of the NLT were moderately correlated, in test-retest regression analyses each version of the NLT was the only significant predictor of its corresponding post-test. Moreover, in a different set of analyses, the attractiveness NLT emerged as a unique and significant predictor of explicit self-competency.¹

In the current studies, we sought to tease apart the proposed self-liking and self-attractiveness aspects of implicit self-esteem through activation of a particular state of mind, since such a methodology had previously helped McClelland and colleagues to discern the achievement motive in storytelling prompted by simple picture cues. In particular, we activated a narcissistic frame of mind and observed its influence on the two versions of the NLT. Narcissism was chosen because it accentuates the distinction between the agentic and communal dimensions of self-regard. For example, chronically narcissistic individuals tend to perceive themselves as above average on agentic traits (e.g., intellectual skills) but below average on communal traits (e.g., agreeableness; Campbell, Rudich, & Sedikides, 2002). Simply put, they think highly of themselves but do not actually like themselves very much. Narcissists' hunger for dominance and status has been further revealed in their preference for romantic partners possessing highly positive traits that encourage status, over partners displaying highly caring, other-oriented qualities (Campbell, 1999). The self-

¹ It is also worth noting that researchers have likewise used two different versions of the implicit association test (IAT), one consisting of affective positive (e.g., kindness, sunrise) and negative (e.g., assault, poison) words, and the other containing evaluative positive (e.g., splendid, worthy) and negative (e.g., ashamed, vile) words (Greenwald & Farnham, 2000). Although initial studies showed that both versions assess implicit self-esteem, it seems plausible that these two approaches to the IAT may in fact be assessing somewhat different aspects of implicit self-esteem.

worth of narcissism appears highly contingent on superiority over others (e.g., Baldwin & Baccus, 2004), and narcissists often pursue their relentless desire for admiration and attention by boasting, competing, or belittling others. Further highlighting the contrast between agency and communion, it has been observed that narcissistic individuals tend to aggress against others when their positively exaggerated view of self is challenged or threatened (e.g., Baumeister, Bushman, & Campbell, 2000; Bushman & Baumeister, 1998). Kirkpatrick and colleagues (2002) explored this narcissism–aggression link further, revealing this aggressive response to be differentially predicted by the two aspects of (explicit) self-esteem: These researchers found that whereas self-perceived superiority was positively related to aggression following an ego-threat, self-liking based in social inclusion was negatively related to it.

Based on the foregoing research, we derived two hypotheses: First, examining in the implicit realm the dissociation of the two self-evaluative dimensions recognized by Campbell and colleagues, we hypothesized that the combination of high self-attractiveness but low self-liking would be a recipe for narcissism and aggressiveness. Alternatively, in keeping with the work of Kirkpatrick and colleagues, we wondered if high self-attractiveness on its own might predict narcissism and aggressiveness. In either case, a dissociation between self-attractiveness and self-liking aspects of implicit self-esteem would demonstrate the multidimensionality of the construct.

In two experiments, we sought to activate a narcissistic frame of mind in some participants, either by having them visualize a time that they had impressed others (Study 1), or by having them read a list of highly positive trait words (Study 2). These narcissism-activation conditions were compared with acceptance-activation conditions, chosen to provide positive feelings (as in the narcissism-activation manipulation) but in this case derived from feelings of warm, non-contingent social approval rather than superiority and admiration (see, e.g., Baldwin & Holmes, 1987; Baldwin & Sinclair, 1996 for similar primes). For these conditions participants either visualized a time that they had felt accepted (Study 1), or read a list of non-contingent acceptance words (Study 2). We then had all participants complete the two different versions of the NLT, along with measures of narcissism and, in Study 2, aggressiveness. We hypothesized that the two instructional sets for the NLT would tap into different aspects of implicit self-esteem, differentially related to the activated highly contingent narcissistic frame of mind as compared to the non-contingent acceptance frame of mind.

Study 1

Method

Participants

Participants were 40 (18 men, 22 women) English-speaking university students from McGill University. Age ranged from 17 to 43 years with a mean of 20.75 years.

