

Intuition and the Correspondence Between Implicit and Explicit Self-Esteem

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Four studies tested whether the perceived validity of intuition increases the correspondence between implicit and explicit self-esteem. Studies 1 and 2 found, with 2 different measures of implicit self-esteem, that people who chronically view their intuition as valid have more consistent implicit and explicit self-esteem. In contrast, people with relatively low faith in their intuition had a negative relation between implicit and explicit self-esteem, suggesting that they may overcorrect their explicit self-views for the potential bias posed by implicit self-esteem. In Studies 3 and 4, participants who were induced to view their intuition as valid reported explicit self-views (self-evaluations made under time pressure, or state self-esteem) that were more consistent with their implicit self-esteem. These results suggest that people experience implicit self-esteem as intuitive evaluations. The correspondence between implicit and explicit self-esteem among individuals who view their intuition as valid may suggest that these individuals incorporate implicit self-esteem into their explicit self-views.

Keywords: intuition, implicit, explicit, self-esteem, attitudes

Imagine that you are deciding whether to buy a particular used car. There are many factors you might consider when making your decision: mileage, safety ratings, appearance, and so on. Imagine further that you have considered these factors and have, overall, a positive impression of the car. What if, at the same time, you have a negative gut reaction? Something about the car makes you feel uneasy. How might this affect your overall attitude toward the car? In a sense, you have two distinct sources of evaluation that, in this instance, push you in opposite directions: rational analysis and intuition.

This distinction is relatively familiar in the context of problem solving and decision making (Hammond, 1996; Hogarth, 2001). But can these sources of evaluation inform models of self-esteem (SE)? Does SE derive, on one hand, from deliberative (although probably not unbiased) consideration of accomplishments and failings and, on the other hand, from relatively intuitive reactions? We argue that it does, and that this distinction maps closely onto the distinction between explicit and implicit SE. Moreover, by considering intuition, we may be better able to specify when, and for what kinds of people, explicit and implicit SE correspond with each other.

Implicit and Explicit Attitudes and SE

Attitudes can be activated automatically (Bargh, Chaiken, Raymond, & Hymes, 1996; Fazio, Sanbonmatsu, Powell, & Kardes, 1986). Objects in the environment can trigger evaluations quickly, efficiently, and with little conscious guidance. Some theorists have thus proposed that people can hold two distinct attitudes toward the same attitude object at explicit and implicit levels (e.g., Wilson, Lindsey, & Schooler, 2000). Implicit attitudes correspond, roughly, to automatically activated attitudes and are considered to be distinct from explicit attitudes, which are more deliberative and conscious in nature. Implicit attitudes are measured indirectly, often by reaction time measures that are difficult to control (Fazio & Olson, 2003; Kihlstrom, 2004), whereas explicit attitudes are measured directly by self-report scales. The same is true of self-attitudes. People may hold distinct explicit and implicit SE (Farnham, Greenwald, & Banaji, 1999; Greenwald & Banaji, 1995). Although there is controversy about whether implicitly and explicitly measured attitudes represent distinct constructs (Fazio & Olson, 2003; Petty, Wheeler, & Tormala, 2003), the two do demonstrate some discriminant validity.

Implicit and explicit measures of SE, for example, are generally uncorrelated (Bosson, Swann, & Pennebaker, 2000). They do, however, predict relevant outcomes, albeit distinct ones. Explicit SE has, for example, predicted reports of anxiety for participants about to undergo a sensitive interview, whereas implicit SE has predicted nonverbal indicators of anxiety (Spalding & Hardin, 1999). In addition, specific combinations of implicit and explicit SE may predict unique outcomes. People with high explicit but low implicit SE appear to be more defensive and self-enhancing than people with high explicit and high implicit SE (Bosson, Brown, Zeigler-Hill, & Swann, 2003; Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003; Jordan, Spencer, & Zanna, 2005; McGregor & Marigold, 2003; McGregor, Nail, Marigold, & Kang, 2005; Zeigler-Hill, 2006). People with low explicit but high

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This research was supported by a grant from the Social Sciences and Humanities Research Council of Canada to Christian H. Jordan. We thank Ian McGregor, Steve Spencer, and Mark Zanna for insightful comments on an earlier version of this article.

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implicit SE, in contrast, may be particularly responsive to self-relevant events. Among students with low explicit SE, those with high implicit SE reported more positive self-views shortly after an academic success and more negative self-views after a failure (Logel, Spencer, Wood, Holmes, & Zanna, 2006).

Despite such findings, many aspects of implicit SE remain poorly understood. How, if at all, do people experience implicit SE? Are people ever aware of their implicit SE? It is widely assumed that implicit attitudes and SE are nonconscious, but no clear evidence supports this assumption (Fazio & Olson, 2003; Gawronski, Hofmann, & Wilbur, 2006). Even if implicit attitudes are automatic in the sense of being efficient and unintentionally activated, this does not necessarily mean that they are nonconscious (Bargh, 1994; Moors & De Houwer, 2006). Indeed, some recent models of implicit attitudes posit that people are generally aware of them (Gawronski & Bodenhausen, 2006; Petty & Briñol, 2006, in press). Understanding whether and how people experience implicit SE is thus a timely issue.

This issue, moreover, dovetails with another fundamental question: "When, under what conditions, and for what kind of people, are implicit and explicit measures related?" (Fazio & Olson, 2003, p. 304; see also Nosek, 2005). If people are aware of their implicit attitudes, they may incorporate them into their explicit, overtly expressed attitudes, increasing the correspondence between the two (Hofmann, Gschwendner, & Schmitt, 2005; Kihlstrom, 2004). Whether awareness increases explicit-implicit attitude consistency may depend, however, on whether people view their implicit attitudes as valid (as discussed further below; see also Gawronski & Bodenhausen, 2006; Hofmann, Gschwendner, & Schmitt, 2005). But in what sense might people be aware of their implicit attitudes?

Intuition and Dual-Systems Theories

Numerous theorists have posited that people process information through two independent, although interacting, cognitive systems (e.g., Barrett, Tugade, & Engle, 2004; Carver, 2005; Epstein, 1990; Hinton, 1990; Sloman, 1996; Smith & DeCoster, 2000; Smolensky, 1988; Strack & Deutsch, 2004). One system is fast acting and operates largely through automatic processes—associative connections and spreading activation. This *associative* system is highly efficient, but relatively inflexible. The other system, in contrast, is slower and operates largely through controlled processes—symbolic rules that rely on deliberative reasoning. This *rule-based* system is not efficient, but it is highly flexible. Within this framework, the associative system may produce implicit attitudes, whereas the rule-based system may produce explicit attitudes (Carver, 2005; Smith & DeCoster, 2000; Strack & Deutsch, 2004).

People may thus experience explicit and implicit attitudes differently. Reasoning within the rule-based system is believed to be largely transparent and introspectively accessible. People are thought to be generally aware of the processes that contribute to their attitudes within this system and to be able to articulate, at least roughly, reasons for their attitudes. One could, for example, point to the importance of safety ratings and mileage in forming an attitude toward a car. The associative system, in contrast, operates preconsciously. People are sometimes aware of its products but not of its processes (Sloman, 1996; Smith & DeCoster, 2000;

Smolensky, 1988). Responses generated by this system may subjectively "pop" into one's head and thus be experienced as intuition (Hinton, 1990; Hogarth, 2001; Lieberman, 2000; Smith & DeCoster, 2000; Smolensky, 1988). Implicit attitudes and SE may thus be experienced as intuitive evaluations.

