



Who can't take a compliment? The role of construal level and self-esteem in accepting positive feedback from close others

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HIGHLIGHTS

- We show that people with low self-esteem (LSEs) have difficulty accepting and capitalizing on compliments.
- Drawing on mental construal theories, we propose and test an intervention to help LSEs accept compliments.
- When LSEs are not thinking about a compliment in relation to their relatively negative self-theories (in a concrete mindset), they capitalize on compliments.
- When LSEs are thinking about a compliment in the context of their self-theories (in an abstract mindset), they fail to capitalize on compliments.

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ABSTRACT

One way that relationship partners express positive regard — a key variable in relationship success — is through compliments. However, some people are unable to perceive positive regard through compliments. We hypothesized that low self-esteem (LSE) individuals' relatively negative self-theories conflict with the positive information conveyed in compliments. Hence, LSEs' self-verification motives (e.g., Swann, 1997, 2012) may lead LSEs to reject the positive implications of compliments. In an initial study, we demonstrated that LSEs (vs. high self-esteem individuals; HSEs) feel greater self-related concerns and negative affect after receiving compliments, which leads them to devalue those compliments. Drawing on theories of mental construal (e.g., Libby, Valenti, Pfent, & Eibach, 2011), we reasoned that the remedy for such self-theory-driven processes is to adopt a concrete (vs. abstract) mindset: LSEs should be less likely to apply their relatively negative self-theories when they process compliments in a concrete mindset. Across three studies, we used diverse methods to induce participants to experience either a concrete or abstract mindset, and asked them to recall (Studies 2 and 3) or imagine (Study 4) a partner's compliment. We then assessed their perceptions of their partners' regard. Results confirmed that the discrepancy in LSEs' and HSEs' perceptions of positive regard following a compliment from their romantic partners was significantly reduced when a concrete mindset was induced compared to when an abstract mindset (or no mindset, Study 4) was induced.

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1. Introduction

Some people cannot take a compliment. Contrary to their intended effect, compliments make such people feel uncomfortable and evoke their pre-existing self-doubts. Failing to accept others' praise is especially problematic in close relationships, because exchanging compliments is a key means by which partners convey positive regard for one another, and feeling positively regarded by one's partner is an essential ingredient for relationship satisfaction (Murray, Bellavia, Rose, & Griffin, 2003). In the current research, we propose that people with low self-esteem (LSEs) are especially likely to have difficulty accepting compliments and that the reason why LSEs have this problem is that the

positive information conveyed in a compliment is too discrepant from LSEs' self-theories. We also propose a solution to this problem, drawing on literature on the psychology of construal (e.g., Trope & Liberman, 2010), that may not only allow LSEs to accept compliments and feel better about themselves, but also to make their close relationships more fulfilling.

2. Self-esteem as a theory of one's relational value

Self-esteem can be conceptualized as a theory about the self (e.g., Conner Christensen, Wood, & Feldman Barrett, 2003; Epstein, 1973; Libby, Valenti, Pfent, & Eibach, 2011; Story, 1998). That is, self-esteem comprises a set of organizing beliefs, knowledge, and expectations. A core belief that distinguishes the theories of high vs. low self-esteem individuals (HSEs and LSEs, respectively) is their *perceived relational value*.

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According to sociometer theory, self-esteem reflects one's subjective impression of one's worth or value to other people (Leary & Baumeister, 2000). HSEs feel valued by others and are certain about their worth, whereas LSEs doubt their value.

People's self-theories can be difficult to disprove or alter. As outlined by self-verification theory (e.g., Swann, 1997, Swann & Brooks, 2012), self-theories provide a sense of psychological coherence that is so valuable that people strive to maintain their self-theories even if they are negative (Swann, 1983; Swann, Rentfrow, & Guinn, 2003). Self-verification research shows that people use diverse strategies to maintain their self-theories. For example, people actively seek out or create social environments that provide theory-consistent feedback (e.g., Swann, Stein-Seroussi, & Giesler, 1992; Giesler, Josephs, & Swann, 1996). People also maintain their self-theories through biased information processing. For instance, relative to HSEs, LSEs perceive fewer acceptance cues from interaction partners—even when acceptance cues are experimentally held constant (Cameron, Stinson, Gaetz, & Balchen, 2010). However, when LSEs do not draw on a self-theory (e.g., when acceptance cues are directed at other people), they detect just as much acceptance as HSEs. Hence, LSEs have no deficit in the skills needed to detect acceptance cues. Instead, they appear motivated to discount information that does not jibe with their self-theory that they are relatively low-value relationship partners.

3. Perceived regard, self-esteem, and relationship outcomes

Because LSEs assume that others hold the same relatively negative view of them that they hold themselves—a consequence of naïve realism (Murray, Holmes, MacDonald, & Ellsworth, 1998)—LSEs fail to recognize how positively their romantic partners see them (Murray, Bellavia, Feeney, Holmes, & Rose, 2001b; Murray, Holmes, & Griffin, 2000; Murray, Holmes, Griffin, Bellavia, & Rose, 2001a; Murray et al., 1998). Murray, Holmes, and their colleagues have highlighted the costs of LSEs' unwarranted insecurity: LSEs defensively find more faults in their partners (Murray et al., 1998); feel less satisfied with, and committed to, their partners (Murray et al., 2001a; Murray et al., 2001b); and behave destructively in response to hurt feelings (Murray et al., 2003). If people do not trust in their partners' positive regard—which is chronically true for LSEs—they adopt self-protection goals, which drive behavior that can undermine opportunities to achieve satisfying relationships (Murray & Holmes, 2009; Murray, Holmes, & Collins, 2006).

4. Self-esteem and positive information

If low perceived regard leads to LSEs' maladaptive relationship responses, then boosting perceived regard should help LSEs in their relationships. What better way to do so than by their partners making direct and frequent compliments? Unfortunately, there is reason to believe compliments may not work. When LSEs receive success feedback, they feel more anxious not only than HSEs who receive identical success information, but surprisingly, also more anxious than control LSEs who receive no positive information (Wood, Heimpel, Newby-Clark, & Ross, 2005). Similarly, when asked to repeat positive self-statements, such as "I am a lovable person," LSEs feel worse compared with LSEs who do not repeat such statements (Wood, Perunovic, & Lee, 2009). Further, although everyone (i.e., HSEs and LSEs) shows increases in state self-esteem after receiving positive feedback about themselves, people with LSE then experience epistemic uncertainty (e.g., lower self-concept clarity) in response to positive information (Stinson et al., 2010). It seems, then, that positive information in general is not easily incorporated into LSEs' self-theories.

