The Liking Gap in Conversations: Do People Like Us More Than We Think?

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Abstract

Having conversations with new people is an important and rewarding part of social life. Yet conversations can also be intimidating and anxiety provoking, and this makes people wonder and worry about what their conversation partners really think of them. Are people accurate in their estimates? We found that following interactions, people systematically underestimated how much their conversation partners liked them and enjoyed their company, an illusion we call the *liking gap.* We observed the liking gap as strangers got acquainted in the laboratory, as first-year college students got to know their dorm mates, and as formerly unacquainted members of the general public got to know each other during a personal development workshop. The liking gap persisted in conversations of varying lengths and even lasted for several months, as college dorm mates developed new relationships. Our studies suggest that after people have conversations, they are liked more than they know.

Having conversations with new people is a fundamental part of social life. It is how we meet new friends and romantic partners. It is how we ease into a new neighborhood or workplace. It is a basic way we learn about the world. But having conversations with new people is rarely easy.

One of the main difficulties is that it is hard for people to know what their conversation partners really think of them, leaving people uncertain about how much others like them, enjoy their company, and would like to interact again. Why? There are several reasons. First, conversations are conspiracies of politeness in which people do not reveal their true feelings (Blumberg, 1972; Brown & Levinson, 1987; Schegloff, Jefferson, & Sacks, 1977; Swann, Stein-Seroussi, & McNulty, 1992; Tesser & Rosen, 1975). Second, conversations raise the specter of social rejection, and so people are reluctant to express interest in others in case this interest is not reciprocated (Beck & Clark, 2010; Eisenberger, Lieberman, & Williams, 2003). Third, conversations are cognitively demanding, and so even when people do signal how much they like one another, their partners often fail to notice because they are too focused on themselves or too busy planning what to say next (Epley, Keysar, Van Boven, & Gilovich, 2004; Keysar, 2007; Lieberman & Rosenthal, 2001). In short, the natural dynamics of conversation can make it hard for people to know how much others like them, and as a result, conversations are often marked by awkwardness and uncertainty (e.g., "Did I overstep my bounds?" "Did I talk too much?" "Did they think I was boring?").

Short of actually knowing how much others like them, people are left to venture their best guess, but people's best guesses tend to be biased (Kenny & DePaulo, 1993). Specifically, people are often biased by their own internal monologues, which, after social interactions, can be remarkably self-critical and negative,

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especially with the added uncertainty of talking to someone new (Brozovich & Heimberg, 2008; Mor & Winquist, 2002; Schlenker & Leary, 1982). Uncertainty and worries about how one has come across are familiar feelings to anyone who has been involved in a conversation; afterward, people tend to compare themselves unfavorably with their ideal version of themselves (e.g., "My banter wasn't witty enough."), ruminate about the worst possible outcomes (e.g., "Does she think I'm a bigot?"), and focus on the things they need to fix for next time (e.g., "I really shouldn't talk about my ex so much."). In short, people can be their own greatest critic, but what is hard for people to see is that others do not have this same perspective on their faults. This discrepancy in perspectives causes people to overestimate how harshly others will judge them during social interactions (Savitsky, Epley, & Gilovich, 2001; Savitsky & Gilovich, 2003).

This amounts to the following. First, successful conversations require that people know how much others like them and enjoy their company. Second, the dynamics of conversation prevent people from knowing this. Third, left with few alternatives, people estimate how much others like them by assuming that others' thoughts about them are the same as their own thoughts about themselves. But this is problematic because people's own thoughts tend to be overly critical. Taken together, these facts suggest that when people have conversations with new people, they will systematically underestimate how much others like them.

We call this mistaken belief the *liking gap*, and we explored it across five studies. In Study 1a, we tested the hypothesis that after a short conversation, people will underestimate how much others like them. Studies 1b and 2 provided evidence that the liking gap exists not because people fail to signal that they like each other—in fact, the signals are right there for people to see—but, rather, people are too focused on their own self-critical thoughts to notice. Studies 3 and 4 showed that the liking gap exists after short, medium, and long conversations, as well as among the general public in a United Kingdom (UK) sample. Finally, in Study 5, we tracked college dorm mates over the course of an academic year, finding that they too showed sustained evidence of the liking gap. Together, these studies suggest that after people have conversations, they chronically underestimate how much their conversation partners like them and enjoy their company.

Study 1a: Is There a Liking Gap?

Method

***Purpose.*** As an initial test of our hypothesis, we used a straightforward methodology: We recruited two people to have a conversation. Then, after they were finished, we asked them how much they liked one another and how much they believed the other person liked them.

Participants. We began data collection part way through a summer term, and because the predicted effect had not previously been demonstrated, we decided to collect as many participants as we could before the end of the summer term, with plans to replicate the effect, if it emerged, in further studies. We recruited community members of all ages using fliers posted on and near Yale University's campus. Thirty-six people (72.2% female, 27.8% male; age: $M = 23.25$ years, $SD = 6.12$) reported to our lab and participated in exchange for $10.00.

Procedure. Each session involved 2 same-sex participants. After arriving at the laboratory, participants were greeted by an experimenter and escorted to the study room, where they sat side by side at a large table. Participants were instructed to have a conversation for approximately 5 min. To aid conversations, we gave participants a sheet of ice-breaker questions (e.g., "Where are you from?" "What are some of your hobbies?") and told them to take turns asking each other questions until the experimenter returned. A computer running an analog clock program was left on the table to ostensibly help the participants pace themselves. In reality, the computer was recording participants' conversations.

After 5 min, the experimenter returned, and participants ended their conversation. Participants were then escorted to separate rooms, where they completed a computer-based survey. Participants were asked to answer four questions to measure how much they liked their conversation partners (measures A through D) and an analogous four questions to measure how much they thought their conversation partners liked them (measures E through H). Participants used 7-point Likert-type scales, with the end points *strongly disagree* and *strongly agree*, to report the extent to which they agreed with the following statements: (a) "I generally liked the other participant"; (b) "I would be interested in getting to know the other participant better"; (c) "If given the chance, I would like to interact with the other participant again"; (d) "I could see myself becoming friends with the other participant"; (e) "The other participant generally liked me"; (f) "The other participant would be interested in getting to know me better"; (g) "If given the chance, the other participant would like to interact with me again"; and (h) "The other participant could see himself/herself becoming friends with me."

