Acceptance Is in the Eye of the Beholder: Self-Esteem and Motivated Perceptions of Acceptance From the Opposite Sex

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Social risk elicits self-esteem differences in signature social motivations and behaviors during the relationship-initiation process. In particular, the present research tested the hypothesis that lower self-esteem individuals’ (LSEs) motivation to avoid rejection leads them to self-protectively underestimate acceptance from potential romantic partners, whereas higher self-esteem individuals’ (HSEs) motivation to promote new relationships leads them to overestimate acceptance. The results of 5 experiments supported these predictions. Social risk increased activation of avoidance goals for LSEs on a word-recall task but increased activation of approach goals for HSEs, as evidenced by their increased use of likeable behaviors. Consistent with these patterns of goal activation, even though actual acceptance cues were held constant across all participants, social risk decreased the amount of acceptance that LSEs perceived from their interaction partner but increased the amount of acceptance that HSEs perceived from their interaction partner. It is important to note that such self-esteem differences in avoidance goals, approach behaviors, and perceptions of acceptance were completely eliminated when social risk was removed.

Keywords: self-esteem, goals, motivated perception, acceptance, relationship formation

Initiating relationships is an inherently perilous process. Success could lead to the formation of new social bonds, but failure could result in a painful rejection experience. Therein lies the rub: Although people are highly motivated to seek new relationships that will satisfy their need to belong (Baumeister & Leary, 1995; Reis, Collins, & Berscheid, 2000), they are equally, if not more strongly, motivated to avoid the pain that accompanies rejection (Leary, 2004; MacDonald & Leary, 2005).

Individuals vary in their propensity to err on the side of seeking belonging or avoiding rejection (e.g., Gable, 2006; Gable, Reis, & Elliot, 2000). In particular, self-esteem seems to act as an interpersonal guidance system, influencing people’s signature social motivations and behaviors (e.g., Anthony, Wood, & Holmes, 2007; Leary, 2004; Murray, Derrick, Leder, & Holmes, 2008; Murray, Holmes, & Collins, 2006). Individuals with higher self-esteem (HSEs) are particularly motivated to seek rewarding social relationships, whereas individuals with lower self-esteem (LSEs) are particularly motivated to avoid the pain of rejection. In the present research, we investigate the influence of self-esteem on people’s signature social motivations and behaviors by examining people’s perceptions of acceptance from novel opposite-sex interaction partners. As we detail shortly, in this social context, we propose that LSEs’ signature social motivations cause them to cautiously underdetect acceptance from their interaction partner, whereas HSEs’ signature social motivations cause them to optimistically overdetect acceptance. Ultimately, we argue that LSEs’ and HSEs’ differing signature social motivations and behaviors serve to maintain their self-esteem by causing them to perceive, and perhaps even experience, the very rejection or acceptance that they anticipate.

Self-Esteem and Signature Social Motivations

Chronic feelings of higher or lower self-esteem influence one’s interpersonal beliefs and social behaviors. For example, LSEs believe that they are less valuable interaction partners than do HSEs (e.g., Leary, Tambor, Terdal, & Downs, 1995), have less confidence in their romantic partners’ regard (Murray, Holmes, & Griffin, 2000), and anticipate less acceptance from novel interac-
tion partners (Anthony et al., 2007). In accordance with these pessimistic social expectations, LSEs’ signature social motivation and behavior reflects a self-protective style aimed at limiting the pain of anticipated rejection (e.g., Anthony et al., 2007; Baumeister, Tice, & Hutton, 1989; Heimpel, Elliot, & Wood, 2006; Murray et al., 2006). In contrast, HSEs’ social confidence acts as a psychological insurance policy that allows them to adopt a risky, but potentially rewarding, relationship-promoting interpersonal style aimed at fostering closeness with others.

The different social motivations of LSEs and HSEs are pervasive, occurring in diverse social contexts such as social comparison (e.g., Wood, Giordano-Beech, Taylor, Michela, & Gaus, 1994), seeking self-relevant feedback (e.g., Bernichon, Cook, & Brown, 2003), group-joining behavior (e.g., Anthony et al., 2007), and within romantic relationships (e.g., Murray et al., 2006). Recent research by Murray et al. (2008) provides an explanation for such self-esteem differences: The risk of rejection automatically activates both the motivation to seek belonging and the motivation to protect the self from the pain of rejection, creating a fundamental approach-avoid conflict that must be resolved. Given their depleted reserves of self-worth and pessimistic social expectations, LSEs’ signature strategy is to override belongingness needs in favor of self-protection. In contrast, given their psychological insurance policy against the pain of rejection and their optimistic social expectations, HSEs’ signature strategy is to override self-protective needs in favor of seeking belonging. Although Murray et al. tested their model within the context of ongoing romantic relationships, we suspect that these basic risk-regulation processes operate similarly in any social context where the risk of rejection is salient (see Anthony et al., 2007).

In the present research, we examine self-esteem differences in signature social motivation and behavior in a totally new social domain: the initiation of new romantic relationships. Given the high level of risk that is inherent to first-meeting situations, we expect that LSEs’ and HSEs’ markedly different interpersonal styles will be abundantly clear in this context.

**Self-Esteem and Social Motivations During Relationship Initiation**

It is presumable that self-esteem differences in social motivation are evident at many different points in the relationship-initiation sequence. In the present research, we choose to focus our attention on the very first step in the initiation process: detecting a potential romantic partner’s acceptance. Although people are remarkably adept at detecting verbal and nonverbal acceptance or rejection cues (Downey & Feldman, 1996; Gardner, Pickett, & Brewer, 2000; Leary et al., 1995; Tooby & Cosmides, 1996), social motivation can still bias the processing of social information (Strachman & Gable, 2006). Hence, we suggest that people’s perceptions of social cues are often biased by their signature social strategies for dealing with interpersonal risk.

When the risk of rejection is present, LSEs’ signature social strategy is to override their connectedness motivation, causing their self-protective motivation to become paramount (Murray et al., 2008). In relationship-initiation situations, we suggest that this self-protective motivation causes LSEs to become particularly cautious when assessing a potential interaction partner’s social cues. Perceiving acceptance when it is not actually present, termed a *false alarm* in signal-detection terms (Gable, Reis, & Downey, 2003; Green & Swets, 1966), could lead to social embarrassment, disappointment, and hurt feelings. LSEs’ self-protective motivation should cause them to try to avoid these negative outcomes at all costs, even if that cost is overlooking acceptance cues that are actually present. Thus, we propose that when the risk of rejection is present, LSEs will show a perceptual bias that causes them to underdetect acceptance cues from their interaction partner.

In contrast, when the risk of rejection is present, HSEs’ signature strategy is to override their self-protective motivation, causing their connectedness motivation to become paramount (Murray et al., 2008). In relationship-initiation situations, we suggest that this connectedness motivation causes HSEs to become particularly optimistic when assessing a potential interaction partner’s social cues. Overlooking acceptance when it is actually present, termed a *miss* in signal-detection terms (Green & Swets, 1966; Gable et al., 2003), could lead to missed social opportunities, lost friendship or romance, and overlooked opportunities for fun. HSEs’ connectedness motivation should cause them to try to avoid these lost opportunities at all costs, even if that cost is an increased possibility of social pain resulting from false alarms. Thus, we propose that when the risk of rejection is present, HSEs will show a perceptual bias that causes them to overdetect acceptance cues from their interaction partner.

Combining these two arguments results in our first hypothesis (H1): HSEs will perceive greater acceptance than will LSEs when social risk is present. But what will happen when social risk is reduced or eliminated? We anticipate that manipulating social risk will influence both LSEs’ and HSEs’ perceptions of acceptance. Hence, our second hypothesis (H2) is that, compared with a risky social context, the goal to protect the self from hurt will be less active for LSEs when the risk of rejection is reduced, causing them to become less cautious in their perception of acceptance. Conversely, our third hypothesis (H3) is that, compared with a risky social context, the goal of seeking belonging will be less active for HSEs when the risk of rejection is reduced, causing them to become less optimistic in their perceptions of acceptance cues. Hence, we expect to find evidence of a perceptual bias for both HSEs and LSEs. Interpersonal risk will bias LSEs to *underdetect* acceptance relative to HSEs in similarly risky social conditions (H1) and relative to LSEs in low-risk social conditions (H2). In contrast, interpersonal risk will bias HSEs to *overdetect* acceptance relative to LSEs in similarly risky social conditions (H1) and relative to HSEs in low-risk social conditions (H3).