Some limited evidence supports the link between implicit attitudes and intuition. Hofmann, Gawronski, Gschwendner, Le, and Schmitt (2005) had judges rate attitude domains in terms of the spontaneity with which people report attitudes. Specifically, they rated, for each domain, how much respondents "rely on their gut reactions when asked to report their attitudes" (p. 1373). In a subsequent meta-analysis, they found higher correlations between implicit and explicit attitudes in domains for which people rely more heavily on gut feelings.

Thus, people may experience implicit attitudes as intuition, and this awareness may allow greater consistency between implicit and explicit attitudes. If people are conscious of implicit attitudes, they may use them in forming their explicit attitudes (Hofmann, Gschwendner, & Schmitt, 2005). A negative gut reaction to a car may thus temper an otherwise positive attitude toward that car. This would increase the correspondence between implicit and explicit attitudes.

It is important to note, however, that implicit attitudes might only influence explicit attitudes to the extent that they are perceived to be valid (Gawronski & Bodenhausen, 2006; Petty & Briñol, 2006, in press). That is, if implicit attitudes, experienced as intuitive evaluations, are perceived to be valid, they may be incorporated into explicit attitudes. We thus examined whether the perceived validity of intuition increases the correspondence between implicit and explicit SE. We predicted that the more people perceive their intuition to be valid, the greater would be the correspondence between their implicit and explicit SE.

Study 1

Pelham et al. (2005) reported indirect evidence that intuition increases the correspondence between implicit and explicit SE. They found that women show greater implicit-explicit SE consistency than do men and suggested that this finding reflects women's greater focus on affect and intuition, although they did not directly measure this focus. It is thus desirable to more directly test the role of intuition in the correspondence between implicit and explicit self-esteem by measuring individual differences in how much people trust their intuition. We did so in Study 1 by using Epstein and Pacini's (1999) Rational-Experiential Inventory (REI), which includes a subscale measuring Faith in Intuition, or the extent to which people rely on and are engaged by intuition. We expected people higher in Faith in Intuition to show closer correspondence between implicit and explicit SE.

We also examined the REI subscale measuring Need for Cognition, although our predictions for it were less straightforward. On the one hand, the processes we are specifying require cognitive engagement and should be enhanced by Need for Cognition. The more cognitively engaged people are, the more likely they should be to actively rely on implicit SE when reporting explicit self-views, if they trust their intuition. On the other hand, Need for Cognition increases overall cognitive elaboration and may also increase reliance on other sources of information when reporting explicit SE. To the extent that these other considerations diverge

from implicit SE in their implications, they will dilute the correspondence between implicit and explicit SE (Gawronski & Bodenhausen, 2006). Indeed, Need for Cognition is associated with less correspondence between implicit and explicit prejudices (Florack, Scarabis, & Bless, 2001). We thus included Need for Cognition in a relatively exploratory manner.

Method

Participants

Sixty-eight female undergraduates enrolled in psychology courses participated in exchange for course credit. For this initial study, we included only female participants to create a more homogeneous sample, which should provide a more sensitive test of our predictions (Aronson, Ellsworth, Carlsmith, & Gonzales, 1990). Three participants had error rates of more than 20% on the Implicit Association Test (IAT; described below) and were excluded from analyses (Greenwald, McGhee, & Schwartz, 1998). One participant scored more than 3 standard deviations from the mean on a primary dependent measure and was also excluded.¹ Results are reported for the remaining 64 participants.

Materials and Procedure

Up to 8 participants at a time participated in sessions, although they were seated at individual workstations and did not interact with each other. Participants were met by a male experimenter who described the study as an investigation of “personality and perceptual styles.”

Need for Cognition and Faith in Intuition. Participants first completed the short form of the REI, including subscales measuring Need for Cognition and Faith in Intuition (Pacini & Epstein, 1999).² For the Need for Cognition subscale, respondents rated their agreement with 12 items such as “I have a logical mind,” “I enjoy problems that require hard thinking,” and “I am not a very analytical thinker” (reversed). For the Faith in Intuition subscale, respondents rated their agreement with 12 items such as “I suspect my hunches are often inaccurate” (reversed), “If I were to rely on my ‘gut feelings,’ I would often make mistakes” (reversed), and “I like to rely on my intuitive impressions.” Responses were made on 5-point scales ranging from 1 (*definitely not true of myself*) to 5 (*definitely true of myself*). These subscales showed good reliability (Cronbach’s α s = .85 for Need for Cognition and .84 for Faith in Intuition). Scores on the items for each subscale were averaged together.

Implicit SE. Participants next completed an IAT measure of implicit SE (Greenwald et al., 1998; Greenwald & Farnham, 2000). The IAT is a computer-based, response-mapping procedure that measures the extent to which respondents associate the self with positive and negative affect. Participants categorized words, as quickly and accurately as possible, along two dimensions: (a) pleasant versus unpleasant words (i.e., *holiday, warmth, friend, smile, sunshine, gift, love, happy, party, and joy* vs. *agony, death, disease, vomit, evil, cockroach, pain, stink, disaster, and garbage*), and (b) self versus object words (i.e., *me, myself, it, and that*). Rather than contrasting self with other, as is commonly done in SE IATs, we contrasted self with the more neutral category of object (Jordan et al., 2003, 2005; McGregor & Jordan, 2007). IAT scores

should thus more clearly reflect evaluations of self rather than evaluations of others (Karpinski, 2004). The target words appeared in the center of the screen, and the category labels appeared in the upper left and right corners of the screen, corresponding to the response keys (*e* and *i*) used to indicate category membership. There were seven blocks of trials altogether. Within each block, words were presented in random order.

Blocks 1, 2, and 5 were practice blocks for which participants made single categorizations (pleasant vs. unpleasant or self vs. object; 20 trials each). In the remaining blocks, participants made both sets of categorizations, on alternate trials, using a single set of response keys. In Block 4, participants used one response key to indicate whether a word belonged to the unpleasant or object category and the other key to indicate whether the word belonged to the pleasant or self category (40 trials). In Block 7, participants used one response key to indicate whether a word belonged to the unpleasant or self category and the other key to indicate whether the word belonged to the pleasant or object category (40 trials). Blocks 3 and 6 were practice blocks (20 trials each) for Blocks 4 and 7, although data from these blocks were used in calculating IAT scores (Greenwald, Nosek, & Banaji, 2003).

The IAT is premised on the logic that individuals with high implicit SE (i.e., strong associations between the self and positive affect) should respond faster when self and pleasant share a response than when self and unpleasant share a response because the positive affect associated with the self interferes with responding in the latter (but not in the former) condition. This facilitation effect serves as an index of implicit SE. We calculated IAT scores using the algorithm advocated by Greenwald et al. (2003), with higher scores indicating higher implicit SE. We calculated split-half reliability for the IAT using separate scores for the critical blocks (4 and 7) and the practice blocks (3 and 6). This revealed that the IAT had acceptable reliability (Spearman-Brown coefficient = .62).

Explicit SE. Last, participants completed two measures of explicit SE: Heatherton and Polivy’s (1991) state SE scale and the Rosenberg (1965) Self-Esteem Scale (RSES). The state SE scale has 20 items (Cronbach’s α = .87) and asks participants to indicate how they feel “right now” with respect to such items as “I feel confident about my abilities” and “I feel others respect and admire me.” Responses were made on 5-point scales ranging from 1 (*not at all*) to 5 (*extremely*). The RSES is a 10-item measure of trait SE (Cronbach’s α = .92). Items include “I feel that I am a person of worth, at least on an equal basis with others,” and “All in all, I am inclined to feel that I am a failure” (reversed). Responses were made on 9-point scales ranging from 1 (*very strongly disagree*) to 9 (*very strongly agree*). Scores on items for each scale were averaged together to create measures of explicit SE.

