

# Attitude Accessibility as a Moderator of Implicit and Explicit Self-esteem Correspondence

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*A key question in the self-esteem literature involves the conditions under which implicit and explicit self-esteem correspond. The current investigation adds to this literature by using a novel strategy capitalizing on natural variation in self-report response latencies to shed further light on the conditions of implicit and explicit self-esteem consistency. The current study demonstrated that implicit and explicit self-esteem corresponded for highly accessible self-attitudes (as indexed by response latencies to the Rosenberg Self-Esteem Scale items, RSES; Rosenberg, 1965) whereas implicit and explicit self-esteem were virtually unrelated for less accessible self-attitudes. This effect was found using both the Name Letter Task (NLT; Nuttin, 1985) and the Self-Esteem Implicit Association Test (SE-IAT; Greenwald & Farnham, 2000) as measures of implicit self-esteem.*

**Keywords:** Explicit self-esteem; Implicit–explicit correspondence; Implicit self-esteem; Name Letter Task; Self-Esteem Implicit Association Test.

Recently, self-esteem researchers have increasingly utilized so-called *indirect* measures of self-esteem in the hopes that these measures will reveal deeper insights into self-esteem and its underlying processes (Bosson et al., 2008; Bosson, Swann, & Pennebaker, 2000). Some have argued that *direct* measures of self-esteem may suffer from introspection and self-presentation limitations (see Kernis, 2003, for a review). That is, individuals may lack introspective access into all of their self-attitudes (Paulhus, 1984) and they may also inaccurately report their true feelings of self-worth due to social desirability concerns (e.g., Raskin, Novacek, & Hogan, 1991). Following from these considerations, Greenwald and Banaji (1995) suggested that individuals may possess *implicit self-esteem* (ISE), which they defined as the “introspectively unidentified effect of the self-attitude on evaluation of self-associated objects” (p. 11). Others have defined ISE more simply as the efficient cognitive associations between self and positivity and negativity (Jordan, Logel, Spencer, & Zanna, 2006).

Various indirect measures have been created specifically to measure this distinct form of self-esteem (see Bosson, 2006a, 2006b, for reviews). It has been argued that

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these indirect measures of self-esteem may provide a more complete and/or accurate assessment of self-esteem (but see Gawronski, LeBel, & Peters, 2007). Two of the most commonly used indirect measures of self-esteem include the Self-Esteem Implicit Association Test (SE-IAT; Greenwald & Farnham, 2000) and the Name Letter Task (NLT; Nuttin, 1985, 1987). It is clear that the use of these indirect measures have helped shed light on a multitude of self-esteem-related phenomena including depression (De Raedt, Schact, Franck, & De Houwer, 2006; Franck, De Raedt, & De Houwer, 2007; Jordan et al., 2006), mental and physical health (Schröder-Abé, Rudolph, Wiesner, & Schütz, 2007; Shimizu & Pelham, 2004), anxiety (Spalding & Hardin, 1999), narcissism (Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003), social acceptance (Baccus, Baldwin, & Packer, 2004), unrealistic optimism (Bosson, Brown, Zeigler-Hill, & Swann, 2003), feedback sensitivity (Dijksterhuis, 2004), self-regulation (Jones, Pelham, Mirenberg, & Hetts, 2002), out-group derogation (Kernis et al., 2005), and even cross-cultural questions on the universality of self-esteem (Hetts, Sakuma, & Pelham, 1999; Yamaguchi et al., 2007).