Although we predict that self-esteem will be positively associated with perceptions of acceptance when risk is present, we also predict that this association will change under risk-limited social conditions. The nature of this change could take one of two forms. The first possibility is that LSEs and HSEs will detect similar levels of acceptance under risk-limited social conditions (H4a). In such social circumstances, the competing goals of seeking connection versus self-protection will not be activated or will be activated to a lesser degree, and thus, self-esteem differences in the resolution of the goal conflict will not be evident in people’s detection of acceptance cues. Instead, idiosyncratic factors may determine people’s interest in pursuing a new relationship (e.g., perceived attractiveness of the target, baseline cue-detection abilities). Because such idiosyncratic factors may not vary systematically with self-esteem, it is plausible to predict that self-esteem will be unrelated...
to perceptions of acceptance under risk-limited social conditions. Indeed, this hypothesis is consistent with some previous research examining self-esteem differences in thoughts and behaviors under risk-limited social conditions (e.g., Anthony et al., 2007). However, the second possibility is that when the risk of rejection is reduced or eliminated, then LSEs will actually detect greater acceptance than HSEs (H4b). When situational risk is removed, the remaining idiosyncratic influences on social goals and perceptions of acceptance may not be independent from self-esteem: LSEs’ chronically higher need to belong (e.g., Leary & Baumeister, 2000) may cause them to find the safe social context particularly appealing. As a result, in risk-limited social situations, LSEs may become more approach oriented than HSEs, and thus, may perceive greater acceptance than HSEs. This possibility is also suggested by the results from risk-regulation research that included a low-risk experimental condition (e.g., Anthony et al., 2007, Study 5; Marigold, Holmes, & Ross, 2007, Study 2).

Overview of Studies

In multiple studies, we test our hypothesis that the risk of rejection causes LSEs to cautiously underdetect acceptance from novel interaction partners but causes HSEs to optimistically overdetect acceptance. In Studies 1, 2, and 5, we use the same novel and highly rigorous experimental design: Single participants introduce themselves via video camera to an attractive, ostensibly single, opposite-sex participant, watch their interaction partner’s videotaped response, and then report their perceptions of acceptance. In reality, all participants receive the exact same taped response from a trained confederate. Study 3 uses a similar paradigm, but participants have a face-to-face interaction with a trained confederate. To our knowledge, our use of these paradigms represents the first attempt to hold acceptance cues completely constant across participants while still maintaining a meaningful social context.

Study 1 examines whether LSEs perceive less acceptance than HSEs in a risky social context when acceptance cues are held constant across participants. Study 2 asks participants to detect acceptance cues directed at the self or another person, thereby testing whether the self-esteem difference in perceptions of acceptance is a motivated process, or whether it reflects self-esteem differences in social skill. In Studies 3, 4, and 5, we use two distinct methods to experimentally reduce or eliminate the risk of rejection that is typically present in the relationship-initiation context. We then examine the effect of these risk manipulations on goals and perceptions of acceptance. Taken together, the results of these diverse studies converge to demonstrate that social risk indeed elicits self-esteem differences in signature social motivations and behaviors during the relationship-initiation process.

Study 1: Does Self-Esteem Predict Perceptions of Acceptance When Social Risk is Present?

Two previous studies have demonstrated that LSEs think they are less accepted by novel interaction partners than do HSEs (Brockner & Lloyd, 1986; Campbell & Fehr, 1990). In these previous studies, actual acceptance by the participants’ interaction partner was not related to participants’ self-esteem, suggesting that the self-esteem effect may actually represent motivated perception, consistent with our hypotheses. However, even though self-esteem did not influence interaction partners’ explicit reports, it might still have influenced the interaction partners’ social behavior. Thus, the possibility remains that LSE and HSE participants in these studies actually received different social cues from their interaction partners. If this is the case, then the self-esteem effect on perceptions of acceptance in these previous studies may have reflected real differences in social cues.

Hence, this first study was designed to test H1 by examining whether self-esteem predicts perceptions of acceptance when social risk is present. It is important to note that we test this hypothesis when social cues from one’s interaction partner are held completely constant across participants. Even in such controlled conditions, we predict that LSEs will perceive less acceptance than HSEs from an attractive, single, opposite-sex stranger, presumably because of self-esteem differences in signature social motivations in response to the social risk inherent to such a first-meeting situation. Moreover, we sought to measure the pervasiveness of the self-esteem effect on perceptions of acceptance by examining participants’ perceptions of acceptance when social cues reflect low and high levels of acceptance.

Method

Participants. Seventy-nine undergraduate students (58 women, 21 men) enrolled in introductory psychology classes at the University of Manitoba participated in exchange for partial course credit. Participants ranged from 18 to 25 years of age (M = 18.77 years, SD = 1.43). The majority of participants were not involved in romantic relationships (i.e., single; n = 62), and all participants reported that they were heterosexual.

Procedure. Upon arriving for their individual lab sessions, participants completed a preliminary survey in which they indicated their self-esteem using the 10-item Rosenberg (1965) Self-Esteem Inventory (α = .86), which was adapted to use a 9-point response format (1 = very strongly disagree, 9 = very strongly agree), rather than the original 4-point response format. This version of Rosenberg’s scale was used throughout the studies reported in this article. The preliminary survey also included demographic questions (e.g., age) and filler items intended to disguise our focus on self-esteem (e.g., scales assessing morning vs. evening personality types).

We devised an elaborate cover story that allowed us to expose all participants to identical social cues while also maintaining the believability of the interpersonal context. When participants arrived for their individual lab sessions, they were informed that the present study was investigating compatibility between opposite-sex strangers. Hence, participants thought that there was a second, opposite-sex participant in the lab room next to theirs. Participants were also informed that because the study was interested in examining “constrained communication,” the participants would be communicating with their interaction partner via video camera. To enhance the personal relevance of the experiment and the importance of the participants’ communication, the researcher informed the participants that there might also be the opportunity for them to meet their interaction partner later in a face-to-face interaction.

In the constrained communication task that participants completed, the participants first introduced themselves to their inter-
action partner by recording a video. Their interaction partner supposedly watched this introductory statement on a closed-circuit television in the room next door. To ensure consistency across participant introductions, the participants all discussed the same list of seven general conversation topics, adapted from Aron, Melinat, Aron, Vallone, and Bator’s (1997) closeness-generating procedure (e.g., “What is your dream job?”). After their interaction partner had supposedly watched the participants’ introductory tape, participants watched a “response” from their interaction partner, in which the interaction partner answered the same seven questions that the participants had answered. Once the participants had finished watching their interaction partner’s response tape, they completed a final survey that contained the dependent measures.

Although participants anticipated that they would meet their interaction partner face to face following the constrained communication task, no second interaction ever took place, because there was actually no second participant in the next room. The taped response from the participants’ interaction partner was a prerecorded videotape of an attractive opposite-sex confederate. The content of the confederate’s taped response represented the experimental manipulation in this study. Hence, after watching the confederate’s response and completing the dependent measures, participants were thoroughly debriefed.

Materials and measures.

Confederate responses. The confederates, one male and one female, were recruited and filmed at the University of Waterloo, ensuring that the University of Manitoba participants did not recognize them. To ensure both the believability of the tapes and to increase the likelihood that participants would want to meet the confederate, both confederates had minor acting experience and were above average in attractiveness. Each confederate filmed two responses. A summary of the confederates’ behavior and the confederate scripts in the two experimental conditions are presented in Table 1. In the response used for the low-acceptance condition, the confederate answered the same seven questions that the participant initially answered but engaged in minimal self-disclosure, did not make any reference to the participant’s videotape, and expressed minimal nonverbal liking cues (e.g., no smiling, no laughing, little eye contact). In the high-acceptance condition, the majority of the informative content of the response was the same as the low-acceptance condition, but in this case, the confederate agreed with some of the participant’s responses (e.g., “I’m with you on this one”), self-disclosed personal information, expressed strong nonverbal liking cues (e.g., smiling, eye contact), and finally displayed a verbal overtone of interest (i.e., “So, I hope to see you in the second part of the study!”).

Summary perceptions of acceptance. In the final survey, participants reported their perceived acceptance from the confederate with five items (i.e., “The other participant probably likes me,” “The other participant probably wants to have another interaction with me,” “The other participant probably enjoyed the interaction with me,” “The other participant is probably willing to spend time with me,” “The other participant probably wants to have another interaction with me”), using a 7-point response format (1 = strongly disagree, 7 = strongly agree). These items were averaged to form a reliable index of summary perceptions of acceptance (α = .83).