Why does positive feedback leave LSEs anxious? As mentioned, Swann's self-verification theory contends that people are motivated to perceive stable self-views in order to maintain psychological coherence (i.e., "epistemic concerns"). People may also prefer self-verifying

feedback to aid in smooth social interaction (i.e., "pragmatic concerns;" Swann et al., 2003). We believe that compliments in a close relationship could activate both epistemic concerns and pragmatic concerns for LSEs. LSEs might see compliments as "unwarranted," leading them to feel unknown by their partner, which is a dysphoric state (Stinson et al., 2010). Pragmatically, compliments can communicate norms or standards of behavior that LSEs might worry about being able to meet (Swann, Chang-Schneider, & Angulo, 2007). To resolve these concerns, it might be easier for LSEs to discount compliments. Put another way, it seems easier and safer to discount a one-off compliment rather than a self-theory based on a lifetime of past experience (Swann & Ely, 1984). Hence, we suspect that compliments are often too discrepant from LSEs' relatively negative self-theories, and therefore, LSEs discount compliments as inauthentic (Lemay & Clark, 2008), and fail to internalize the praise (Marigold, Holmes, & Ross, 2007).

5. Reducing the influence of self-theories to help LSEs benefit from compliments

How can this problem be solved? On the one hand, LSEs need to hear their partners' praise so they feel valued and stop pursuing destructive self-protection goals; on the other hand, LSEs' relatively unfavorable self-theories may block them from hearing their partners' praise. Somehow negative self-theories themselves must be blocked or circumvented. Theory and research on subjective construal suggests a way to accomplish this goal. According to several social cognition models, notably Construal Level Theory (CLT; Trope & Liberman, 2003, 2010) and Action Identification Theory (Vallacher & Wegner, 1987), people can construe the same event in varying degrees of abstraction, ranging from very concrete to highly abstract (Freitas, Gollwitzer, & Trope, 2004; Fujita, Trope, Liberman, & Levin-Sagi, 2006). When people are induced to adopt a relatively concrete versus abstract mindset, their subsequent cognitive operations differ. For example, when induced to adopt an abstract mindset, people focus on superordinate or high-level features of an event (e.g., "why" one would complete an action). In contrast, when induced to adopt a concrete mindset, people tend to focus on subordinate or low-level features of an event (e.g., "how" one would complete an action; Trope & Liberman, 2003, 2010).

One key insight from subjective construal research is that people's self-theories are less likely to guide their interpretations of events when they construe those events concretely than when they construe them more abstractly (for a review, see Libby & Eibach, 2011a, 2011b). Abstract construals cause people to analyze that event "top-down" by applying their self-theories to interpret its meaning. By contrast, concrete construals cause people to process events "bottom-up," independent of their self-theories (Libby & Eibach, 2011a, 2011b; Libby, Eibach, & Gilovich, 2005; Libby et al., 2011; Wakslak, Nussbaum, Liberman, & Trope, 2008). For example, Wakslak et al. (2008) found that when people predicted their behavior in the distant future—a task that promotes abstract construal—their predictions corresponded to their general self-views more strongly than when they made predictions about their behavior in the near future—a task that promotes more concrete construal (see also Freitas, Langsam, Clark, & Moeller, 2008).

Other research shows that people's self-theories affect their reaction to events more strongly when they picture them from the third-person perspective, which promotes abstract event construal, than when they picture them from the first-person perspective, which promotes concrete event construal. For instance, in the context of self-esteem, Libby et al. (2011) showed that LSEs felt more shame and overgeneralized their failures to a greater extent when those failures were pictured from a third-person (abstract) perspective, presumably because they drew upon their self-theories. In fact, when pictured from the first-person (concrete) perspective, LSEs' reactions to failure mirrored those of their more adaptive HSE counterparts.

We propose that because positive information conflicts with LSEs' relatively negative self-theories, and because abstract (vs. concrete) mindsets are associated with interpreting information in the context of one's self-theories (Libby et al., 2005; Libby & Eibach, 2011a, 2011b; Wakslak et al., 2008), LSEs who construe compliments in a concrete (vs. abstract) mindset will most benefit. In other words, we propose that LSEs in a concrete mindset will avoid integrating their self-theories with the compliment, which will enable them to be receptive to positive information (Murray et al., 2001a; Murray et al., 2001b).

Understanding how LSEs' mindset affects whether they accept their partners' compliments is important because of the central (and causal) role of perceived regard in many of LSEs' maladaptive relationship behaviors (Murray, Rose, Bellavia, Holmes, & Kusche, 2002). Thus, boosting LSEs' perceived regard could be an important first step in reducing such maladaptive relationship behaviors (Kille & Wood, 2012; Leary & MacDonald, 2003).

We tested three hypotheses about how, and under what conditions, self-esteem shapes people's reactions to partners' compliments. First, we hypothesized that partners' compliments would trigger LSEs' less positive self-views and that those self-views would lead LSEs to devalue their partners' compliments (Study 1). Second, we hypothesized that self-esteem influences people's reactions to partners' compliments more if they process the information in an abstract (vs. concrete) mindset. Third, we hypothesized that LSEs would respond more positively to partners' compliments if they process those compliments in a concrete (vs. abstract) mindset. We tested the second and third hypotheses in a series of studies that used three distinct operationalizations of abstract versus concrete mindset adapted from the literature on mental construal (Studies 2–4). Our hypotheses integrate three distinct literatures: self-verification, subjective construal, and close relationship processes.

6. Study 1

Despite research suggesting that LSEs have more difficulty accepting positive information about themselves (e.g., Wood et al., 2009), much less research has examined the process of receiving positive feedback from partners in close relationships. In line with self-verification theory (e.g., Swann, 2012), we hypothesized that LSEs would report more concerns pertaining to their self-views than HSEs after receiving compliments from partners. Because compliments convey positive information, and because LSEs' self-views are relatively negative, compliments may activate epistemic and pragmatic concerns, which are aversive (e.g., Stinson et al., 2010; Swann et al., 2003). Thus we hypothesized that lower self-esteem would predict more concerns related to self-theories after receiving compliments. We further predicted that these self-concerns would be associated with negative affect, which in turn would predict devaluing or discounting compliments. To examine this mediational model, we asked people to report their self-esteem and had them answer questions about their general experience of receiving compliments that tapped into (a) concerns related to their self-theories, (b) negative affect, and (c) compliment devaluing.

6.1. Method

6.1.1. Participants

We recruited 113 university undergraduates to participate in an online study entitled "The Compliments Study" (74 Women, 37 Men, 2 unidentified, M age = 21.04 years, SD = 5.60). Sample size was determined by recruiting as many people as possible from the participant pool within the timeframe of the academic term. Participants received partial credit towards their psychology course. Two participants did not provide complete data, and their data are not included in any analyses.

Table 1

Items tapping into three dimensions resulting from receiving compliments in general (Study 1).