In light of these new ISE measures, a challenging discovery that has surfaced is to understand why measures of ISE and explicit self-esteem (ESE) are not (or at most very weakly) correlated with each other (Bosson et al., 2000). Some researchers have argued that the general independence of ISE and ESE may be due to individuals over-presenting or self-deceiving themselves on ESE measures (e.g., Greenwald & Farnham, 2000). Others have argued that ISE and ESE may not be associated because they operate in two distinct attitude systems (Wilson, Lindsey, & Schooler, 2000). An ensuing question that has consequently surfaced is to understand the conditions under which ISE and ESE may correspond. This is an important question because, as Fazio and Olson (2003) emphasized for attitude research in general, deeper insights can be gained not by asking whether there *is* a relation between implicit and explicit attitudes, but rather by asking *when* or *under which conditions* the two correspond. The present investigation aims to contribute to this question in a novel way, by using an approach that capitalizes on natural variation in response latencies on a self-report measure of self-esteem to examine the conditions under which ISE and ESE correspond. Ultimately, investigation of this kind may shed further light on basic psychological processes underlying self-esteem and its many related phenomena.

### *Past Research on Implicit and Explicit Self-esteem Correspondence*

Only a handful of investigations have examined the factors that influence the correspondence between ISE and ESE (see Krizan & Suls, 2008, for a meta-analysis). Pelham et al. (2005), for example, found that women showed greater ISE–ESE correspondence than men, which they argued may be the case because evidence suggests that women trust their intuitive feelings more than men (but see Riketta, 2005, who found the opposite pattern). Jones et al. (2002) found that ISE and ESE corresponded after a self-concept threat, but not after self-affirmation or under a control condition. In addition, Olson, Fazio, and Hermann (2007) found that a simple request to respond honestly on an ESE measure moderated ISE–ESE correspondence, such that higher ISE–ESE correspondence was found in the honest compared to control condition (see also Kitayama & Uchida, 2003). The perceived validity of one's intuition has also been found to increase the correspondence between ISE and ESE (Jordan, Whitfield, &

Zeigler-Hill, 2007). Finally, Koole, Dijksterhuis, and van Knippenberg (2001) found that self-reflection moderated ISE–ESE correspondence. Koole et al. demonstrated that the time taken to endorse positive trait words (dichotomous judgment: applies to me or not) moderated the correspondence between NLT scores and the proportion of positive traits endorsed, such that correspondence between NLT scores and positive trait endorsement was found for relatively fast responders whereas there was virtually no correspondence for relatively slow responders. In a second study, using a cognitive load manipulation, they found that NLT scores predicted positive trait endorsement under cognitive load but not in a control condition.

Although the Koole et al. (2001) studies show that cognitive elaboration moderates the convergence of ISE and ESE, several open questions remain about the nature of their findings. For one, it is unclear how indicating whether positive traits do or do not apply to the self maps onto self-reported feelings of self-worth. This concern is supported by the fact that Koole et al.’s findings did not extend to negative trait endorsements. Given that both positive and negative characteristics are important components of self-views, it is uncertain whether Koole et al.’s results extend to more conventional (and arguably more valid) measures of self-esteem. Second, given that Koole et al. instructed participants to “decide as quickly as possible” (p. 677) whether the traits did or did not apply to them, it is unclear how the time variation in these trait endorsements map onto time variation in more typical self-esteem measures. Finally, given that Koole et al. only used the NLT to index ISE, whether these findings extend to other ISE measures is an important open question.

### *The Present Research*

The present research addresses these three questions by using a novel approach. To my knowledge, the current studies are the first to capitalize on natural variation in response latencies of an ESE self-report measure to investigate the dynamics of the automatic self as it relates to ISE–ESE consistency. The present work investigates these questions from an attitude accessibility perspective (Fazio, 1986; Fazio, Powell, & Herr, 1983). From this perspective, attitudes are viewed as object-evaluation associations in memory, whereby the strength of the association determines the accessibility of the attitude. Furthermore, it is argued that stronger (i.e., more accessible) object-evaluation associations are more likely to become spontaneously activated upon encountering an attitude object (Fazio & Williams, 1986). Importantly, it is specifically argued that highly accessible attitudes are “more predictive of subsequent perceptions of the attitude object and subsequent behavior toward the attitude object” than are less accessible attitudes (Fazio & Williams, 1986, p. 506). In line with these claims, Fazio and Williams, in the context of the 1984 US presidential election, found that response latencies to attitudinal questions about Reagan and Mondale moderated the correspondence between attitudes and actual voting behavior. Specifically, attitudes were significantly more predictive of voting behavior for participants with fast as compared to slow response latencies to the attitude questions about the candidates (see also Bassili, 1995). Moreover, general attitudes toward Reagan and Mondale were more predictive of attitudes toward the candidate’s debate performance for highly accessible general attitudes. Relevant to the present investigation, presumably this was the case because individuals’ attitudes toward the candidate’s debate performance were more likely

influenced by their automatically activated attitudes toward the candidates for highly accessible attitudes (Fazio & Williams, 1986).

