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The Surprise of Reaching Out: Appreciated More Than We Think

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People are fundamentally social beings and enjoy connecting with others. Sometimes, people reach out to others—whether simply to check-in on how others are doing with brief messages or to show that they are thinking of others by sending small gifts to them. Yet, despite the importance and enjoyment of social connection, do people accurately understand how much other people value being reached out to by someone in their social circle? Across a series of preregistered experiments, we document a robust underestimation of how much other people appreciate being reached out to. We find evidence compatible with an account wherein one reason this underestimation of appreciation occurs is because responders (vs. initiators) are more focused on their feelings of surprise at being reached out to. A focus on feelings of surprise in turn predicts greater appreciation. We further identify process-consistent moderators of the underestimation of reach-out appreciation, finding that it is magnified when the reach-out context is more surprising: when it occurs within a surprising (vs. unsurprising) context for the recipient and when it occurs between more socially distant (vs. socially close) others. Altogether, this research thus identifies when and why we underestimate how much other people appreciate us reaching out to them, implicating a heightened focus on feelings of surprise as one underlying explanation.

Keywords: appreciation, social relationships, surprise, gifts, prediction

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Maintaining connections in one's social circle is essential to well-being (Baumeister & Leary, 1995; Cohen & Wills, 1985; Sandstrom & Dunn, 2014a, 2014b). Sometimes, life gives people opportunities to interact with one another without much effort or initiative by either party. Work colleagues may run into each other at the office coffee room, neighbors may pass each other as they are walking around the neighborhood, or friends may spontaneously meet at their local café. These brief interactions with a wide range of relationship partners are associated with positive psychological outcomes, including increased social and emotional well-being (Sandstrom & Dunn, 2014a, 2014b), protection from stressful events (Cohen & Wills, 1985) and anxiety (Gump & Kulik, 1997), personal growth (Lee et al., 2018), and increased cognitive functioning (Granovetter, 1973; Lee et al., 2018). However, beyond opportune moments of social connection, which are vital for well-being, people are often left disconnected from friends and acquaintances with whom they typically have pleasant interactions, if neither party takes the initiative to connect.

Although connecting with friends and acquaintances is typically a pleasant experience (Baumeister & Leary, 1995), people often find themselves out of touch with people in their lives. In many parts of the United States, for example, many people's lives are set up for

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The experiments in this article adhere to preregistration, open materials, and open data. Preregistrations, materials, and data for all experiments are available at https://researchbox.org/289.

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isolation rather than spontaneous social interactions—whether at the workplace, in the neighborhood, or at a café—and therefore, there is a dearth of opportunities to maintain ties with those we are already acquainted with in various settings (Putnam, 2000). As reflected in a steady decline of social interactions in society (McPherson et al., 2006; Putnam, 2000), there may exist various costs to taking the initiative to reach out to a friend or an acquaintance that outweigh the benefits. If people perceive both the costs and the benefits accurately, then the resulting cost–benefit analysis that they perform is appropriate and correct.

However, in this work, we examine whether people accurately perceive the benefits that would accrue to others from their reaching out. We define "reaching out" broadly to involve a minimum criterion consisting of a gesture to check-in with someone to show that one is thinking about them—for instance, by sending a short message (e.g., to say hi, to say "I'm thinking of you," to say "I hope you are well") or a small gift. By this minimum criterion definition, more specific instantiations of social exchange behavior that have been examined in prior research would qualify as reach-outs but also involve additional elements that are not necessary to qualify as a reach-out. For instance, contacting someone to ask for a favor (e.g., Zhang & Epley, 2009) qualifies as a reach-out but also adds an element of asking for help that is not necessary to qualify as a reach-out. Likewise, contacting someone to offer a compliment (e.g., as in Boothby & Bohns, 2021; Zhao & Epley, 2021a, 2021b) qualifies as a reach-out but also adds an element of saying something positive about a recipient's traits or behaviors that is not necessary to qualify as a reach-out. As a final example, contacting someone to express gratitude (e.g., as in Grant & Gino, 2010) qualifies as a reach-out but also adds an element of thanking someone for some positive action they have done for oneself or others in the past—which is not necessary to qualify as a reach-out. Altogether then, in the present research, we offer a broad definition of "reaching out" (one which is also consistent with its colloquial usage to refer to checking in on someone; e.g., Pennell, 2021 on today.com) based on a minimum threshold. We then investigate it empirically through testing reach-outs that meet this minimum threshold but do not necessarily exceed it with "added elements" (i.e., reach-outs can—but do *not* have to—include help requests, compliments, or gratitude expressions).

We propose that people underestimate how much others appreciate being reached out to by others. Examining whether people underestimate how much others value their attempts to reach out is important because underestimation may deter people from reaching out as often as would benefit themselves and others. For instance, imagine that you thought of a friend this morning while stopping by at a café you have frequented together in the past. You have not interacted with this friend in a while. How much do you think your friend would appreciate it if you reached out and sent a brief text message or even a small gift? Does your prediction match your friend's actual appreciation? We propose that you would likely underestimate how much your friend would appreciate being reached out to.

Next, we discuss the theoretical framework for our predictions. We first discuss prior research on mispredictions as a function of differences in perspective across a variety of domains, ranging from the prosocial behavior and gratitude domains to the gift-giving domain. We then discuss the rationale for our focus on responder appreciation of being reached out to—including why accurately estimating responder appreciation is important. Finally, we discuss the underlying role of focusing on responder surprise as one potential explanation for the underestimation of reach-out appreciation.

Theoretical Framework

Mispredictions as a Function of Perspective Differences

Our prediction draws on and contributes to an extensive literature documenting the difficulty of engaging in accurate perspective-taking and, relatedly, the powerful effect of perspective differences across various domains. This literature shows that people tend to have difficulty making accurate judgments of others' perspectives on a social situation, in part due to egocentric biases in perspective-taking (Epley et al., 2004; Kardas et al., 2022; Liu & Kwon, 2022; Liu & Min, 2020; Ross & Sicoly, 1979). For instance, following social interactions, people tend to be overly focused on their own actions (e.g., conversation performance) and overestimate the salience of these actions to others (Gilovich et al., 2000), leading to a systematic underestimation of how much their conversation partners liked them and enjoyed their company (Boothby et al., 2018). They often focus on their own internal monologues, which can be self-critical and negative after social interactions; however, others do not perceive them with such a critical or negative lens (Boothby et al., 2018; Savitsky et al., 2001; Savitsky & Gilovich, 2003). Additionally, people also underestimate how much others, especially strangers, are interested in their intimate disclosures in conversations, which serves as a barrier to deeper—yet more socially satisfying—conversations (Kardas et al., 2022).

In the prosocial behavior literature, perspective differences often occur as well. Potential helpers and help-seekers are often misaligned in their understanding of each other's thoughts and behaviors, suggesting that people often act suboptimally when help is needed. Help-seekers underestimate the extent to which potential helpers will comply with their direct requests for help because help-seekers and potential helpers have a differential focus on the costs incurred by the potential helper. Compared to the potential helper, help-seekers are more attentive to the instrumental costs of accepting a request for help and less attentive to the social costs of rejecting a request for help (Flynn & Lake, 2008). By mispredicting how much a potential helper is willing to comply with their request, people often forego opportunities to request (and receive) assistance. Help-seekers also tend to underestimate the amount of effort put forth by potential helpers because they overlook the discomfort (e.g., guilt) that potential helpers experience from being unhelpful (Newark et al., 2017). Just as help-seekers underestimate compliance to requests for help, they also underestimate the quality of such help, and by doing so, they forego opportunities to request assistance.

On the flip side, potential helpers are also often inaccurate in predicting help-seekers' willingness to ask for help: They overestimate help-seeking willingness because they overlook the role of embarrassment in discouraging people from requesting help (Bohns & Flynn, 2010). Potential helpers rely to some extent on their own perspective when judging how help-seekers are thinking (Epley et al., 2004, 2006) and do not recognize that in situations involving exposure of vulnerabilities and embarrassment, help-

seekers often want to "save face" (Bohns & Flynn, 2010). This inaccuracy in perceiving others' thoughts not only leads to missed opportunities for helping others but also leads to inefficient social interactions involving incorrect inferences that people do not need help because they do not ask for help.

Once help is received, research on gratitude expressions to thank others for their prior help has shown that people may not always accurately judge how much others value their expressions of gratitude (Kumar & Epley, 2018; Liu et al., 2015). For instance, people expressing gratitude underestimated how positive and surprising an expression of gratitude would be for a receiver and overestimated how awkward it would be (Kumar & Epley, 2018). Relatedly, research on compliments has shown that people offering compliments—which say something positive about a recipient's traits or behavior—underestimated the positive impact of their compliments on recipients (Boothby & Bohns, 2021; Zhao & Epley, 2021a, 2021b). Such misestimations are also explained by expressors' failure to sufficiently adjust from their own perspective to the recipient's perspective (Epley et al., 2004, 2006).

Finally, research on gift-giving further demonstrates judgment discrepancies as a function of a person's perspective as either a giver or a recipient. The domain of gift-giving is relevant to the present work because one way in which a reach-out can occur is through the giving of a gift. However, in previous work, the focus has been on documenting and explaining discrepancies between the types of gifts that givers prefer to give and that recipients prefer to receive (Baskin et al., 2014; Cavanaugh et al., 2015; Galak et al., 2016; Gino & Flynn, 2011; Givi & Galak, 2022; Kupor et al., 2017; Liu & Baskin, 2021; Liu, Dallas, et al., 2019; Yang & Urminsky, 2018). For instance, givers tend to be more focused on what would make the recipient have the most positive emotional reaction at the moment of gift exchange, whereas recipients are more focused on what would be more satisfying to them overall beyond just the moment of gift exchange (Yang & Urminsky, 2018). Other work documents various other mispredictions of appreciation for different types of gifts, such as the tendency to underestimate appreciation of requested gifts (Gino & Flynn, 2011) and the tendency to overestimate how much distant others appreciate socially responsible gifts (Cavanaugh et al., 2015). By contrast, in the present work, we focus on appreciation of the reach-out gesture itself. In other words, rather than focusing on whether people accurately predict which type of gift is appreciated more, we examine more generally whether people accurately predict how much others appreciate being reached out to in the first place. We also examine the generalizability of the underestimation of appreciation of reaching out across different reach-out modes (e.g., a message or a gift).