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Confederates’ Behavior and Scripted Responses in the Low-Acceptance and High-Acceptance Conditions in Study 1</th>
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<tbody>
<tr>
<td><strong>Low-acceptance condition</strong></td>
<td><strong>High-acceptance condition</strong></td>
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<tr>
<td><strong>Behavior:</strong> Little facial expression, no smiling, little eye contact with the camera, little vocal inflection.</td>
<td><strong>Behavior:</strong> Animated facial expression, lots of smiling and laughing, leaning towards the camera (male only), touching hair and face (female only), lots of eye contact with camera, enthusiastic vocal inflection.</td>
</tr>
<tr>
<td>So I guess I’ll give my answers now . . .</td>
<td>Hi! So, I guess I’ll give my answers now!</td>
</tr>
<tr>
<td>What is my favorite class? Nothing in particular—I like them all about the same.</td>
<td>Question 1 . . . I’m with you on this one! Are we in the same class? I’m surprised I don’t know you . . .</td>
</tr>
<tr>
<td>My favorite type of movies . . . hmmm, I like a lot of different kinds. I guess I mostly watch comedies and action movies.</td>
<td>My favorite type of movies . . . hmmm, I like a lot of different kinds. I guess I mostly watch comedies and action movies . . . who doesn’t! I thought <em>Kill Bill</em> was pretty cool.</td>
</tr>
<tr>
<td>The last concert I saw was . . . Sum41 here on campus. It was a really good show.</td>
<td>The last concert I saw was . . . Sum41 here on campus. It was a really good show! Those guys are crazy!</td>
</tr>
<tr>
<td>What is my favorite holiday and why? Definitely Christmas, no question. Everyone’s in a good mood, you get to eat great food . . . plus you get presents.</td>
<td>. . . what is my favorite holiday and why? Definitely Christmas, no question. Everyone’s in a good mood . . . you get to eat great food, plus you get presents!</td>
</tr>
<tr>
<td>I’d like to do something with kids—like teaching, or social work maybe? My brother, he teaches Grade 5, and it seems like something I could do. But I’d want to work with junior high kids, maybe doing science.</td>
<td>. . . my dream job . . . being rich! No . . . I’d like to do something with kids—like . . . teaching, or social work maybe? My brother, he teaches Grade 5, and it seems like something I could do. But I’d want to work with junior high kids, maybe doing science?</td>
</tr>
<tr>
<td>Well, I’ve always worked full time, so that’s what I do during the day, during the week. But I hang out with friends after work, go to clubs, have fun. On the weekends, we’ll take day trips, go to the lake, the beach, play volleyball.</td>
<td>How do I usually spend my summers? Well, I’ve always worked full-time. So that’s what I do during the day, during the week. But I hang out with friends after work . . . go to clubs, have fun. On the weekends, we’ll take day trips, go the lake, the beach, play volleyball.</td>
</tr>
<tr>
<td>Ummm, if I could go anywhere in the world . . . I guess I would go to Australia, I’ve heard Aussies are cool. I like beaches and I could learn to surf.</td>
<td>Anywhere in the world eh? Well I’d like to go lots of places, but if I had to pick I’d say Australia . . . I went on a Contiki tour in Europe after graduation, and all the Aussies we met were awesome! And I can work on my tan, I like beaches . . . and I can learn to surf.</td>
</tr>
<tr>
<td>Ok, so that’s the end of the questions.</td>
<td>Ok, so that’s the end of the questions. Now we can meet right? Cuz I think that you’re in the very next room! Bye!</td>
</tr>
</tbody>
</table>
Results and Discussion

Preliminary analyses indicated that gender and relationship status did not moderate the following results, so these variables were not included in the reported analyses.

To test whether self-esteem predicted differences in perceptions of acceptance, we conducted a hierarchical multiple regression in which self-esteem (mean centered; $M = 7.20$, $SD = 1.09$), condition (dummy coded: low acceptance $= 0$, high acceptance $= 1$), and the interaction between the variables were used to predict perceptions of acceptance ($M = 4.25$, $SD = 0.97$). In this hierarchical procedure, which we used in all of the regressions that we report in this article, we entered main effects at Step 1, and the two-way interaction was added to the equation at Step 2. We interpreted the main effects from Step 1 of the analysis and interpreted the interaction obtained at Step 2. Moreover, in all of the studies in this article, when a significant interaction emerged at Step 2 of the regression, tests of simple effects were conducted according to Aiken and West’s (1991) recommendations.

Results revealed a main effect of condition, $\beta = .41$, $t(76) = 4.14$, $p < .001$, such that participants perceived less acceptance in the low-acceptance condition ($M = 3.78$, $SD = 0.92$) than in the high-acceptance condition ($M = 4.65$, $SD = 0.82$). Also, a main effect of self-esteem, $\beta = .23$, $t(76) = 2.32$, $p = .023$, indicated that across conditions, LSEs (i.e., participants scoring one standard deviation below the mean; $M_{est} = 3.59$) detected much less acceptance than did HSEs (i.e., participants scoring one standard deviation above the mean; $M_{est} = 4.04$). The interaction between self-esteem and condition was not significant ($\beta = .08$, $t < 1$). Thus, it appears that self-esteem predicted perceptions of acceptance at both higher and lower levels of acceptance.

This result replicates previous research by Brockner and Lloyd (1986) and Campbell and Fehr (1990), which demonstrated that LSEs also perceive less acceptance than HSEs from an interaction partner in a naturalistic, face-to-face interaction. However, our results are the first to demonstrate that self-esteem moderates perceptions of acceptance, even when acceptance cues are held constant across participants. In naturalistic social interactions, it is possible that LSEs’ social doubts lead them to behave in a cold manner, which in turn causes their interaction partner to behave in a reciprocal fashion, leading LSEs to (perhaps accurately) perceive less acceptance. On the other hand, HSEs’ confidence allows them to behave in a friendly manner, which in turn may cause their interaction partner to reciprocate, leading HSEs to (perhaps accurately) perceive greater acceptance. Hence, self-esteem differences in anticipated acceptance could lead to a self-fulfilling prophecy (e.g., Stinson, Cameron, Wood, Gaucher, & Holmes, 2009). Such potential “actor effects” were controlled in the present study, which suggests that the observed self-esteem differences in the perception of acceptance were indeed the result of motivated perception.

The present results also suggest that the biasing influence of self-esteem does not overwhelm actual situational differences in acceptance cues, because everyone, regardless of self-esteem, perceived more acceptance from the high-acceptance confederate than from the low-acceptance confederate. This condition effect suggests that LSEs’ relative underdetection of acceptance may not be a skill deficit: LSEs were capable of differentiating between higher and lower levels of acceptance. Study 2 was designed to explore further the skill-deficit hypothesis.

Study 2: Are Perceptions of Acceptance Motivated?

The present study seeks to extend Study 1 in four important ways. First, we want to determine whether LSEs underdetect acceptance relative to HSEs when social risk is present because of a skill deficit or whether such differences reflect motivated perception. Therefore, we used the same method as Study 1, but participants watched only the high-acceptance confederate response. In addition, half of the participants believed that the taped response was directed at them, and the other half thought that the taped response was directed at a different participant. Thus, participants were either the subject of acceptance cues, or they were the observer of acceptance cues directed at someone else. If LSEs’ relative underdetection of acceptance is the result of a skill deficit, then LSEs will detect less acceptance than HSEs in both experimental conditions. However, we predict that self-esteem differences in the detection of acceptance cues result from a perceptual bias that is caused by self-esteem differences in social motivation in response to risk. Hence, when the acceptance cues are directed at the self, we expect LSEs to perceive less acceptance than HSEs, replicating Study 1 and supporting H1. We do not expect to observe such a self-esteem difference in the other-directed condition.

Second, by comparing the self-directed acceptance cues condition with the other-directed cues condition, we will be able to determine the direction of the potential perceptual bias. We anticipate that both LSEs and HSEs show a perceptual bias. Consistent with H2, LSEs will self-protectively underdetect acceptance when the risk of rejection is present, and thus will detect less acceptance when cues are directed at the self than when they are directed at another person. In contrast, consistent with H3, HSEs will optimistically overdetect acceptance when the risk of rejection is present, and thus will detect more acceptance when cues are directed at the self than when they are directed at another person. Third, in the other-directed condition, we test whether LSEs will either perceive the same amount of acceptance as HSEs, consistent with H4a, or LSEs will detect more acceptance than HSEs, consistent with H4b.

Finally, in addition to assessing participants’ perceptions of acceptance, as in Study 1, we also assess participants’ perceptions of specific verbal and nonverbal acceptance cues (e.g., smiling). Acceptance is considered to be so central to well-being and survival that the perception of acceptance cues is thought to be hardwired (Tooby & Cosmides, 1996). Reflecting the importance of such acceptance cues, people constantly monitor their environment for acceptance cues (Leary & Downs, 1995), and the detection of nonverbal cues occurs automatically (Choi, Gray, & Ambady, 2005). By including both measures of acceptance, we are able to examine whether the biasing influence of self-esteem is evident only at a summary level (i.e., “He really likes me!”), or whether the perceptual bias is pervasive enough to affect participants’ perceptions of specific behaviors.

Method

Participants. Seventy-nine undergraduate students (54 women, 25 men) enrolled in introductory psychology classes at the
University of Manitoba participated in exchange for partial course credit. Participants ranged in age from 17 to 25 years of age ($M = 19$ years, $SD = 1.93$). All participants were single, heterosexual, and reported English as a first language.

**Procedure, materials, and measures.** As in Study 1, participants first completed a preliminary survey that included the self-esteem measure ($\alpha = .81$). For participants in the self condition, the procedure was identical to that used in Study 1: Participants taped an introductory video and then watched the high-acceptance confederate response, believing the confederate’s acceptance cues were directed at the self. Participants in the observer condition were informed that they would be watching a response made by the interaction partner of the previous participant. To keep the conditions as similar as possible, however, prior to watching the response, participants in the observer condition were asked to make an introductory videotape to give them “some insight into what the participant before them had to do.” They believed that no one would watch this introductory tape. After they made their introductory tape, they watched the confederate’s response to the “previous participant.” Thus, participants in the observer condition thought that the confederate’s acceptance cues were directed at someone else. Moreover, these participants did not think that they were ever going to meet the confederate.