¹ We also conducted all analyses including this participant. The pattern of results was no different with this outlier retained in the data.

² For the revised version of the scale that we administered, Pacini and Epstein (1999) preferred the terms *rationality* and *experientiality* for the subscales measuring Need for Cognition and Faith in Intuition, respectively. We retain the older terminology here, however, because it corresponds more closely to our theoretical focus in this article.

Results and Discussion

The two measures of explicit SE, the state SE scale and the RSES, correlated highly ($r = .78$). We thus converted scores on these scales into z scores and averaged them into a single index of explicit SE. This index was not correlated with IAT scores. Table 1 presents descriptive statistics and correlations for measures in this study.

To test whether trust in intuition moderates the correspondence between implicit and explicit SE, we conducted a multiple regression analysis predicting explicit SE from IAT scores, Faith in Intuition, and Need for Cognition. These predictors were centered on their means, and interaction terms were generated by creating cross-product vectors (Aiken & West, 1991). We conducted a hierarchical regression, entering main effects first and higher order interactions sequentially on subsequent steps. Consistent with past research (Epstein, Pacini, Denes-Raj, & Heier, 1996), this analysis revealed a main effect of Faith in Intuition: higher Faith in Intuition was associated with higher explicit SE ($\beta = .30$), $t(59) = 2.62$, $p = .01$. The main effect of Need for Cognition, however, was not significant ($\beta = .17$), $t(59) = 1.49$, $p = .14$. None of the interactions involving Need for Cognition were significant either ($t_s < 1$). We thus reduced our model by dropping these interaction terms.

As predicted, however, the interaction between IAT scores and Faith in Intuition predicted explicit SE ($\beta = .32$), $t(59) = 2.81$, $p = .007$. The sign of this interaction was positive, indicating that as Faith in Intuition increased, the relation between implicit and explicit SE became more positive (see Figure 1).³ Testing at the conventional point of 1 SD above the mean of Faith in Intuition (Cohen & Cohen, 1983), there was a marginally significant positive relation between IAT scores and explicit SE ($\beta = .28$), $t(59) = 1.77$, $p = .08$. This effect became significant at 1.1 SD above the mean ($\beta = .33$), $t(59) = 2.00$, $p = .05$. Unexpectedly, at 1 SD below the mean of Faith in Intuition, there was a significant negative relation between IAT scores and explicit SE ($\beta = -.35$), $t(59) = -2.18$, $p = .03$. Thus, as Faith in Intuition increased across women, the relation between implicit and explicit SE became more positive. Women who trust their intuition demonstrated a more positive correspondence between implicit and explicit SE. This is consistent with the idea that such individuals,

Table 1
Correlations and Descriptive Statistics for Measures of Explicit Self-Esteem, Implicit Esteem, Faith in Intuition, and Need for Cognition: Study 1

Measure/statistic	1	2	3	4
1. Explicit self-esteem	—			
2. Implicit self-esteem	-.05	—		
3. Faith in Intuition subscale	.38**	-.10	—	
4. Need for Cognition subscale	.30**	.06	.20	—
<i>M</i>	6.75/3.47	0.61	3.53	3.49
<i>SD</i>	1.35/0.57	0.35	0.56	0.62

Note. Descriptive statistics for the Rosenberg Self-Esteem Scale appear on the left and those for the state self-esteem scale appear on the right in the explicit self-esteem column (Column 1).

** $p < .001$.

through awareness of implicit SE as intuition, incorporate implicit SE into their explicit self-views.

Notably, this effect was asymmetrical. People with high implicit SE (1 SD above the mean) showed large differences in explicit SE, as a function of Faith in Intuition ($\beta = .62$), $t(59) = 3.78$, $p < .001$, but those with low implicit SE (1 SD below the mean) showed no such differences ($\beta = -.01$), $t(59) < 1$. This asymmetry reflects, in part, the overall positive correlation between Faith in Intuition and explicit SE. People with higher explicit SE generally trust their intuition more than do people with low explicit SE (Epstein et al., 1996). Thus, if implicit SE did not moderate the relation between Faith in Intuition and explicit SE, all participants with high Faith in Intuition would be expected to report relatively high explicit SE. The present findings show, however, that whereas this relation is amplified among people with high implicit SE, it is attenuated for people with low implicit SE. Thus, the relatively small differences in explicit SE observed for people with low implicit SE may mask the extent to which they actually temper their self-views as a function of Faith in Intuition.

Also notable is the unanticipated finding that women with relatively low Faith in Intuition showed a negative relation between implicit and explicit SE. An admittedly speculative explanation for this finding is that these women, because they have relatively low faith in their intuition, are more likely to view their intuition as a potential source of bias in evaluation. They may thus adjust or “correct” their reports to control this bias (Hofmann, Gschwendner, & Schmitt, 2005). In fact, they may overcompensate, creating a negative relation between implicit and explicit SE (Wegener & Petty, 1995). (For a description of an analogous process affecting the relation between implicit and explicit prejudice, see Fazio & Olson, 2003; Nosek, 2005.)

Overall, these findings suggest that people experience implicit SE as intuition and react differently to it depending on whether they perceive it to be valid. People who trust their intuition may incorporate implicit SE into explicit SE. People with less faith in intuition, in contrast, may ignore their implicit SE, or even correct for the presumed bias posed by implicit SE, when determining their explicit self-views.

Study 2

In Study 2, we sought to replicate Study 1 and increase its generalizability in two ways: (a) by using a different measure of implicit SE and (b) by including male participants. We used the Implicit Self-Evaluation Survey (ISES; Pelham & Hetts, 1999) as a measure of implicit SE. Because it is a paper-and-pencil measure, we were able to test a much larger sample than in Study 1. This afforded us greater statistical power, which was desirable because a key simple effect—the relation between implicit and explicit self-esteem for individuals high in Faith in Intuition—was only marginally significant at the conventional testing point in Study 1. By including male participants, we were also able to examine whether gender uniquely predicts the correspondence between implicit and explicit SE once trust in intuition is taken into account (cf. Pelham et al., 2005).

³ This interaction is likewise significant when state and trait SE are analyzed separately: For state SE, $\beta = .34$, $t(59) = 2.99$, $p = .004$; for trait SE, $\beta = .26$, $t(59) = 2.24$, $p = .03$.

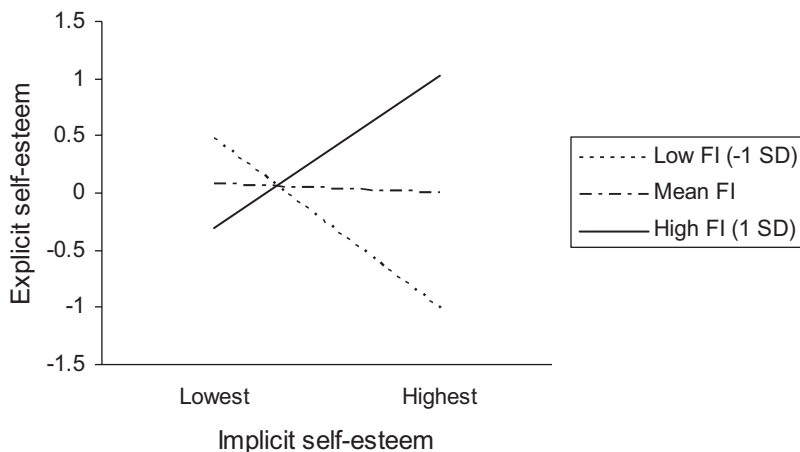


Figure 1. Explicit self-esteem (z -score composite) as a function of Faith in Intuition (FI) and implicit self-esteem (Implicit Association Test scores) in Study 1. Predicted values displayed are for the full range of implicit self-esteem represented in the sample (-0.21 to 1.45). Lines are depicted at the mean and at 1 standard deviation above and below the mean of Faith in Intuition.