Materials and procedure

Following informed consent, participants in the narcissism-activation condition were asked to visualize a specific time when they felt that they had impressed someone. In the acceptance-activation condition, participants were asked to visualize a specific time that they had felt accepted and/or included: a socially positive experience without the narcissistic elements, including superiority and admiration, of the narcissism visualization.² Participants were directed to take as much time as they needed to get the requested memory in their mind, then to take another minute to focus in on the memory and get it as clear as possible, to briefly relive it, and to then hold the image and the accompanying feelings in their mind for another few seconds. Following this visualization task, participants completed the two versions of the name-letter task. They evaluated each letter of the alphabet, rating the letters on a 9-point scale either for their likeability (1 = *dislike very much*; 9 = *like very much*) or for their attractiveness (1 = *not at all attractive*; 9 = *extremely attractive*). The order in which the two NLTs were presented was counterbalanced across participants. In each case, NLT scores were calculated by adjusting the participant's rating of his or her own initials by ratings for other letters, as well as by the average rating other participants without those initials gave those letters (e.g., Koole et al., 2001; see Baccus, Baldwin, & Packer, 2004, for detailed scoring procedures). Next, participants completed the 40-item Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979), the most widely used self-report measure of narcissism, which involves choosing either the narcissistic response (e.g., "I am an extraordinary person") or the non-narcissistic response (e.g., "I am much like everybody else") from pairs of statements. The NPI has previously demonstrated extensive evidence of construct validity and internal reliability (e.g., Raskin & Terry, 1988), and indeed the internal reliability of the forty items in this study was good (Cronbach's $\alpha = 0.81$). Finally, participants briefly reported on the content of their visualizations.

Results and discussion

The correlation between the two NLT measures was moderately high ($r = .62$), indicating that similar constructs were being assessed (likely inflated by shared method variance),

² For exploratory purposes, in both studies we attempted to create a neutral control condition to be devoid of any social content (e.g., "Retrieve a memory of yourself where you were doing something relatively neutral that is part of your daily routine"). The results of these conditions were uninformative, in part because of greater variance than in the other two conditions. Moreover, in Study 1, the visualizations generated in this condition were highly variable in their content, ranging from "Checking my email in my room and browsing around the Internet" to "Me and my friends were drinking tea together in a restaurant—talking and joking." This condition was dropped from analyses and will not be mentioned further. Future research would benefit from a carefully designed neutral baseline condition to allow for firmer conclusions regarding the specific effects of different activation conditions.

but much variance remained unshared between measures. A regression analysis was conducted, regressing the NPI score on to the two centered NLT scores, activation condition (narcissism versus acceptance), and all interaction terms. (Preliminary analyses showed no moderating effects of gender, so gender was left out of the following analyses.) A significant main effect of condition emerged, showing NPI scores for participants in the narcissism-activation condition ($M=18.80$) to be significantly higher than those of participants in the acceptance-activation condition ($M=15.57$), $t(32)=2.63, p=.013$. Thus, visualizing an instance in which one had impressed someone did activate narcissistic thoughts and feelings. There were no other main effects or two-way interactions: In particular, the hypothesis that narcissism might be directly related to attractiveness name-letter ratings, either overall or only in the narcissism-activation condition, was not supported. However, a significant three-way interaction emerged between condition, attractiveness name-letter ratings, and liking name-letter ratings, $t(32)=-2.61, p=.014$. To explore this interaction further, separate regressions were conducted for each condition, in which the NPI score was regressed on to the two NLT scores and their interaction. Nothing significant emerged for participants in the acceptance-activation condition. In the narcissism-activation condition, however, a significant two-way interaction emerged between the two NLTs, $t(16)=-2.27, p=.038$. As can be seen in Fig. 1, analysis of the simple slopes (Aiken & West, 1991) revealed a marginally significant negative relation between liking NLT scores and NPI scores for participants with high attractiveness NLT scores (+1 SD; $\beta=-1.78$), $t(16)=-1.78, p=.093$. In contrast, no significant relationship emerged among participants with low attractiveness NLT scores. After imagining an experience of impressing others, then, elevated feelings of narcissism were predicted by the combination of high implicit self-attractiveness and low implicit self-liking. This result parallels findings from research on agentic and communal traits (Campbell et al., 2002), and clearly supports the premise of there being at least two dimensions to implicit self-esteem.