**Summary perceptions of acceptance.** Participants indicated their perceptions of acceptance using the same five items that were used in Study 1. The wording of the items in the observer condition was adjusted to reflect the experimental context in that condition. For example, the item “The other participant is probably willing to spend time with me” was changed to read “The other participant is probably willing to spend time with his/her assigned partner.” These items were averaged to form a reliable index of perceptions of acceptance ($\alpha = .90$).

**Perceiving acceptance cues.** We also assessed participants’ perceptions of specific verbal and nonverbal acceptance cues. Participants rated the frequency with which the confederate engaged in eight acceptance cues during his or her response (i.e., smiling, eye contact, crossing legs, laughter, flirtatious glances, fixing hair, agreeing with something the participant said, expressing interest in meeting the participant again), which were adapted from previous research (e.g., Simpson, Gangestad, & Biek, 1993). Frequencies were rated using a 5-point scale (1 = not at all, 5 = most of the time). To reduce suspicion, participants also rated the frequency of some behaviors that were not displayed by the confederates (e.g., sighing, winking, frowning). Frequencies for each of the eight acceptance cues were averaged to form a perceived cues index.

**Results and Discussion**

One female participant in the self condition indicated that she suspected that her assigned partner was a videotaped confederate before the final survey was given. This skeptical participant’s data were excluded from the analyses.

We conducted two hierarchical regressions in which self-esteem (mean centered: $M = 7.16$, $SD = 1.00$), sex (dummy coded: $0 = male$, $1 = female$) and experimental condition (dummy coded: $0 = self$ condition, $1 = observer$ condition) and the interactions between the variables were used to predict summary perceptions of acceptance ($M = 4.98$, $SD = 0.99$) and perceived cues ($M = 2.45$, $SD = 0.58$).

**Summary perceptions of acceptance.** Results revealed a main effect of gender, $\beta = .32$, $t(74) = 3.43$, $p = .001$, such that men perceived more acceptance from the female confederate ($M = 5.53$, $SD = 0.96$) than women perceived from the male confederate ($M = 4.72$, $SD = 0.90$).1 Also, a main effect of condition, $\beta = .48$, $t(74) = 5.12$, $p < .001$, indicated that people perceived more acceptance in the observer condition ($M = 5.79$, $SD = 0.75$) than in the self condition ($M = 4.47$, $SD = 0.95$). However, this condition effect was qualified by the predicted interaction between self-esteem and condition, $\beta = -.25$, $t(71) = -2.61$, $p = .011$. No other significant effects emerged from the analysis. The interaction between self-esteem and experimental condition is depicted in the top panel of Figure 1. Replicating Study 1 and consistent with H1, in the self condition, LSEs detected much less acceptance than did HSEs, $\beta = .38$, $t(71) = 3.10$, $p = .002$. In addition, as predicted by H2, LSEs were strongly influenced by the experimental manipulation, $\beta = .91$, $t(71) = 9.40$, $p < .001$, detecting much more acceptance when the confederate’s behavior was directed at someone else than when it was directed at the self. In contrast, H3 was not supported; HSEs’ perceptions of acceptance were not influenced by the experimental manipulation, $\beta = .15$, $t(71) = -1.53$, $p = .130$, although the means were in the anticipated direction. Results for the observer condition supported H4b: In the observer condition, LSEs detected much more acceptance than HSEs, $\beta = -.31$, $t(71) = -2.33$, $p = .022$.

**Perceiving acceptance cues.** Once again, results revealed a main effect of gender, $\beta = .67$, $t(74) = 7.59$, $p < .001$, such that men ($M = 2.98$, $SD = 0.58$) perceived more acceptance cues than women ($M = 2.17$, $SD = 0.35$).2 In addition, the predicted interaction between self-esteem and condition emerged, $\beta = -.36$, $t(71) = -2.64$, $p = .010$. This interaction is depicted in the bottom panel of Figure 1. As with perceptions of acceptance, H1 was supported in the self condition such that LSEs perceived fewer acceptance cues than HSEs, $\beta = .32$, $t(71) = 2.15$, $p = .034$. Moreover, LSEs in the observer condition also detected substantially more acceptance cues that LSEs in the self condition, $\beta = .44$, $t(71) = 4.74$, $p < .001$, and in this case, the interaction was a true crossover, in that HSEs perceived fewer acceptance cues in the observer condition than in the self condition, $\beta = -.31$, $t(71) = -2.33$, $p = .022$.

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1 This gender difference appears to be a result of differences between the male and female confederate’s behavior rather than an effect of the participants’ gender. In a follow-up study, 15 single female undergraduate students ($M_{age} = 19$, $SD = 1.89$) participated in the observer condition but believed that the study session involved same-sex pairs. Hence, these women watched the female confederate’s tape as observers and indicated perceptions of acceptance. When these female participants’ perceptions of acceptance were compared with those of the female participants in the observer condition in Study 2, who watched the male confederate’s response, results indicated that female outside observers reported that the female confederate expressed greater acceptance than the male confederate, $\beta = -.37$, $t(36) = -2.36$, $p = .024$.

2 Once again, this gender difference seems to be a confederate effect, rather than an effect of the participants’ gender. In the follow-up study described in Footnote 1, the female outside observers also rated their perception of acceptance cues from the female confederate. Once again, results indicated that female outside observers perceived more acceptance cues from the female confederate than from the male confederate, $\beta = -.74$, $t(38) = -6.44$, $p < .001$. 

HSEs appear to exhibit motivated perception for summary perceptions of acceptance and in their perceptions of specific cues that signify acceptance (e.g., smiles), suggesting that the biasing influence of self-esteem on perceptions of acceptance is quite pervasive.

These results also suggest that LSEs and HSEs live in very different social worlds. LSEs’ self-protective perceptual bias means that in daily life, a man with lower self-esteem will be extremely likely to notice that his friend has lots of admirers and that his brother attracts the attention of all the cutest dates. However, this same individual will remain relatively blind to acceptance cues directed at the self, even when those acceptance cues are strong and blatant, as they were in the confederate tapes used in the present study. In contrast, HSEs’ relationship-promoting risk-regulation strategy of overdetecting acceptance means that they might actually notice more acceptance directed at the self and less acceptance directed at other people. So a man with higher self-esteem might notice that he has more admirers than does his friend, and he might think that he attracts more female attention than his brother. As a result, HSEs’ perceptual bias serves to confirm their belief that they are valuable interpersonal partners, whereas LSEs’ perceptual bias makes it more likely that LSEs will perceive the very rejection that they are motivated to avoid.

**Study 3: Does Risk Affect Perceptions of Acceptance in a Face-to-Face Interaction?**

This study was designed to address two questions. First, would our model generalize to a more naturalistic setting? Thus, instead of using prerecorded tapes of confederates as a method of conveying acceptance cues, participants had a face-to-face interaction with an attractive, and ostensibly single, opposite-sex confederate who was trained to treat all participants in exactly the same manner. Second, would a subtle manipulation of interpersonal risk alter perceptions of acceptance for LSEs and HSEs? Hence, participants either interacted with the confederate after receiving only general demographic information about the confederate, or, prior to the interaction, the confederate disclosed in writing a personal flaw (i.e., that he/she experiences social anxiety). We predict that this disclosure will reduce interpersonal risk in a number of possible ways. For example, (a) it may reduce the self-focused attention and evaluation that so often accompanies social worries (e.g., Mor & Winquist, 2002), and this reduced self-focus may decrease participants’ awareness of the risk of personal hurt from rejection; (b) the disclosure suggests that the confederate, who experiences social anxiety, may not negatively judge the participants’ own shy or nervous behavior; or (c) the confederate’s admission of a personal flaw may cause participants to feel superior to the confederate. For a number of possible reasons, then, we predict that
this disclosure will decrease the risk of rejection, and we test this hypothesis in a pilot study described shortly.

Hence, as observed in Study 2, we predict that LSEs will perceive less acceptance than HSEs when the risk of rejection is present (H1), but when the risk of rejection is reduced by the confederate’s disclosure of a personal flaw, LSEs will detect more acceptance than HSEs (H4b). Moreover, we expect that LSEs will self-protectively underdetect acceptance in the risky context but will detect increased levels of acceptance when the risk of rejection is reduced (H2). In contrast, we hypothesize that HSEs will overdetect acceptance in the risky context but will detect decreased levels of acceptance when the risk of rejection is reduced (H3). These predictions are consistent with prior research in the domain of ongoing romantic relationships, which suggests that the discovery of a partner’s personal flaw decreases LSEs’ use of self-protective risk-regulation strategies and also decreases HSEs’ use of relationship promoting strategies (Murray et al., 2005).

Method

Participants. Twenty-eight men from the University of Waterloo were recruited to participate in the present study (eight were recruited from the introductory psychology classes, and 20 were recruited from the campus student center). Participants received partial course credit or an $8 gift certificate and two chocolate bars (or a stationery set) in appreciation for their time. Participants were between 18 and 24 years of age ($M = 20.1$ years, $SD = 1.64$), all were single, and all reported being fluent in English.