Method

Participants

Four hundred eighty-seven undergraduates enrolled in psychology courses participated in exchange for course credit. One participant was excluded from analyses for failing to provide complete information. Results are thus reported for the remaining 486 participants (100 men and 386 women).

Materials and Procedure

Up to 15 participants at a time participated in sessions, although they completed the measures individually and did not interact with each other. Participants were met by a female experimenter who described the study as an investigation of “personality processes.” They were informed that they would complete a series of paper-and-pencil personality measures. In addition to the measures described below, they completed a number of other personality measures that are not relevant to the present study.

Need for Cognition and Faith in Intuition. Participants completed the long form of the REI, including the Need for Cognition and Faith in Intuition subscales. This measure was identical to that used in Study 1, except that each subscale consisted of 20 items rather than 12. Both subscales showed good reliability in the present sample (Cronbach’s $\alpha = .88$ for Need for Cognition and $.89$ for Faith in Intuition).

Implicit SE. Participants also completed the ISES (Pelham & Hetts, 1999). The ISES is a paper-and-pencil version of an evaluative priming measure. It is designed to measure how much one’s self-concept associatively activates positive and negative affect. There are four items on this measure, each consisting of two parts: a self-priming statement followed by a series of word-fragment completions. For each item, participants respond first to a self-priming statement that requires them to think about themselves. These self-priming statements are “It’s important to me to understand myself as well as possible,” “Other people value my abilities

and opinions,” “The way other people treat me has a lot to do with my own unique personality,” and “I am very sensitive to my inner thoughts and feelings.” Participants indicate their agreement with each statement on a 7-point scale with endpoints labeled 1 (*not at all true*) to 7 (*very true*). These statements serve to prime the self-concept.

Each priming statement is followed by a series of word-fragment completions. For each item, participants complete one word fragment three times in a row by forming three different words in the order in which the words occur to them (e.g., “1. __ICE 2. __ICE 3. __ICE”). Each fragment has a target completion that is either positive or negative. Two items have positive target completions (i.e., “NICE” and “GOOD”) and two have negative target completions (i.e., “MEAN” and “HATE”). For participants who have high implicit SE, thinking about the self should activate positive affect. This should, in turn, render positive words more accessible to them and negative words less accessible. Hence, participants with high implicit SE should complete positive target words early in the sequence of word fragments and negative target words late, if at all. Participants receive a score of 1 for each item if the target completion appears in the first serial position, a score of 2 if it appears in the second position, and a score of 3 if it appears in the third position. If the target word is not listed, they receive a score of 4. To calculate ISES scores, the average serial position for the two positive target completions is subtracted from the average serial position for the two negative target completions. Higher scores thus reflect greater accessibility of positive words than negative words when the self is primed, and hence higher implicit SE. Consistent with previous research (e.g., Bosson et al., 2000), the internal consistency of the ISES was low ($\alpha = .47$).

Explicit SE. Participants next completed the RSES exactly as in Study 1, except that they responded using 5-point scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach’s alpha for this measure was $.83$.

Results and Discussion

Implicit and explicit SE were uncorrelated overall. Table 2 presents descriptive statistics and correlations for all measures in Study 2. In addition, female participants ($M = 3.60, SD = 0.60$) reported significantly more Faith in Intuition than did male participants ($M = 3.45, SD = 0.46, t' (196.65) = 2.76, p < .01$).

We conducted a multiple regression analysis predicting explicit SE from ISES scores and Faith in Intuition to test whether a focus on intuition moderates the correspondence between implicit and explicit SE. As in Study 1, Need for Cognition was included in this analysis. We also included gender (dummy coded: female = 0, male = 1). Preliminary analyses indicated that the results were not moderated by gender, and so it was retained only as a control variable. We conducted a hierarchical regression analysis, entering main effects on the first step and higher order interactions on subsequent steps. Consistent with past research (Epstein et al., 1996), this analysis revealed main effects of both Faith in Intuition and Need for Cognition: Higher Faith in Intuition was associated with higher explicit SE ($\beta = .13, t(470) = 2.59, p = .01$; higher Need for Cognition was also associated with higher explicit SE ($\beta = .15, t(470) = 3.00, p = .003$). The main effects of implicit SE and gender were not significant (both $ps > .50$).

Of greater relevance to our predictions, and closely paralleling the results of Study 1, the interaction between implicit SE and Faith in Intuition significantly predicted explicit SE ($\beta = .14, t(470) = 2.67, p = .008$, with a positive sign indicating that as Faith in Intuition increases, the relation between implicit and explicit SE becomes more positive (see Figure 2). Indeed, testing at 1 SD above the mean of Faith in Intuition, there was a significant positive relation between ISES scores and explicit SE ($\beta = 0.17, t(470) = 2.58, p = .01$). This is notable because the same effect was marginally significant in Study 1 when tested at the same point. Meta-analyzing across the two studies, moreover, revealed this simple slope to be strongly significant overall ($z = 2.64, p = .004$). In contrast, at 1 SD below the mean of Faith in Intuition, there was a negative relation between ISES scores and explicit SE ($\beta = -.17, t(470) = -2.58, p = .01$). As in Study 1, this effect was asymmetrical, with greater observed differences in explicit SE among participants with high implicit SE (+1 SD) as a function of Faith in Intuition ($\beta = .33, t(470) = 4.87, p < .001$, than among those with low implicit SE (-1 SD; $\beta = -.02, t(470) < 1$). Again, this asymmetry reflects, in part, the overall positive correlation between Faith in Intuition and explicit SE, which was amplified for

people with high implicit SE but attenuated for those with low implicit SE.

These results were further moderated by Need for Cognition: There was a significant three-way interaction between implicit SE, Faith in Intuition, and Need for Cognition in predicting explicit SE ($\beta = .10, t(470) = 2.04, p = .04$). This three-way interaction indicates that the predicted two-way interaction between Faith in Intuition and implicit SE was apparent for participants who were high in Need for Cognition (+1 SD; $\beta = .24, t(470) = 4.11, p = .001$, and those who scored at the mean of Need for Cognition ($\beta = .14, t(470) = 2.67, p = .008$, but not for those who were low in Need for Cognition (-1 SD; $\beta = .03, t = .39, ns$). Thus, supporting the notion that the two information-processing systems interact to produce responses (Epstein, 1994), some minimum degree of rational engagement may be necessary for implicit SE to influence explicit SE.

The results of Study 2 thus parallel those of Study 1 and further illustrate that people who trust their intuition demonstrate closer correspondence between implicit and explicit SE. Overall, individuals who trust their intuition showed a positive relation between implicit and explicit SE, suggesting that they may incorporate their implicit SE into their explicit self-views. Individuals with relatively low trust in their intuition, in contrast, showed no relation or even a negative relation between implicit and explicit SE. The results of these two studies suggest that people experience implicit SE as intuition. The results of Study 2 further suggest that cognitive engagement may contribute to this effect. People who were moderate to high in Need for Cognition showed more correspondence between implicit and explicit SE to the extent that they perceived their intuition to be valid. People who were low in Need for Cognition, however, did not.