Mispredicting Appreciation for Reaching Out and a Differential Focus on Responder Surprise

We propose that people considering reaching out ("initiators") underestimate how much other people ("responders") will appreciate their gesture. Note that we are not suggesting that initiators are entirely unaware of responders' appreciation. Most people understand that gestures to socially connect are valued. Indeed, nearly all reach-outs are likely to be in the positive domain of appreciation.[1] Instead, our prediction regarding underestimation is that initiators do not understand the full extent to which their reach-outs are appreciated. Understanding the full extent to which their reach-outs are appreciated is important because it would likely contribute to people initiating social contact to the benefit of themselves and others. Furthermore, examining responder appreciation of reaching out is an important outcome because appreciation is an important signal of relationship development (Gordon et al., 2012), and thus how much an exchange is appreciated is also a focal outcome shared by prior work on gifting (Cavanaugh et al., 2015; Flynn & Adams, 2009; Gino & Flynn, 2011; Liu et al., 2015) and by prior work on prosocial behaviors (Converse & Fishbach, 2012).

Why might people mispredict the extent to which a friend or an acquaintance would appreciate them simply reaching out? Our prediction relies on prior theorizing on self-other discrepancies, including the work discussed in the prior section, wherein people bring their own egocentric perspectives to bear when predicting others' mental states (Epley et al., 2004). In particular, we predict that one reason this mismatch occurs is because initiators are less focused on the responder's positive feelings of surprise when predicting responder appreciation than responders are actually focused on their own feelings of positive surprise. Specifically, by virtue of their differing perspectives, we suggest that responders may be more focused on their own feelings of positive surprise when they are reached out to, both because the unexpectedness of the event is especially salient for them and also because they are especially attuned to cues to others' warmth (Abele & Wojciszke, 2007; Zhao & Epley, 2021a). By contrast, initiators may be less focused on the responder's feelings of surprise both because the unexpectedness of the event is less salient for them, given that they themselves have not experienced it, and because they are more likely attuned to alternative cues such as those regarding the competence of their reach-outs (Abele & Wojciszke, 2007; Zhao & Epley, 2021a).

How might focusing on feelings of positive surprise shape the appreciation of being reached out to by a friend or an acquaintance? Early work on surprise conceptualized it as one of the basic emotions, along with happiness, sadness, anger, fear, and disgust (Ekman, 1982; Ekman et al., 1972). Later work conceptualized surprise as a cognitive process that precedes an emotional experience (Fiske, 1992; Teigen & Keren, 2003), detecting whether an event is discrepant with one's existing schemas and thus triggering motivational resources to analyze the event (Meyer et al., 1997; Reisenzein et al., 2019). Of note, surprise can make a positive event more positive or can make a negative event more negative. According to decision affect theory (Mellers et al., 1997), when making decisions, people consider not only subjective expected utility but also subjective expected emotions. Surprise amplifies the pleasantness or unpleasantness of an experience, such that an unexpected gain of a smaller amount can feel more pleasurable than an expected gain of a larger amount, and an unexpected loss of a smaller amount can feel worse than an expected loss of a larger amount. For instance, participants felt more pleasure after an unexpected win of $5.40 than an expected win of $9.70, and they felt worse after an unexpected loss of $17.50 than after an

[1] In fact, if we compare all participants' appreciation ratings to the appreciation scale midpoint across studies, we find that nearly all participants across our studies—whether in the initiator condition or in the responder condition—indicate appreciation ratings greater than the midpoint.

expected loss of $31.50 (Mellers et al., 1997). Subsequent work corroborated the finding that surprise enhances pleasurable experiences (Oliver, 1997; Valenzuela et al., 2010). For example, participants felt more pleased, happy, and excited after receiving a small, unexpected gift for participating in a study than when they received no gift or the same gift but under circumstances where the gift was expected (Valenzuela et al., 2010). In a related line of work, Kurtz et al. (2007) found that people who received a gift after a period of uncertainty about which one of two gifts they would receive were in a positive mood for longer than those who received a gift without a period of uncertainty. In essence, the "surprise" of the gift increased the pleasure of the experience.

In the context of social exchange, surprise gifts may be positive when they signal warmth and care on the part of the giver (cues to which responders may be especially attuned; Abele & Wojciszke, 2007; Zhao & Epley, 2021a). The positive surprise elicited by such gifts can have a positive impact on the relationship by strengthening and affirming it (Ruth et al., 1999). On the other hand, surprise gifts can be negative when they violate relational appropriateness because they are considered overkill for the current state of the relationship (e.g., an expensive bouquet for someone one does not know very well) or they are insulting given the relationship (e.g., a used frying pan as a wedding gift for a close friend), and these negative surprise gifts could damage the relationship (Ruth et al., 1999). In our research, we are specifically interested in the context of reach-outs that we suggest would be considered positive surprises among acquaintances. Neither a brief message nor a small gift—as we examine—are likely to be perceived as a bad or an uncomfortable surprise (see also footnote 1). Accordingly, a greater focus on the responder's positive surprise should amplify the focal outcome of appreciation, which is an especially relevant outcome for positive (not negative) surprises.

Drawing on these prior findings, we suggest that being reached out to in a positive way by someone with whom one has had positive interactions in the past is likely to be a pleasant experience bolstering feelings of appreciation in the responder. When the reach-out occurs unexpectedly, the element of positive surprise for the responder likely leads to an amplification of the positive experience (Mellers et al., 1997; Oliver, 1997; Valenzuela et al., 2010) and, thus, a corresponding boost in feelings of appreciation, a fact not fully accounted for by initiators. Therefore, our prediction is that initiators underestimate the extent to which responders will appreciate their reach-out because initiators are less focused on the positive surprise that responders would feel in such a situation.

The Present Research

Table 1 contains an overview of the 13 preregistered studies (nine main studies and four Supplemental Studies). Experiments 1–4 examine our focal prediction that initiators will underestimate the extent to which their reach-out is appreciated by a responder. Experiment 1 tests this focal prediction using a recall paradigm in which participants considered actual experiences in which they had reached out to someone (vs. had been reached out to). Experiment 2 is a field experiment on a college campus, involving actual reach-out experiences conducted with dyads, wherein people wrote notes checking in on a college classmate with whom they had not had contact in some time. Experiment 3 is another field experiment on a college campus, also involving actual reach-out experiences conducted with dyads, wherein people wrote notes and sent small gifts to college classmates with whom they had not had contact in some time. Experiments 4a and 4b further test this focal prediction using a scenario paradigm, thereby allowing us to control reach-out content and addressing other limitations of the recall and dyadic paradigms.

Experiments 5–7 then examine the proposed role of a differential focus on the responder's feelings of surprise on being reached out to. Experiments 5a and 5b use a mediation-based approach to test for evidence consistent with our account that the underestimation of reach-out appreciation is driven by a greater responder (vs. initiator) focus on the responder's feelings of surprise on being reached out to, both in a field experiment with actual reach-out experiences in dyads (Experiment 5a) and in a scenario paradigm with a larger sample size (Experiment 5b). Experiments 6 and 7 then identify process-consistent moderators of the underestimation of reach-out appreciation by comparing the magnitude of the underestimation of reach-out appreciation across reach-out contexts that differ in their surprisingness. Specifically, Experiment 6 tests whether the underestimation of reach-out appreciation exists when the reach-out occurs in a surprising context for the responder but is eliminated when it occurs in an unsurprising context. Experiment 7 tests whether the underestimation of reach-out appreciation is magnified when the reach-out occurs within a relationship in which it is relatively more (vs. less) surprising: when the initiator and responder are weak (vs. strong) ties. The four Supplemental Studies are discussed briefly in the article, with full information in the Supplemental Material.

All 13 studies' preregistrations, materials, data, and syntax are available at https://researchbox.org/289. All measures, manipulations, and exclusions are disclosed. All sample sizes were determined in advance and preregistered; sample sizes were not determined based on intermittent data analysis. We preregistered a target sample size of 100 participants per cell for our two-cell independent-groups experiments focused on the basic effect (i.e., Experiments 1, 4a, and 4b), a target sample size of 50 dyads for our first dyadic field experiment (Experiment 2), an available sample size based on all potential initiators coming to the in-person spring 2022 behavioral lab sessions available to one of our researchers for our second dyadic field experiment (Experiment 3), a target sample size of 100 valid initiators for our third dyadic field experiment (Experiment 5a), a target sample size of 200 participants per cell for our two-cell independent-groups mediation experiment (Experiment 5b), and target sample sizes of 400 participants per cell for both 2×2 interaction experiments (Experiments 6 and 7). For our Supplemental Studies, we preregistered a target sample size of 200 participants per cell for our 2×2 interaction experiment (Supplemental Study S1), a target sample size of 100 participants per cell for our mediation experiment (Supplemental Study S2), a target sample size of 200 participants for our single-cell correlational study (Supplemental Study S3), and an available sample size based on all potential initiators coming to an in-person spring 2022 behavioral lab session over 4 days for our two-cell intervention experiment on potential initiators (Supplemental Study S4).