Procedure and measures. Participants were recruited for a study about “communication styles and media.” Participants were informed that they would watch an excerpt from a television program and then discuss the television program and other topics with another participant, who turned out to be a very attractive woman. Unbeknownst to the participants, the other “participant” was actually a confederate. To bolster the believability of the confederate’s participant identity, the research assistant met both the confederate and the participant in the same location prior to the study, and then separated them into different rooms for the first part of the study.

In his individual lab room, each participant first completed the preliminary survey that included the same measure of self-esteem ($\alpha = .90$) as in Studies 1 and 2. Next, the participant watched an 8-min clip from a television documentary about the international coffee industry under the premise that he would discuss this clip with the other participant.

After watching the documentary, the participant was given an information sheet about the confederate, constituting the experimental manipulation. Participants were randomly assigned to one of two conditions, and because a second researcher prepared the envelopes, the researcher running the experimental session was blind to the participant’s assigned condition. It is important to note that the confederate was also blind to the participants’ self-esteem and experimental condition. In the risk condition participants were provided with information about the confederate indicating that she was a 20-year old, single, Canadian woman whose first language was English. In essence, this information indicated that she was similar to the participant (in terms of language, age, and citizenship) and potentially available for a relationship (i.e., single). In the lower risk condition, in addition to reading the basic demographic information about the confederate, participants read her ostensibly hand-written answers to two additional questions: “What are your best qualities?” and “What are some things you’d like to improve about yourself?” Her answer to the first question was: “I’m pretty good at creative writing, especially short stories. And I’m open to trying new things.” Her answer to the second question disclosed a personal flaw: “I wish I could feel more confident in social situations. Especially when I meet someone new (like now!), I find myself worrying about whether the other person likes me or not. I’d like to improve that.”

Pilot study. We validated this experimental manipulation in a pilot study. One hundred twenty participants (62 women, 58 men; $M_{\text{age}} = 24.4$ years, $SD = 7.61$; 49 single, 71 in relationships) completed the self-esteem scale ($\alpha = .89$; $M = 7.11$, $SD = 1.21$) and then read one of two hypothetical scenarios that asked participants to imagine participating in either the risk condition or the lower risk condition of the present study. Participants then reported their perceived risk of rejection by answering two questions: “In this scenario, how likely is it that your interaction partner would reject you?” and “In this scenario, how likely is it that your interaction partner would dislike you?” Both items used a 9-point format response range (1 = not at all; 9 = extremely) and were averaged to form a reliable index ($\alpha = .63$; $M = 3.77$, $SD = 1.60$). Participants’ gender did not moderate the results that follow. As intended, participants in the risk condition ($M = 4.07$, $SD = 1.64$) thought that the risk of rejection was higher than did participants in the lower risk condition ($M = 3.44$, $SD = 1.52$), $t(113) = -2.15$, $p = .033$. In addition, LSEs ($M_{\text{est}} = 4.27$) believed rejection was more likely than did HSEs ($M_{\text{est}} = 3.72$), $t(113) = -2.57$, $p = .011$. Thus, the risk manipulation influenced both HSEs and LSEs in a similar manner, although LSEs thought rejection was more likely overall.

After participants in the present lab study finished reading the information about the confederate, the researcher brought the confederate to the participant’s lab room. The researcher then gave the participant and the confederate their instructions for the interaction task: “[Participant], you were randomly assigned to be the communicator in this study, so that means that you will give your opinions about each of the questions on this sheet of paper, and [Confederate], you were randomly assigned to be the listener, which means that you are supposed to ask [Participant] the questions and then listen to his answers.” In actuality, the participant was always assigned the role of communicator, and the confederate was always assigned the role of listener.

For all participants, the confederate was trained to act in a warm, attentive manner with the goal of making the other participant feel comfortable. She was required to lean toward the participant as he spoke, and to smile, nod, maintain eye contact, and to not cross her legs. In addition, she responded to some of the participant’s comments with scripted lines (see Table 2). In part because she spoke very little, the confederate’s behavior was more reserved than the female confederate’s behavior in Studies 1 and 2.

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4 To reduce the possibility of confederate effects, we limited our design to only male participants. We selected male participants because current social norms dictate that men bear the major responsibility of initiating romantic relationships (Cameron et al., 2010).
Table 2
Confederates’ Questions and Scripted Responses in Study 3

<table>
<thead>
<tr>
<th>Question</th>
<th>Scripted response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What message do you think the filmmakers were trying to communicate in the documentary that you watched?</td>
<td>Agree with whatever answer the participant provides.</td>
</tr>
<tr>
<td>2. Did you learn anything new by watching the documentary?</td>
<td>No scripted response</td>
</tr>
<tr>
<td>3. How do North American attitudes towards coffee differ from Ethiopian attitudes?</td>
<td>Say “That’s a hard question!” as soon as you finish reading this question.</td>
</tr>
<tr>
<td>4. What are your favorite types of movies?</td>
<td>No scripted response</td>
</tr>
<tr>
<td>5. What is your favorite class this semester? Why?</td>
<td>Say “That sounds interesting!” to the participant’s response.</td>
</tr>
<tr>
<td>6. What is your favorite holiday? Why?</td>
<td>Say “That’s definitely my favorite holiday too” when he is finished.</td>
</tr>
<tr>
<td>7. What is your dream job? Why?</td>
<td>No scripted response</td>
</tr>
<tr>
<td>8. How do you usually spend your summers?</td>
<td>No scripted response</td>
</tr>
<tr>
<td>9. If you could travel to anywhere in the world, where would you go? Why?</td>
<td>After he answers, say “Cool! I really want to visit Russia.”</td>
</tr>
</tbody>
</table>

After the interaction, participants completed a questionnaire that assessed the dependent variables of perceived acceptance. Participants reported their summary perceptions of acceptance and their perceived cues. Summary perceptions of acceptance were assessed with the same five items that were used in Studies 1 and 2 (α = .79). Because the confederate in the present study had been trained to engage in certain behaviors to convey acceptance, we measured participants’ detection of acceptance cues using only those five items that were actually represented in the confederate’s behavior: smiling, flashing eyebrows, flirting, touching her face, and touching her hair. Frequencies for each of the five acceptance cues were averaged to form a perceived cue index.

Results and Discussion

Five participants did not believe that the female confederate was a real participant. These skeptical participants’ data were not included in the analyses that follow.5

We used the same analysis strategy as in the previous studies. We conducted two hierarchical regressions in which self-esteem (mean centered; $M = 7.24, SD = 0.98$), experimental condition (dummy coded: $0 = \text{risk}, 1 = \text{lower risk}$) and the interaction between the variables were used to predict summary perceptions of acceptance ($M = 4.65, SD = 0.63$) and perceived cues ($M = 2.07, SD = 0.38$).

Summary perceptions of acceptance. This variable was not influenced by self-esteem, condition, or the interaction between the variables ($\text{all } ts < 1$).

Perceiving acceptance cues. Results revealed the predicted interaction between self-esteem and condition, $\beta = -.69, t(20) = -2.14, p = .047$ (see Figure 2). In the risk condition, consistent with H1, LSEs detected much fewer acceptance cues than HSEs, $\beta = .76, t(20) = 2.25, p = .037$. In addition, although H2 was not supported whereby the condition effect for LSEs was not statistically significant, $\beta = .35, t(20) = 1.47, p = .154$, it was in the expected direction such that LSEs tended to detect less acceptance in the risk condition than in the lower risk condition.6 Moreover, consistent with H3, the condition effect for HSEs was significant, such that HSEs detected more acceptance cues in the risk condition than in the lower risk condition, $\beta = -.63, t(20) = -2.71, p = .037$. Unlike in Studies 2 and 3, H4b was not supported, $\beta = -.21, t < 1$, although the direction of the association between self-esteem and perceptions of acceptance cues was in the anticipated direction.

Hence, as in Study 2, when interpersonal risk was present (i.e., in the self condition), HSEs perceived greater acceptance than did LSEs. However, when interpersonal risk was reduced by the confederate’s disclosure, the self-esteem difference in perceptions of acceptance cues was eliminated. Unlike Studies 1 and 2, we did not find evidence for motivated perceptions of acceptance on the summary measure. It is possible that only very strong and clear manipulations of risk, such as the manipulation used in Study 2, influence summary assessments of acceptance. In contrast, participants may encode acceptance cues like smiling quickly and automatically (e.g., Choi et al., 2005), and thus, perception of such cues may be more influenced by subtle manipulations of interpersonal risk, such as the method used in the present study.

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5 The suspicious participants were recruited from the general campus where we could not screen for previously being in a deception study. All suspicious participants reported previously participating in psychology studies. None of the naı¨ve participants that had been recruited from introductory psychology (where we could screen for previous deception experience) detected the deception.