It is also interesting to consider these results in relation to Pelham et al.'s (2005) finding that women demonstrate greater implicit-explicit SE consistency than men. This gender difference is variable across studies (Greenwald & Farnham, 2000; Riketta, 2005). Indeed, we found no such difference in Study 2. Gender did not moderate implicit-explicit SE consistency overall ($p > .50$). We did, however, find that Faith in Intuition moderated the correspondence between implicit and explicit SE for both men and women. This pattern of results suggests that Pelham et al. were correct to highlight the role of intuition in their findings. Because women tend to show greater Faith in Intuition than men, they may often show greater correspondence between implicit and explicit SE. The operative variable, however, appears to be trust in intuition, rather than gender per se.

Table 2
Correlations and Descriptive Statistics for Measures of Explicit Self-Esteem, Implicit Esteem, Faith in Intuition, and Need for Cognition: Study 2

Measure	1	2	3	4
1. Explicit self-esteem	—			
2. Implicit self-esteem	.01	—		
3. Faith in Intuition subscale	.17**	-.05	—	
4. Need for Cognition subscale	.19**	.11*	.21**	—
<i>M</i>	4.12	0.76	3.57	3.56
<i>SD</i>	0.65	1.03	0.58	0.62

* $p < .05$. ** $p < .001$.

Study 3

The results of Studies 1 and 2 suggest that dispositional trust in intuition may lead to increased correspondence between implicit and explicit SE. Over time and repeated experiences, individuals who trust their intuition may incorporate their implicit SE into their explicit SE. We also wondered, however, whether explicit self-views are more dynamically affected by situational factors that influence the degree to which people perceive their intuition as valid. In addition, the correlational nature of Studies 1 and 2 makes it unclear whether trust in intuition causally affects the correspondence between implicit and explicit SE. In Study 3, we thus experimentally induced some participants to perceive their intu-

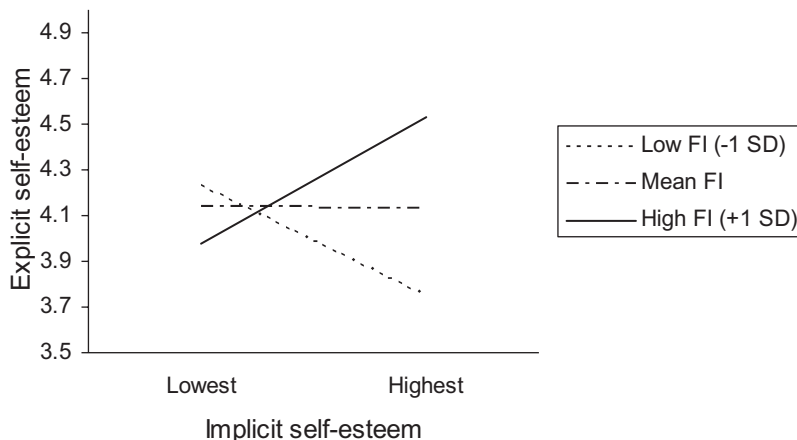


Figure 2. Explicit self-esteem as a function of Faith in Intuition (FI) and implicit self-esteem (Implicit Self-Esteem Scale scores) in Study 2. Predicted values displayed are for the full range of implicit self-esteem represented in the sample (-2.5 to 3.0). Lines are depicted at the mean and at 1 standard deviation above and below the mean of Faith in Intuition.

ition as valid. We expected that these participants would report explicit self-views that are more consistent with their implicit SE.

We reasoned, however, that standard measures of explicit SE might not be sensitive enough to detect this effect because they are highly stable and resistant to situational pressures (e.g., Rosenberg, 1965; Silber & Tippett, 1965). We thus sought a measure of explicit SE that would be highly sensitive to the changes induced by situational differences in the perceived validity of intuition. To this end, we developed a measure of self-evaluations made under time pressure (see also Koole, Dijksterhuis, & van Knippenberg, 2001). By having participants report their explicit self-views quickly, we felt that intuition could more directly affect self-reports. In addition, time pressure should prevent people from defensively distorting self-views, which would make it more difficult for us to detect our predicted effects. We expected that implicit SE would correspond more closely to self-evaluations made under time pressure for individuals induced to trust their intuition.

Method

Participants

Sixty-two undergraduates enrolled in psychology courses participated in exchange for course credit. Three participants had error rates of more than 20% on the IAT, and their data were excluded from analyses. One participant's self-evaluations were not recorded because of a technical failure. Results are reported for the remaining 58 participants (18 men and 40 women). Gender did not influence the results of this study and so is not discussed further.

Materials and Procedure

Up to 8 participants at a time participated in sessions, although they were seated at individual workstations and did not interact with each other. Participants were met by a male experimenter who described the study as an investigation of decision making. They were informed that they would complete a series of computer-

based reaction time tasks and some measures of personality and affective experiences.

Implicit SE. Participants first completed the IAT to measure implicit SE. As in Study 1, it showed acceptable reliability (Spearman-Brown coefficient = .73).

Need for Cognition. Participants next completed Cacioppo and Petty's (1982) Need for Cognition scale.

Manipulation of the perceived validity of rational analysis or intuition. After some practice making speeded self-evaluations (described below), we induced participants to trust either rational analysis or intuition. We did so by having participants make a series of decisions either rationally or intuitively. Half of the participants were told, "There is clear evidence that people who adopt an intuitive approach to decision making are more successful in many areas of their lives." Such individuals were said to excel in business, be popular, and have more successful romantic relationships. The remaining participants were told that "people who adopt a rational approach to decision making" are more successful. We told participants that we were interested in why intuitive (or rational) decision makers are more successful and that we wanted to see how well they made such decisions. To this end, they were shown a series of fictitious personality profiles and were asked to decide whether they would live with each person in a co-ed house. They were asked to make decisions either rationally or intuitively, depending on condition.

Participants in the intuitive condition were encouraged to use gut feelings to decide, relying on how they felt overall about each person. They were asked to work quickly and not think too much about their decision. Participants in the rational condition were instead encouraged to decide carefully, to write down each consideration and why they felt it was important. They were encouraged to list pros and cons. All participants then saw seven personality profiles presented by computer, four of which were for men. Each profile included a short written description and a photograph of the individual. Profiles included information that most people would likely deem to be relevant to deciding (e.g., the person's agreeableness, responsibility, or finances), as well as information

that would likely be more peripheral (e.g., the person's hobbies, tastes in movies, or career aspirations). For example, one profile indicated that "Trent" "treats everyone with the utmost respect and decency" and that he "spends his weekends with his competitive bowling team." Participants indicated whether they would accept each individual as a housemate. Although the instructions to be intuitive or rational applied only to this task, we hoped our manipulation would induce a general trust in intuition or rational analysis that would carry over into subsequent tasks (cf. Mussweiler, 2001).

Speeded self-evaluation task. At the beginning of the study, participants were told that they would rate their own personalities several times during the study. They were told that we were interested in how their ratings related to their decision-making styles and that for some of their responses they would be required to respond quickly.