We also conducted sensitivity power analyses for all studies using G*Power (Faul et al., 2007), indicating the minimum effect size detectable with statistical power of .80 given the final sample sizes achieved. In general, the observed effect sizes were either

Table 1
Summary of Main Findings

Studies	Design	Main findings
1	2 (role: initiator, responder)	When recalling a past experience in their lives, people who recalled a time when they were the initiator predicted lower responder appreciation than people who recalled a time when they were the responder and indicated how much they appreciated being reached out to.
2	2 (role: initiator, responder)	We replicate the underestimation of reach-out appreciation using a dyadic paradigm in a field experiment involving actual reach-outs wherein college students sent reach-out notes to a classmate they had not been in contact with for a while.
3	2 (role: initiator, responder)	We replicate the underestimation of reach-out appreciation using a dyadic paradigm in a field experiment involving actual reach-outs wherein college students sent reach-out notes with small gifts to a classmate they had not been in contact with for a while.
4a and 4b	2 (role: initiator, responder)	We replicate the underestimation of reach-out appreciation using a scenario paradigm, both with reach-outs consisting of brief notes (Experiment 4a) and with reach-outs consisting of small gifts (Experiment 4b).
5a and 5b	2 (role: initiator, responder)	The underestimation of reach-out appreciation is mediated by greater responder (vs. initiator) focus on the responder's surprise when indicating responder appreciation, both with a dyadic paradigm in a field experiment involving actual reach-outs (Experiment 5a) and with a scenario paradigm (Experiment 5b).
6	2 (role: initiator, responder) × 2 (reach-out context: surprising vs. unsurprising)	The underestimation of reach-out appreciation exists when the reach-out occurs in a context in which it is surprising to responders and is eliminated when the reach-out occurs in a context in which it is unsurprising to responders.
7	2 (role: initiator, responder) × 2 (relationship closeness: weak tie vs. strong tie)	The magnitude of the underestimation of reach-out appreciation is greater for weak tie reach-outs (which may be more surprising to responders) than strong tie reach-outs (which may be less surprising to responders).
S1	2 (role: initiator, responder) × 2 (reach-out: brief message, small gift)	This study is a replication of the findings in Experiments 4a and 4b, showing that the underestimation of reach-out appreciation occurs for both brief message reach-outs and for small gift reach-outs.
S2	2 (role: initiator, responder)	This study is a replication of Experiment 5b, which was conducted with a smaller sample size prior to Experiment 5b. This study found a trending but nonsignificant mediation effect, which encouraged us to test for the mediation effect with a larger sample size (i.e., Experiment 5b).
S3	Correlational	This correlational study shows that among initiators, being more focused on the positive surprise of their reach-outs and believing that a responder would appreciate a reach-out more were correlated with increased interest in reaching out.
S4	2 (initiator control vs. initiator intervention)	An intervention informing potential initiators about the research findings (i.e., that initiators often underestimate the positive feelings of surprise and thus the appreciation of responders) found a trending but nonsignificant increase in potential initiators' interest in reaching out and found no significant increase in potential initiators' actual reach-out behavior during a brief window of opportunity to reach-out during the experiment.

larger than the minimum effect size detectable at .80 for some experiments or slightly smaller than could be reliably detected at .80 for others. See Table 2 for a summary of the sensitivity power analyses.

Experiment 1: Recalled Experiences

Experiment 1 tested our main hypothesis that people ("initiators") underestimate the extent to which others ("responders") appreciate being reached out to. Participants were randomly assigned to recall a time when they either reached out to someone in their social circle or were reached out to by someone in their social circle. We hypothesized that initiators recalling an instance of reaching out to someone in their social circle would estimate lower appreciation of their reach-out compared to how much responders indicated having appreciated being reached out to. We also collected control measures to gauge whether initiators and responders recalled reach-out events that significantly differed on various dimensions: the extent of current (post-reach-out) relationship closeness with the other person, temporal distance from the event, and reach-out mode.

Method

Participants and Design

This experiment was preregistered at https://aspredicted.org/kr8tk.pdf. Participants (N = 200; 46% female; M_{age} = 34.02) were U.S.-based adults recruited from Prolific Academic. They were randomly assigned to one of two roles: initiator versus responder.

Procedure

All participants were asked to recall an event from their personal history. Based on random assignment, they were asked to recall the last time (initiator condition: they reached out to someone in their social circle; responder condition: someone in their social circle reached out to them) "just because" or "just to catch up" via email, text, or phone, after a prolonged period of not interacting with them.

Table 2
Summary of Sensitivity Analyses

Studies	Design	*N*	Observed effect size	Minimum detectable effect size at 80% power
1	Two-cell	200	$d = .29$	$d = .40$
2	Paired two-cell	54 pairs	$d_z = .34$	$d_z = .39$
3	Paired two-cell	67 pairs	$d_z = .56$	$d_z = .35$
4a	Two-cell	201	$d = .32$	$d = .40$
4b	Two-cell	196	$d = .65$	$d = .40$
5a	Paired two-cell	85 pairs	$d_z = .22$	$d_z = .31$
5b	Two-cell	402	$d = .55$	$d = .28$
6	2 × 2 interaction	1,576	$\eta_p^2 = .015$ (interaction)	$\eta_p^2 = .008$
			$\eta_p^2 = .019$ (effect of role in surprising context)	
			$\eta_p^2 = .001$ (effect of role in unsurprising context)	
7	2 × 2 interaction	1,602	$\eta_p^2 = .007$ (interaction)	$\eta_p^2 = .007$
			$\eta_p^2 = .046$ (effect of role for weak ties)	
			$\eta_p^2 = .010$ (effect of role for strong ties)	
S1	2 × 2 interaction (with a focus on the main effect)	801	$\eta_p^2 = .045$ (main effect)	$\eta_p^2 = .015$
			$\eta_p^2 = .007$ (interaction)	
			$\eta_p^2 = .009$ (effect of role for brief message)	
			$\eta_p^2 = .043$ (effect of role for small gift)	
S2	Two-cell	200	$d = .49$	$d = .40$
S3	Correlational	199	$r = .61$ (appreciation predictions and reach-out interest)	$r = .20$
S4	Two-cell	118	$d = .41$ (appreciation predictions) $d = .35$ (reach-out interest)	$d = .52$

Note. All sample sizes were preregistered. For any studies with preregistered exclusions, the sample size denoted in the table is the sample size after preregistered exclusions. The minimum detectable effect size at 80% power was calculated based on the observed sample size and G*Power settings ($\alpha = .05$, two-tailed).

Participants indicated the initials of the person they thought about in response to the recall prompt.

Thinking back on this time, participants were then asked to rate a set of four items measuring appreciation on a 7-point Likert scale (1 = *not at all*, 7 = *to a great extent*), adapted from Flynn and Adams (2009). Initiators (responders) indicated the extent to which they thought that this person (they) appreciated, felt grateful, felt thankful, and felt pleased that they (this person) reached out to them. These four items were averaged to create an appreciation index ($\alpha = .95$), serving as our dependent measure.

Participants then responded to three control measures to gauge whether initiators and responders recalled events that were systematically different. Specifically, participants indicated how long ago the reach-out occurred (1 = *less than* 1 *month*, 2 = 1–3 *months*, 3 = 3–6 *months*, 4 = 6–9 *months*, 5 = 9–12 *months*, 6 = *more than* 12 *months*) and the reach-out mode (*email, via text, via phone, other [please elaborate]*). Participants also described their current—that is, post-reach-out—closeness to the person they recalled using a single 8-point modified Inclusion of Others in the Self (IOS) scale item (Aron et al., 1992; 1 = *diagram of no overlap between self and the other person*, 8 = *diagram of most overlap between self and the other person*[2]).

Results

Underestimation of Reach-Out Appreciation

An independent-samples *t* test showed that initiators ($M = 5.50$, $SD = 1.28$) thought the gesture they recalled was appreciated significantly less than responders ($M = 5.87$, $SD = 1.27$) appreciated the gestures they recalled, $M_{difference} = -.37$, 95% CI [−.73, −.01], $t(198) = -2.05$, $p = .041$, Cohen's $d = .29$.

Control Measures

First, we checked whether there were systematic differences in the nature of the reach-out events recalled by initiators versus responders. An independent-samples *t* test showed that the experience recalled did not differ between initiators and responders on temporal distance, $M_{initiator} = 1.70$, $SD = 1.19$ versus $M_{responder} = 1.65$, $SD = 1.02$, $M_{difference} = .05$, 95% CI [−.26, .36], $t(198) = .32$, $p = .753$, $d = .05$. Further, a chi-square test showed that the event recalled also did not differ between initiators and responders on reach-out mode; text message: 70.0% versus 70.1%; phone: 15.5% versus 16.5%; email: 5.8% versus 6.2%; other: 8.7% versus 7.2%; $\chi^2(3, N = 200) = .18$, $p = .980$, Cramer's $V = .030$. Finally, the nature of the reach-out events recalled did not differ between initiators and responders on current (i.e., post-reach-out) relationship closeness to the person whom they recalled, $M_{initiator} = 4.27$, $SD = 1.80$ versus $M_{responder} = 4.44$, $SD = 1.84$, $M_{difference} = -.17$, 95% CI [−.68, .34], $t(198) = -.67$, $p = .506$, $d = .09$.

We also conducted a one-way analysis of covariance (ANCOVA) to examine whether initiators and responders differed on the appreciation index after controlling for temporal distance from the reach-out event, the reach-out mode (coded −1 = *less effortful [text*

[2] We inadvertently indicated on the preregistration for this experiment that participants would complete a 7-point IOS scale; participants actually completed an 8-point IOS scale.

message]; 1 = *more effortful [phone or email]*; 0 = *other*),[3] and current (post-reach-out) closeness to the person whom they recalled. The underestimation of reach-out appreciation remained significant controlling for these three measures, $F(1, 195) = 4.16$, $p = .043$, $\eta_p^2 = .021$.

Discussion

Experiment 1 shows initial evidence for the underestimation of reach-out appreciation using a recall paradigm. Specifically, initiators recalling the last time that they reached out to someone in their social circle estimated lower responder appreciation compared to responders recalling the last time someone in their social circle reached out to them. These findings provide initial evidence of the underestimation of reach-out appreciation with experiences that participants recalled from their own lives.