Participants also completed personality scales measuring narcissism (Ames, Rose, & Anderson, 2006), shyness (McCroskey, Andersen, Richmond, & Wheeless, 1981), rejection sensitivity (Berenson et al., 2009), and self-esteem (Rosenberg, 1965). After responding to
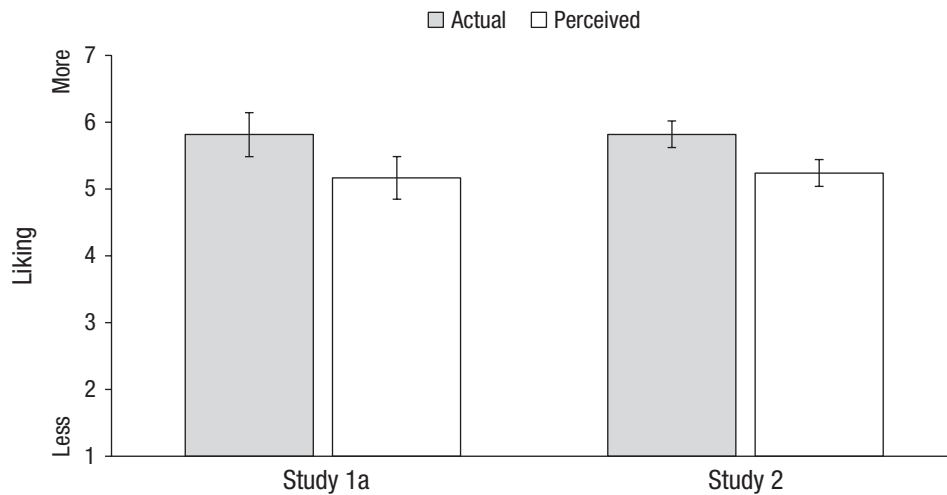
Fig. 1. Results of Studies 1a and 2: mean ratings of actual and perceived liking of conversation partners. Error bars show 95% confidence intervals.

these measures and some exploratory questions, participants reported their demographics and were debriefed and dismissed. The exploratory questions and demographics questions for this and all subsequent studies can be found in the Supplemental Material available online.

Results

Did participants know how much their conversation partners liked them? Our four measures of how much participants liked their conversation partners (measures A through D) were highly correlated (α = .88), and so we averaged participants' scores on these measures into a single measure of actual liking. Likewise, our four measures of how much participants thought that their conversation partners liked them (measures E through H) were also highly correlated (α = .89), and so we averaged scores on these measures to form a single measure of perceived liking. These measures, collectively referred to as a liking index, served as our primary dependent variable.

Because the two types of ratings were nested within participants and participants were nested within dyads, we fitted a linear mixed model to the data in the R programming environment (R Core Team, 2008) using the *lme4* package (Bates, Maechler, Bolker, & Walker, 2018), with rating type (actual or perceived) as the independent variable and our liking index as the dependent variable. Our model included our independent variable as a fixed effect as well as an intercept for each participant and an intercept for each dyad as random effects. We used the *lmerTest* package (Kuznetsova, Brockhoff, & Christensen, 2014) to derive

p values and degrees of freedom (for all studies reported here). Note that the reported means are predicted marginal means (for all studies reported here).

Data from one dyad were excluded from analyses because the participants turned out to be close friends. The analysis revealed a significant effect of rating type on liking, $b = -0.65$, $SE = 0.11$, 95% confidence interval (CI) = [−0.87, −0.42], $t(34) = -5.83$, $p < .001$, with participants reporting liking their conversation partner (actual: $M = 5.82$, 95% CI = [5.49, 6.14]) significantly more than they perceived their conversation partner to like them (perceived: $M = 5.17$, 95% CI = [4.85, 5.49]). But because it cannot logically be true that participants, on average, liked their conversation partners more than their conversation partners liked them, it follows that the significant difference between actual liking and perceived liking is a mistake on the part of participants. This mistake is the hypothesized liking gap.

In sum, as Figure 1 shows, after a brief conversation with another person, people significantly underestimated how much others liked them. In short, Study 1a provided the predicted evidence of the liking gap.

Personality moderators. Tests of the four potential moderators were conducted; a Holm-Bonferroni procedure was used to correct for multiple comparisons. Because we started collecting data on shyness after the study had begun, the following analyses exclude data on that measure from two dyads. We found a significant Shyness × Rating Type (actual or perceived) interaction, $b = 0.03$, 95% CI = [0.01, 0.04], $t(30) = 3.29$, $p = .003$. The shyer participants were, the greater their liking gap was. Rejection sensitivity ($p = .64$), self-esteem ($p = .42$), and narcissism ($p = .12$) did not moderate the size of the liking gap.

Shyness. To further explore the effects of shyness on the liking gap, we grouped participants into three levels of shyness: low shyness (first tertile of shyness; $n = 10$), average shyness (second tertile of shyness; $n = 10$), and high shyness (third tertile of shyness; $n = 10$). We then fitted a linear mixed model to the data with rating type (actual or perceived) as the independent variable and liking as the dependent variable. We included shyness (treated as a factor) as a fixed effect to explore its effect on participants' liking. Our model included an intercept for each participant and an intercept for each dyad as random effects. Finally, we conducted a series of postestimation contrasts to fully explore how shyness moderates the liking gap.

Our analyses revealed that participants who were high in shyness liked their partners (actual: $M = 6.16$, 95% CI = [5.63, 6.69]) significantly more than they thought their partners liked them (perceived: $M = 5.02$, 95% CI = [4.53, 5.51]), $t(27.56) = 5.71$, $p < .001$, estimated mean difference = 1.14, 95% CI = [0.73, 1.55]. Participants who were average in shyness liked their partners (actual: $M = 5.67$, 95% CI = [5.16, 6.17]) significantly more than they thought their partners liked them (perceived: $M = 5.12$, 95% CI = [4.57, 5.67]), $t(27.54) = 2.76$, $p = .01$, estimated mean difference = 0.55, 95% CI = [0.14, 0.96]. Lastly, participants who were low in shyness did not like their partners (actual: $M = 5.57$, 95% CI = [5.03, 6.11]) significantly more than they thought their partners liked them (perceived: $M = 5.32$, 95% CI = [4.78, 5.86]), $t(26.42) = 1.30$, $p = .21$, estimated mean difference = 0.25, 95% CI = [−0.15, 0.65].

In sum, shyness moderated the liking gap: Participants low in shyness did not report a liking gap, whereas participants high in shyness reported a large liking gap. Note, however, that even participants who were of average shyness reported a significant liking gap. It is also worth noting how the preceding analysis of shyness speaks against an alternative interpretation of our findings. Specifically, it is possible that what we have shown is not a liking gap but, rather, a reporting gap. In other words, perhaps participants did not really believe that their conversation partners liked them less but simply said so to appear more modest or humble. However, the significant moderating effect of a personality factor (i.e., shyness) is evidence against this interpretation.