Dimension	Alpha	Items
Self-concerns	0.51	"I feel like I don't know exactly who I am after getting a compliment." "I worry about not being able to live up to expectations implied by compliments." "When I am complimented, sometimes I feel the person clearly doesn't know me." I feel like I don't know exactly who I am after getting a compliment." "When I receive a compliment, I feel that I don't always deserve it."
Negative affect	0.83	"I love receiving compliments." (R) "A compliment can make me feel anxious." When I receive a compliment it always makes me feel good. (R) I love receiving compliments. (R) I feel uniformly positive after receiving a compliment. (R) A compliment can make me feel anxious. At times, I feel negatively after getting a compliment. I have felt a bit of shame after receiving a compliment. I have felt jittery after receiving a compliment.
Compliment devaluing	0.69	"Compliments are not really that great to get." "Receiving compliments does not really matter to me."

6.1.2. Procedure and measures

In this, and all subsequent studies, we administered the 10-item Rosenberg (1965) self-esteem scale (e.g., "I feel that I have a number of good qualities," "I wish I could have more respect for myself" (R), 1 = *very strongly disagree*, 9 = *very strongly agree*). We averaged scores into a reliable composite of self-esteem (α = 0.91, M = 6.55, SD = 1.55). We asked participants to complete a filler personality questionnaire—to disguise our specific interest in the relation between self-esteem and compliments—and then presented participants with our compliment questionnaire, which was designed to assess reactions to receiving compliments from others. We told participants that we were interested in their experience receiving compliments and asked them to answer several questions about how they feel in general when receiving a compliment. Items tapped into the extent to which upon receiving compliments they experienced (a) self-concerns—i.e., feelings of discrepancy or worry involving one's self-theory and (b) negative affect, and responded by (c) devaluing the compliments (see Table 1 for items and scale alphas). Participants answered the items with a 9-point response scale (1 = *very strongly disagree*, 9 = *very strongly agree*).

6.2. Results

Table 2 contains the correlations between variables assessed in Study 1. Did LSEs report having different reactions to receiving compliments, in general, compared to their HSE counterparts? To examine our mediational model, we used the PROCESS SPSS macro (Hayes, 2013).

As Fig. 1 reveals, the direct effect of self-esteem on compliment devaluing was significant, suggesting that LSEs were more likely to devalue compliments than HSEs, B = -0.23 , SE = 0.09, $t(109)$ = -2.49 ,

Table 2

Zero-order correlations among variables assessed in Study 1. Correlations are significant at the 0.01 level (**) and the 0.05 level(*).

		2.	3.	4.
1.	Self-esteem	–0.50**	–0.42**	–0.23*
2.	Self-concerns	–	0.62**	0.36**
3.	Negative affect	–	–	–0.48**
4.	Compliment devaluing	–	–	–

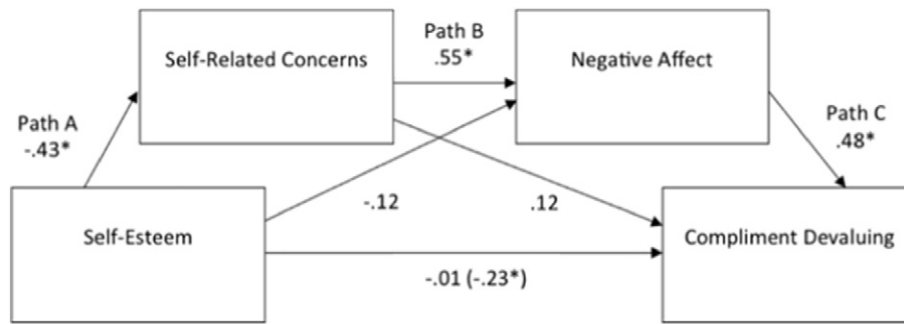


Fig. 1. Mediation of the effect of self-esteem on devaluing compliments through sequential mediators of self-related concerns and negative affect in Study 1. Each path is labeled with the path estimate associated with the effect. Value in parentheses is direct effect. *denotes a significant effect at the 0.05 level.

$p = 0.014$. We next examined whether this effect was mediated through self-concerns and negative affect. Bootstrapping analysis with 5000 resamples and a 95% bias-corrected confidence interval (CI) revealed one significant indirect path, as indicated by the absence of 0 within the confidence interval. The significant path is shown in Fig. 1 (Paths A through C). Estimate = -0.11 , $SE = 0.04$, 95% CI = -0.195 to -0.055 .

As can be seen in Fig. 1, self-esteem was negatively associated with self-concerns, $B = -0.43$, $SE = 0.07$, $t(109) = -6.07$, $p < 0.001$. Thus, as predicted, LSEs reported feeling greater self-concerns than HSEs after receiving compliments. We also found that greater self-concerns were associated with greater levels of negative affect after receiving compliments, $B = 0.55$, $SE = 0.09$, $t(109) = 6.36$, $p < 0.001$, which fits with past research suggesting that self concerns, or epistemic uncertainty, is an aversive state that people are motivated to alleviate (e.g., Stinson et al., 2010). Last, greater negative affect after receiving compliments led to greater devaluing of compliments, $B = 0.48$, $SE = 0.13$, $t(109) = 3.76$, $p < 0.001$. Once self-concerns and negative affect were entered into the model, self-esteem no longer directly predicted compliment devaluing, $B = -0.01$, $SE = 0.10$, $t(109) = 0.10$, $p = 0.92$.

6.3. Discussion

When they receive compliments from others, people with low self-esteem are troubled by concerns that stem from their general self-theories. They report feeling unsure as to whether they will be able to live up to the information implied in a compliment, and indeed, feel unsure about their sense of self more generally after receiving compliments. Interestingly, in the model we tested, when self-concerns were added to the model, self-esteem did not directly predict feeling more negative affect (e.g., Leary & MacDonald, 2003) or devaluing compliments (e.g., Lemay & Clark, 2008) as might be expected based on past research; rather, self-esteem exerted its influence on compliment devaluing via self-concerns and subsequent negative affect. Study 1 thus reinforced our assertion that the activation of LSEs' general self-theories may be a critical component as to why they often fail to benefit from positive feedback about themselves (cf. Swann, 1997; Wood, Anthony, & Foddis, 2006).

7. Study 2

If LSEs devalue compliments largely because of their self-concerns, then manipulations that reduce the extent to which people draw upon their self-theories should reduce self-esteem differences in how people receive compliments. Studies 2–4 test our hypothesis that LSEs are less able than HSEs to benefit from their partners' expressions of positive regard when they are interpreting that information in an abstract (vs. concrete) mindset. When recalling compliments, abstract mindsets should lead to logical discordance for LSEs—whose self-views are less positive than HSEs—causing them to discount compliments and to fail to benefit from them. In contrast, when people are

placed in a concrete mindset, they interpret events and information by focusing on the event in isolation. If this narrow focus inhibits the activation of one's general self-theories, the value of the compliment may be maintained, and LSEs' reactions to receiving compliments may more closely mirror the reactions of their HSE counterparts.