Using a recall paradigm has the strength of allowing us to tap into participants' real-life experiences. In addition, we confirmed that the events recalled did not differ between initiators and responders on some key dimensions—temporal distance from the event, reach-out mode, and the current (i.e., post-reach-out) closeness to the person recalled—thus addressing some potential alternative explanations based on systematic differences between initiators and responders in aspects of the reach-out event recalled. Nonetheless, a recall paradigm is still susceptible to some additional alternative explanations. For instance, although our control measures would argue against it, it is possible that people in the responder role more selectively recalled instances of being reached out to that were highly positive and memorable due to being highly appreciated. In the next experiment, we thus move away from the recall paradigm to provide convergent support for our predictions in a field experiment on a college campus, involving actual reach-out experiences conducted with dyads.

Experiment 2: Underestimation of Reach-Out Appreciation in a Field Experiment With Actual Reach-Outs Consisting of a Note

In Experiment 2, we further tested our main hypothesis that initiators underestimate how much responders appreciate being reached out to in the context of a field experiment examining actual reach-outs, thereby addressing potential alternative explanations associated with the recall paradigm. For this field experiment, we adapted a dyadic design and procedure from Zhao and Epley's (2021a) Experiment 2. Specifically, we recruited undergraduate students on a college campus to write a reach-out message to an actual friend whom they had not connected with in a while and to predict how much their friend would appreciate receiving this message. We then delivered these reach-out messages to participants' friends on their behalf and asked their friends to read the message and to indicate how much they appreciated receiving this message. We predicted that participants would underestimate the extent to which their friends appreciated their reach-out gesture.

Method

Participants and Design

This experiment was preregistered at https://aspredicted.org/zc7iu.pdf. We set a preregistered target to collect data from 50 unique dyads. We thus purposely recruited a larger number of initiators in our first stage, anticipating that not all initiator reach-outs would lead to completed surveys by responders. In this first stage, participants were recruited in-person on a college campus in the U.S. and participated in exchange for a snack item. All participants recruited in-person in this first stage were assigned to the role of the initiator and provided the email address of the person whom they would like to reach out to; these people then served as the corresponding paired responders if they agreed to take part in the study. A total of 109 students participated as initiators (M_{age} = 19.73, 56.0% female) across 2 days of recruitment: Day 1 (n = 72) and Day 2 (n = 37). We sent emails to the corresponding responder on behalf of 105 of these initiators.[4] From the 105 responders who received our email regarding the reach-out note and a request to participate in our survey, 59 responders responded to our survey. We then excluded five of these dyads because the responder had already participated in the same experiment in the role of an initiator, meaning that there were 100 valid initiators in this experiment and 54 valid responders.[5] Thus, 54 unique dyads were included in the final analyses (i.e., a 54% response rate when considering 54 responders for 100 valid initiators; M_{age} = 19.80; 68.6% female; n = 3 did not provide age and gender). We employed a two-group (initiator, responder) between-subjects design with matched pairs of initiators and responders.

Procedure

We first asked initiators to name a fellow college student in their social circle with whom they typically have pleasant encounters but have not interacted (either virtually or in-person) in a while. Initiators were also instructed that this person should be someone whom they know to some extent and who knows them to some extent—someone with whom they are friendly. Initiators provided the email address and first and last name of such a person in their lives, as well as their own email address and first and last name. On a separate page, initiators were then asked to write a short note to the responder whom they named earlier to "check in and say hello."

[3] We also conducted a similar ANCOVA where "other" was coded as "1" (thus included in the analysis as an effortful reach-out mode), and all other aspects of the model remained unchanged. The underestimation of reach-out appreciation in this model was similar, $F(1, 195) = 4.14$, $p = .043$, $\eta_p^2 = .021$.

[4] One email was not delivered because the initiator did not indicate the responder's email address. Two emails were not delivered because one initiator named two different responders. Another email was not delivered to the responder until after data collection was completed because the responder was addressed in notes by two different initiators. We delivered the email on behalf of the first initiator who completed the survey during the data collection period and delivered the email on behalf of the second initiator after data collection closed.

[5] There is a difference between the preregistrations of Experiments 2 and 3, with regard to sending the reach-out messages of initiators to responders who already participated as initiators. We realized after conducting Experiment 2 that these five responders should not have been reached out to as they had already participated as initiators (thus effectively, the response rate should have been 54 responders out of 100 valid initiators, instead of 59 out of 105). Thus, we modified our preregistration for the next dyadic experiment, Experiment 3, to clarify that if initiators listed a responder who already participated as an initiator, they would not be reached out to (our response rate in Experiment 3 was thus 67 responders out of 91 valid initiators). Experiment 5a, which is also a dyadic experiment, uses the same preregistered criteria for determining valid participants as Experiment 3 does (our response rate in Experiment 5a was 85 responders out of 109 valid initiators).

On the same page, initiators were informed that the responder would receive a survey link that allows them to read their note and answer a question about how they feel. Finally, participants predicted the extent to which the responder would appreciate their note reaching out to them (1 = *not at all*, 7 = *a great extent*). Participants were informed that their appreciation predictions would not be shared with the responders (only the notes would be shared).

We emailed responders later on the same day on which their corresponding initiator completed the study. In the email, we informed them that one of their classmates (with first and last name indicated) wrote a note reaching out to them as part of a research experiment conducted on campus, and then we requested that the responder read the note and complete a brief survey. Responders who agreed then read their notes and reported the extent to which they appreciated the initiator's note reaching out to them on the same 7-point appreciation scale that initiators used.

Results

A paired-samples t test was conducted to compare initiators' predictions of responder appreciation and responders' actual appreciation. Initiators ($M = 5.57$, $SD = 1.35$) significantly underestimated how much their reach-outs were appreciated compared to how much responders ($M = 6.17$, $SD = 1.24$) appreciated them, $M_{\text{difference}} = -.59$, 95% CI [−1.07, −.12], $t(53) = -2.51$, $p = .015$, $d_z = .34$.[6,7]

Discussion

In Experiment 2, we found evidence of the underestimation of reach-out appreciation effect using a dyadic paradigm on a college campus involving reach-outs to actual friends, further generalizing our findings while addressing limitations with the recall paradigm. Specifically, undergraduate students wrote a reach-out message to an actual friend that they had not connected with in a while and then predicted how much they thought their friend would appreciate receiving this message; their friends then read this reach-out message and indicated how much they appreciated receiving this message. The results replicated our key finding, wherein initiators underestimated the extent to which responders appreciated their act of reaching out.

However, Experiment 2 had the limitation that there was a relatively high attrition rate. To address this issue, we conducted two additional dyadic field experiments (Experiments 3 and 5a) aimed at mitigating the attrition rate through three modifications. First, we modified the reach-outs to consist of a note with a small gift, which we expected would incentivize responders to participate. Second, we modified the email subject line to include the initiator's first and last names to reduce the chances of being misidentified as spam email. Third, we used the Qualtrics email distribution platform to identify responders who did not open our initial email and followed up with these responders with one reminder email. See also, the Supplemental Material, where we conducted exploratory analyses across Experiments 2, 3, and 5a, examining whether initiators whose reach-out recipients did (vs. did not) participate as responders differed systematically in any observable characteristics. There were no systematic differences across the three experiments, suggesting that selective responding is unlikely to account for the underestimation of appreciation effect.

Experiment 3: Underestimation of Reach-Out Appreciation in a Field Experiment With Actual Reach-Outs Consisting of a Note With a Small Gift

In Experiment 3, we again further tested our hypothesis that initiators underestimate how much responders appreciate being reached out to in the context of a field experiment examining actual reach-outs using a similar design and procedure as in Experiment 2, but with reach-outs consisting of a note with a small gift. We again predicted that participants would underestimate the extent to which their friends appreciated their reach-out gesture.

Method

Participants and Design

This experiment was preregistered at https://aspredicted.org/8ys68.pdf. In the first stage of Experiment 3, participants were recruited through a U.S. school's behavioral lab for course credit. As in Experiment 2, all participants in this first stage were assigned to the role of the initiator and provided the email address of the person whom they would like to reach out to; these people then served as the corresponding paired responders if they agreed to take part in the study. A total of 109 students participated as initiators ($M_{\text{age}} = 20.55$, 68.8% female) across 3 weeks of recruitment: Week 1 ($n = 58$), Week 2 ($n = 19$), and Week 3 ($n = 32$). We sent emails to the corresponding responders on behalf of 91 valid initiators. In accordance with our preregistration, we did not consider someone to be a valid initiator if they had already participated as an initiator in the same experiment ($n = 6$). We also did not consider someone to be a valid initiator if they named a responder who was either (a) already named by another participant ($n = 1$) or (b) had already participated in the same experiment in the role of an initiator ($n = 7$). Additionally, we did not use reach-outs initiated by participants who wrote to themselves ($n = 2$) or left the note field blank ($n = 2$). From the 91 responders to whom we sent an email regarding the reach-out note with a small gift and a request to participate in our survey, 67 responders completed the survey (i.e., a 74% response rate; $M_{\text{age}} = 20.45$; 65.7% female; $n = 2$ indicated "Other" gender), resulting in 67 unique dyads for the final analyses. We employed a two-group

[6] Following Kenny et al. (2006), we also analyzed the data with linear mixed effects modeling, nesting initiators and responders within friend dyads. Given that our paradigm requires complete dyads, the results from the linear mixed effects model analysis were the same as those from the preregistered paired t test, $B = -.59$, $SE = .24$, $t(53) = -2.51$, $p = .015$.

[7] We also examined the content of participants' messages. Nearly all participants followed directions in reaching out to someone with whom they have had positive interactions in the past, except one participant whose message indicated that they had reached out to someone with whom they had a recent falling out. Excluding this one participant, the underestimation of reach-out appreciation effect remained significant, $M_{\text{initiator}} = 5.60$, $SD_{\text{initiator}} = 1.35$ versus $M_{\text{responder}} = 6.26$, $SD_{\text{responder}} = 1.02$; $M_{\text{difference}} = -.66$, 95% CI [−1.12, −.20], $t(52) = -2.87$, $p = .006$, $d_z = .39$. In the General Discussion section, we discuss future research directions, including expanding to examine reach-outs in the context of prior negative interactions and how they may differ from reaching out within mostly positive interaction relationships.