From this perspective, response latencies to attitudinal questions have been argued to reflect attitude accessibility based on compelling evidence from studies showing (a) that repeated expression of attitudes increases the speed with which individuals respond to attitude endorsements (Fazio, Chen, McDonel, & Sherman, 1982; Powell & Fazio, 1984) and (b) that fast attitudinal endorsements are more likely to be congruent with automatically activated attitudes as compared to slow attitudinal endorsements (Fazio, Sanbonmatsu, Powell, & Kardes, 1986). In light of these noteworthy election studies, Fazio, Williams, and Powell (2000) argued that assessing attitude accessibility, in addition to attitudinal responses, is a very useful strategy for increasing prediction of attitudes, beliefs, and behaviors.

The present research applied this attitude accessibility perspective to the question of specifying the conditions under which ISE and ESE may correspond. Past theoretical and empirical work helps articulate how the attitude accessibility perspective may clarify *when* ISE and ESE may correspond. Fazio's MODE model (Fazio, 1990; Fazio & Olson, 2003), conceptually related to the attitude accessibility perspective outlined above, proposes that sufficiently accessible object-evaluation associations may become spontaneously activated upon encounter of an attitude object (e.g., during an attitude judgment) and hence influence that attitudinal judgment. From this perspective, then, it is expected that automatic self-evaluative associations will more likely become spontaneously activated during self-worth judgments for highly accessible self-attitudes. Hence, automatic self-evaluative associations (i.e., ISE) should correspond more strongly to self-worth judgments for highly accessible self-attitudes than for less accessible self-attitudes. It is important to remember that ISE measures provide a proxy for the overall valence of automatic self-evaluative associations and that response latencies to ESE measures index the accessibility of these underlying self-attitudes. Finally, an empirical meta-analysis (Krizan & Suls, 2008) showed that the NLT and the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) showed higher correspondence when the RSES was completed *before* rather than *after* the NLT, presumably because completing the RSES rendered the self-attitude more accessible for NLT judgments.

Drawing on this past research, the main hypothesis of the present work is that self-report response latencies for RSES items should moderate the relation between ISE and explicit self-worth judgments. In particular, ISE–ESE correspondence should be higher for those completing the RSES items relatively quickly compared to those completing the RSES items relatively slowly. The ESE measure (i.e., RSES) was conceptualized as the criterion variable (rather than ISE) because of the theoretical model on which the research was based (i.e., Fazio's MODE model). From this perspective, automatically activated self-evaluation associations feed into self-evaluative judgments, which are viewed as “downstream”.

To test these hypotheses, the current research used participants' natural self-report response latencies for RSES items as an index of self-attitude accessibility. Of theoretical importance, the RSES, the most commonly used self-esteem measure, was used as an index of ESE. Additionally, both the NLT and SE-IAT were used as indices of ISE in order to gain more insight into the generalizability of Koole et al.'s (2001) finding. To my knowledge, this would be the first research reporting an ISE finding consistent across both the NLT and SE-IAT measures *within* the same sample.

## Method

### *Participants and Design*

Two hundred two undergraduate students from a large public Canadian university (153 females, 47 males; mean age 20.9,  $SD = 5.65$ ) participated in exchange for course credit or CDN-\$10.<sup>1</sup> Participants completed the self-esteem measures in one of four orders,<sup>2</sup> however, order was ignored in all analyses because it did not qualify the predicted pattern of moderation for either the NLT or SE-IAT data ( $ts < 1$ , *ns*). Two participants were excessively slow in responding to the RSES items (means of 13.2 and 22.2 seconds per item; scores 4.5 and 9.1  $SDs$  above the mean) and were thus excluded from the sample, yielding a final sample size of 200. Main results of the study were identical if these two participants were included.