In Study 2, we primed an abstract or concrete mindset using a standard manipulation from the construal level literature (e.g., Freitas et al., 2004), asked participants to recall a compliment from a romantic partner, then measured the extent to which they internalized the compliment by measuring perceived regard. We expected that after being primed with an abstract mindset, self-esteem differences in perceived regard would emerge, whereas these differences would be diminished—or possibly even eliminated—in the concrete mindset condition.

7.1. Method

7.1.1. Participants

Seventy-one undergraduates who were currently in romantic relationships participated for partial course credit. We excluded data from 3 participants who failed to properly complete the manipulation (2 from the concrete condition, 1 from the abstract condition, see below for more detail). Hence, we had a final sample of 68 participants (51 women, 17 men, mean age 21.46 years, $SD = 6.60$, mean relationship length 29.81 months, $SD = 56.36$). Sample size was determined by recruiting as many participants as possible within the timeframe of the academic term, with a minimum of 30 participants per experimental condition.¹

7.1.2. Procedure

Participants first completed a general demographics questionnaire (e.g., age, relationship length) followed by the Rosenberg (1965) self-esteem scale ($\alpha = 0.93$, $M = 6.88$, $SD = 1.37$). We then asked participants to select the most recent compliment they had received from their romantic partner. Participants indicated how long ago the compliment was received and provided two keywords to identify the compliment. The timing of this compliment selection procedure ensured that participants were not choosing qualitatively distinct compliments as a function of mindset condition. After selecting the compliment, participants were randomly assigned to the abstract or concrete mindset condition. In the concrete condition participants answered a series of *how* questions that are designed to get them to unpack a goal into progressively more concrete means to the goal. Participants were first asked how they would maintain good physical health. After generating a

¹ In this and all subsequent studies we recruited only native English speakers. This was done because the manipulations that we chose required a firm understanding of English. Further, in our student samples (Studies 2 and 3), we followed past research (Marigold et al., 2007, see footnote 2) and did not include participants who were from Asian countries because self-esteem may operate differently among such participants (cf. Heine, Lehman, Markus, & Kitayama, 1999).

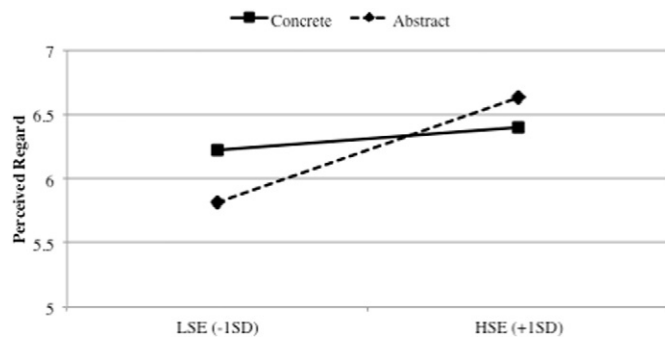


Fig. 2. Predicted means for Study 2 participants with low (-1 SD) and high ($+1$ SD) self-esteem as a function of remembering a compliment after being put into a concrete or abstract mindset.

means to this physical health goal they were then asked to specify how they would enact that means to the goal. For example, one participant first responded she would exercise to maintain her health, and then responded that she would go to the gym in order to exercise. This process of unpacking increasingly concrete means to a goal continued until participants had responded to four of these sequential 'how' questions. In previous research this procedure has been shown to prime a concrete mindset that carries over to affect action construal in subsequent tasks (see Freitas et al., 2004 for complete details). Two participants entered only 1 of the 4 responses to the how or why fields, and 1 participant did not enter a response related to how she would maintain her health. As mentioned, the data from these participants were excluded.

Participants in the abstract condition were given the same starting point goal (i.e., "maintain good physical health"), but instead of generating means to this goal they were asked to generate increasingly abstract reasons for that goal by answering a series of sequential 'why' questions. The first question asked why they seek to "maintain good physical health." The next question then asked them to explain why they pursue the goal that they generated in response to the first question, and so on. For example, one participant first reported that she would "maintain good physical health" so that she could stay healthy and physically thin. She next responded that she would stay healthy and thin to feel good about herself. Participants responded to four of these sequential 'why' questions in the abstract condition. This process of generating increasingly abstract reasons for a goal has been shown to prime an abstract mindset that carries over to affect action construal in subsequent tasks (Freitas et al., 2004).

After the mindset induction, participants described the compliment they had previously selected in as much detail as possible. Then to capture the extent to which participants accepted and internalized on their partners' compliments, we assessed perceived regard with a measure adapted from Cameron and Holmes that averaged together four-items (2010; $\alpha = 0.87$; "I am confident that my partner accepts and loves me," "My partner believes I have many good qualities," "My partner regards me as very important in his/her life," and "My partner values and admires my personal qualities and abilities." 1 = *not at all true*, 7 = *completely true*). To the extent that participants accepted and gave value to the positive information conveyed by a compliment, they should infer that their partners regard them more positively.²

7.2. Results and discussion

Participants reported compliments ranging from the same day as study completion up to 14 days prior ($M = 5.18$ days, $SD = 3.54$).

² In this and subsequent studies, we also asked participants additional questions about their relationships for exploratory purposes. These questions always followed our main dependent variable of interest, perceived regard. We present these items as well as the associated analyses in supplementary materials.

Self-esteem did not affect length of time since receiving the compliment $\beta = 0.036$, $t(65) = 0.29$, $p = 0.77$.

We submitted participants' perceived regard scores to a hierarchical linear regression. We centered self-esteem and dummy coded condition (0 = concrete, 1 = abstract), both of which we entered in the first block. Because relationship length varied widely, in this and all subsequent studies we controlled for relationship length by entering it into the first block of the regression equation. We calculated an interaction term between centered self-esteem and dummy-coded condition and entered it in the second block.

Replicating Study 1, we found an effect of self-esteem on perceived regard, $\beta = 0.43$, $t(63) = 3.77$, $p < 0.001$, such that overall, LSEs felt less positively regarded than HSEs (see Fig. 2). This effect, however, was qualified by the predicted Condition \times Self-Esteem interaction, $\beta = 0.40$, $t(62) = 2.67$, $p = 0.01$. As we predicted, the effect of self-esteem was significant in the abstract condition, $\beta = 0.74$, $t(62) = 4.67$, $p < 0.001$, whereas in the concrete condition, the effect of self-esteem on perceived regard was rendered non-significant, $\beta = 0.16$, $t(62) = 1.06$, $p = 0.29$. Additional analyses revealed that LSEs felt more positively regarded by their partner in the concrete (vs. abstract) mindset condition, $\beta = -0.36$, $t(62) = -2.23$, $p = 0.029$. Although not significant, the opposite trend emerged for HSEs, $\beta = 0.24$, $t(62) = 1.60$, $p = 0.114$.³

Study 2 provides the first empirical evidence that self-esteem differences in response to recalling compliments can be diminished, and in this case eliminated, by putting participants into a concrete mindset. In an abstract mindset, self-esteem (a guiding self-theory; Libby et al., 2011) shaped reactions to compliments: LSEs were less likely to infer their partners' positive regard after recalling an objective display of regard (i.e., a compliment) than HSEs—presumably because such information conflicts with LSEs' less positive self-theories. We next attempted to conceptually replicate the results of Study 2 using a different manipulation of construal level.