6 Self-esteem in Study 3 was negatively skewed compared with the typical distribution of self-esteem in the population from which the sample was drawn, thus Aiken and West’s (1991) technique of centering self-esteem at one standard deviation below the mean to test the simple slope for LSEs actually tested the simple slope for a moderate level of self-esteem ($M = 6.30$). When we centered self-esteem at two standard deviations, which is a more typical level of self-esteem for LSEs ($M = 5.36$), the simple slope of the condition effect for this true LSE group was significant, $\beta = .80, t(20) = 3.44, p = .003$. 
Study 4: Does Risk Affect Goal Activation During Relationship Initiation?

In the present study, we seek to determine whether social risk influences goal activation in the manner that we propose. We again return to the constrained-communication paradigm that we used in our first two studies, but this time we use a very face-valid manipulation of social risk. Murray et al. (2008) define risky situations as “[situations] of dependence where one partner’s actions constrain the other’s capacity to satisfy important needs and goals” (p. 430). In a typical relationship initiation context, people are indeed dependent upon one another: Each person depends upon the other’s acceptance to fulfill their need to belong. Hence, in the high-risk condition of the present study, we exaggerate this dependence by telling participants that they would have a face-to-face meeting with their interaction partner if their interaction partner decided that he or she was interested in such a meeting. Hence, the participant’s social outcomes were completely dependent on his or her interaction partner. In the no-risk condition, participants were told that they would never meet their interaction partner again. Hence, the participant’s social outcomes were not at all dependent on his or her interaction partner’s acceptance or rejection. As in Study 3, we conducted a pilot study to validate this manipulation.

When the participants’ social outcomes are dependent on their interaction partners’ decision, this risky social context should activate self-protective avoidance goals for LSEs, whereas HSEs should show no such activation of avoidance goals. Hence, we expect that in the risky condition, LSEs will show greater activation of avoidance goals than HSEs (H1), and LSEs’ activation of avoidance goals will decrease when the risk of rejection is eliminated (H2). In contrast, consistent with H1, we expect that HSEs will show greater activation of approach goals than LSEs when the risk of rejection is present, and HSEs’ activation of approach goals will decrease when the risk of rejection is eliminated, supporting H3.

Method

Participants. Sixty-seven individuals (31 women; 36 men) from introductory psychology courses at the University of Mani-
condition was not significant, $\beta = -0.03, t < 1.$ However, for single individuals, the interaction between self-esteem and condition was significant, $\beta = 0.36, t(75) = 2.41, p = 0.022$ (see Figure 3). In the high-risk condition, LSEs thought the scenario was more risky than did HSEs, $\beta = 0.68, t(75) = 3.89, p < 0.001,$ whereas in the no-risk condition, LSEs and HSEs did not reliably differ, $\beta = -0.01, t < 1.$ In addition, LSEs viewed the high-risk scenario as riskier than the no-risk scenario, $\beta = -0.42, t(75) = -2.38, p = 0.019,$ whereas HSEs’ perceptions of risk were not influenced by the manipulation, $\beta = 0.24, t(75) = 1.36, p = 0.178,$ although HSEs’ responses were in the expected direction. Hence, it appears that our manipulation affected perceptions of risk for the intended participants—single participants, but this effect was moderated by self-esteem.

**Explicit measure of goals.** To assess explicit approach and avoid motivations, participants completed the eight-item measure of social motivation used by Andersen, Reznik, and Manzella (1996). Participants responded to five items meant to tap their motivation to approach the other participant (e.g., “How much are you willing to share your feelings with your interaction partner?”) and three items designed to indicate their motivation to avoid the other participant (e.g., “How much do you want to distance yourself emotionally from your interaction partner?”). The approach items were averaged into a single score representing *explicit approach goals* ($\alpha = 0.85$) and avoidance items were averaged into a single score representing *explicit avoidance goals* ($\alpha = 0.72$).

**Measuring cognitive accessibility of goals.** When a person is given a list of words to study and then is asked to recall as many words as possible, the number of words recalled from a given category is an indicator of the cognitive accessibility of those concepts—more frequent recall indicates greater cognitive accessibility (e.g., Higgins, King, & Mavin, 1982). Hence, we created a memory task to assess the cognitive accessibility of approach and avoidance goals and reasoned that the cognitive accessibility of approach and avoid words would reflect the cognitive accessibility of approach and avoid goals. Participants were asked to study a list of 22 words for 1 min. This list included seven approach words (approach, closer, reveal, share, disclose, advance, near), seven avoidance words (distance, conceal, protect, avoid, away, hide, withdraw), and eight filler words (asleep, armchair, puppy, cupboard, reading, grass, writing, table). The order in which these words were presented was randomized for each participant. After 1 min, the list of words was taken from the participant, and the participant was given another minute to write down as many words as he or she could recall. The number of approach words recalled represented the *approach accessibility* score and the number of avoid words recalled represented the *avoid accessibility* score.

**Results and Discussion.**

Seven participants were eliminated from the analyses. Two participants (one female and one male) indicated during debriefing that they did not believe that there was another participant in the other room, one male participant opted not to finish the study after completing the first survey, and four participants (three male and one female) displayed response styles that called into question the validity of their data (e.g., one participant recalled more than twice as many words as any other participant and more than the original word list).

**Analysis strategy.** We conducted four hierarchical regressions in which self-esteem (mean centered; $M = 7.50, SD = 0.88$), gender (dummy coded: 0 = female; 1 = male), experimental condition (dummy coded: 0 = high risk, 1 = no risk) and the subsequent two-way interactions and three-way interaction between the variables were used to predict explicit approach ($M = 4.02, SD = 1.48$) and avoid ($M = 5.88, SD = 1.52$) goals, and cognitive accessibility of approach ($M = 2.17, SD = 1.06$) and avoid ($M = 2.43, SD = 1.41$) words.

**Explicit goals.** When explicit approach goals were entered as the criterion, there were no significant effects (all $t > 1.3$). When explicit avoidance goals were entered as the criterion, there were significant main effects for self-esteem and gender. LSEs reported greater avoidance goals ($M_{\text{est}} = 6.87$) than HSEs ($M_{\text{est}} = 5.64$), $\beta = -0.41, t(56) = -3.43, p = 0.001.$ In addition, women reported greater avoidance goals ($M = 6.28, SD = 1.49$) than men ($M = 5.51, SD = 1.47$), $\beta = -0.30, t(56) = -2.57, p = 0.01.$ All other effects were not significant (all $t < 1$).

**Cognitive accessibility.** Participants in the high-risk condition were marginally more likely to recall approach words than were participants in the no-risk condition, $\beta = -0.23, t(56) = -1.77, p = 0.080.$ However, self-esteem moderated the association between condition and accessibility of avoid words, $\beta = 0.50, t(52) = 2.38, p = 0.021$ (see Figure 4). In the high-risk condition, consistent with H1, LSEs recalled more avoid words than HSEs, $\beta = -0.45, t(52) = -2.02, p = 0.048.$ In addition, consistent with H2, LSEs recalled more avoid words in the high-risk condition than in the no-risk condition, $\beta = 0.44, t(52) = 2.36, p = 0.022,$ whereas the recall of avoid words for HSEs was unaffected by condition, $\beta = -0.22, t(52) = -1.16, p = 0.251.$ Taken together, these results support our hypothesis that risk activates avoid goals for LSEs but not HSEs. However, we failed to find support for our hypothesis that risk activates approach goals for HSEs. This result perhaps is not surprising given that HSEs’ ratings of risk in the pilot study were not affected by the dependence manipulation; HSEs’ perceptions of risk were not affected by the manipulation, their activation of approach goals also would not be affected by the manipulation.
However, it is also possible that our explicit measures both of risk and of approach goal activation were not sensitive enough to detect subtle, perhaps nonconscious activation of risk and approach goals for HSEs. Hence, in the next study, we examine the effect of our manipulation on indirect, behavioral indicators of goals, in addition to perceptions of acceptance.

**Study 5: Does Risk Affect Goals and Perceptions of Acceptance?**

In our final study, we first sought to determine whether our clear manipulation of social risk would indeed lead to the expected biases in perceptions of acceptance. Hence, we used the same constrained communication paradigm that we used in Studies 1 and 2 to examine the effect of the dependence manipulation on participants’ perceptions of acceptance from the highly accepting confederate. As in Study 3, we anticipate that in the high-risk social context (i.e., the dependence condition), HSEs will detect much more acceptance than LSEs (H1), but that this self-esteem effect will be reversed in the no-risk social context (H4b). Moreover, we anticipate that LSEs will detect more acceptance in the no-risk condition than in the high-risk condition (H2), whereas HSEs will detect less acceptance in the no-risk condition than in the high-risk condition (H3).