(initiator, responder) between-subjects design with matched pairs of initiators and responders.

Procedure

We first asked initiators to name a fellow college student in their social circle with whom they typically have pleasant encounters but have not interacted (either virtually or in-person) in a while. Initiators were also instructed that this person should be someone whom they know to some extent and who knows them to some extent—someone with whom they are friendly. Initiators provided the email address and first and last name of such a person in their lives, as well as their own email address and first and last name. On a separate page, initiators were then asked to write a short note to the responder whom they named earlier to "check in and say hello." On the same page, initiators were informed that the responder would receive a survey link that allows them to read their note, receive a gift voucher redeemable for a bag of assorted candy/snacks, and answer a question about how they feel. Finally, participants predicted the extent to which the responder would appreciate that they chose them to reach out with their note and gift voucher (1 = *not at all*, 2 = *slightly*, 3 = *moderately*, 4 = *very*, 5 = *extremely*). Participants were informed that their appreciation predictions would not be shared with the responders.

We emailed responders later during the same week in which their corresponding initiator completed the study. In the email, we informed them that one of their classmates (with first and last name indicated) wrote a note and gifted them a voucher for a bag of assorted candy/snacks reaching out to them as part of a research experiment conducted on campus, and then we requested that the responder read the note and complete a brief survey. Responders who agreed then read their notes and reported the extent to which they appreciated the initiator's note and gift voucher reaching out to them, on the same 5-point appreciation scale that initiators used. The final page contained instructions for redeeming the gift voucher on campus.

Results

A paired-samples t test was conducted to compare initiators' predictions of responder appreciation and responders' actual appreciation. Initiators ($M = 4.25$, $SD = .86$) significantly underestimated how much their reach-outs were appreciated compared to how much responders ($M = 4.72$, $SD = .62$) appreciated them, $M_{\text{difference}} = -.46$, 95% CI [−.66, −.26], $t(66) = -4.60$, $p < .001$, $d_z = .56$.[8]

Discussion

Having provided converging evidence across both a recall study and two field experiments involving different kinds of reach-outs, we next used a scenario experimental paradigm in Experiments 4a and 4b, which provided greater experimental control regarding reach-out content and also removed attrition concerns. Specifically, in the subsequent scenario studies, we had participants think of someone in their social circle first, before we randomly assigned them to consider reaching out to this person or being reached out to by this person. We then controlled the content of initiators' reach-out by having initiators and responders imagine the same reach-out made by initiators.

Experiments 4a and 4b: Underestimation of Reach-Out Appreciation

Experiments 4a and 4b further test our key hypothesis that initiators underestimate the extent to which responders appreciate being reached out to using a scenario paradigm. To further test the generalizability of the underestimation of reach-out appreciation, there were several differences between Experiments 4a and 4b. First, we examined two different reach-out modes—brief messages (Experiment 4a) and small gifts (Experiment 4b). We also varied whether participants considered a weak tie (Experiment 4a) or more generally someone with whom they have not interacted in a while (Experiment 4b). Finally, we also used two different participant pools—a U.S. adult Prolific sample (Experiment 4a) and a U.S. college student sample (Experiment 4b).

Method

Participants and Design

In Experiment 4a, U.S.-based adult participants ($N = 201$; 54.7% female; $M_{\text{age}} = 34.83$) were recruited from Prolific Academic. In Experiment 4b, participants ($N = 196$; 52.8% female; $M_{\text{age}} = 21.19$, $n = 1$ did not provide age and gender) were recruited from a U.S. university's behavioral lab. All participants were randomly assigned to one of two roles: initiator versus responder. Both experiments were preregistered (Experiment 4a: https://aspredicted.org/ns5km.pdf; Experiment 4b: https://aspredicted.org/a8i5q.pdf).

Procedure

All participants were first asked to think about someone in their social circle with whom they typically have pleasant encounters. In Experiment 4a, participants were further instructed to think of someone whom they would consider a weak tie—someone whom they are not very close to, whom they know to some extent and who knows them to some extent, with whom they are friendly but would be unlikely to confide in (adapted from Sandstrom & Dunn, 2014b). In Experiment 4b, participants read similar instructions but without specification that the person should be a weak tie; they were asked to think of someone with whom they have not interacted (either virtually or in-person) in a while and were told that this person should be someone whom they know to some extent and who knows them to some extent, with whom they are friendly. Participants then indicated the initials of the person they thought about in response to the prompt presented to them.

Then, initiators imagined a situation in which they happened to think about this person and are considering reaching out to them after a while of not spending any time with them. Responders imagined a scenario in which this person happened to be thinking about them and that this person is considering reaching out to them after a while of not spending any time with them. In

[8] As in Experiment 2, a dyadic analysis using linear mixed effects modeling, nesting initiators and responders within friend dyads, led to the same results as those from the preregistered paired t test, $B = -.46$, $SE = .10$, $t(66) = -4.60$, $p < .001$.

Experiment 4a, the reach-out was through a brief message, whereas in Experiment 4b, the reach-out was with a small gift of a bag of cookies, a box of tea bags, a bag of coffee, or a mini plant.

Finally, all participants rated a similar set of four items measuring appreciation from Experiment 1 but adapted for the scenario paradigm, again on a 7-point Likert scale (1 = *not at all*, 7 = *to a great extent*) to create an appreciation index (Experiment 4a: $\alpha = .94$; Experiment 4b: $\alpha = .89$).

Results

Independent-samples t tests with role as the independent variable and the appreciation index as the dependent variable were conducted in both experiments.[9] In both experiments, initiators significantly underestimated how much responders would appreciate their reaching out, Experiment 4a: $M_{\text{initiator}} = 4.36$, $SD = 1.31$ versus $M_{\text{responder}} = 4.81$, $SD = 1.53$, $M_{\text{difference}} = -.45$, 95% CI [−.84, −.05], $t(199) = -2.23$, $p = .027$, $d = .32$, Experiment 4b: $M_{\text{initiator}} = 5.72$, $SD = 1.03$ versus $M_{\text{responder}} = 6.32$, $SD = .82$, $M_{\text{difference}} = -.60$, 95% CI [−.86, −.34], $t(194) = -4.52$, $p < .001$, $d = .65$.

Discussion

In sum, Experiments 4a and 4b provide converging evidence that people consistently underestimate the extent to which responders would appreciate being reached out to, both with a message (Experiment 4a) and with a gift (Experiment 4b), with specifying weak ties (Experiment 4a) and more generally without specifying weak ties (Experiment 4b), and in both an online panel of U.S. adults (Experiment 4a) and college undergraduates (Experiment 4b). We also replicated these findings, showing that the underestimation of appreciation occurs for both a message and a gift reach-out (see Supplemental Study S1 in the Supplemental Material).

Experiments 5a and 5b: Mediation by a Differential Focus on the Responder's Surprise

Experiments 5a and 5b both test for the underlying role of a differential focus on the responder's surprise between initiators and responders. Specifically, using a mediation approach, we tested whether the responder (vs. initiator) role is more focused on the responder's surprise, and whether a greater focus on the responder's surprise is linked to higher appreciation ratings. Experiment 5a was conducted with a field experiment paradigm involving actual reach-outs within dyads (similar to Experiment 3). Experiment 5b was conducted using a scenario paradigm with a much larger sample size and higher statistical power (similar to Experiment 4b). Given the differing paradigms and the slightly different wording of the measures in each experiment, we discuss the methods and results separately for each experiment next.

Experiment 5a Method

Participants and Design

This experiment was preregistered at https://aspredicted.org/8rd52.pdf. Participants were recruited on a U.S. college campus. As in Experiments 2 and 3, all participants in this first stage were assigned to the role of the initiator and provided the email address of the person whom they would like to reach out to; these people then served as the corresponding paired responders if they agreed to take part in the study. A total of 131 students participated as initiators ($M_{\text{age}} = 20.08$, 61.8% female) spanning 5 weeks of recruitment: Week 1 ($n = 32$), Week 2 ($n = 18$), Week 3 ($n = 7$), Week 4 ($n = 26$), and Week 5 ($n = 48$). We sent emails to the corresponding responders on behalf of 109 valid initiators. In accordance with our preregistration, we did not consider someone to be a valid initiator if they had already participated as an initiator in the same experiment ($n = 6$). We also did not consider someone to be a valid initiator if they named a responder who was either (a) already named by another participant ($n = 3$) or (b) had already participated in the same experiment in the role of an initiator ($n = 12$).[10] Additionally, we did not use reach-outs initiated by participants who wrote to themselves ($n = 2$). Following our preregistration, we stopped recruiting new initiators at the end of the day on which we reached 100 valid initiators. From the 109 potential responders to whom we sent an email with the reach-out note and a small gift voucher and a request to participate in our survey, 85 responders completed the survey (i.e., a 78% response rate; $M_{\text{age}} = 20.04$; 65.9% female; $n = 1$ indicated "Other" gender), resulting in 85 unique dyads for the final analyses. We employed a two-group (initiator, responder) between-subjects design with matched pairs of initiators and responders.

Procedure

Initiators first completed the same procedure from Experiment 3, following the same set of instructions. After writing their short note to the responder whom they named earlier to "check in and say hello," initiators responded to two questions on the next page. First, participants predicted the extent to which the responder would appreciate that they chose them to reach out to with their note and gift voucher. Second, participants indicated how much they were thinking about how pleasantly surprised the responder would feel by their reach-out. For both questions, participants responded on a 5-point Likert scale (1 = *not at all*, 2 = *slightly*, 3 = *moderately*, 4 = *very*, 5 = *extremely*).

Following the same procedure as in Experiment 3, we emailed responders with our request to complete a brief survey later during the same week in which their corresponding initiator completed the study, and any responders who did not open our initial email were sent one reminder email. The content of the email was identical to that of Experiment 3, except for a change in the name of the university, as this experiment was conducted with students from a different university. Responders who agreed then read their notes and reported the extent to which they appreciated the initiator's note and gift voucher reaching out to them and the extent to which they were thinking about how pleasantly surprised they feel by the reach-out, both on the same 5-point scales that initiators used.