Before the manipulation, participants practiced the self-evaluation task, although these trials were not identified as practice trials to participants. Adjectives appeared, one at a time, at the center of their computer screens. Participants indicated whether each adjective described them, using a 4-point scale. The 1, 2, 8, and 9 keys at the top of the keyboard corresponded to values of 1 (*extremely uncharacteristic of me*), 2 (*somewhat uncharacteristic of me*), 3 (*somewhat characteristic of me*), and 4 (*extremely characteristic of me*), respectively. Without time pressure, participants first responded to 20 adjectives that were neutral in terms of their social desirability (based on norms provided by Anderson, 1968), such as *modern*, *musical*, *loyal*, and *unique*. This familiarized them with the response scale. They then practiced evaluations under time pressure. They responded to another 29 neutral adjectives and were instructed to respond within 1 s to these adjectives. If they did not, the message "Please try to respond faster!" appeared for 2 s. After this practice, participants received the manipulated focus on intuition or rational analysis described above. We gave this practice before the manipulation so that the critical trials of the self-evaluation task could be completed shortly after the manipulation.

Indeed, immediately after the manipulation, participants completed another 10 neutral trials to refamiliarize themselves with the task. They then completed the critical test trials, consisting of 10 positive adjectives (e.g., *confident*, *likable*, *good*, and *secure*) and 10 negative adjectives (e.g., *incompetent*, *flawed*, *useless*, and *insecure*) derived from a measure of state SE (McFarland & Ross, 1982). Responses to negative adjectives were reversed, and responses to all adjectives were then averaged to create an index of positive self-evaluation (Cronbach's $\alpha = .82$). All responses longer than 1,300 ms (2.9% of responses) or shorter than 300 ms (0.3% of responses) were first excluded.

Manipulation check. Last, participants completed a modified REI. This scale was identical to that used in Study 1, except that participants were asked to "please answer according to how you feel right now at this moment. Do not worry about what you are generally like or how you might have felt in the past." We could thus assess whether our manipulation affected Faith in Intuition and Need for Cognition.

Results and Discussion

Following the manipulation, participants reported more Faith in Intuition in the intuitive condition ($M = 3.70$, $SD = 0.56$) than in

the rational condition ($M = 3.30$, $SD = 0.82$), $t(55) = -2.16$, $p = .03$. The manipulation appeared to primarily target intuition, however. Participants in the intuitive condition ($M = 3.62$, $SD = 0.55$) and in the rational condition ($M = 3.85$, $SD = 0.66$) reported equal Need for Cognition, $t(55) = 1.45$, *ns*.

Overall, participants showed positive IAT scores ($M = .60$, $SD = .50$) and speeded self-evaluations ($M = 3.06$, $SD = 0.31$). Speeded self-evaluations and IAT scores were not, overall, correlated with each other ($r = .15$, *ns*). To test whether situational trust in intuition moderates the correspondence between implicit and explicit SE, we conducted a multiple regression analysis predicting speeded self-evaluations from IAT scores and condition (effect coded as intuitive = 1, rational = -1). We also included premanipulation Need for Cognition in our analyses. Because it did not moderate any of the results, we dropped its interaction terms from the model, retaining it only as a covariate.

We expected a stronger relation between IAT scores and self-evaluations made under time pressure in the intuitive condition relative to the rational condition. Consistent with this prediction, the interaction between IAT and condition was significant ($\beta = .28$), $t(53) = 2.35$, $p = .02$. As can be seen in Figure 3, there was a significant positive relation between IAT scores and self-evaluations in the intuitive condition ($\beta = .55$), $t(53) = 3.04$, $p = .004$, but not in the rational condition ($\beta = -.02$), $t(53) = -0.10$, *ns*. Thus, consistent with the results of Studies 1 and 2, greater trust in intuition increased the correspondence between implicit and explicit SE. In this case, however, trust was experimentally induced, demonstrating a causal role for trust in intuition. In addition, the self-evaluations made in this study were made under time pressure, and so were highly efficient. They may thus be relatively automatic, making the fact that they were influenced by our manipulation particularly remarkable (cf. Koole et al., 2001).

Notably, participants in the rational condition showed no negative relation between implicit and explicit SE, as was found in Studies 1 and 2 for participants with relatively low dispositional faith in intuition. Earlier, we speculated that this negative relation in Studies 1 and 2 might reflect a correction process in which some individuals adjust their explicit SE for the potential bias posed by implicit SE. If that is the case, there may be methodological reasons why it did not occur in the rational condition of the present study. First, the manipulation induced participants in this condition to trust rational analysis, but did not actively discredit intuition. Thus, participants in this condition were not likely to see intuition as a source of bias, and so would not be motivated to correct their self-evaluations for the influence of implicit SE. Second, correction processes are believed to be effortful, controlled processes that should be disrupted by time pressure (Wegener & Petty, 1995). Thus, even if some participants were motivated to correct their self-evaluations, the time pressure in Study 3 likely prevented them from doing so. In Study 4, we sought to remove these methodological constraints on correction. We specifically discredited intuition for some participants and encouraged them to overcome the influence of intuition in their judgments. They also reported their self-evaluations without time pressure.

It is also worth noting that Need for Cognition did not moderate the results of Study 3. Study 2 suggested that some rational engagement may be necessary for implicit SE to affect explicit self-views. In Study 3, however, even under conditions of time pressure, a focus on intuition increased the correspondence between implicit and explicit

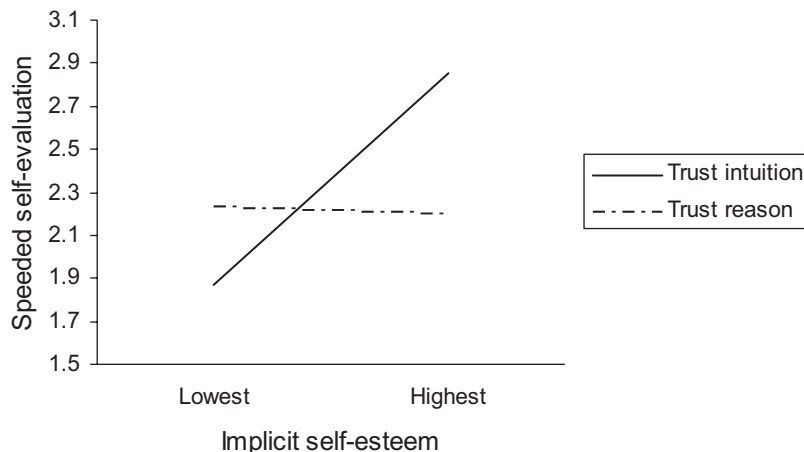


Figure 3. Speeded self-evaluation as a function of the manipulation of the validity of intuition and implicit self-esteem (Implicit Association Test scores) in Study 3. Predicted values displayed are for the full range of implicit self-esteem represented in the sample (-0.68 to 2.16).

SE, regardless of participants' levels of Need for Cognition. This may be because of the more statelike nature of the self-evaluations made in this study. On any one occasion, if people are induced to trust their intuition, they may incorporate implicit SE into explicit, state SE. However, to see an effect on trait SE may require people to consider their implicit SE and use it in forming explicit self-views over multiple occasions. This might only occur for people who have at least a moderate Need for Cognition.

Study 4

Study 4 aimed to replicate Study 3 and extend it in several ways. First, in Study 3 it is not clear which experimental condition affected the correspondence between implicit and explicit SE. It is possible that rational analysis disrupted the correspondence between implicit SE and speeded self-evaluations, rather than trust in intuition increasing it. We thus added a condition in which participants were told nothing about the validity of intuition. Relative to this control condition, we expected participants induced to trust intuition would report explicit SE that corresponds more closely to implicit SE.