Second, we wanted to assess indirect, behavioral indicators of approach goal activation. To this end, we asked participants whether or not they engaged in specific behaviors during their taped introduction that reflect relationship promotion. Moreover, we asked observers to watch the participants’ taped introductions and rate how likeable and attractive the participants seemed. Stinson et al. (2009) demonstrated that observers’ liking for participants is almost completely determined by participants’ prosocial behavior. Hence, we thought that observers’ liking for participants in the present study could reflect participants’ actual use of relationship promoting, prosocial behaviors and, thus, would be an indirect behavioral indicator of the activation of participants’ approach goals. On both the participants’ reports and the observers’ reports of prosocial behavior, we expect to see more relationship-promoting behavior from HSEs than from LSEs in the high-risk condition (H1), but we expect this self-esteem difference to be reversed when the risk of rejection is ameliorated (H4b). Moreover, in reflection of the activation of their approach goals in response to social risk, we expect that risk will dampen LSEs’ prosocial behavior (H2) but will heighten HSEs’ prosocial behavior (H3), relative to the no-risk condition.

**Method**

**Participants.** Thirty-nine men from introductory psychology courses at the University of Manitoba participated in exchange for partial course credit. Participants were between 18 and 21 years of age ($M = 19.9$ years, $SD = 0.91$), all were single or causally dating, and all reported English as their first language.

**Procedure and measures.** We used the same basic procedure and materials described in the lab study in Study 4. Participants first completed the preliminary questionnaire that included the self-esteem assessment ($\alpha = .84$). Before participants actually introduced themselves to their interaction partner, participants in the high-risk condition were informed that they might meet their interaction partner for a second, face-to-face interaction, but only if she wanted to meet them. Participants in the no-risk condition were informed that they would not meet their interaction partner for a second, face-to-face interaction. After receiving these instructions, participants filmed their introductory video, and then watched the same female confederate’s acceptance video that was used in Studies 1 and 2. This video was edited to remove the confederate’s final statement (i.e., “So, I hope to see you in the second part of the study or maybe in the hallway because I think you’re in the room next to me!”) so as not to contradict the risk manipulation.

After viewing the response video, participants completed assessments of summary perceptions of acceptance and perceived cues. These measures were modified from those used in Study 2 to reflect the cover story of the present study. Specifically, any items referring to possible future interactions (“The other participant probably wants to meet me,” “The other participant is probably willing to spend time with me,” and “The other participant probably wants to have a face-to-face interaction with me”) were cut. After completing these measures, participants were thoroughly debriefed.

After participants had completed the dependent measures they were then asked to rate their own behavior in their video message. To assess participants’ approach goal–relevant behavior, participants indicated how much they engaged in two important prosocial behaviors (i.e., smiling and leaning toward the camera), which were interspersed amongst nondiagnostic filler items (e.g., cleared throat). Participants rated their behavior using a 5-point scale ($1 = \text{not at all}, 5 = \text{most of the time}$).

At a later date, three trained female coders watched the first minute of participants’ taped introductions and rated each participant on two prosocial variables: “likeable” and “attractive.” Coders rated how well each dimension described the participants using a 7-point scale ($1 = \text{not at all}, 7 = \text{extremely}$). We chose to have observers watch only a 1-min “slice” of participants’ behavior, because research suggests that such slices are highly predictive of impressions formed over a longer period of time (Ambady & Rosenthal, 1993). Interrater agreement for both variables was high.
(intraclass $rs = .62$ and $60$, respectively; both $ps < .001$). Thus, ratings for likeability and attractiveness were combined to create an index that represented the participants’ likeability ($\alpha = .76$).

Results and Discussion

Two participants indicated during debriefing that they did not believe that there was actually a female participant watching their taped introduction. These skeptical participants were excluded from the analyses that follow.

Detecting acceptance. We conducted two hierarchical regressions in which self-esteem (mean centered; $M = 7.24$, $SD = 1.05$), experimental condition (dummy coded: $0 = \text{high risk}$, $1 = \text{no risk}$) and the interaction were used to predict perceptions of acceptance ($M = 4.37$, $SD = 0.64$) and perceived cues ($M = 2.09$, $SD = 0.42$).

Summary perceptions of acceptance. As in Study 3, this variable was not influenced by self-esteem, condition, or the interaction between the variables ($rs < 1$).

Perceiving acceptance cues. Results revealed the predicted interaction between self-esteem and condition, $\beta = -.66$, $t(33) = -2.27$, $p = .030$ (see Figure 5). In the high-risk condition, consistent with H1, LSEs tended to detect fewer acceptance cues than HSEs, $\beta = .52$, $t(33) = 1.76$, $p = .088$. In addition, consistent with H2 and H3, LSEs detected fewer acceptance cues in the high-risk condition than in the no-risk condition, $\beta = .45$, $t(33) = 1.47$, $p = .008$, whereas HSEs detected more acceptance cues in the high-risk condition than in the no-risk condition, $\beta = -.36$, $t(33) = -2.22$, $p = .032$. H4b was not supported in the safe condition, $\beta = -.28$, $t(33) = -1.44$, $p = .158$, but the direction of the self-esteem effect was in the expected direction.

Using a face-valid manipulation of social risk (i.e., manipulating dependence on one’s social partner), we thus replicated the biasing influence of social risk observed in Studies 2 and 3. Compared with the high-risk condition, when the possibility of rejection was removed from the situation, LSEs actually detected more acceptance cues and HSEs detected fewer acceptance cues, a result that supports our motivational account of self-esteem differences in perceptions of acceptance.

Behavioral indicators of goals. The frequency of smiling ($M = 2.35$, $SD = 0.92$) was not predicted by self-esteem or the interaction between the variables ($rs < 1$). However, for leaning toward the camera ($M = 1.92$, $SD = 1.12$), there was a significant interaction between self-esteem and condition, $\beta = -.53$, $t(33) = 3.08$, $p = .004$ (see Figure 6). As anticipated, in the high-risk condition, consistent with H1, LSEs reported leaning toward the camera less than did HSEs, $\beta = -.56$, $t(33) = -3.23$, $p = .003$. In addition, consistent with H2, LSEs reported leaning toward the camera less in the high-risk condition than in the no-risk condition, $\beta = -.74$, $t(33) = -5.12$, $p < .001$. HSEs’ reports did not vary by condition, $\beta = .23$, $t(33) = 1.61$, $p = .116$, although the means were in the direction predicted by H3. Results for the leaning variable were also consistent with H4b, such that in the no-risk condition, LSEs reported leaning toward the camera more than did HSEs, $\beta = .40$, $t(33) = 2.29$, $p = .028$.

Next, we used our standard regression to predict observers’ ratings of participants’ likeability ($M = 4.03$, $SD = 1.09$). Results revealed a main effect for self-esteem, $\beta = .39$, $t(34) = 2.42$, $p = .021$, such that observers found HSEs more likeable ($M_{\text{est}} = 4.41$) than LSEs ($M_{\text{est}} = 3.70$). However, this effect was qualified by the predicted interaction between self-esteem and condition, $\beta = -.60$, $t(33) = -2.22$, $p = .034$ (see Figure 7). Consistent with H1, in the high-risk condition, observers liked HSEs much more than LSEs, $\beta = .89$, $t(33) = 3.26$, $p = .003$. Moreover, consistent with H2 and H3, the experimental manipulation influenced impressions of both LSEs and HSEs: Compared with the high-risk condition, observers perceived LSEs to be more likeable, $\beta = .36$, $t(33) = 2.36$, $p = .022$, and HSEs to be less likeable, $\beta = -.38$, $t(33) = -2.45$, $p = .018$, in the no-risk condition. On this variable, we did not find support for H4b: When the risk of rejection was experimentally eliminated, observers were equally attracted to LSEs and HSEs ($\beta = .16$, $t < 1$).

These behavioral results offer support for our motivational account of participants’ perceptions of acceptance. When risk was present, LSEs’ self-protective orientation was evident in their inhibited reports of leaning toward the camera and also in observers’ codes of their likeability. Because actual liking is strongly dependent on people’s warm and friendly behavior (e.g., Ambady & Rosenthal, 1993; Stinson et al., in press), this latter result suggests that when risk is present, LSEs self-protectively inhibited their prosocial behaviors. Ironically, the observers’ actual liking results also suggest that LSEs’ self-protective cognitions and behaviors ultimately lead to the very rejection they were trying to avoid. In contrast, HSEs seem to “pull out all the stops” when social risk is present. In the high-risk condition, HSEs’ drive to seek out new relationships was evident in their reports of leaning toward the camera and in their use of likeable behaviors. However, when the risk of rejection was eliminated, these self-esteem effects were also eliminated or even reversed, resulting in LSEs behaving more prosocially than HSEs.

General Discussion

In the present research, we investigated the influence of self-esteem on people’s perceived social motivations and behaviors by examining people’s perceptions of acceptance from novel opposite-sex interaction partners. We proposed that LSEs’ signature self-protective social motivations cause them to cautiously
underdetect acceptance from their interaction partners, whereas HSEs' signature relationship-promoting social motivations cause them to optimistically overdetect acceptance. The results of three experiments that varied the risk of rejection using very different manipulations (i.e., Studies 2, 3, and 5) strongly supported our predictions. Results of a meta-analysis of the condition effects for LSEs and HSEs in these three studies indicated that social risk reduces perceptions of acceptance for LSEs ($Z = -3.81, p < .001$) but increases perceptions of acceptance for HSEs ($Z = 2.63, p < .01$). Although the biasing influence of interpersonal risk on perceptions of acceptance was stronger for LSEs ($d = 2.28$) than for HSEs ($d = 0.81$), risk exerted a strong influence on perceptions of acceptance for everyone. To our knowledge, these results are among the first to demonstrate that the risk-regulation system also operates outside of ongoing romantic relationships (see also Anthony et al., 2007), and our results are the first to demonstrate that the risk-regulation system can bias the very manner in which people perceive concrete social cues like smiles, eye-contact, and laughter.