Study 1b: Do People Send Signals That They Like Each Other?

Method

Purpose. Why did people in Study 1a underestimate how much their conversation partners liked them? One explanation is that when people have conversations, they do not outwardly exhibit as much liking of each other as they internally feel. In other words, maybe people cannot tell how much their conversation partners like them because their conversation partners do not signal that they like them. We refer to this as the *no-signal* account. However, another explanation is that people signal plenty of interest in each other during conversations, but their partners do not notice or use these signals. We call this the *neglected-signal* account. If the no-signal account is correct, then third-party observers of the conversation should not be able to tell how much conversation partners like each other. However, if the neglected-signal account is correct, then third-party observers should be able to tell how much conversation partners like each other. Which account is correct? To answer this question, we had trained coders watch the videotapes of the conversations from Study 1a and report how much they thought people liked one another.

Procedure. All dyads from Study 1a had consented to let us keep their videos for research purposes. Technical difficulties prevented 2 videos from recording properly, and 1 video was not coded because the participants turned out to be close friends, leaving us with 15 videos for coding.

Two trained research assistants, who were unaware of the hypothesis, independently coded the videotaped conversations for how much conversation partners liked one another. The coders watched each video twice, once paying attention to and answering questions about one member of the dyad and once paying attention to and answering questions about the other member of the dyad. They answered the following questions about each participant: "How much does he/she like the other person?" "How much would he/she like to interact with the other participant again?" "How interested is he/she in getting to know the other participant?" "How much is he/she interested in becoming friends with the other person?" All questions were answered using a 7-point Likert-type scale with the end points *not at all* and *very/ very much*. We averaged each coder's responses to these four questions to create a composite for each coder (αs > .87), for each participant in the dyad. Coders' ratings were reliable (intraclass correlation coefficient = .71), so we averaged across coders to create an observed-liking index for each participant in each dyad.

Results

We fitted two linear mixed models to test whether coders' observed-liking index predicted participants' actual liking and participants' perceived liking. Both models

included observed liking as the independent variable and an intercept for each dyad as a random effect.

Actual liking. The analysis revealed that observed liking was a significant predictor of actual liking, $b = 0.71$, $SE = 0.22$, 95% CI = [0.26, 1.16], $t(30) = 3.20$, $p < .001$. Coders who watched the videos of participants' conversations could and did predict how much participants actually reported liking one another.

Perceived liking. The analysis revealed that observed liking (coders' judgments of how much participants liked their conversation partners) was not a significant predictor of perceived liking (participants' estimates of how much their conversation partners liked them), $b = 0.38$, $SE = 0.26$, 95% CI = [−0.17, 0.91], $t(21.13) = 1.48$, $p = .51$.

In sum, coders could reliably predict people's actual liking of their conversation partners, but coders' ratings did not correspond to how much people perceived that their conversation partners liked them. This pattern of results is inconsistent with the no-signal account and consistent with the neglected-signal account; participants did signal that they liked one another, but participants neglected this information when estimating how much their conversation partners liked them.

Given this evidence in support of the neglected-signal account, it follows that the explanation for the liking gap lies in processes occurring within the perceivers' own heads that are distracting them from realizing how much their conversation partners really like them. But can we find more direct evidence for this? Moreover, if participants are ignoring the signals that their conversation partners like them, what exactly are they focused on instead?

Study 2: Why Does the Liking Gap Exist?

Method

Purpose. Study 1b supported the neglected-signal account, which suggests that although people do signal that they like one another during conversations, people neglect these signals when estimating how much others like them. Why? We think one major reason is that people are overly focused on the contents of their own thoughts, which are largely critical of their own conversation performance, and these thoughts distract them from perceiving how much their conversation partners like them. If this is correct, then the extent to which people's thoughts are critical of their own conversational performance will be positively related to the size of the liking gap. We tested this prediction in Study 2. To do so, we made two changes to the methods used in Study 1a. First, to assess the contents of people's postconversation thoughts, we

simply asked them to report the most salient thoughts they had about their conversation partner, as well as the most salient thoughts they believed their conversation partner had about them. Second, rather than using ice-breaker questions to guide the conversation, we allowed people to talk about whatever they wanted; this allowed the conversations to unfold more naturally.

Participants. We prespecified a target sample of at least double the size from Study 1 and ran the study from the start of the spring semester until the end. Eighty-four students and recent graduates of Yale University (59.5% female, 40.5% male; age: $M = 19.25$ years, $SD = 1.28$) reported to our lab and participated in exchange for $10.00.

Procedure. The procedure was identical to that used in Study 1a, except that instead of being given ice-breaker questions, participants were given the following instructions: "You'll have about five minutes to talk, and you can talk about whatever you like. I'll keep time from the other room and then return when it's time to move on."

After answering the questions about how much they liked their conversation partners and how much they thought their conversation partners liked them, participants were asked what thoughts went into forming their impression of the other participant (measure A: "What are the top 3 moments from your conversation that caused you to form the impression of the other person that you did?"). Participants were also asked what thoughts they believed went into forming the other participant's impression of them (measure B: "What are the top 3 moments from your conversation that caused the other person to form the impression of you that he/she did?"). Participants were instructed to write in detail about each moment and then to rate the negativity or positivity of each moment on a 7-point Likert-type scale with the end points *extremely negative* and *extremely positive*. After completing several exploratory questions (see the Supplemental Material), participants reported their demographic information and were debriefed and dismissed.

Results

Liking gap. As in Study 1a, the four measures of how much participants liked their conversation partners were highly correlated ($\alpha = .85$), and the same was true for measures of how much participants thought their conversation partner liked them ($\alpha = .89$); collectively, this liking index served as our primary dependent variable.

We fitted a linear mixed model to the data with rating type (actual or perceived) as the independent variable and our liking index as the dependent variable. Our model included our independent variable
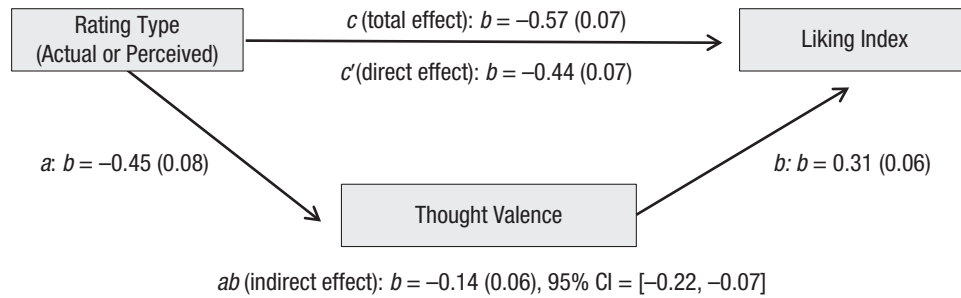
Fig. 2. Mediation diagram for Study 2: thought valence as a mediator of the relationship between rating type (actual or perceived) and how much participants liked one another after their conversation. Standard errors are given in parentheses. CI = confidence interval.

as a fixed effect as well as an intercept for each participant and an intercept for each dyad as random effects. Just as in Study 1a, the analysis revealed that rating type was a significant predictor of liking, $b = -0.57$, $SE = 0.07$, 95% CI = $[-0.71, -0.44]$, $t(84) = -8.32$, $p < .001$. As Figure 1 shows, after having a conversation, people underestimated how much others liked them.