8. Study 3

LSEs experience more self-concerns compared to HSEs after receiving compliments in general (Study 1) and in response to a particular remembered compliment. As predicted, LSEs were less likely to internalize the positive information conveyed by a compliment than HSEs when in an abstract mindset—but not when they were in a concrete mindset (Study 2). To further establish whether concrete (vs. abstract) mindsets benefit LSEs when thinking about positive relational information, we used a very different manipulation from the visual-perspective literature (e.g., Libby et al., 2011). This work has shown that when recalling failure experience, if individuals picture their failures from the third-person (abstract) visual perspective, LSEs draw on their self-theories and overgeneralize those failures, whereas if they use the first-person (concrete) visual perspective, they do not. We reasoned, then, that LSEs would better embrace compliments when in a concrete, first-person mindset than when in an abstract mindset. Participants

³ We also had 7 coders, who were blind to experimental condition and our hypotheses, rate the compliments so that we could determine whether self-esteem, condition, or their interaction affected how participants described the compliments. Coders rated each compliment in terms of (a) its positivity (three items; how [positive/meaningful/important] does the compliment sound?), and (b) its degree of concreteness to abstractness (how concretely – abstractly did participants describe the compliment? From specific to general, how was the compliment described?). Coders reached an acceptable level of agreement ($\alpha s = 0.69$ – 0.85 per item). We averaged all coders' scores for the three items that tapped into compliment positivity (i.e., how positive is this compliment; how meaningful is this compliment; how important does this compliment seem; $\alpha = 0.92$) and the two items that tapped into how concrete vs. abstract the compliment seemed ($\alpha = 0.90$). For neither individual coding items ($ps > 0.22$) nor the two composite variables ($ps > 0.39$) did we find effects of self-esteem, condition, nor their interaction. Thus, objective observers were unable to detect differences between how the compliments were described by participants suggesting that the manipulation was not having its effect by altering the compliment per se.

were asked to describe a compliment they received from their romantic partner while visualizing it from either a first-person perspective (a concrete mindset) or a third-person perspective (an abstract mindset). We predicted that self-esteem would predict participants' perceptions of regard less strongly when they recalled a partner's compliment from the first-person (concrete) perspective than when they recalled a partner's compliment from the third-person (abstract) perspective. Furthermore, we predicted that LSEs who recalled their partner's compliment from the first-person perspective would feel more positively regarded than LSEs who recalled the compliment from the third-person perspective.

8.1. Method

8.1.1. Participants

We recruited 101 undergraduates involved in a romantic relationship. Sample size was determined by recruiting as many people as possible from the participant pool within the timeframe of the academic term, with an aim of at least 30 participants per experimental condition. Data from six participants were excluded for failing a categorical manipulation check (i.e., they incorrectly recalled the visual-perspective condition to which they were assigned; five were in the third-person condition, one in the first-person condition), and from one participant for failing to report a compliment. The final sample consisted of 94 participants (18 men) with an average age of 23.45 years ($SD = 7.51$) and an average length of relationship of 44.87 months ($SD = 59.63$).

8.1.2. Procedure

Participants first completed a general demographics questionnaire (e.g., age, relationship length) followed by the Rosenberg (1965) self-esteem scale ($\alpha = 0.93$, $M = 6.34$, $SD = 1.23$). We then asked participants to select the most recent compliment they had received from their romantic partner. Participants indicated how long ago the compliment was received and provided two key words to identify the compliment. Participants were then randomly assigned to one of two conditions. Participants in the concrete condition were asked to remember the event from the first-person perspective. More specifically, participants were told that they should visualize their partner and their surroundings looking through their own eyes as they remembered the event (see Libby et al., 2011, pp. 1162). Participants in the abstract condition were asked to remember the event as though they were watching themselves from an outsider's perspective and that they should visualize themselves, their partner and their surroundings from an outside observer's perspective as they remembered the event. After participants imagined the compliment for approximately 1 min, we asked them to describe the compliment. To assess whether participants accepted and internalized their partners' compliments, we measured perceived regard using the same scale from Study 2 ($\alpha = 0.87$), after which participants indicated the perspective from which they actually remembered the event, which constituted our manipulation check.

8.2. Results and discussion

We used the same analysis strategy described in Study 2, this time with perceived regard regressed on mean-centered self-esteem, dummy-coded perspective condition (first-person = 0, third-person = 1), and an interaction we calculated between the two variables, with relationship length as a covariate. Participants reported compliments ranging from the same day as study completion up to 6 months prior ($M = 6$ days, $SD = 12.24$). Self-esteem did not affect length of time since receiving the compliment ($t(91) = 0.23$, $p = 0.82$).

As Fig. 3 illustrates, there was a main effect of self-esteem, $\beta = 0.44$, $t(89) = 4.64$, $p < 0.001$, such that overall, LSEs reported feeling less positively regarded than HSEs. This main effect was qualified by the predicted Self-Esteem \times Condition interaction, $\beta = 0.24$, $t(88) = 1.76$, $p = 0.083$, although it failed to reach conventional significance levels

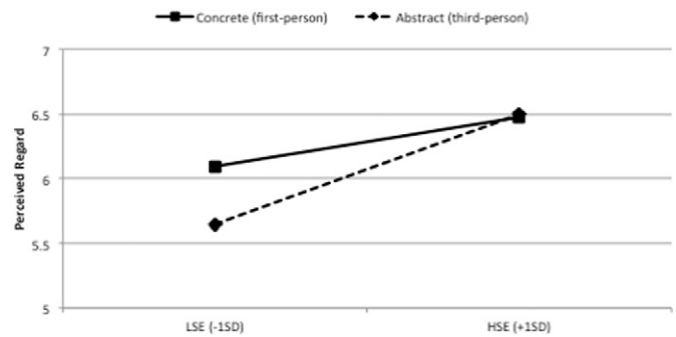


Fig. 3. Predicted means for Study 3 participants with low (-1 SD) and high ($+1$ SD) self-esteem as a function of remembering a compliment in a concrete (first-person perspective) or abstract (third-person perspective) mindset.