The results of the present research also demonstrate that self-protective motivations and behaviors can have generally pernicious ramifications for the process of relationship initiation. LSEs’ self-protective response to risk sensitizes them to the possibility of rejection (Study 4), increases their avoidance-goal activation (Study 4), decreases their use of prosocial, approach behaviors (Study 5), and inhibits their perceptions of acceptance (Studies 2, 3, and 5). Taken together, this pattern of self-protective behaviors means that in a relationship-initiation context, LSEs are very likely to perceive and even experience the very rejection that they so desperately want to avoid. In contrast, HSEs’ signature relationship-promoting motivations and behaviors have generally positive effects on the process of relationship initiation. HSEs are generally less sensitive to the possibility of rejection than LSEs (Studies 3 and 4), and the risk of rejection increases their use of prosocial, approach behaviors (Study 5), as well as exaggerating their perceptions of acceptance (Studies 2, 3, and 5).

### An Alternative Explanation

People believe they are viewed in the same manner in which they view themselves (Shrauger & Schoeneman, 1979), and they believe that others like them as much as they like themselves (Kenny & DePaulo, 1993). Consequently, LSEs, who have poor regard for themselves, may project those doubts onto others and therefore perceive that others do not like them. In contrast, HSEs, who believe they possess high relational value, may project their confidence and therefore perceive that others accept them. The literature on motivated self-perception (Kunda, 1990) also suggests that LSEs may be motivated to see less acceptance from others, whereas HSEs may be motivated to see more acceptance, because such perceptions would be congruent with their respective self-perceptions. Although projection and the motivation to perceive feedback as being consistent with one’s self-concept may contribute to the self-esteem main effect on perceptions of acceptance observed in Study 1, and these alternative accounts may also help to explain the self–observer differences observed in Study 2, these mechanisms cannot explain our key finding that social risk moderates the effect of self-esteem on perceptions of acceptance, as demonstrated in Studies 3 and 5.

### Mechanisms to Explain the Self-Esteem Effects

Although our results are consistent with our risk-regulation perspective, one may still wonder why self-esteem is related to people’s responses to social risk. One possible answer to this question concerns the personality variables that are associated with self-esteem. In particular, extroversion has been linked to brain systems implicated in guiding approach motivations, whereas neuroticism has been linked to brain systems implicated in guiding avoidance motivations (e.g., Elliot & Thrash, 2002). In turn, extroversion is positively related to self-esteem and neuroticism is negatively related to self-esteem (e.g., Robins et al., 2001). Hence, it is possible that LSEs’ relatively higher levels of neuroticism and lower levels of extroversion predispose them to favor avoidance motivations, whereas HSEs’ relatively higher levels of extroversion...
sion and lower levels of neuroticism predispose them to favor approach motivations. We suspect that these personality influences are active ingredients in the processes that we observed in the studies we presented. Indeed, we observed main effects of self-esteem that are consistent with such a personality account (e.g., in contrast to HSEs, LSEs perceived greater risk in Studies 3 and 4, reported greater explicit avoidance goals in Study 4 and exhibited less prosocial behavior in Study 5). However, the interaction between self-esteem and social risk is not easily explained by a personality account: If LSEs are chronically higher in avoid motivations than HSEs, then why do they appear to be so approach motivated in the risk-limited social conditions? The same question in the reverse may be asked about HSEs. Given these issues, we propose that self-esteem differences in extroversion and neuroticism may influence baseline preferences for avoid or approach goals across social situations, but self-esteem is still the ultimate arbiter of social goals because it is sensitive to social risk. Depending on the riskiness of the social context, self-esteem and risk-regulation processes may cause people to rely on their baseline preferences, or self-esteem may override such preferences in favor of other goals. Future research should explore these possibilities by examining the links between personality, self-esteem, social risk, and goals.

A second mechanism that may explain the influence of self-esteem on perceptions of acceptance and social behavior concerns the differing self-concepts that characterize individuals with higher and lower self-esteem. Anthony et al. (2007) demonstrated that LSEs’ self-doubts tend to center on their possession of qualities that are particularly valued in first-impression situations, such as their physical attractiveness, social skills, and their social status. In contrast, HSEs feel very confident in their possession of these valued social commodities. Hence, in the types of socially risky first impression situations examined in the present research, LSEs’ poor self-views of their social commodities may have driven their avoidance motivations. After all, if LSEs think that they do not possess desired qualities, then they would anticipate rejection and thus wish to avoid the social situation. In contrast, HSEs’ confidence in their possession of social commodities may have allowed them to blithely approach the risky social situations with little fear of rejection.

If self-esteem differences in self-views are a mechanism to explain self-esteem differences in social goals and behavior, then it is important to ask whether these self-views are indeed accurate. If LSEs are actually lower in social commodities than HSEs, then perhaps LSEs’ social insecurities and HSEs’ social confidence are warranted. If this is the case, then LSEs’ use of self-protective social strategies may be adaptive in the sense that such strategies may actually help LSEs to avoid real rejection; conversely, perhaps HSEs’ use of relationship-promoting strategies is adaptive in the sense that it really is safe for HSEs to approach new relationships because acceptance is highly likely.

Research suggests that self-esteem differences in self-views about social commodities like physical attractiveness are not generally accurate (Baumeister, Campbell, Krueger, & Vohs, 2003). However, despite the objective similarities between LSEs’ and HSEs’ social commodities, the results of our Study 5 indicated that when social risk was present, LSEs were indeed less liked than their HSEs counterparts. Although we suspect that this social outcome was the result of a self-fulfilling prophecy resulting from self-esteem differences in social expectations and social behavior (e.g., Stinson et al., 2009), rather than the result of objective differences between LSEs’ and HSEs’ possession of social commodities, the result is the same: Self-esteem differences in a priori social expectations may contain a kernel of truth in risky social situations. However, we suspect that neither group is aware of the role that their own behavior plays in creating the social outcomes that they anticipate. This misattribution of the root cause of social outcomes—to one’s own traits and characteristics rather than to one’s social behavior—may serve to further undermine LSEs’ depleted self-worth and support HSEs’ self-confidence.

Conclusions

Although socially risky contexts highlight self-esteem differences in signature social motivations and behaviors, in each of the studies that we presented, reducing or eliminating social risk also eliminated, and in some cases even reversed, such self-esteem differences. These results put to rest any notion that LSEs are socially apathetic or socially unskilled. Instead, social risk seems to lead to self-protective motivations that simply outweigh approach motivations for LSEs, resulting in an apparent lack of interest in forming new social bonds and an apparent skill deficit in detecting acceptance or behaving in a likeable manner.

Unfortunately for LSEs, the everyday, normative, relationship-initiation context appears to be a context of social risk, bound to elicit LSEs’ self-protective motives. Given this, our findings suggest a rather grim situation for LSEs desiring new social bonds: Boy meets girl, boy underestimates acceptance, boy feels rejected, boy acts inhibited, and boy actually gets rejected. Underestimating acceptance might be particularly detrimental to LSEs’ emotional well-being (Nezlek, Kowalski, Leary, Blevins, & Holgate, 1997), and their relatively cold interpersonal behavior might actually create the very rejection they fear (Stinson et al., 2009). Such experiences would only serve to reinforce LSEs’ doubts about their social value (Leary et al., 1995), perhaps even increasing their self-protective motivations and reducing their likelihood of trying to initiate relationships with others (Cameron, Stinson, Wood, & Holmes, 2010). Although the heightened risk LSEs experience in forming social bonds might encourage them to fulfill their need to belong with less risky, less interpersonal means (Gardner et al., 2000), a lack of real social bonds with others could have real negative consequences for their health (Stinson et al., 2008) and well-being (Baumeister & Leary, 1995). In contrast, the everyday, normative, first-meeting context appears to benefit HSEs, who favor connectedness goals over self-protection. Although this signature social strategy leads HSEs to overdetect acceptance, which potentially could lead to awkward social interactions, their likeable behavior under such risky circumstances may offset this risk because it ultimately creates real acceptance from others, as evidenced by our results in Study 5. Consequently, the social risk inherent in day-to-day life leads HSEs to shine and receive actual acceptance from others, thus bolstering their already secure sense of self.

On a hopeful note for LSEs, when interpersonal risk is reduced, their perceptions of acceptance increase, and they act in a more likeable manner. This suggests that interventions designed to build the social networks of LSEs should focus on reducing perceptions of interpersonal risk. The manipulation of social risk used in Study
3 may be a readily applicable intervention. Highlighting for LSEs that other people also experience social anxiety may be an effective tool to help LSEs put aside their self-protective motives so that they can see, and potentially create, the acceptance that they crave.

References


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