The role of negative thoughts in the liking gap. People clearly underestimate how much others like them. But why? One explanation is that after people have conversations, their thoughts tend to be critical of their own social performance, and they then project these thoughts onto others and have doubts about how much others like them. Our data allowed us to test this reasoning directly. We measured the valence of people's thoughts by having participants report the most salient thoughts they had about their conversation partner (measure A), as well as the most salient thoughts they imagined their conversation partner had about them (measure B). We then had participants report how negative or positive each of their thoughts was, and we averaged the valence of the thoughts into a thought-valence index. This allowed us to test whether the negativity of people's postconversation thoughts was related to the size of the liking gap.

Did the negativity of people's thoughts mediate the relationship between rating type (actual or perceived) and liking? To find out, we fitted three linear mixed models: (a) M (thought valence) ~ X (rating type), (b) Y (liking index) ~ M (thought valence) + X (rating type), and (c) Y (liking index) ~ X (rating type). All models included an intercept for each participant and an intercept for each dyad as random effects. We extracted the relevant coefficients and bootstrapped an estimate of the indirect effect using the *boot* package in the R programming environment (Canty & Ripley, 2016).

As shown in Figure 2, the indirect effect of rating type on liking through thought valence was significant, $b = -0.14$, $SE = 0.06$, 95% CI = $[-0.22, -0.07]$, $p < .05$.

When participants reflected on their conversations, their most salient thoughts about how others viewed them were more negative than their most salient thoughts about how they viewed others, and this difference was related to how much they believed their conversation partners liked them.

Study 3: Does the Liking Gap Persist in Longer Conversations?

Method

Purpose. Does the liking gap generalize to longer conversations? To find out, we recruited people to have conversations and let them talk for as long as they wanted. We also broadened our sample to include mixed-gender conversations. Lastly, in addition to measuring how much people liked one another, we also measured how much people enjoyed the conversation and how much people thought others enjoyed the conversation, to measure a natural extension of the liking gap: Do people believe that they enjoyed conversations more than their conversation partners did?

Participants. Participants were recruited as part of a study on conversation whose primary purpose was to look at the factors that predict the length of conversations. Thus, the sample size was determined by that study's primary aims. One hundred two people (52.9% female, 47.1% male; age: $M = 23.62$ years, $SD = 3.11$), recruited via the Harvard Decision Science Laboratory subject pool (consisting of students and the general public alike), reported to the laboratory in exchange for $15.00.

Procedure. Each session involved two previously unacquainted participants. After arriving at the laboratory, they were greeted by an experimenter and escorted to the study room, where they sat face to face at a small table. Participants were given the following instructions:

We're interested in how people have conversations. In the first part of this study, you'll have a conversation with each other, and in the second part, you'll answer some questions on computers in one of the rooms across the hall. If there is time remaining after that, you may complete some additional tasks, so you will participate for the full hour regardless of how long you choose to talk in the first part of the study. Your conversation will be recorded, and the recording will only be used for research purposes.

Now, please talk about whatever you like, for as little time or as much time as you like, as long as it is more than 1 minute and less than 45 minutes. Whenever you're ready to move on to the next part of the study, please come get me. I'll be across the hall. Thanks!

The total amount of time participants spent talking was recorded. After participants' conversations were finished, participants retrieved the experimenter and then that experimenter escorted the 2 participants to separate cubicles where they each, independently, completed a computer-based survey. As noted, because the primary purpose of this study was about a different aspect of conversation (i.e., what determines the length of conversations), most measures were also unrelated to the liking gap (see the Supplemental Material). Yet for the present purposes, participants answered the following four questions related to the liking gap: (a) "How much do you generally like the other person?" (b) "How much did you enjoy the conversation?" (c) "How much do you think the other person generally likes you?" and (d) "How much do you think your partner enjoyed the conversation?" Participants answered measures (a) and (c) on a 7-point Likert-type scale with the end points *not very much* and *very much*. Participants answered measures (b) and (d) on a 7-point Likert-type scale with the end points *did not enjoy at all* and *enjoyed very much*. Participants reported their demographic information and were debriefed and dismissed.

Results

We fitted a linear mixed model to the data with rating type (actual or perceived) as the independent variable and liking as the dependent variable. Our model included the independent variable as a fixed effect as well as an intercept for each participant and an intercept for each dyad as random effects. We also fitted an analogous model with enjoyment as the dependent variable. Lastly, we included conversation length (the total amount of time participants spent talking) as a fixed effect in both models to explore the effect of conversation length on participants' liking and enjoyment of the conversations. Overall, participants' conversations lasted anywhere from 2 min to 45 min (length: $M = 22.97$, $SD = 14.47$).

Liking and enjoyment gaps. The analysis revealed that rating type (actual or perceived) was a significant predictor of liking, $b = -0.38$, $SE = 0.10$, 95% CI = [−0.59, −0.18], $t(102) = -3.72$, $p < .001$. Once again, participants underestimated how much others liked them.

Next, we turned to the question of whether there is also an enjoyment gap. The analysis revealed that rating type was a significant predictor of enjoyment, $b = -0.52$, $SE = 0.10$, 95% CI = [−0.71, −0.33], $t(102) = -5.42$, $p < .001$. It appears that there is an enjoyment gap as well: Participants mistakenly believed that they enjoyed the conversation more than their conversation partners enjoyed the conversation.

In sum, participants underestimated how much others liked them and how much others enjoyed the conversation. Do these effects vary across conversations of different lengths?

Conversation length and liking. The analysis revealed that conversation length was a significant predictor of liking, $b = 0.03$, $SE = 0.009$, 95% CI = [0.01, 0.05], $t(69) = 3.47$, $p < .001$, but the interaction between conversation length and rating type was not a significant predictor of liking, $b = 0.006$, $SE = 0.007$, 95% CI = [−0.01, 0.02], $t(100) = 0.892$, $p = .37$. In other words, participants who had longer conversations liked each other more, but the liking gap persisted no matter the length of the conversation. Was the same true for enjoyment?