(see Fig. 3). As in Study 2, self-esteem was a weaker predictor of perceived regard in the concrete condition, $\beta = 0.26$, $t(88) = 1.95$, $p = 0.055$, compared to the abstract condition, $\beta = 0.64$, $t(88) = 4.64$, $p < 0.001$. Thus the concrete condition diminished the pervasive self-esteem differences that we observed in Study 1. Critically, LSEs who remembered the compliment from the first-person perspective felt more positively regarded than LSEs who remembered the compliment from the third-person perspective, $\beta = -0.35$, $t(88) = -2.29$, $p = 0.024$. Regardless of what perspective HSEs remembered the compliment from, they felt equally positively regarded, $t < 1$.⁴

In sum, there was less of an influence of self-esteem on participants' perceived regard after recalling a real compliment when participants thought of the event from the visual perspective that tends to support a concrete (vs. abstract) mindset; this is presumably because LSEs' relatively negative self-theories were not brought to bear when a concrete (vs. abstract) mindset was induced. In other words, because LSEs' relatively negative self-theories cause them to prefer less positive information (e.g., Swann, 1997), LSEs in the concrete condition where self-theories should have been less influential were better able to internalize and benefit from their partners' compliments to more closely mirror their HSE counterparts. Indeed, the concrete (vs. abstract) mindset boosted LSEs' perceived regard: LSEs who recalled a compliment from a first-person perspective, associated with concrete mindsets, felt more positively regarded by their romantic partners than LSEs who recalled a compliment from a third-person perspective, associated with abstract mindsets.

9. Study 4

Our self-verification perspective on compliments assumes that low self-esteem is associated with negative expectations about how others value the self and that those expectations regularly guide how people interpret and react to compliments. Indeed, LSEs (vs. HSEs) react less positively to favorable information in general (e.g., Study 1; Wood et al., 2005, 2009). Thus we expect that LSEs customarily interpret positive information through the prism of their negative self-theories—i.e., that the pattern that we observed in the abstract condition in Studies 2 and 3 will mirror LSEs' default mindset. We believe that it is only

⁴ The same 7 coders from Study 2 also rated Study 3's compliments. Coders reached an acceptable level of agreement ($\alpha s = 0.69$ – 0.78). We combined the ratings for the positivity items ($\alpha = 0.93$), and the concrete-abstract items ($\alpha = 0.94$). In terms of compliment positivity, we observed a main effect of self-esteem, $\beta = 0.26$, $t(85) = 2.5$, $p = 0.014$, suggesting that HSEs described compliments that were perceived more positively than LSEs'. Neither condition nor the self-esteem by condition interaction emerged as significant ($ps > 0.25$). In terms of how concrete vs. abstract participants described the compliments, we observed only a marginal main effect of condition, $\beta = 0.21$, $t(85) = 1.96$, $p = 0.053$, suggesting those in the abstract condition participants described compliments at a broader and more general level. Neither self-esteem nor the self-esteem by condition interaction emerged as significant ($ps > 0.45$).

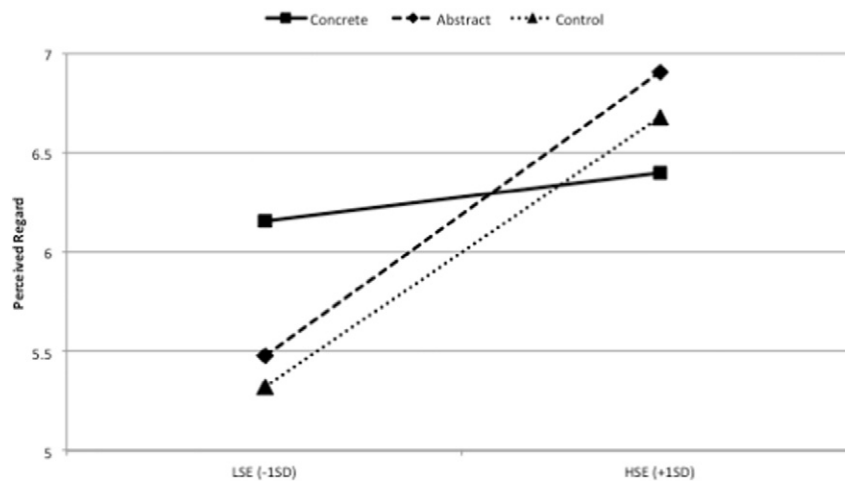


Fig. 4. Predicted means for Study 4 participants with low (-1 SD) and high ($+1$ SD) self-esteem as a function of imagining a compliment in an abstract or concrete mindset, or in a no-mindset control condition.

when we actively intervene to promote concrete thinking that LSEs are able to value compliments. To examine this assumption, we added a control condition that did not induce a particular mindset participants adopted when considering a compliment.

Another purpose of Study 4 was to prime an abstract or concrete mindset using yet another distinct operationalization (Fujita et al., 2006). Study 4 also tested the generalizability of our results to a sample of people who were, on average, in longer relationships. A final goal of Study 4 was to assess whether HSEs and LSEs differ in their reactions to identical information. That is, in our first three studies participants relied on their actual experience in receiving compliments in general (Study 1) and particular compliments by a partner (Studies 2–3). It is possible, though we believe unlikely, that LSEs receive qualitatively different types of compliments than do HSEs, which could explain their divergent reactions to them. Although this explanation would not account for why concrete mindsets reduce or eliminate self-esteem differences in reactions to compliments, in Study 4 we asked all participants to imagine that their romantic partner paid them a specific compliment so that we could control the content of this compliment.

9.1. Method

9.1.1. Participants

One-hundred and five participants (46 men) who were currently involved in a romantic relationship completed an online questionnaire. The average participant age was 30.34 years ($SD = 9.28$) and the average length of relationship was 65.46 months ($SD = 66.16$). Participants were recruited through Amazon.com's Mechanical Turk and received \$0.50 for participation, and we set the sample size to 100 to be in line with our previous studies.⁵

9.1.2. Procedure

Participants first completed a general demographics questionnaire (e.g., age $M = 30.34$ years, $SD = 9.28$, relationship length $M = 65.46$ months, $SD = 66.16$) followed by the Rosenberg (1965) self-esteem scale ($\alpha = 0.92$, $M = 6.78$, $SD = 1.59$). Next, we used yet another operationalization of abstract and concrete mindsets (developed and validated by Fujita et al. (2006), Studies 3a and 3b). Specifically, we told participants they would engage in a “categorization task” in which we presented a list of 40 common words. In the concrete condition the task required participants to think of a specific subordinate exemplar of that category (e.g., if given the word *soda*, a participant might

list “Pepsi,” because Pepsi is a type of soda). In the abstract condition, participants were asked to think of a superordinate category into which the common word could be placed (e.g., for the word *soda*, a participant might list “drink” because a soda is a type of drink).