### *Procedure and Materials*

Participants completed the NLT, SE-IAT, and the RSES in one of four orders (see endnote 2). The NLT (Nuttin, 1985, 1987), a commonly used measure of ISE, requires individuals to make intuitive liking judgments of each letter of the alphabet. The extent to which an individual likes the letters that make up his or her own initials more than ratings of those letters by individuals whose initials do not include those letters, is taken as an index of the degree of automatic positivity associated with the self (Koole et al., 2001). In the present study, participants were presented with each letter of the alphabet in a fixed random order and asked to indicate how much they liked each letter on a scale anchored from 1 (*not at all*) to 5 (*very much*). NLT scores were computed as a difference score between participants' mean ratings of their initial letters and the corresponding baseline letter ratings of participants whose initials did not contain those letters. Larger positive scores reflect higher levels of ISE ( $\alpha = .57$ ). Although this level of reliability is somewhat low, it is characteristic of the NLT and is consistent with past research (DeHart & Pelham, 2007; Schröder-Abé et al., 2007).

The SE-IAT, following past research (Greenwald & Farnham, 2000), involved categorizing *self* and *object* words and *pleasant* and *unpleasant* words. For one set of trials, *self* and *pleasant* shared one response key, with *object* and *unpleasant* sharing another response key (congruent block). For a second set of trials, *self* and *unpleasant* words shared one response key, with *object* and *pleasant* sharing another response key (incongruent block; please see Greenwald & Farnham, 2000, for full details). The *self* and *object* words were *I, my, me, mine, self* and *it, those, that, these, and this*, respectively, whereas the *pleasant* and *unpleasant* words were *summer, peace, harmony, freedom, heaven, pleasure, vacation, paradise, lucky, sunrise* and *poison, disaster, death, virus, evil, rotten, vomit, bomb, cockroach, stink*, respectively. Words were presented in a fixed random order across the different blocks of the task. The SE-IAT is premised on the logic that individuals with relatively high ISE will categorize words faster when self and pleasant (and object and unpleasant) share a response key than when self and unpleasant (and object and pleasant) share a response key, because automatic affect elicited by the self will cause interference in the latter but not former case (Greenwald, McGhee, & Schwartz, 1998). SE-IAT scores were computed using the D-algorithm (Greenwald, Nosek, & Banaji, 2003) as the difference between participants' mean response time during the incongruent and

congruent block, divided by participants' pooled standard deviation for those two blocks. Higher scores are interpreted as indicating higher levels of ISE ( $\alpha = .72$ ).

Finally, participants completed the RSES (Rosenberg, 1965) as a measure of ESE, completed using a 7-point Likert scale anchored from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores indicate higher levels of ESE ( $\alpha = .87$ ). Finally, attitude accessibility was indexed as the sum of the response latencies to the 10 RSES items ( $\alpha = .80$ ), recorded unbeknownst to participants by the MediaLab software (Jarvis, 2008).

## Results

Table 1 presents descriptive information and correlations among all variables. The primary analysis involved running two multiple regression analyses to estimate the extent to which RSES response latencies moderated the relation between NLT and RSES and between SE-IAT and RSES scores, with RSES as the criterion variable.<sup>3</sup> Parallel analyses were conducted for both SE-IAT and NLT scores separately. All continuous predictors were mean centered (Aiken & West, 1991) and an interaction term was created between the NLT or SE-IAT centered scores and the centered RSES response latencies.