Conversation length and enjoyment. The analysis revealed that conversation length was a significant predictor of enjoyment, $b = 0.03$, $SE = 0.008$, 95% CI = [0.02, 0.05], $t(69) = 3.88$, $p < .001$, but the interaction between conversation length and rating type was not a significant predictor of enjoyment, $b = 0.007$, $SE = 0.007$, 95% CI = [−0.01, 0.02], $t(100) = 0.98$, $p = .33$. Again, participants who had longer conversations reported greater enjoyment, but regardless of conversation length, participants still underestimated how much their conversation partners enjoyed the conversation.

Conversations grouped by length. It might be suspected that the liking and enjoyment gaps would disappear once people had time to really talk and get to know one another. Thus, to further explore the effects of conversation length, we grouped conversations into three types: short conversations (more than 1 *SD* below the
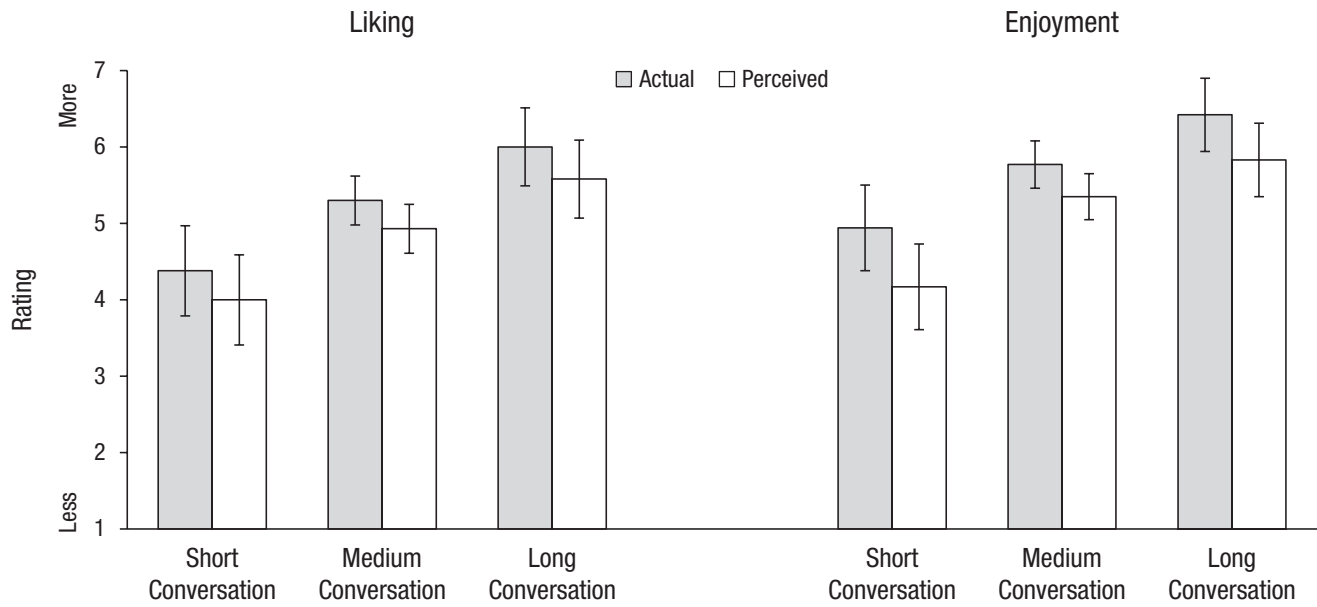
Fig. 3. Results of Study 3: mean ratings of actual and perceived liking (left) and actual and perceived conversation enjoyment (right), separately for participants who engaged in short, medium, and long conversations. Error bars show 95% confidence intervals.

mean length; $n = 18$), medium conversations (between 1 SD below and 1 SD above the mean length; $n = 60$), and long conversations (more than 1 SD above the mean length; $n = 24$). We then conducted a series of postestimation contrasts using the *lsmeans* package (Lenth, 2016) to examine the liking gap and the enjoyment gap at each conversation length. A Holm-Bonferroni procedure was used to correct for multiple comparisons.

The liking-gap pattern was similar for short, medium, and long conversations. As the left side of Figure 3 shows, after participants had short conversations, they liked their partners (actual: $M = 4.38$, 95% CI = [3.80, 4.98]) marginally more than they thought their partners liked them (perceived: $M = 4.00$, 95% CI = [3.41, 4.59]), $t(99) = 1.57$, $p = .12$, estimated mean difference = 0.39, 95% CI = [−0.10, 0.88]. After participants had medium-length conversations, participants liked their partners (actual: $M = 5.30$, 95% CI = [4.98, 5.62]) more than they thought their partners liked them (perceived: $M = 4.93$, 95% CI = [4.61, 5.25]), $t(99) = 2.69$, $p < .01$, estimated mean difference = 0.37, 95% CI = [0.09, 0.63]. And after participants had long conversations, participants liked their partners (actual: $M = 6.00$, 95% CI = [5.49, 6.50]) marginally more than they thought their partners liked them (perceived: $M = 5.58$, 95% CI = [5.08, 6.09]), $t(99) = 1.94$, $p = .056$, estimated mean difference = 0.42, 95% CI = [−0.01, 0.84].

The enjoyment-gap pattern was also similar for short, medium, and long conversations. As the right side of Figure 3 shows, after participants had short conversations, they reported that they enjoyed the conversation

(actual: $M = 4.94$, 95% CI = [4.39, 5.50]) more than they thought their partners enjoyed the conversation (perceived: $M = 4.17$, 95% CI = [3.61, 4.72]), $t(99) = 3.40$, $p < .01$, estimated mean difference = 0.78, 95% CI = [0.32, 1.23]. After participants had medium-length conversations, participants reported that they enjoyed the conversation (actual: $M = 5.77$, 95% CI = [5.46, 6.07]) more than they thought their partners enjoyed the conversation (perceived: $M = 5.35$, 95% CI = [5.05, 5.65]), $t(99) = 3.32$, $p < .01$, estimated mean difference = 0.42, 95% CI = [0.17, 0.67]. And after participants had long conversations, participants reported that they enjoyed the conversation (actual: $M = 6.42$, 95% CI = [5.94, 6.90]) more than they thought their partners enjoyed the conversation (perceived: $M = 5.83$, 95% CI = [5.35, 6.31]), $t(99) = 2.94$, $p < .01$, estimated mean difference = 0.58, 95% CI = [0.19, 0.98].