Thus participants in the concrete condition generated concrete examples for each word, whereas participants in the abstract condition generated abstract examples for each word. Previous research suggests that this induction of concrete versus abstract thinking, like many other cognitive operations, carries over to affect the level of abstraction of thought in unrelated tasks (Freitas et al., 2004; Fujita et al., 2006). In the control condition participants engaged in neither of these categorization tasks.

Next we presented all participants with the same compliment experience and asked them to vividly imagine their partner paying them the compliment. Specifically, participants were given the following scenario:

Imagine that you are in the middle of your work or school day, and you decide to phone your romantic partner. You tell your partner about how your day is going, and even though you are not expressing any concern about your performance at work/school, your partner tells you “You’re doing a great job. You must be really charismatic with your colleagues, because it sounds like everyone there really likes you. I’m proud of you.”

After imagining the compliment all participants then answered the questions from the same perceived regard scale used in Studies 2 and 3 ($\alpha = 0.96$). We predicted that as in the previous studies, self-esteem differences would emerge in the abstract condition, but not in the concrete condition. We made no predictions for participants in the control condition.

9.2. Results and discussion

Condition was dummy-coded (control = 0,0; concrete = 0,1; abstract = 1,0), self-esteem was mean centered, and relationship length was entered into the first step of a hierarchical regression predicting perceived-regard scores. We computed two interaction terms to represent the Condition \times Self-Esteem interaction, which we entered in step two of the regression.

Once again, a main effect of self-esteem emerged such that LSEs, on average, felt less favorably regarded after imagining the compliment compared with HSEs, $\beta = 0.49$, $t(97) = 5.67$, $p < 0.001$. This main effect was again qualified by the predicted interaction between self-esteem and condition, $R^2_{change} = 0.045$, $F(2, 95) = 3.20$, $p = 0.045$.

As can be seen in Fig. 4, in both the control and abstract conditions LSEs felt considerably less positively regarded than HSEs (control: $\beta = 0.61$, $t(95) = 4.26$, abstract: $\beta = 0.63$, $t(95) = 4.71$, p 's < 0.001);

⁵ Although we set up 100 HITs on Mechanical Turk, we received responses for 105 participants.

however this large difference was reduced to non-significance in the concrete condition, $\beta = 0.11$, $t(95) = 0.60$, $p = 0.55$. Thus, it appears that in the concrete condition, LSEs' negative self-theories did not drive their reactions to receiving compliments; however in the abstract condition, self-esteem strongly predicted how positively regarded participants felt in response to receiving a compliment. Interestingly, self-esteem also guided reactions to compliments in the control condition; this finding is consistent with the results of Study 1, in which participants were effectively in the same "no instruction" mindset as these control condition participants.

Also evident in Fig. 4, LSEs in the concrete condition felt more positively regarded than LSEs in the abstract condition, $\beta = 0.27$, $t(95) = 2.02$, $p = 0.047$. LSEs in the control condition also differed significantly from LSEs in the concrete condition, $\beta = 0.33$, $t(95) = 2.36$, $p = 0.02$, but not in the abstract condition ($p > 0.63$). Regardless of condition, HSEs felt just as positively regarded by their romantic partner (p 's > 0.17).

One inference from this evidence is that given that the control condition did not differ from the abstract condition, LSEs may generally default to an abstract way of processing highly valenced feedback. Indeed, people who suffer from depression, which is highly correlated with LSE, tend to overgeneralize failure experiences (Brown & Dutton, 1995; Kernis, Brockner, & Frankel, 1989). This general way of processing information has been linked to ruminative thought patterns. Future research should examine the extent to which individual differences, such as self-esteem, correlate with defaulting to either a concrete or abstract mindset when considering various types of information.

Study 4 provides further support for our hypothesis that self-esteem guides how people react to receiving compliments when they are thinking abstractly but not when they are thinking concretely. LSEs may benefit from thinking concretely and experientially about positive feedback because doing so allows them to avoid the problematic interpretations that their abstract self-theories lead them to generate.

10. General discussion

People with low self-esteem have trouble accepting compliments from their partners. Across four studies, we showed that LSEs fail to internalize their partners' compliments because compliments conflict with their self-theory of low personal worth. After considering partner compliments, LSEs felt more self-uncertainty (Study 1) and felt less trust in their partners' regard (Studies 2–4) than their HSE counterparts. However, these self-esteem differences were diminished or eliminated when participants considered the positive information in a concrete mindset, which we operationalized in various ways.

Concrete mindsets appeared to let LSEs focus on and benefit from their partners' compliments because such mindsets downplayed the conflict with LSEs' self-theories. The consistency of this finding across diverse operationalizations of mindset, and with both real (Studies 2 and 3) and imagined (Study 4) compliments, provides strong converging evidence for our hypotheses. Thus, these studies provide evidence that people are less likely to use their self-theories to interpret events when they think about those events concretely (vs. abstractly).

10.1. When positive information "fits"

These studies highlight that no information is inherently positive (McNulty & Fincham, 2012). Rather, one must consider contextual factors such as the "fit" between the information provided and the target's self-theories (Swann, 1997). As partners of people with LSE can attest, information in general—and positive information in particular—must be regulated to fit with LSEs' insecurities. For example, Marigold, Eibach, Libby, Ross, and Holmes (2014) asked people to support a LSE friend who was considering a past failure. Friends who tried to help by putting a positive spin on the failure ended up feeling rebuffed and upset, whereas friends who simply validated the LSE's feelings were

better received. Other research also highlights that positive information can act as a double-edged sword for LSEs: Stinson et al. (2010) discovered that although positive information (e.g., acceptance cues from a confederate) made HSEs and LSEs alike feel good, the epistemic uncertainty associated with incongruent information quickly made LSEs experience greater self-concept confusion.

The above evidence, taken together with the present studies, supports predictions in line with self-verification theory: People prefer information that *verifies* their self-theories. In terms of fit, positive information is more consistent with HSEs' confident and favorable self-theories, whereas the same information is inconsistent with LSEs' relatively unfavorable self-theories. Thus, conveying positive information to LSE partners presents a problem (Stinson et al., 2010): LSEs' self-theories make positive information seem unrealistic and thus they discount the information. From this perspective, any cognitive intervention that makes self-theories less salient to LSEs is a potential solution for capitalizing on compliments. Indeed, Swann, Hixon, Stein-Seroussi, and Gilbert (1990) found that limiting people's cognitive resources decreased their ability to draw upon their self-concept. While placed under cognitive load, people preferred interaction partners who viewed them positively, but when they had sufficient resources, people preferred interaction partners who verified their self-views. Similarly, Cavallo, Holmes, Fitzsimons, Murray, and Wood (2012) examined how self-esteem interacts with executive resources in responses to interpersonal risk. These authors found that LSEs did *not* respond to risk by self-protectively withdrawing from their relationship if they were experimentally placed under high cognitive load. In other words, LSEs must have ample cognitive resources for their self-theories to steer them toward self-protection (rather than approach) in the face of threat. When their resources are temporarily or chronically reduced, and the activation of self-theories is impeded, LSEs pursue relational approach goals (e.g., drawing closer to their partners) to the same extent as HSEs.