For NLT scores, results revealed a significant positive relation between NLT and RSES scores,  $\beta = .15$ ,  $t(194) = 2.20$ ,  $p = .03$ , but no relation between response latencies and RSES scores,  $\beta = -.11$ ,  $t(194) = -1.48$ ,  $p = .14$ . More importantly, the analysis revealed a significant interaction pattern,  $\beta = -.23$ ,  $t(194) = -3.11$ ,  $p = .002$ , whereby NLT scores were positively associated with RSES scores for fast responders,  $\beta = .40$ ,  $t(194) = 3.68$ ,  $p = .0003$ , whereas NLT and RSES scores were unrelated for slow responders,  $\beta = -.10$ ,  $t(194) = -1.00$ ,  $p = .32$  (see Figure 1, panel A).<sup>4</sup>

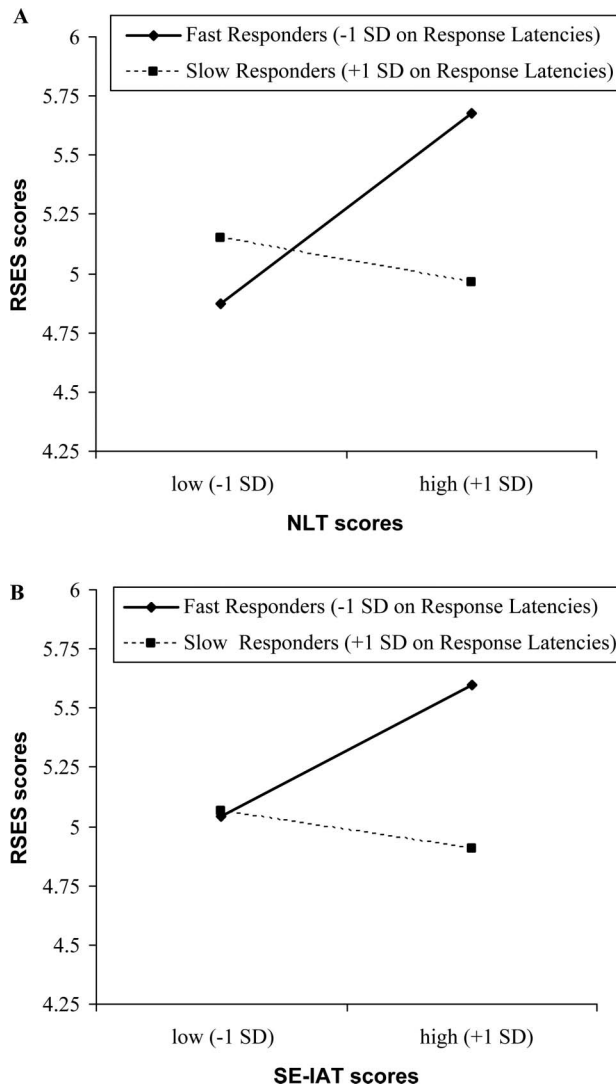
For SE-IAT scores, a parallel analysis revealed a significant effect of response latencies,  $\beta = -.16$ ,  $t(195) = -2.31$ ,  $p = .02$ , but no relation between SE-IAT and RSES scores,  $\beta = .10$ ,  $t(195) = 1.39$ ,  $p = .17$ . More importantly, a significant interaction emerged,  $\beta = -.17$ ,  $t(195) = -2.38$ ,  $p = .02$ , whereby SE-IAT scores significantly and positively predicted RSES scores for fast responders,  $\beta = .27$ ,  $t(195) = 2.61$ ,  $p = .01$ , whereas no relation emerged for slow responders,  $\beta = -.08$ ,  $t(195) = -0.79$ ,  $p = .43$  (see Figure 1, panel B).