Study 2

We conducted a second study, in which we used a different approach to activate a narcissistic frame of mind. Although the visualization task in Study 1 successfully activated a narcissistic state of mind, examination of the specific content of participants' visualization experiences revealed that many different forms of "impressing someone" and "feeling accepted" had been recalled. To increase experimental control and at the same time test a second type of prime, participants in Study 2 were instead presented with a series of words to stimulate specific aspects of superiority. In addition, to try to more sensitively assess this momentary narcissistic frame of mind, we devised a shorter, state measure of narcissism that we used in place of the full-length, trait (and therefore presumably relatively stable) measure of narcissism. Finally, in accordance with research indicating that self-esteem related to personal superiority is often associated with aggressiveness, participants were given a self-report measure of aggressiveness used in previous research (Baccus et al., 2004).

Method

Participants

Participants were 134 (61 men, 73 women) English-speaking university students from McGill University. Age ranged from 18 to 55 years with a mean of 22.07 years.

Materials and procedure

Participants completed a computer-priming procedure, which involved sitting at a computer and responding to primes during a bogus lexical decision task (LDT). The LDT involved quickly making word–nonword judgments on a series of letter strings. In the narcissism-activation condition, fifteen positive trait terms, including the words *beautiful* and *smart* (see Dijksterhuis, 2004), served as the 'word' letter-strings. In the acceptance-activation condition, we generated fifteen acceptance terms, including the words

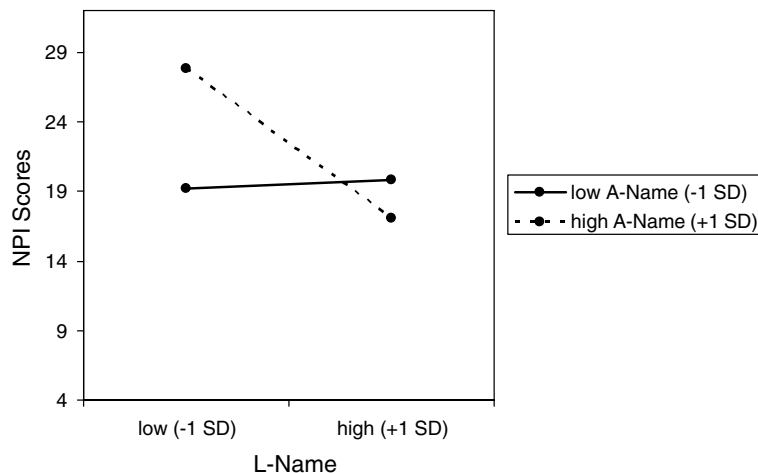


Fig. 1. Narcissism as a function of attractiveness NLT and liking NLT for participants in the narcissism-activation condition. NLT, name-letter task; A-Name, attractiveness name-letter task; L-Name, liking name-letter task; NPI, Narcissistic Personality Inventory.

accepted and wanted, to serve as positive social letter-strings without narcissistic content.

Following the LDT priming task, participants completed the two versions of the NLT. Next, participants completed a self-report aggression measure that was adapted from behavioral research (Taylor, 1967) and used in previous research on implicit self-esteem (Baccus et al., 2004). Briefly, participants are asked to imagine competing with another student who proceeds to insult and reject them. Participants are told that they won the competition and consequently can ‘punish’ the other student with a blast of noise. They are therefore asked to indicate how loud and for how long they feel like setting, and actually would set, the noise blast (see Baccus et al., 2004 for details). This measure has previously shown good internal reliability (Baccus et al., 2004), and its internal reliability in this study was likewise good (Cronbach’s $\alpha = 0.90$).

Finally, participants completed a brief, 7-item state narcissism measure that was adapted from the NPI by taking the highest loading item from each of seven first-order principal components of the chronic measure (Raskin & Terry, 1988) that could easily be reworded in a state form (e.g., “Right now, I feel I deserve more than other people do”). The internal reliability of the seven items was acceptable (Cronbach’s $\alpha = 0.70$).

Results and discussion

The correlation between the two NLT measures was again relatively high ($r = .73$), supporting the notion that they both were assessing similar constructs, but with approximately half the variance remaining unshared.³ A regression analysis was conducted, regressing the state narcissism score on to the two centered NLT scores, activation condition (narcissism versus acceptance), and all interaction terms. (Preliminary analyses showed no moderating effects of gender, so gender was left out of the following analyses.) A significant main effect of condition emerged, showing state narcissism scores for participants in the narcissism-activation condition ($M = 29.22$) to be significantly higher than those of participants in the acceptance-activation condition ($M = 26.24$), $t(126) = 2.99$, $p = .003$. Thus, being primed with positive trait words did manage to acti-