[9] We also conducted an independent-samples Welch's t test in Experiment 4b due to heterogeneity of variances between initiators and responders. The results remain the same.

[10] One dyad was excluded for two reasons: The initiator had already participated as an initiator in the same study, and the responder had already participated as an initiator.

Experiment 5a Results

Underestimation of Appreciation

A paired-samples t test was conducted to compare initiators' predictions of responder appreciation and responders' actual appreciation. Initiators ($M = 3.91$, $SD = .95$) significantly underestimated how much their reach-outs were appreciated compared to how much responders ($M = 4.19$, $SD = .87$) appreciated them, $M_{\text{difference}} = -.28$, 95% CI [−.564, −.001], $t(84) = -1.99$, $p = .049$, $d_z = .22$.[11]

Mediation

We then used methods for testing mediation in within-subject designs (5,000 bootstrapped samples; MEMORE v2.1, Model 1; Montoya & Hayes, 2017) to examine whether the underestimation of reach-out appreciation was mediated by a focus on the responder's surprise. First, a paired-samples t test showed that responders ($M = 4.00$, $SD = 1.07$) were more focused on their pleasant surprise at the reach-out than initiators were ($M = 3.62$, $SD = 1.08$), $M_{\text{difference}} = .38$, 95% CI [.04, .72], $t(84) = 2.21$, $p = .030$, $d_z = .24$.[12] Next, a regression of the difference between the responder's actual appreciation and the initiator's predicted appreciation within each dyad (i.e., responder appreciation − initiator appreciation) on two predictors—(a) the difference in the focus on pleasant surprise between responder and initiator within each dyad (i.e., responder surprise − initiator surprise) and (b) the mean-centered average of the dyad's focus on pleasant surprise (i.e., [responder surprise + initiator surprise]/2) showed that the regression coefficient for the difference in the focus on pleasant surprise predictor was significant, $B = .49$, $SE = .07$, 95% CI [.35, .64] $t(82) = 6.70$, $p < .001$. The indirect effect was significant as the 95% confidence interval (CI) excluded zero, $B = .18$, $SE = .08$, 95% CI [.02, .36], indicating that initiators' underestimation of responders' appreciation of their reach-out is mediated by a differential focus on the responder's surprise.

Experiment 5b Method

Participants and Design

This experiment was preregistered at https://aspredicted.org/m8w7f.pdf. U.S.-based adult participants ($N = 402$; 79.9% female; $M_{\text{age}} = 28.62$) recruited from Prolific Academic were randomly assigned to one of two roles: initiator versus responder.

Procedure

All participants were asked to think about someone in their social circle after being presented with the same prompt as in Experiment 4b. Participants then indicated the initials of the person they thought about in response to the prompt. Initiators were then asked to consider a situation in which they happened to be thinking about this person and that they are considering reaching out to this person, whereas responders were asked to think of a situation in which this person happened to be thinking about them and was considering reaching out to them. In both conditions, reaching out involved sending a small gift of cookies, a box of tea bags, a bag of coffee, or a mini plant. Both initiators and responders then completed a similar four-item appreciation index ($\alpha = .94$) as in Experiments 4a and 4b (1 = *not at all*, 7 = *to a great extent*).

Next, participants completed two items assessing the proposed mediator, a differential focus on the responder's surprise: "How much were you thinking about how surprised you ([initials]) would feel by this gift?" and "How much were you thinking about how unexpected this gift feels (would feel for [initials])?" (1 = *not at all*, 7 = *very much*). We averaged the items to create a focus on responder's surprise index ($r = .68$, $p < .001$).

Experiment 5b Results

Underestimation of Appreciation

We conducted an independent-samples t test with role as the independent variable and the appreciation index as the dependent variable.[13] Initiators ($M = 6.22$, $SD = 1.00$) significantly underestimated responder appreciation ($M = 6.67$, $SD = .57$) of being reached out to, $M_{\text{difference}} = -.45$, 95% CI [−.61, −.29], $t(400) = -5.53$, $p < .001$, $d = .55$, exhibiting the underestimation of reach-out appreciation.

Mediation

We then examined whether the underestimation of reach-out appreciation was mediated by a focus on the responder's surprise. Mediation analysis (5,000 bootstrapped samples; PROCESS v3.5, Model 4; Hayes, 2013) with role as the predictor, appreciation as the outcome, and surprise focus as the mediator showed that the mediation pathway through the focus on the responder's surprise was significant as the 95% CI excluded zero, $B = .06$, $SE = .03$, 95% CI [.02, .13]. See Figure 1 for information on each mediation pathway.

Discussion

In both Experiments 5a and 5b, we found mediation evidence compatible with our proposed account involving a differential responder (vs. initiator) focus on the surprise from the reach-out. Specifically, we find that responders are more focused than initiators on the surprise of being reached out to when indicating how much they would appreciate the reach-out, and this differential focus on surprise is one reason why initiators underestimate the extent to which their gestures of reaching out are appreciated. We also tested this mediation effect in Supplemental Study S2, reported in the Supplemental Material.

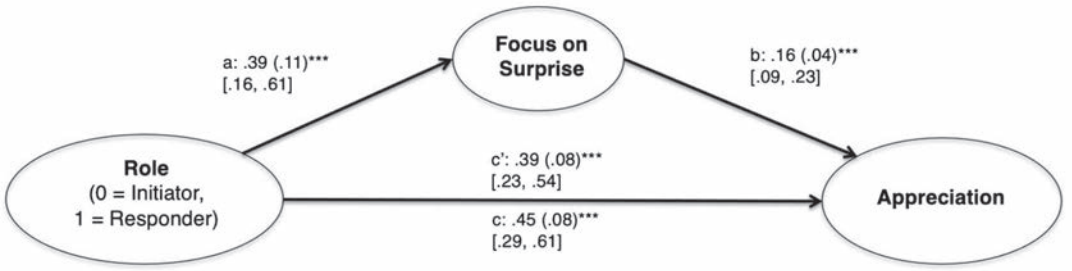
To test for further evidence for our proposed explanatory framework, we next examine process-consistent moderators of the underestimation of reach-out appreciation in Experiments 6 and 7. We conjecture that when a reach-out occurs unexpectedly, the element of surprise for the responder is likely to lead to an amplification of the positive experience (Mellers et al., 1997; Oliver, 1997; Valenzuela et al., 2010) and, thus, a corresponding boost in feelings

[11] As in Experiments 2 and 3, a dyadic analysis using linear mixed effects modeling, nesting initiators and responders within friend dyads, led to the same results as those from the preregistered paired t test, $B = -.28$, $SE = .14$, $t(84) = -1.99$, $p = .049$.

[12] A dyadic analysis using linear mixed effects modeling, nesting initiators and responders within friend dyads, led to the same results as those from the paired t test, $B = .38$, $SE = .17$, $t(84) = 2.21$, $p = .030$.

[13] We also conducted an independent-samples Welch's t test. The results remain the same.

Figure 1
Mediation Model (Experiment 5b)



Note. Regression coefficients are unstandardized; *SE* in parentheses; 95% confidence intervals of the regression coefficients in brackets.
*** $p < .001$.

of appreciation. Therefore, our prediction is that the more surprising a reach-out is, the more misaligned initiators and responders will be.

Experiment 6: The Underestimation of Reach-Out Appreciation for Surprising Versus Unsurprising Reach-Outs

In Experiment 6, we tested whether the underestimation of reach-out appreciation occurs when the reach-out is within a context that would be surprising to the responder but is eliminated when the reach-out is within a context that would be unsurprising to the responder. In particular, we suggest that the experiments thus far have examined reach-out situations in which the initiator reaches out without the responder expecting it. However, there are also some reach-out situations in which initiators may reach out with the responder expecting it (e.g., support programs or mentorship programs that involve people paired together to reach out to each other). We thus randomly assigned participants both to a role (initiator vs. responder) and to a reach-out context (surprising vs. unsurprising). We tested whether the underestimation of reach-out appreciation occurs when the context of the reach-out is surprising for the responder, whereas the underestimation of reach-out appreciation is eliminated when the context of the reach-out is unsurprising for the responder. In doing so, we are able to further test our framework based on differential focus on the responder's surprise.

Method

Participants and Design

This experiment was preregistered at https://aspredicted.org/s3988.pdf. U.S.-based adult participants ($N = 1{,}602$) were recruited from Prolific Academic and completed this experiment. As preregistered, we excluded participants with dual IP addresses with another participant in the data set ($n = 4$), and we also excluded participants who failed an attention check included at the end of the study ($n = 22$), resulting in 1,576 participants (64.2% female, 34.1% male, 1.7% other; $M_{age} = 38.02$) for analysis. However, results remained similar (i.e., all significant findings remain significant) if these participants were not excluded. Participants were randomly assigned to one of four conditions in a 2 (role: initiator vs. responder) × 2 (reach-out context: surprising vs. unsurprising) between-subjects design.

Procedure

Participants were randomly assigned to one of the four conditions. All participants were first asked to think about someone in their circle with whom they typically have pleasant encounters but have not interacted in a while and to write the person's first initial to personalize the scenario for them. The surprising reach-out context condition then involved stimuli similar to those in the prior studies. Specifically, initiators in the surprising reach-out context condition were asked to imagine that they happened to be thinking about this person and that they are considering reaching out by sending a brief note to say hi with a small gift of a bag of cookies. Responders in the surprising reach-out context condition were asked to imagine that this person happened to be thinking about them and is reaching out with a brief note to say hi with a small gift of a bag of cookies.

By contrast, the unsurprising reach-out context condition was different from the contexts in the prior studies. Specifically, initiators in the unsurprising reach-out context condition were asked to imagine that they happen to be thinking about this person because they are paired in a program where it is expected that they will reach out to this person sometime this month to check-in on them and send a small gift, such that it should not be surprising to this person when they do. They were then asked to imagine that they are considering reaching out by sending a brief note to say hi with a small gift of a bag of cookies, as they are expected to do in this program. Responders in the unsurprising reach-out context condition were asked to imagine that this person happened to be thinking of them because they are paired in a program where it is expected that this person will reach out to them sometime this month to check-in on them and send a small gift, such that it should not be surprising to them when they do. They were then asked to imagine that the other person is reaching out by sending a brief note to say hi with a small gift of a bag of cookies, as they are expected to do in this program.