In sum, across conversations that ranged from 2 min to 45 min, people systematically underestimated the extent to which their conversation partners liked them and enjoyed the conversation.

Study 4: Can the Liking Gap Be Observed in the Real World?

Method

Purpose. The first three studies primarily examined undergraduate students in a laboratory environment. Can evidence of the liking gap be found among the general public, in a more natural setting? To address this question,

we had participants complete measures during several "How to Talk to Strangers" workshops. For this study, we operationalized liking as how interesting conversation partners thought one another were, and so at various points during the workshops, we asked people how interesting they found their conversation partner and how interesting they thought their conversation partner found them.

Participants. One hundred eighteen people participated (104 at workshops held in the community and 14 at a workshop held on a university campus; 52% female, 42% male, 6% failed to report sex; age: $M = 29.61$ years, $SD = 8.99$; only participants who attended the fifth workshop were asked to report their age, and 5 participants did not report age). All participants attended one of several "How to Talk to Strangers" workshops in the UK: 14 community members attended the first workshop, which was hosted and advertised by the Royal Society for the Encouragement of Arts, Manufactures and Commerce as part of a regular series of breakfast sessions for social entrepreneurs; 75 community members attended the second and fifth workshops, which were hosted and advertised by the UK nonprofit Talk to Me; 15 community members attended the third workshop, which was a public event funded by the Economic and Social Research Council's Festival of Social Science; and 14 undergraduate students attended the fourth workshop, hosted and advertised by a university department, for professional development purposes. The purpose of these events was to allow attendees to discuss issues related to conversation, with the ultimate goal of helping people to more easily form social connections. Our sample size was constrained by the number of people willing to participate.

Procedure. After arriving at the event, participants filled out a preconversation survey regarding their expectations for the workshop. Participants were then instructed to find a conversation partner whom they did not previously know and to spend approximately 5 min introducing themselves. After this initial chat, participants completed a postconversation survey. For the duration of the workshop, which lasted about 1.5 hr, participants continued to talk to their conversation partners about workshop-related topics.

Participants were asked two primary questions of interest, both before and after their initial conversation with their partner. At the start of the workshop, before talking to their partner, participants were asked to report how interesting they thought their conversation partner would be and how interesting they thought their conversation partner would find them. After their initial conversation with their partner, participants were asked to report how interesting they thought their

conversation partner had been and how interesting they thought their conversation partner had found them. Participants answered these questions on 5-point Likert-type scales with the end points *not at all* and *extremely*. Participants also completed several additional measures (e.g., general trust, social connectedness) that were of relevance to a different study (see the Supplemental Material) and completed a battery of demographics measures.

Results

We excluded the data from 15 participants who did not consent to have their data used. We also a priori excluded data from 1 participant who was on the autism spectrum, which is associated with difficulties during social interactions; the data from that participant's conversation partner were also excluded. This left us with data from 100 participants in the data set (54% female, 43% male, 3% failed to report sex; age: $M = 30.58$ years, $SD = 9.27$).

We fitted a linear mixed model to the data with rating type (actual or perceived) as the independent variable and interesting (how interesting the participants in the conversation thought one another were) as the dependent variable. We also included time (the time at which participants were asked: before conversation, after conversation) as a fixed effect to explore the effect of time on how interesting participants thought their conversations were. The model included an intercept for each participant and an intercept for each workshop as random effects.

Liking gap. The analysis revealed a significant Rating Type × Time interaction, $b = 0.32$, $SE = 0.13$, 95% CI = [0.07, 0.56], $t(259) = 2.50$, $p = .01$. Postestimation contrasts were used to explore the nature of this interaction. Before the conversation, participants predicted that they would find their conversation partner to be more interesting (actual: $M = 3.59$, 95% CI = [3.44, 3.73]) than their conversation partner would find them (perceived: $M = 3.22$, 95% CI = [3.07, 3.37]), $t(259) = 4.12$, $p < .001$, estimated mean difference = 0.37, 95% CI = [0.19, 0.54]. And after talking to their partner for approximately 5 min during the workshop, participants reported that they found their conversation partner more interesting (actual: $M = 4.30$, 95% CI = [4.15, 4.44]) than they thought their conversation partner had found them (perceived: $M = 3.61$, 95% CI = [3.47, 3.76]), $t(259) = 7.73$, $p < .001$, estimated mean difference = 0.68, 95% CI = [0.51, 0.86]. In short, participants predicted that their conversation partner would find them less interesting than they found their partner to be, and this mistaken belief grew more mistaken after participants actually had a conversation.
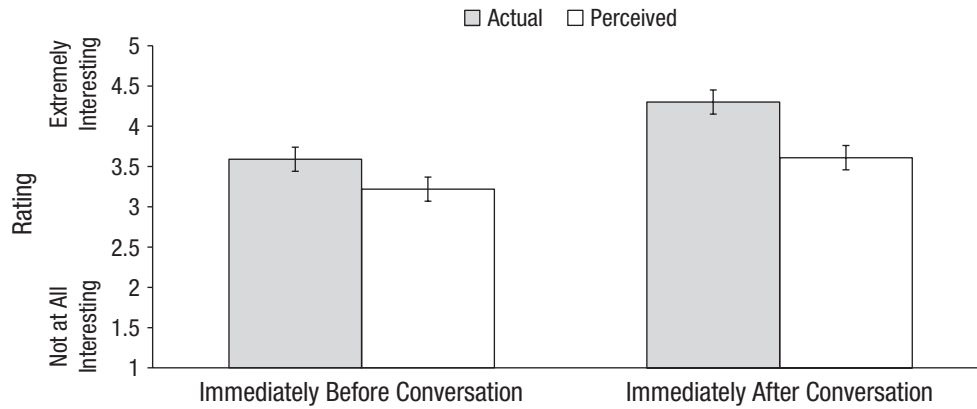
Fig. 4. Results of Study 4: mean ratings of actual and perceived interest before and after conversations took place. Error bars show 95% confidence intervals.

Are conversations more interesting than people predict? Although it was not the primary aim of the study to test whether conversations were overall more interesting than people predicted they would be, collapsing across rating type, we found that time was a significant predictor of interestingness, $b = 0.55$, $SE = 0.07$, 95% CI = [0.42, 0.70], $t(280) = 7.69$, $p < .001$. In other words, participants predicted that both they and their conversation partner would be less interesting (before conversation: $M = 3.40$, 95% CI = [3.28, 3.52]) than they and their conversation partner actually were (after conversation: $M = 3.96$, 95% CI = [3.84, 4.08]). A conversation with a stranger, it seems, is better than people predict.