10.2. Integrating construal level theory and visual perspective theory

Our research integrates construal level theory (CLT) with visual perspective research. Visual perspective research (see Libby & Eibach, 2011a, for a review) suggests that people draw on their generalized self-knowledge, including self-theories, narratives, and beliefs, when they picture events from the third-person (vs. first-person) visual perspective. Thus, the conceptual self is more likely to exert an influence when people picture events from a visual perspective associated with abstract construals (i.e., third-person).

Research from CLT also suggests that the conceptual self—the self made up of one's beliefs, standards, and self-theories—exerts a greater influence when people construe events or decisions abstractly. For example, Freitas et al. (2008) found that people who temporarily or chronically thought abstractly were more likely to make decisions in line with their desired self-concept. Similarly, Ledgerwood, Trope, and Chaiken (2010) found that abstract (vs. concrete) mindsets led to greater attitudinal consistency. When participants were induced to experience an abstract (vs. concrete) mindset, they were less likely to take into account the attitudes of a potential interaction partner, and instead drew on their personal views. In other CLT research, Wakslak et al. (2008) found that people's predictions for their future self are more consistent with their self-theories when they make predictions about the distant future, which promotes abstract reflection, than when they make predictions about the near future, which promotes concrete processing.

In the current research, we manipulated abstract and concrete mindsets using methods from both the visual perspective literature and CLT research and obtained the same pattern of results across these diverse manipulations. These convergent findings suggest that the conceptual self—specifically, one's explicit self-esteem—shapes reactions to self-relevant information more strongly when it is processed in an abstract mindset than in a concrete mindset.

10.3. Limitations and future directions

On the surface, the present findings could seem discordant with past research investigating abstract construal of positive relational information. Specifically, Marigold et al. (2007) found that instructing LSEs to write an abstract description of their partner's compliment was more beneficial than instructing them to write a more concrete description (see Zunick, Fazio, and Vasey (2015), for similar findings). We suggest that the discrepant findings can be reconciled by examining the methods of each: Specifically, the manipulations we used were relatively non-directive.

We simply activated a general mindset—and then examined how that mindset shaped participants' interpretations of positive information, without providing any specific direction for those interpretations. In contrast, Marigold et al. (2007) subtly led participants to form a positive generalization from their partner's compliment by asking participants to think about *why their partner admired them*. This technique, referred to as *directed abstraction* by Zunick et al. (2015), encourages LSEs to construe their partner's compliment as reflecting their partners' admiration, rather than some less positive meaning. In contrast, in the current studies, LSEs led to make abstract construals may have generated the specific content of those construals themselves—and in a negative way. Abstract construals may have negative consequences when LSEs generate the content of those construals themselves, as in the current studies, but they may have positive consequences when external agents (e.g., experimenters; relationship counselors) actively direct the content of the abstract construals. The contrast between our results Marigold et al.'s (2007) thus underscore Zunick et al.'s (2015) point that “the ability of directed abstraction to ‘direct’ those with negative self-views towards positive generalizations is likely crucial to its success” (p. 16).

Our work may also initially seem discordant with previous work which finds that people tend to respond more negatively to upsetting events when they adopt a concrete (vs. abstract) perspective (Ayduk & Kross, 2008; Kross, Ayduk, & Mischel, 2005; Kross & Ayduk, 2008). However, we believe that these findings are reconciled by considering the context of our studies and the source of the negativity. In our studies, the event — receiving a compliment — was seemingly positive in its concrete features. For this event any negativity that LSEs experience likely stems from abstract, top-down processing in which they try to reconcile the discrepant event of receiving a compliment with their negative self-theories. When negative responses are a product of top-down, theory-driven processing, as in our studies, concrete mindsets help LSEs circumvent the influence of their theories and thus reduce the negativity of their responses. However, when negativity stems from bottom-up processing that involves reliving one's visceral responses to an upsetting event (e.g., recalling a time one experienced overwhelming anger), concrete mindsets function to activate people's negative reactions, as in previous work that examined the role of abstraction in moderating hot versus cold processing (Kross et al., 2005). Another way to look at the different pattern of findings in these two programs of research is to consider how they involve two different forms of self-distancing. Our effect hinges on using concrete mindsets to distance the individual from their conceptual self, inducing them to focus on the event itself in relative isolation from their broader self-knowledge. By contrast the work by Ayduk, Kross, and colleagues involves using abstract mindsets to distance individuals from their experiential self, inducing a kind of psychological separation from the self in the scene they are recalling. When the negativity of the experience is caused or exacerbated by relating it to one's conceptual self, we would expect to replicate the pattern we observed in the present studies — concrete (vs. abstract) mindsets should reduce the negativity. However, when the negativity stems from experiential reliving of the visceral sensations of the event, then we would expect the opposite pattern. These predictions about boundary conditions may be an interesting focus for future research.

Finally, it is noteworthy that HSEs were unaffected by our mindset manipulations. One might have hypothesized that HSEs would feel even more positively regarded by their partners when considering a compliment from an abstract perspective. After all, if an abstract mindset leads one to interpret an event in light of one's self-theories, then HSEs, whose self-views can act as a resource, might get a boost from considering positive information in an abstract mindset. We suspect that because HSEs already confidently believe in their partners' (and others') regard for them, their evaluations of perceived regard may be less dependent on any one particular localized event. That is, because HSEs tend to trust in their partners' regard to a much greater extent than LSEs (Murray & Holmes, 2009), any one piece of positive information should not confer much additional benefit (see Holmes and Rempel (1989), for more explanation).

Although the present set of studies focused on a specific individual difference variable (i.e., self-esteem) in a specific context (i.e., a positive relationship interaction), at a broader level, these studies have potential implications for using construal level to moderate the impact of other individual differences that usually predict problematic interpretations of events. For example, people with a hostile attribution bias tend to respond aggressively when they think about an ambiguous social slight. Would using a concrete mindset mute this tendency? Although we can only speculate, our analysis of self-esteem differences suggests that level of construal may be an important variable in the study of personality more generally.

10.4. Conclusion

Positive feedback from others is often thought of as universally desired, especially in the context of close relationships. However, when one's self-theory is at odds with such information, it is easier to discount a “single-shot,” localized piece of information than one's lifetime of accumulated self-views (Swann, 1997). Our findings show that by guiding LSEs to consider positive relational information in isolation from those self-theories—i.e., in a concrete (vs. abstract) mindset—it is possible to override this discounting process and thus enable LSEs to better internalize, and benefit from, their partners' expressions of positive regard.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <http://dx.doi.org/10.1016/j.jesp.2016.05.003>.

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