In sum, response latencies in the RSES moderated both the correspondence between NLT and RSES scores and between SE-IAT and RSES scores.<sup>5</sup> This suggests that attitude accessibility moderated ISE–ESE correspondence such that ISE and ESE corresponded for relatively accessible self-attitudes whereas there was

**TABLE 1** Descriptive Statistics and Correlations Among Variables

Variable	<i>N</i>	Minimum	Maximum	Mean	<i>SD</i>	1	2	3
1. RSES	200	2.00	7.00	5.18	1.02	–		
2. NLT	198	–2.16	2.38	0.98	0.86	.14	–	
3. SE-IAT	199	0.04	3.14	1.13	0.45	.11	.17*	–
4. RL (seconds)	200	22.1	106.8	45.1	13.6	–.17*	–.01	–.16*

*Note:* \*Indicates  $p < .05$ . RSES = Rosenberg Self-Esteem Scale; NLT = Name Letter Task; SE-IAT = Self-Esteem Implicit Association Test; RL = Response Latencies. Order in which measures were completed did not affect correlations among any of the variables (all  $t_s < 1$ ).



**FIGURE 1** RSES scores as a function of NLT (panel A) and SE-IAT (panel B) scores and response latencies for RSES items.  $N=198$  for NLT (panel A) and  $N=199$  for SE-IAT (panel B).  $SD$  = standard deviation; RSES = Rosenberg Self-Esteem Scale; NLT = Name Letter Task; SE-IAT = Self-Esteem Implicit Association Test.

virtually no correspondence for less accessible self-attitudes. Importantly, this pattern was reflected in the data for both the NLT and SE-IAT measures of ISE *within* the same sample.

## Discussion

The present research aimed to gain insight into the dynamics of self-esteem using a novel approach to investigate the conditions under which implicit self-esteem (ISE)

and explicit self-esteem (ESE) correspond. Although past research has examined the antecedents and consequences of ISE, a key issue outstanding in this literature concerns the particular conditions under which ISE and ESE correspond. Understanding these conditions not only has important theoretical implications, but also has important potential implications for informing optimal assessment situations in the clinical domain such as depression and substance abuse (e.g., De Raedt et al., 2006).

Using the novel strategy of considering response latencies in the RSES, inspired by prior attitudinal accessibility research (Fazio, 1986; Fazio et al., 1983), the current work showed that attitude accessibility moderated ISE and ESE correspondence. In particular, more accessible attitudes were associated with increasing correspondence between ISE and ESE whereas less accessible self-attitudes were associated with virtually no relation. In line with Fazio's (1990) MODE model, the present results suggest that self-worth judgments were more likely influenced by automatically activated self-evaluative associations for highly accessible attitudes. Presumably, for highly accessible attitudes, self-evaluative associations were more likely to color self-worth judgments during the RSES. This account is in line with previous research demonstrating that highly accessible attitudes are more likely to influence behavior and other related attitudes (Fazio et al., 1983; Fazio & Williams, 1986). The current account is also directly in line with theorizing by Koole et al. (2001), who argued that more deliberate trait endorsements may include explicit knowledge that dilutes the influence of implicit self-evaluations on judgments of self-worth. Finally, the current results resonate well with Gawronski and Bodenhausen's (2006) associative-propositional evaluation (APE) model, which predicts that the impact of automatic self-evaluative associations on self-worth judgments depends on whether these judgments include self-attitudinal information that go beyond the self-evaluative associations. From this perspective, quickly made self-evaluative judgments provide conditions that minimize the consideration of additional information and thus allow automatic self-evaluative associations to have a larger impact on self-worth judgments.

Furthermore, the current results are in line with the studies by Koole et al. (2001), who found that trait endorsement response latencies and cognitive load moderated the association between NLT scores and positive trait endorsements. Results from the current investigation are also broadly consistent with research by Ranganath, Smith, and Nosek (2008), who found that responses on a direct measure of attitude made under time pressure corresponded more strongly with IAT scores than attitude responses made in a control condition. The results are also in line with Krizan and Suls' (2008) meta-analysis that showed a higher NLT-RSES correlation under conditions where the self-attitude was highly accessible. Thus, the current findings add to the growing literature on the psychological processes underlying the automatic components of the self and reinforce the utility of applying the theories and methods of cognitive psychology to understand the complexities of the self.