In sum, as shown in Figure 4, when anticipating a future conversation, participants underestimated how interesting their conversation partner would find them. This mistaken belief persisted—and indeed was magnified—after participants actually talked to their conversation partner.

Study 5: Does the Liking Gap Persist Over Time?

Method

Purpose. Can we find evidence of the liking gap over a longer period of time? We collaborated with a larger longitudinal study, which followed college suite mates over the course of an entire academic year. The primary purpose of that study was to assess the impact of personality on taking steps to initiate relationships, but we added measures to test for the liking gap. Specifically, at five different time points, we asked college students how much they liked their suite mates and how much they thought their suite mates liked them. This allowed us to see how long the liking gap lasts as people develop new relationships over time.

Participants. One hundred two first-year college students (49.5% female, 50.5% male, 2 participants failed to report sex; age: $M = 18.29$ years, $SD = 0.52$; 3 participants failed to report age) were recruited as part of a study on suite mates who had been assigned to live together in a dorm at Yale University. Note that dorm assignments are made by residential college deans, so they are not random. Factors such as preferences for staying up late or not, neatness, and playing music in the rooms are considered in making assignments, but no personality measures are used. Our sample size was determined and constrained by the number of people willing to participate.

Procedure. Incoming first-year students in the class of 2020 were recruited in the summer of 2016 to take part in a study investigating "how relationships normally develop." At the beginning of the fall semester (i.e., September) and then at four subsequent time points over the course of the academic year (October, December, February, and May), participants reported on between one and four different people who lived in the same dorm suite. They received $15 for completing an initial survey and an additional $85 if they completed all remaining four surveys. Prior to receiving the fifth and final survey, participants were given an additional incentive of $50 and were entered into a raffle to win one of ten $100 cash bonuses if they completed the last survey; this was done to incentivize delinquent participants to return. Survey links were e-mailed to participants, and participants completed the surveys online.

Among other questions unrelated to our present purposes (see the Supplemental Material), participants answered a series of questions relevant to the liking gap each time they were surveyed. Participants answered the following questions about each of their suite mates who also participated in the study: (a) "How

much do you like [name of suite mate]?" (b) "How interested are you in getting to know [name of suite mate] better?" (c) "How interested are you in becoming better friends with [name of suite mate]?" and (d) "How interested are you in spending more time with [name of suite mate]?" Next, participants answered four questions about how much they believed each of their suite mates liked them: (e) "How much do you think [name of suite mate] likes you?" (f) "How interested do you think [name of suite mate] is in getting to know you better?" (g) "How interested do you think [name of suite mate] is in becoming better friends with you?" and (h) "How interested do you think [name of suite mate] is in spending more time with you?" Participants indicated their responses on a 7-point Likert-type scale with the end points *not at all* and *very much*.

Because of an administrative error, measures (a) and (e) were inadvertently removed for one suite mate at Time 1 and for all participants at Times 2 through 4. We used the four-item composite when we had it and the three-item composite when we did not (the two composites were highly correlated; α = .99). Also, because of an error in the survey flow, there were no data from one of the suite mates in suites of three people or more at Time 5.

In the fifth and final survey, we incentivized participants to be accurate in estimating how much their suite mates liked them by randomly assigning half of our participants to see the following prompt prior to responding to questions (e) through (h):

> At this point in the survey, we want you to think about the people you've been reporting on and tell us what you believe they think about you. Try to be as accurate as possible in your estimates of what they think about you. Whoever makes the most accurate estimates will win a $100 cash bonus. Your answers are confidential.

The other half of our sample was assigned to see the following prompt instead:

> At this point in the survey, we want you to think about the people you've been reporting on and tell us what you believe they think about you. Your answers are confidential.

Results

The four measures of how much participants liked their suite mates and how much participants thought their suite mates liked them were highly correlated (αs > .90), and we collectively refer to them as a liking index, which served as our primary dependent variable.

We fitted a linear mixed model to the data with rating type (actual or perceived) as an independent variable and liking as the dependent variable. We also included time (the five time points at which participants were sampled over the course of the year) as an additional independent variable. The model included the independent variables as fixed effects and an intercept for each suite mate that participants reported on, an intercept for each participant, and an intercept for each group (i.e., suite) as random effects.

Liking gap. The analysis revealed that rating type (actual or perceived) was a significant predictor of liking, $b = -0.36$, $SE = 0.06$, 95% CI = $[-0.47, -0.24]$, $t(1131) = -6.16$, $p < .001$. Once again, participants underestimated how much others liked them. Did the liking gap vary over time?

Liking gap over time. As shown in Figure 5, postestimation contrasts revealed that rating type (actual or perceived) was a significant predictor of liking at Time 1, Time 2, Time 3, and Time 4 (all ps < .01). Rating type was not a significant predictor of liking at the final time point, Time 5 ($p = .87$). In short, and as shown in Figure 5, people underestimated how much their suite mates liked them at all time points except for the final one.

Incentivizing accuracy. At the final time point, we tested whether incentivizing participants to be accurate affected how much participants thought their suite mates liked them. Analysis revealed that incentivizing participants did not have a significant effect on how much they thought others liked them compared with how much nonincentivized participants thought others liked them, $b = -0.07$, $SE = 0.28$, 95% CI = $[-0.62, 0.48]$, $t(93) = -0.25$, $p = .81$. The fact that a chance for a large monetary reward did not have a significant effect on their estimates is evidence that participants believed what they were reporting.

In sum, Study 5 found that the liking gap persisted for several months as suite mates formed and developed new relationships. It did disappear at the final time point. That may be because people were getting to know one another well by that time; because the students were making decisions regarding whether to live together the following year, which may have forced discussions that revealed liking; or both.