vate narcissistic thoughts and feelings. There were no other main effects or two-way interactions, however, consistent with the findings in Study 1, a marginally significant three-way interaction emerged between condition, attractiveness name-letter ratings, and liking name-letter ratings, $t(126) = -1.73$, $p = .086$. To examine the consistency of this pattern with the findings in Study 1, separate regressions were conducted for each condition, in which the state narcissism score was regressed onto the two NLT scores and their interaction. Nothing significant emerged for participants in the acceptance-activation condition. In the narcissism-activation condition, a marginally significant two-way interaction emerged between the two NLTs, $t(63) = -1.76$, $p = .083$. Analysis of the simple slopes failed to reveal any significant relationships, however, consistent with Study 1, high levels of state narcissism were observed in participants high in name-letter attractiveness but low in name-letter liking, although participants high in name-letter liking but low in name-letter attractiveness also had high levels of state narcissism. Because the regression effects were only marginally significant, these results must be interpreted cautiously.⁴

To assess the impact of the activated narcissistic frame of mind on aggressiveness, a similar regression analysis was conducted. Aggression scores were significantly higher in the narcissism-activation condition ($M = 39.33$) than in the acceptance-activation condition ($M = 36.75$), $t(126) = 2.29$, $p = .024$. Additionally, a significant three-way interaction emerged between condition, attractiveness name-letter ratings, and liking name-letter ratings, $t(126) = -2.75$, $p = .007$. Separate regressions were conducted for each condition. Nothing significant emerged for participants in the acceptance-activation condition. In the narcissism-activation condition, a significant two-way interaction emerged between the two NLTs, $t(63) = -3.53$, $p = .001$. As can be seen in Fig. 2, analysis of the simple slopes revealed a significant negative relation between liking NLT scores and aggression scores for participants with high attractiveness NLT scores ($+1$ SD; $\beta = -.52$), $t(63) = -2.82$, $p = .007$. In contrast, no significant relationship emerged among participants with low attractiveness NLT scores. After being cued with positive trait terms, then, greater amounts of aggressive thoughts and feelings were predicted by the combination of high implicit self-attractiveness and low implicit self-liking.

A second regression was conducted in which aggression was regressed on to all seven variables used in the previous

³ As a secondary inquiry related to Campbell et al.’s (2002) findings, we thought that the different primes might directly influence the NLTs, such that participants in the narcissism-activation condition would have higher attractiveness name-letter ratings, but lower liking name-letter ratings, than participants in the acceptance-activation condition. In Study 2 this turned out to be partially the case, as the mean liking name-letter ratings were significantly higher for participants in the acceptance-activation condition ($M = 3.24$) than for participants in the narcissism-activation condition ($M = 1.92$), $F(1, 132) = 5.12$, $p = .025$. There was no significant difference between conditions on mean attractiveness name-letter ratings, however. Moreover, there were no significant differences between conditions on either mean attractiveness or liking name-letter ratings in Study 1 (all $F_s < 1$). Given this lack of consistency across measures and studies, we are reluctant to draw strong conclusions from this finding until it can be replicated.

⁴ In light of the comparatively weak narcissism results in Study 2, we conducted a meta-analysis using the Stouffer method (Rosenthal, 1984) on the narcissism dependent variable to determine the significance levels (aggregated over the two studies) of the three-way interaction, as well as both the two-way interaction and the critical simple slope in the narcissism-activation condition. The composite Stouffer z -score for both the three-way and the two-way interaction were significant ($z = -3.09$, $p = .002$ and $z = -2.70$, $p = .007$, respectively), although the composite Stouffer z -score for the critical simple slope was still only marginal ($z = -1.64$, $p = .101$). The significant interaction effects in this meta-analysis strengthen the case that the two versions of the NLT are meaningfully different.