The current results also significantly extend current knowledge and are thus theoretically important for at least four reasons. First, the current results strengthen our confidence that the effect identified by Koole et al. (2001) was *not* specific to the trait endorsement measure of self-esteem employed. Also, given that Koole et al.'s results did not extend to negative trait endorsements, the current results add to this literature by showing that the ISE-ESE correspondence effect applies to an ESE measure that includes both positive and negative components of self-views. The



results not only extend Koole et al.'s findings in this way, but they bolster our confidence in their results by finding the effect with the most common measure of ESE (i.e., the RSES), which arguably is a more valid measure of ESE.

Second, the results are important because they imply that Koole et al.'s (2001) findings were not specific to the NLT. The current effect was replicated with the NLT but also generalized to the SE-IAT. Obtaining this effect across different measures is important because it increases our confidence in the network of relations (Cronbach & Meehl, 1955) related to the ISE construct. Furthermore, the finding is important because it extends the generalizability of the effect to an ISE measure that is, at least in terms of reliability, arguably more psychometrically sound. The results are also significant because, although some research has found parallel effects across different ISE measures *across* different samples (e.g., Spencer, Jordan, Logel, & Zanna, 2005), the current findings, to my knowledge, are the first study reporting a psychological finding involving ISE using both the NLT and the SE-IAT *within* the same sample. The current findings suggest that, although the NLT and SE-IAT may tap into distinct facets of the automatic self, accessibility moderates the consistency between both of these facets and ESE, indicating that the ISE–ESE correspondence effect identified in the current research may reflect a basic psychological process.

Third, the current findings suggest that the natural variation in trait endorsement response latencies used by Koole et al. (2001) corresponds to natural variation in response latencies of self-reported self-esteem measures. Hence, although participants in Koole et al.'s study were instructed to respond as quickly as possible in the trait endorsement task, the current results suggest that variation in trait endorsement response latencies maps onto natural variation of response latencies in more typical measures of ESE. More importantly, the current results imply that using natural variation in response latencies of self-esteem measures is a very useful strategy for investigating the dynamics of ISE and ESE correspondence.

Finally, and of broader significance, the current findings imply that the use of natural variation in response latencies of self-rating scales is useful for gaining insight into the underlying mechanisms of attitudinal processes in general. This reasoning is in line with past research showing the great utility of using attitudinal response latencies to gain insights into processes underlying attitude–behavior and belief–behavior consistency (Fazio & Williams, 1986; Fazio et al., 2000). As Fazio and Williams (1986) argued, probing attitude accessibility (as indexed by response latencies) potentially sheds light on the *how* and *when* questions of attitude–perception and attitude–behavior consistency in general. That being said, the current approach may also be helpful in understanding the conditions under which implicit and explicit prejudicial attitudes correspond. This may be a fruitful avenue for future research.

It is worth briefly discussing the possible implications of the current results for the nature of awareness of ISE. On the one hand, it has been argued that ISE reflects over-learned associations that exist outside of awareness (e.g., Greenwald & Banaji, 1995; Koole & Pelham, 2003). On the other hand, some researchers have argued that individuals may at times become aware of their ISE (e.g., Jordan et al., 2006, 2007; Krizan, 2008). As mentioned, Jordan et al. (2007) showed that individuals who placed more faith in their intuitions showed higher ISE–ESE correspondence. Krizan (2008) demonstrated that individuals who reported awareness of the self-relevant nature of the NLT showed greater NLT–RSES correspondence. From these perspectives, the current results imply that individuals with highly accessible self-attitudes may have been, at least to some extent, aware of their ISE.

A peculiar finding worthy of mention concerns the unusual (albeit small) positive correlation observed between the NLT and SE-IAT. In general, the NLT and SE-IAT are typically uncorrelated (Bosson et al., 2000), so it is noteworthy that a small positive correlation was observed in the current study. It is difficult to speculate as to why this correlation emerged and whether this small correlation contributed to observing the parallel finding across both ISE measures *within* the same sample. Ultimately, more research is required to clarify the conditions under which different ISE measures correspond (see Rudolph, Schröder-Abé, Schütz, Gregg, & Sedikides, 2008, for empirical work and new discussions on this issue).