In addition, in Study 3 our manipulation artificially placed intuition and rational analysis in opposition to each other. Rational analysis and intuition may, however, be better conceptualized as independent, but interacting, cognitive processes (Epstein, 1990). Thus, in Study 4, we sought to manipulate only beliefs about the validity of intuition, while encouraging all participants to view rational analysis as valid. In this way, we could focus more exclusively on the role of intuition in the correspondence between implicit and explicit SE. We thus included three conditions in Study 4: one in which participants were induced to perceive intuition as valid, a control condition, and one in which participants were induced to perceive intuition as invalid.

Last, in Study 3, the measure of explicit self-views was somewhat unorthodox. We examined self-evaluations made under time pressure because they were likely to be sensitive to situational changes in self-views and unlikely to be distorted by defensive responding. This measure was explicit in the sense that participants

knew they were reporting self-evaluations. Because the self-evaluations were made under time pressure, however, they were highly efficient, and in this sense may be relatively automatic. As noted earlier, it is thus remarkable that we observed differences in these evaluations as a function of our manipulation. In Study 4, however, we wanted to test the robustness of our findings by exploring whether the same effects would hold for self-evaluations made without time pressure. We thus examined state SE as our primary dependent measure.

Method

Participants

One hundred fifteen undergraduates enrolled in psychology courses participated in exchange for course credit. Six participants had error rates of more than 20% on the IAT, and their data were excluded from analyses. Two participants did not complete the RSES (described below), and 3 indicated that English was not their first language. Another 2 participants were excluded because of their suspicions about the experiment. Results are reported for the remaining 102 participants (35 men and 67 women). Gender did not influence the results of this study and so is not discussed further.

Materials and Procedure

With a few exceptions (specified below), the procedure and materials were identical to those of Study 3. Participants completed the RSES, as a measure of explicit SE, as part of a mass pretesting session roughly 2 months before the experimental session. This measure was identical to that used in Study 1. In the lab, participants completed the IAT as a measure of implicit SE and Cacioppo and Petty's (1982) Need for Cognition scale, in that order. These scales were identical to those used in Study 3. The IAT again showed acceptable reliability (Spearman-Brown coefficient = .61).

Manipulation of the perceived validity of intuition. We next manipulated the perceived validity of intuition. This manipulation

was identical to that used in Study 3, with the following exceptions. One third of participants were induced to perceive intuition as valid, one third were induced to perceive intuition as invalid, and one third (the control group) received no information about the validity of intuition. All participants were told that people approach decisions through some combination of rational and intuitive strategies. Control participants were told nothing further. Participants in the other two conditions were also told that, in general, rational analysis improves the quality of decisions.

Participants induced to view intuition as valid were further told that “paying attention to and trusting intuitions” improves decisions and is related to success. In contrast, participants induced to perceive intuition as invalid were told that “too much attention to and relying too much on intuitions often undermines decisions.” They were told that people who can overcome the influence of intuition on their decisions are more successful. We told participants in these two conditions that we were interested in why people who trust (or can overcome) intuition are more successful and that we wanted to see how well they made decisions intuitively (or by preventing intuition from affecting their decisions). Participants in the control condition were told that we were interested simply in observing how they normally make decisions. All participants were then shown the personality profiles used in Study 3 and were asked to decide, for each person, whether they would live with that person in a co-ed house. While deciding, they were asked to “attend to and trust your intuitions” (trust intuition condition), to “keep your intuitions from influencing your decisions” (overcome intuition condition), or to “use whatever information seems most relevant to you” (control condition).

Explicit state SE. After this manipulation, participants completed Heatherton and Polivy’s (1991) state SE scale, exactly as in Study 1.

Manipulation check. Last, participants completed the modified REI that was used in Study 3 as a manipulation check.

Results and Discussion

The manipulation check suggested that the manipulation was generally effective, $F(2, 99) = 9.92, p < .001$. Participants in the trust intuition condition ($M = 3.95, SD = 0.45$) tended to report more Faith in Intuition than those in the control condition ($M = 3.72, SD = 0.62$), although not significantly so, $t(99) = 1.49, p = .14$. Likewise, participants in the overcome intuition condition ($M = 3.28, SD = 0.74$) reported less Faith in Intuition than those in the control condition, $t(99) = -2.98, p = .004$. Thus, overall, the effect of the manipulation on Faith in Intuition was in the predicted direction for each condition but was somewhat weak. It is worth noting that this relatively weak manipulation should only make it more difficult for us to observe our predicted effects.

In contrast, the manipulation had little impact on Need for Cognition, $F(2, 99) = 1.62, p = .20$. Participants in the trust intuition condition ($M = 3.31, SD = 0.59$) did not report less Need for Cognition than control participants ($M = 3.37, SD = 0.51$), $t(99) = -0.41, p = .69$. Likewise, those in the overcome intuition condition ($M = 3.55, SD = 0.58$) did not report more Need for Cognition than control participants, $t(99) = 1.35, p = .18$.⁴

Overall, participants showed positive IAT scores ($M = .70, SD = .45$) and state SE ($M = 3.69, SD = 0.62$). To test whether our manipulation of the validity of intuition affected the corre-

spondence between implicit and explicit SE, we conducted a multiple regression analysis predicting state SE from IAT scores (centered) and condition (effect coded as trust intuition = 1, 0; overcome intuition = 0, 1; control condition = -1, -1). We also controlled premanipulation Need for Cognition and RSES scores. The main effects were entered before the interaction terms. As predicted, the interaction between IAT and condition was significant (R^2 change = .065), $F(2, 94) = 3.60, p = .03$.

Decomposing this interaction into its two effect-coded vectors revealed that the interaction was significant when comparing the trust intuition condition to the control condition ($\beta = .29, t(94) = 2.36, p = .02$, but not when comparing the overcome intuition condition to the control condition ($\beta = -.05, t(94) = -0.418, p = .68$). As can be seen in Figure 4, there was a significant positive relation between IAT scores and state SE in the trust intuition condition ($\beta = .52, t(94) = 2.10, p = .01$, but not in the overcome intuition condition ($\beta = -.14$) or the control condition ($\beta = .10$; both $ps > .30$). Thus, consistent with the results of Study 3, inducing participants to perceive their intuition as valid led to greater correspondence between implicit and explicit SE. In this case, this effect was observed on a more traditional measure of state SE without time pressure.

In contrast, inducing participants to perceive their intuition as invalid did not influence the relation between implicit and explicit SE. This is consistent with the results of Study 3. In that study, there were methodological factors that might explain why participants in the rational condition did not correct their explicit self-views for the potential bias of implicit SE. In Study 4, in contrast, we specifically led participants to view their intuition as less valid. We encouraged participants to try to overcome the influence of intuition in their judgments, and yet we observed no negative relation between implicit and explicit SE.

General Discussion

Across four studies, we found that greater perceived validity of intuition was associated with greater consistency between implicit and explicit SE. In Studies 1 and 2, people who chronically trust their intuition demonstrated closer correspondence between implicit and explicit SE. In Studies 3 and 4, people who were induced to view their intuition as more valid reported explicit SE that corresponded more closely with their implicit SE; this was true for self-evaluations made under time pressure (Study 3) and for state SE reported without time pressure (Study 4). These latter findings highlight the causal role of trusting intuition in the correspondence between implicit and explicit SE. When people view their intuition as valid, they may incorporate their implicit SE more into their explicit, overtly expressed self-views.

In addition, Studies 1 and 2 demonstrated that people with relatively low dispositional trust in intuition have an inverse relation between implicit and explicit SE. These individuals may view their implicit SE as a source of bias in their judgments and consequently adjust their explicit SE away from their implicit SE.

⁴ This latter effect could be considered to be a trend by some standards, so we also conducted all of the main analyses controlling postmanipulation Need for Cognition. Because the results were nearly identical whether this variable was controlled or not, we report the results without controlling for it.