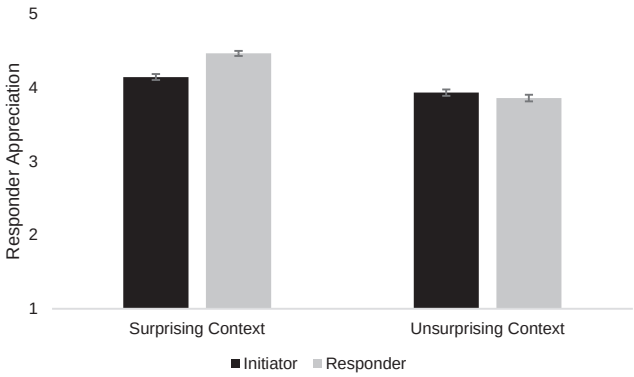
Finally, initiators and responders were asked to complete a similar four-item appreciation index ($\alpha = .95$) as in Experiments 4a and 4b but on a 5-point Likert scale (1 = *not at all*, 2 = *slightly*, 3 = *moderately*, 4 = *very*, 5 = *extremely*).

Results

A 2 (role: initiator vs. responder) × 2 (reach-out context: surprising vs. unsurprising) analysis of variance (ANOVA)[14] was conducted on the appreciation index, revealing a significant interaction, $F(1, 1{,}572) = 23.30$, $p < .001$, $\eta_p^2 = .015$. Given that the interaction was significant, we conducted simple-effects tests within each reach-out context. In the surprising reach-out context, we replicated the underestimation of appreciation effect: Initiators significantly underestimated responders' appreciation of being reached out to, $M_{\text{initiator}} = 4.14$, $SD = .81$ versus $M_{\text{responder}} = 4.46$, $SD = .67$; $M_{\text{difference}} = -.32$, 95% CI [−.44, −.21]; $F(1, 1{,}572) = 30.83$, $p < .001$, $\eta_p^2 = .019$. By contrast, in the unsurprising reach-out context, the underestimation of appreciation effect was eliminated, $M_{\text{initiator}} = 3.93$, $SD = .85$ versus $M_{\text{responder}} = 3.86$, $SD = .90$; $M_{\text{difference}} = .07$, 95% CI [−.04, .19]; $F(1, 1{,}572) = 1.63$, $p = .202$, $\eta_p^2 = .001$ (see Figure 2).

Figure 2

Underestimation of Reach-Out Appreciation by Surprising Versus Unsurprising Context (Experiment 6)



Note. The figure depicts means and standard errors of the mean.

Discussion

Experiment 6 provides further support for our surprise account via a moderation approach. In particular, Experiment 6 found that the underestimation of reach-out appreciation occurred when the reach-out was in a context that was surprising to the responder, whereas it was eliminated when the reach-out was in a context that was not surprising to the responder. We suggest that these moderation findings are in line with our surprise account involving a differential focus on responder surprise. The next experiment proposes another moderator that draws on similar rationale that the more surprising a reach-out is, the more misaligned initiators and responders will be.

Experiment 7: The Underestimation of Reach-Out Appreciation for Weak Versus Strong Ties

In Experiment 7, we examined another potential moderator to the underestimation of reach-out appreciation: the degree of relationship closeness between the initiator and responder. In Experiment 4a, we observed the underestimation of reach-out appreciation when we asked participants to imagine a weak tie. How might strong tie partners differ, if at all, in their estimations of responder appreciation? We surmised that a reach-out from a weak tie would be more surprising for a responder than a reach-out from a strong tie, thus leading to a magnification of the underestimation of reach-out appreciation. We first report a pretest confirming that reach-outs are indeed more surprising for responders when received from weak ties than from strong ties. Then, in our main experiment, we randomly assigned participants both to a role (initiator vs. responder) and to relationship closeness (weak tie vs. strong tie). We tested whether the underestimation of reach-out appreciation will be even greater between weak (vs. strong) tie partners, as a reach-out will be more surprising in the context of a weak tie relationship than in the context of a strong tie relationship.

Pretest

A pretest was conducted to establish whether reach-outs are indeed more surprising when received from weak ties (vs. strong ties). Fifty participants recruited from Prolific Academic (68% female; $M_{\text{age}} = 34.02$) indicated the initials of two different individuals within their social circle: one who is a strong tie and one who is a weak tie, after being presented with the same prompts as in the main experiment. Participants then indicated which person's reach-out, described as in the main experiment, would surprise them more on a 7-point scale (−3 = *definitely a reach-out from my strong tie*, 3 = *definitely a reach-out from my weak tie*). The presentation order of the two relationship types as well as the scale labels were counterbalanced and accordingly recoded. A one-sample *t* test compared to the scale midpoint of zero showed that a reach-out from a weak tie partner was perceived as more surprising than the same reach-out from a strong tie partner ($M = 1.94$, $SD = 1.53$), $t(49) = 8.96$, $p < .001$, $d = 1.27$. In the main experiment, we thus examined both strong tie relationships and weak tie relationships, enabling us to directly compare the magnitude of the underestimation of reach-out appreciation for each kind of relationship tie.

Method

Participants and Design

This experiment was preregistered at https://aspredicted.org/9qi6g.pdf. U.S. and U.K.-based adult participants ($N = 1{,}602$; 65.9% female; $M_{\text{age}} = 36.81$) recruited from Prolific Academic were randomly assigned to one of four conditions in a 2 (role: initiator vs. responder) × 2 (relationship closeness: strong tie vs. weak tie) between-subjects design.

Procedure

Participants were randomly assigned to one of the four conditions. They were first asked to think about someone in their social circle

[14] We preregistered a linear regression interaction analysis in Experiment 6, but as the results are the same regardless of whether we do a linear regression interaction analysis or a 2 × 2 ANOVA analysis, we report a 2 × 2 ANOVA analysis here for consistency with Experiment 7, which uses a similar 2 × 2 design and reports a 2 × 2 ANOVA analysis. The preregistered linear regression interaction analysis for Experiment 6 is presented in the Supplemental Material for completeness of reporting.

with whom they typically have pleasant encounters and with whom they do not currently live. In the weak tie condition, participants were further asked to think about a weak tie—someone they are not very close to, whom they know to some extent and who knows them to some extent, with whom they are friendly but would be unlikely to confide in or talk to about themselves or their problems. In the strong tie condition, participants were further asked to think about a strong tie—someone who they are very close to, whom they know very well and who knows them very well, in whom they confide or talk to about themselves or their problems (adapted from Sandstrom & Dunn, 2014b). Participants then indicated the initials of the person they thought about in response to the prompt.

Next, participants in the initiator role were asked to imagine that they happened to be thinking about this person and that they are considering reaching out with a small gift. By contrast, participants in the responder role were asked to imagine that this person happened to be thinking about them and is considering reaching out with a small gift.

Finally, both initiators and responders completed a similar four-item appreciation index ($\alpha = .95$) as in Experiments 4a and 4b on a 7-point Likert scale (1 = *not at all*, 7 = *to a great extent*).

Results

A 2 (role: initiator vs. responder) × 2 (relationship closeness: strong tie vs. weak tie) ANOVA was conducted on the appreciation index, revealing a significant interaction, $F(1, 1{,}598) = 11.82$, $p < .001$, $\eta_p^2 = .007$. Given that the interaction was significant, we conducted simple-effects tests to examine the magnitude of the underestimation effect for each level of relationship closeness. Initiators significantly underestimated responders' appreciation of being reached out to, both in the case of weak tie reach-outs, $M_{\text{initiator}} = 5.24$, $SD = 1.43$ versus $M_{\text{responder}} = 5.92$, $SD = 1.20$; $M_{\text{difference}} = -.67$, 95% CI [−.82, −.52]; $F(1, 1{,}598) = 77.32$, $p < .001$, $\eta_p^2 = .046$, and as evidenced by the significant interaction, to a lesser extent in the case of strong tie reach-outs, $M_{\text{initiator}} = 6.35$, $SD = .87$ versus $M_{\text{responder}} = 6.65$, $SD = .64$; $M_{\text{difference}} = -.30$, 95% CI [−.45, −.15]; $F(1, 1{,}598) = 15.76$, $p < .001$, $\eta_p^2 = .010$ (see Figure 3).

Discussion

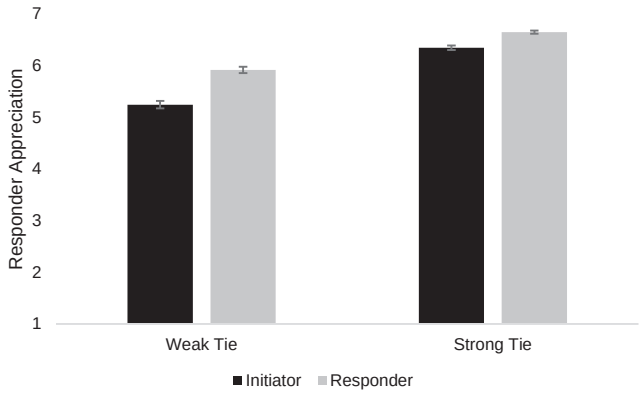
In Experiment 7, we identified another process-consistent moderator of the underestimation of reach-out appreciation: degree of relationship closeness. Experiment 7 shows that the underestimation of reach-out appreciation occurs both within strong and weak tie relationships but is even stronger within weak tie relationships. We suggest that these moderation findings are also in line with our surprise account: A weak tie reach-out is more surprising to a responder than a strong tie reach-out and thus leads to even greater misalignment between initiator and responder.