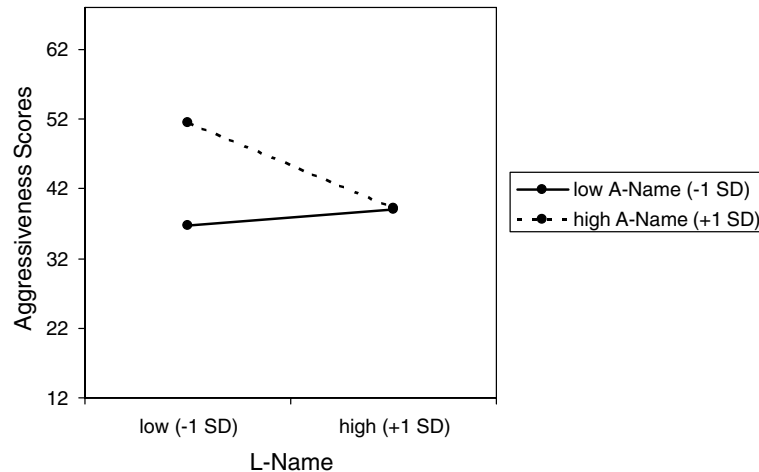


Fig. 2. Aggressiveness as a function of attractiveness NLT and liking NLT for participants in the narcissism-activation condition. NLT, name-letter task; A-Name, attractiveness name-letter task; L-Name, liking name-letter task.

analysis as well as state narcissism. The three-way interaction remained significant, $t(125) = -2.54, p = .012$. Thus, the combination of high implicit self-attractiveness, but low implicit self-liking proved to predict aggressive thoughts and feelings over and above any effect of explicit state narcissism.

General discussion

Our results support the view of implicit self-esteem as multifaceted, rather than unidimensional. Two different versions of the NLT, in which participants rated either the attractiveness or likeability of letters including their initials, were only imperfectly correlated. The unshared variance was meaningful: The priming approach adopted in these studies showed that the two versions had divergent associations with narcissistic states of mind. Narcissistic thoughts and feelings, induced by two different priming manipulations, were associated with a particular pattern in which a glowing implicit appraisal of self-attractiveness was combined with a lack of self-liking. This finding echoes similar findings in research on explicit self-ratings, in which chronic narcissism is related to positive self-views on dimensions of agency or superiority, but negative self-views on dimensions of communion or social inclusion (Campbell et al., 2002). Furthermore, greater aggressiveness in Study 2 was also associated with this particular pattern in which positive implicit self-attractiveness was combined with a lack of self-liking, echoing the research on explicit self-esteem that shows that feeling superior to others promotes aggressive urges, while feeling socially included by others diminishes them (Kirkpatrick et al., 2002). These patterns of association involving implicit self-esteem, narcissism, and aggression were not evident in the acceptance-activation conditions, where the accessibility of non-contingent social acceptance presumably reduced the felt need to project one's superiority and dominance to earn self-worth and social esteem. The divergent effects of these primes raise the possibility of examining the impact of many other contextual factors (e.g., social comparison feedback, self-aware-

ness manipulations, or ego threat, as well as relatively "neutral" control conditions to examine chronic individual differences) on various aspects of implicit self-esteem.

The primary theoretical point addressed by this pair of studies is that implicit self-esteem is multidimensional. Equally important, however, is the empirical point that these two name-letter tasks are not addressing the same aspect of implicit self-esteem: whereas the liking version of the name-letter task seems to access the degree to which individuals like and accept themselves at a nonconscious level, the attractiveness version seems to gauge the degree to which individuals admire themselves at a nonconscious level. The results of our studies, showing interaction effects between dimensions, underline the theoretical and empirical importance of recognizing that the semantic difference between these two versions of the name-letter task leads to systematic and distinct implicit self-evaluations.

The current findings also add to previous research in which situational or conditioning manipulations were used to influence implicit self-esteem. Baccus et al. (2004) found higher scores on the *liking* version of the NLT following a conditioning task that repeatedly associated the self-concept with smiling, accepting faces. In a parallel line of research, Dijksterhuis (2004) found higher scores on the *attractiveness* version of the NLT following a conditioning task that associated the self-concept with positive trait words. Neither of these studies included both versions of the NLT, so comparisons between them were not possible. However, our results suggest that these studies likely manipulated different dimensions of implicit self-esteem.

Earlier research by Bosson et al. (2000), documenting a lack of correlation between different measures of implicit self-esteem, drew attention to several unresolved questions regarding this nonconscious form of self-worth. Our results add to the growing understanding of implicit self-esteem, and also its relation to narcissism (see also Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003). In particular, it now seems clear that different measures should by no means be considered interchangeable. Even when employ-

ing two highly similar measures that use the same response modalities, dissociations emerged depending on the specific question being asked. Implicit self-esteem is clearly far more complex than a unidimensional, good/bad judgment.

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