Discussion

People in our studies systematically underestimated how much their conversation partners liked them and enjoyed their company (Studies 1–5), a mistake we call the liking gap. The liking gap persisted over short, medium, and long conversations (Study 3) and even over the course of a year, as suite mates developed new
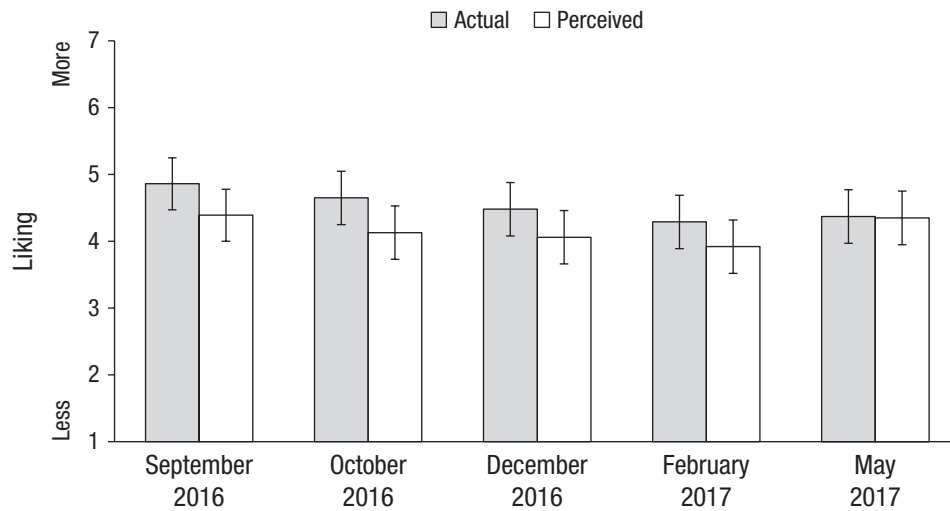
Fig. 5. Results of Study 5: mean ratings of actual and perceived liking of suite mates at five intervals during an academic year. Error bars show 95% confidence intervals.

relationships (Study 5). Further, the liking gap was not limited to students but was also observed in members of the general public (Study 4). The liking gap was supported by the fact that people's thoughts about their own conversational performance tended to be more negative than their thoughts about others' performance (Study 2).

The liking gap may at first glance appear to contradict what we know about people's tendency to hold themselves in particularly high regard. Indeed, decades of research have shown that people hold overly favorable views about everything from their marriages to their ability to operate a motor vehicle (Alicke, 1985; Kruger & Dunning, 1999; Weinstein, 1980). However, emerging evidence shows that people's outlooks can be decidedly less rosy when thinking about their social interactions (e.g., Deri, Davidai, & Gilovich, 2017; Epley & Schroeder, 2014; Whillans, Christie, Cheung, Jordan, & Chen, 2017). Conversation appears to be a domain in which people display uncharacteristic pessimism about their performance.

Important questions remain. Most notably, why are people's thoughts about their own conversational performance so negative, and why are people's thoughts about themselves so much more negative than their thoughts about their partners? And why do people not correct for their overly negative thoughts when estimating how much they are liked? Research suggests several reasons.

First, it seems functional for people to call to mind their conversational mistakes so that they can improve for next time (Epstude & Roese, 2008). After telling a new story, speakers might think about how to get to the point quicker, fine tune a punchline, or liven up their delivery, and this might make their initial story seem a bit dull by comparison. But listeners do not have this same incentive to improve a partner's story for next time. For them, their partner's story got the main point across, the punchline was funny enough, and the delivery seemed perfectly fine. In short, people's harsh inner critic can be functional when it comes to self-improvement, but we suspect that this prevents people from realizing how positively others evaluate them.

Second, people have higher standards for themselves than they do for others. This is in part because people have direct access to how good their conversational performance could have been (e.g., "Last time I told this story, I did a better job"; "I can't believe I forgot the part about how we went camping in our backyard"; "Maybe it's because I'm sleep deprived"). In other words, people can easily compare their actual conversational performance with their ideal, but others do not have access to this same ideal (Gilovich, Kruger, & Medvec, 2002). Moreover, other people's expectations for what it is like to have a conversation with someone new are often pretty dismal (Epley & Schroeder, 2014). So, whereas speakers are thinking that they have failed to live up to their ideal, listeners are thinking that it could have been much worse, and this different standard of comparison for oneself and for others may well be one reason that people underestimate how much their conversation partners enjoy their company.

Third, people overestimate how much their feelings are on display in social interactions. For example, people think that the self-consciousness they feel is readily apparent to those around them, even when that is not the case (Gilovich, Medvec, & Savitsky, 1998; Van

Boven, Loewenstein, & Dunning, 2005). In people's minds, they are stammering and nervous and searching for the right words, but others cannot see the inside of their minds; rather, they are paying attention to overt behavior (Pronin, Kruger, Savitsky, & Ross, 2001; Williams, Gilovich, & Dunning, 2012). And it just so happens that people's overt behavior is often initiated unconsciously and is, for the most part, quite likable (Chartrand & Bargh, 1999). Years of practice have largely shaped people into pleasing conversation partners who gaze, and laugh, and smile, and pause, and gesture, and speak, and take turns in ways that sync with their conversation partners (Garrod & Pickering, 2004; Lakin, Jefferis, Cheng, & Chartrand, 2003; Richardson, Dale, & Kirkham, 2007; Stivers et al., 2009). In short, consciously, people feel like their social awkwardness is on display, but unconsciously, people are executing behavior that makes for remarkably smooth conversations.

In sum, one of life's greatest fears is social evaluation. And so it makes sense that people are vigilant to any potential causes for embarrassment or social awkwardness. In addition, people call to mind their social flaws to fix for next time, people have access to their ideal selves to which their actual selves cannot live up, and people think their social awkwardness is on display more than it really is. Taken together, it seems understandable why people's thoughts about their own social performance might be overly negative and how this might lead them to underestimate how much others like them and enjoy their company.

Coda

Conversations have the power to turn strangers into friends, coffee dates into marriages, and interviews into jobs. But part of what makes conversations difficult is that people do not know what their conversation partners really think of them, and so people use their own thoughts as a substitute, but their own thoughts tend to be more negative than reality. The result is that people systemically underestimate how much their conversation partners like them and enjoy their company. Conversations are a great source of happiness in our lives, but even more than we realize, it seems, as others like us more than we know.

Action Editor

James K. McNulty served as action editor for this article.

Author Contributions

E. J. Boothby and G. Cooney contributed equally to this work. E. J. Boothby, G. Cooney, and M. S. Clark developed the study concept. All authors contributed to the study design. E. J. Boothby and G. M. Sandstrom performed testing and data collection. E. J. Boothby and G. Cooney analyzed and interpreted the data. E. J. Boothby and G. Cooney drafted the manuscript, and M. S. Clark and G. M. Sandstrom provided critical revisions. All the authors approved the final manuscript for submission.

Supplemental Material

Additional supporting information can be found at http://journals.sagepub.com/doi/suppl/10.1177/0956797618783714

Open Practices

All data have been made publicly available via the Open Science Framework and can be accessed at https://osf.io/dw5fm/. Materials for this study have not been made publicly available, and the design and analysis plans were not preregistered. The complete Open Practices Disclosure for this article can be found at http://journals.sagepub.com/doi/suppl/10.1177/0956797618783714. This article has received the badge for Open Data. More information about the Open Practices badges can be found at http://www.psychologicalscience.org/publications/badges.

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