It is interesting to speculate about how the present results fit with past research on other aspects of the self-concept. First, the current findings might be related to research on self-concept clarity, which is the extent to which self-beliefs are clearly and confidently defined, internally consistent, and stable (Campbell et al., 1996). From this perspective, it is possible that individuals with greater self-concept clarity responded to the RSES relatively faster and thus showed greater ISE–ESE consistency than individuals with lower self-concept clarity. Thus, it is possible that attitude accessibility is related to self-concept clarity. Second, research from the perspective of self-schemata theory (Markus, 1977) argues that individuals develop self-schemata that represent well-articulated and organized self information that allows for quick inferences about the self. From this perspective, fast RSES response latencies may have reflected well-articulated self-schemata whereas slow response latencies may have reflected weakly or non-existent self-schemata (aschematics; see also Robins, Hendin, & Trzesniewski, 2001). Future research may benefit from examining the underlying mechanisms of ISE–ESE consistency from these different perspectives.

### Conclusions

Using a novel strategy to capture attitude accessibility of self-esteem judgments, the present research demonstrated that implicit and explicit self-esteem can correspond with each other for highly accessible self-attitudes. These results contribute to the literature in three important ways. First, the results show that Koole et al.'s (2001) ISE–ESE correspondence effect extends to the RSES, which includes both positive and negative conceptions of self. Second, the results extend this past research by finding the moderation effect for both the NLT and SE-IAT, suggesting that the effect reflects a basic psychological process. Finally, the current work suggests that using natural variation in self-report response latencies is broadly useful for understanding implicit and explicit attitude consistency. In the context of the already substantial self-esteem literature, the current work adds to this literature by attempting to further our understanding of the basic psychological processes underlying self-esteem.

### Notes

1. The sample actually consisted of two samples from two different studies that were combined given that they were similar in design and yielded the same general patterns of data. Of note, one sample included two experimental factors (causal attribution and task difficulty) whereas the other sample contained a RSES time-pressure manipulation. However, these factors did not affect the main data patterns reported

herein and thus will not be considered. Furthermore, sample (included as a categorical variable and all relevant interactions) did not qualify the main data patterns for either ISE measures ( $t_s < -1.2$ ,  $ns$ , for both relevant three-way interaction terms).

2. Specifically, participants completed the measures as follows: 120 (order = NLT, RSES, SE-IAT), 28 participants (order = NLT, SE-IAT, RSES), 25 participants (order = SE-IAT, RSES, NLT), and 28 participants (order = RSES, NLT, SE-IAT).
3. Analyses predicting ISE from RSES, RSES response latencies and their interaction yielded exactly the same pattern of results for both measures of ISE (for the analysis involving SE-IAT, the interaction pattern was actually statistically stronger).
4. Independent analyses using NLT scores calculated using the recently recommended scoring algorithms by Albers, Rotteveel, and Dijksterhuis (2009) and the I-algorithm recommended by LeBel and Gawronski (2009), produced the same pattern of results.
5. Separate analyses for positive versus negative RSES items yielded the same general interaction patterns for both the NLT and SE-IAT. In particular, statistically significant interaction terms emerged for positive RSES items and the NLT,  $\beta = -.16$ ,  $t(194) = -2.26$ ,  $p = .03$ , negative RSES items and the NLT,  $\beta = -.23$ ,  $t(194) = -3.21$ ,  $p = .002$ , and positive RSES items and the SE-IAT,  $\beta = -.19$ ,  $t(195) = -2.67$ ,  $p = .008$ ; a marginal interaction term emerged for negative RSES items and the SE-IAT,  $\beta = -.12$ ,  $t(195) = -1.76$ ,  $p = .08$ . For both positive and negative RSES items, simple slope tests showed ISE–ESE relations consistent with the main analyses presented in the text.

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