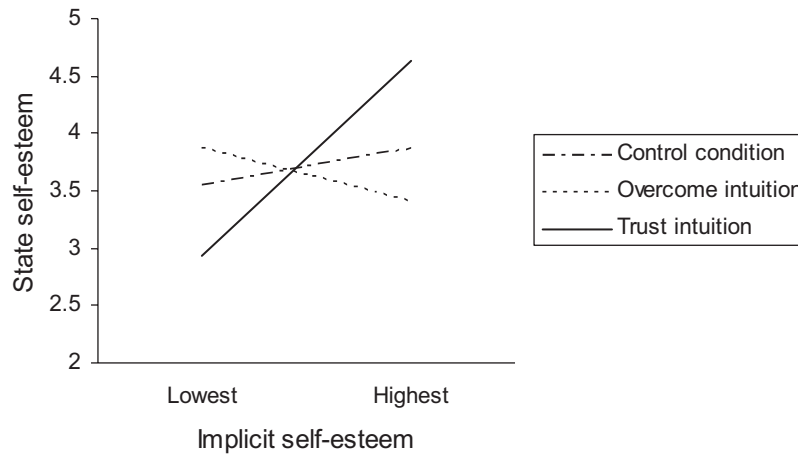


Figure 4. State self-esteem as a function of the manipulation of the validity of intuition and implicit self-esteem (Implicit Association Test scores) in Study 4. Predicted values displayed are for the full range of implicit self-esteem represented in the sample (−0.38 to 1.99).

This interpretation is speculative and has limitations. It is difficult to square with the fact that people who were specifically induced to distrust their intuition in Study 4 showed no inverse relation between implicit and explicit SE. It may be that our manipulation was not strong enough to induce the kind of correction processes that are stimulated by dispositional reservations about intuition. In addition, however, it is not clear how strong participants' reservations about intuition really were in Studies 1 and 2. Our "low" Faith in Intuition participants typically scored near the neutral midpoint of the scale (but see Blanton & Jaccard, 2006). Clearly, further research is needed to better understand this finding.

Overall, the results of the present studies provide a partial answer to the question posed by Fazio and Olson (2003, p. 304): "When, under what conditions, and for what kind of people, are implicit and explicit measures related?" With respect to implicit and explicit SE, one answer seems to be that people who trust their intuition or those who are induced to trust their intuition report explicit self-evaluations that correspond more closely to their implicit SE. We strongly suspect that the same is true of other attitudes. When people trust their intuition, we expect that their implicit and explicit attitudes will, in general, be more closely related to each other.

These results also have implications for understanding whether and how people experience implicit SE. They suggest that people experience implicit SE as intuition or gut feelings about the self. Although we focused on the role of perceived validity of intuition in the correspondence between implicit and explicit SE, our results imply awareness of implicit SE. For people to judge the validity of evaluations, they must logically be aware of them. Gawronski and Bodenhausen (2006) argued persuasively that subjective assessments of validity occur only within a propositional, rule-based system. Associatively activated evaluations may be translated into conscious propositions (e.g., "I feel badly about myself"; see also Hofmann, Gschwendner, & Schmitt, 2005). Only then can people judge whether these evaluations are valid—whether they personally endorse them—or not. Our findings suggest that people who perceive intuition as valid incorporate implicit SE into their ex-

PLICIT self-views. This suggests that people are aware of their implicit SE and experience it as intuitive evaluations of the self.

Awareness of implicit SE may help to explain why individuals with high explicit but low implicit SE are defensive (Bosson et al., 2003; Jordan et al., 2003, 2005; McGregor & Marigold, 2003; McGregor et al., 2005; Zeigler-Hill, 2006). Jordan and colleagues (2003, 2005) suggested that implicit SE is preconscious, occasionally entering awareness. When individuals with high explicit but low implicit SE become aware of their relatively low implicit SE, this may create an aversive inconsistency within the self (Jordan, Logel, Spencer, Zanna, & Whitfield, in press). Thus, these individuals may be motivated to affirm their positive explicit SE and deny their negative implicit SE, causing them to react defensively. Although this reaction may foster defensiveness, it may also be adaptive in some ways. It suggests that these individuals are aware of having low implicit SE but perceive it to be invalid. If they instead perceived it as valid, they might be at greater risk for depression (Beevers, 2005; Jordan, Logel, Spencer, & Zanna, 2006).

The Role of Need for Cognition and Cognitive Elaboration

It is notable that Need for Cognition moderated the results of Study 2. People who were moderate to high in Need for Cognition showed closer correspondence between implicit and explicit SE to the extent that they were higher in Faith in Intuition. People who were low in Need for Cognition, however, did not. This finding may reflect the interactive nature of associative and rule-based processing commonly asserted in dual-system models of cognition. It may also suggest that a minimal degree of cognitive engagement is necessary for implicit SE to affect explicit SE, at least at a dispositional level. This makes sense to the extent that such influence depends on people representing implicit SE propositionally and then judging its validity (Gawronski & Bodenhausen, 2006; Hofmann, Gschwendner, & Schmitt, 2005). It must be acknowledged, however, that this moderation effect did not approach significance in Study 1.

In addition, the role of Need for Cognition in the correspondence between implicit and explicit attitudes may be complicated. It is likely not the case that greater cognitive elaboration will result in uniformly closer implicit–explicit attitude consistency. Need for Cognition has, for example, been associated with less correspondence between implicit and explicit prejudice (Florack et al., 2001). Gawronski and Bodenhausen (2006) gave considerable attention to the role of cognitive elaboration in the correspondence between implicit and explicit attitudes. They noted that as cognitive elaboration increases, people are likely to incorporate more sources of information into explicit evaluations. If this additional information is consistent with implicit attitudes, it should enhance the relation between implicit and explicit attitudes (or leave it unaltered). If additional information contradicts implicit attitudes, however, it may reduce this correspondence.

Conclusions

People who view intuition as valid may incorporate implicit SE into their explicit self-views. People with relatively low dispositional faith in their intuition, in contrast, demonstrate a negative relation between their implicit and explicit SE. This latter finding may suggest that these individuals adjust or “correct” their explicit self-views for the potential bias of implicit SE. Regardless of how these findings are interpreted, however, they have important implications for understanding the relation between implicit and explicit SE. The two are normally uncorrelated. This lack of correlation, however, does not mean that implicit SE and explicit SE are independent. They are actually related, although in opposite ways for different kinds of people. People who trust their intuition have a positive relation between them, whereas people who do not trust their intuition have either no relation or a negative relation.

The current findings may also have broad implications for understanding implicit attitudes and SE. The adoption of the terms *implicit* and *explicit* to describe relatively automatic and controlled attitudes (by Greenwald & Banaji, 1995) may have inadvertently shaped much of the theoretical debate about implicit attitudes. Many researchers have thus asked whether people are aware of implicit attitudes, perhaps because the term *implicit* implies lack of awareness (Fazio & Olson, 2003). If different terms had been adopted, however, such as *intuitive* and *analytic* (see Greenwald and Banaji, 1995, footnote 1), this issue might have been approached differently. Definitions of intuition and associative processes might suggest a refinement of the question of awareness. We could ask, separately, whether people are aware of their automatic evaluations and whether they are aware of the processes that produce them. The present findings suggest that these questions may have different answers. People may be aware of their implicit evaluations, but not where they come from. They may thus experience implicit attitudes and SE as intuition.

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Received July 18, 2006

Revision received June 29, 2007

Accepted July 9, 2007 ■