General Discussion

Social connections with people in one's life are essential to happiness and well-being (Baumeister & Leary, 1995; Cohen & Wills, 1985; Sandstrom & Dunn, 2014a, 2014b). Yet, staying connected can be challenging. Modern life is often not set up to facilitate serendipitous social connection with one's friends and acquaintances, and thus, staying connected often requires at least one person to take the initiative to reach out. Although there are certainly multiple benefits and costs of taking the initiative to reach out, we examined whether people accurately perceive the benefits that would accrue to others when they do so.

Figure 3

Underestimation of Reach-Out Appreciation by Relationship Closeness (Experiment 7)



Note. The figure depicts means and standard errors of the mean.

Across a series of preregistered studies, initiators underestimated the extent to which responders appreciate their act of reaching out. This effect occurred when considering events that participants recalled from their personal history (Experiment 1), in three dyadic field experiments in which people reached out to their actual acquaintances (Experiments 2, 3, 5a), and in scenarios in which we controlled for reach-out mode and content (Experiments 4a, 4b, 5b, 6, 7; Supplemental Studies S1 and S2). Additionally, this effect persisted across both brief message and small gift reach-outs, weak tie and strong tie relationships, and across both undergraduate and online adult samples.

Moreover, we highlight a differential focus on responder surprise as one underlying explanation for why initiators underestimate how much responders appreciate being reached out to. Specifically, we find that responders place greater focus than initiators on the surprise of being reached out to, and this heightened focus on surprise predicts higher appreciation (Experiments 5a and 5b). Further supporting this process based on differential focus on surprise, we also find that the underestimation of reach-out appreciation is magnified under circumstances in which the reach-out is more surprising to responders: When it occurs unexpectedly instead of as part of an expected reach-out program (Experiment 6) and for reach-outs from weak tie partners compared to strong tie partners (in line with the notion that reach-outs from weak tie partners are more surprising than reach-outs from strong tie partners; Experiment 7).

Finally, the present research was focused on documenting when and why the underestimation of reach-out appreciation occurs. However, it is also interesting to consider whether, and if so, how, this underestimation could be mitigated. We thus explored this issue in two Supplemental Studies. First, we found correlational evidence that potential initiators who may be more well-calibrated in

terms of focusing on responders' positive surprise and on how much their reach-outs would be appreciated are more interested in reaching out (Supplemental Study S3). Then, given that people typically use their own perspectives as a default and either insufficiently or inaccurately adjust from this egocentric perspective (see Epley & Caruso, 2009; Keysar & Barr, 2002; Nickerson, 1999, for reviews), we conducted Supplemental Study S4, which explored a potential intervention. This intervention consisted of informing potential initiators about our research findings—and in particular, the tendency to not fully appreciate the large extent to which their reach-outs are surprising and appreciated—and then gauging potential initiators' interest in reaching out and their actual reach-outs during a brief window of opportunity during the experiment. We did not find much evidence in favor of this intervention, at least when using this brief reach-out window paradigm, possibly because multiple additional factors likely shaped the interest in reaching out and actual reach-out behavior during the study.

Implications

Initiating social contact after a prolonged period of disconnect can feel daunting for various reasons, one of which is uncertainty about how such a gesture might be received. When people take the initiative to reach out, they risk being rejected, and this worry could keep them from reaching out in the first place. Indeed, social rejection is a highly negative and painful social experience (Eisenberger, 2012; Leary, 2010; Williams et al., 2000) that people are motivated to avoid given the fundamental need to belong and to feel socially connected with others (Baumeister & Leary, 1995). Our findings take some of this challenge out by demonstrating that responders highly appreciate being reached out to and that initiators in fact systematically underestimate the extent of this appreciation.

We contribute to extant literature by broadening the scope of the contexts to which a phenomenon of underestimation of appreciation of a social exchange applies. In particular, we defined "reaching out" as involving a minimum criterion consisting of a gesture to check-in with someone to show that one is thinking about them. Such a reach-out could, for instance, entail sending a short message (e.g., "I'm thinking of you") or sending a small gift. Importantly, reaching out by this broad definition could, but need not, include expressing gratitude (Kumar & Epley, 2018) or giving compliments (Zhao & Epley, 2021a). Indeed, while gratitude and compliments can sometimes be warranted (Kumar & Epley, 2018; Zhao & Epley, 2021a), not all relationships involve a prior exchange that elicits feelings of gratitude that one wants to reach out and express (as in Kumar & Epley, 2018), nor is giving a compliment always natural or appropriate (as in Zhao & Epley, 2021a). This point is especially true with weak ties, with whom one may have lost touch recently. Accordingly, our studies considered reaching out without expressing gratitude or giving compliments, instead focusing on reach-outs that met the minimum criterion of checking in with someone to show that one is thinking about them. In this way, we hope that our findings will encourage people to reach out to their social contacts more often, "just because." Such small gestures are likely to be appreciated more than people predict.

Moreover, by highlighting the role of a differential focus on the responder's surprise and identifying process-consistent moderators for this account, we also offer additional contributions. First, we contribute to the literature demonstrating that interaction partners are often focused on different aspects of an experience, which can subsequently lead to misalignment in judgment and suboptimal decision-making (Boothby et al., 2018; Kupor et al., 2017; Liu & Min, 2020; Zhang & Epley, 2012). We also note that past related work, which did not find a mediating role for surprise, measured surprise in terms of whether receiving the message and the specific content of the message itself was differentially surprising in magnitude based on perspective (Kumar & Epley, 2018; Zhao & Epley, 2021a). By contrast, our theorized mediator is a differential *focus* on the responder's surprise. We suggest that initiators and responders are misaligned in the extent to which they are focusing on the responder's feelings of surprise when predicting responder appreciation. Our prediction thus relies on prior theorizing on self-other discrepancies, including egocentric perspectives that can lead to misalignment in judgments (Epley et al., 2004) and on differential foci on one party's reactions (Kupor et al., 2017; Liu & Min, 2020). We reasoned that, by virtue of their differing perspectives, responders may be more focused on their own feelings of surprise when they are reached out to, both because the unexpectedness of the event is more salient for them and also because they are especially attuned to cues to others' warmth (Abele & Wojciszke, 2007; Zhao & Epley, 2021a). On the other hand, initiators may be less focused on the responder's feelings of surprise, both because the surprise aspect is less salient for them, given that they are not themselves experiencing (or imagining experiencing) the event, and because they may be more attuned to alternative cues such as those regarding the competence of their reach-outs (Abele & Wojciszke, 2007; Zhao & Epley, 2021a). Consistent with this account, and further contributing to extant literature by identifying boundaries of the tendency to underestimate others' appreciation, we showed that when reach-outs occur within a context in which they are unsurprising to responders (e.g., as part of a program in which one is expecting to be reached out to by someone; Experiment 6), then the underestimation of reach-out appreciation is eliminated. Of note, it is not that unsurprising reach-outs are unpleasant. In fact, responders still indicate that they would appreciate them to a substantial extent (i.e., a mean responder appreciation of 3.86 on a 1–5 appreciation index, where 3 was labeled "moderately," 4 was labeled "very," and 5 was labeled "extremely")—but this appreciation is now aligned with what initiators predict.

Finally, we examined responders' feelings of appreciation (and initiators' predictions about those feelings) as our outcome measure in Experiments 1–7 and Supplemental Studies S1 and S2, consistent with past research on social exchange (Cavanaugh et al., 2015; Gino & Flynn, 2011; Kumar & Epley, 2018; Liu et al., 2015). Appreciation is a meaningful outcome variable for its relational component, as it predicts not only general increases in life satisfaction and well-being (Adler & Fagley, 2005), but is an important factor in building social bonds. Partner appreciation within dyadic relationships has been shown to predict greater relationship satisfaction and relationship commitment (Gordon et al., 2012). Thus, another implication of our findings is that people may underestimate the extent to which simple reach-outs may serve not just to maintain relationships but to strengthen them as well.

Limitations and Future Directions

Our findings come with several limitations that present opportunities for future research. First, we focus on reach-outs that carry positive surprise, as people presumably have initiated the social contact to check-in with someone and signal that they care. However, future work might examine whether the underestimation of reach-out appreciation differs for reach-outs that carry with them more neutral or even slightly negative feelings of surprise, such as reach-outs that are inappropriate for the relationship (e.g., an expensive bouquet of flowers for someone one does not know very well or a cheap, thoughtless gift for one's partner on one's 10-year wedding anniversary). Such reach-outs could be perceived by the responder as inappropriate for the relationship (Liu et al., 2015; Liu, Lamberton, et al., 2019), which may mitigate how appreciative they are of such gifts and ultimately lead to negative consequences for the relationship (Ruth et al., 1999). Relatedly, future research might expand to examine reach-outs in the context of prior negative interactions and how they may differ from reaching out within mostly positive interaction relationships. One possibility is that responders may feel more negative feelings of surprise, which initiators might be less focused on as they predict responder appreciation, such that initiators might even overestimate appreciation.

Second, future research may identify additional barriers to reaching out and, relatedly, test additional interventions to increase reach-outs. Our research suggests that underestimating reach-out appreciation is one barrier that decreases interest in reaching out (see Supplemental Study S3), which if addressed, may increase interest in reaching out. Although the intervention that we tested in Supplemental Study S4 did not successfully increase interest in reaching out and actual reach-out behavior during a brief time window during the study, identifying successful interventions remains an important topic for future work. Of note, there are likely additional types of barriers to reaching out. For instance, people may sometimes not think about reaching out at all, or they may think about reaching out but then procrastinate and forget to do it later. Additionally, people may overestimate the costs of reaching out. Future work could thus examine these various potential barriers and identify ways of addressing them.

Third and finally, people initiate social contact for many reasons, but one major overarching purpose is likely the motive to maintain or increase closeness. Thus, another potential direction for future research is to examine how reaching out affects relationship closeness, both from the initiator perspective and from the responder perspective (Chan & Mogilner, 2017; Min et al., 2018; Rim et al., 2019). In the present research, we did not examine how relationship closeness changes (we measured current post-reach-out closeness in Experiment 1, which had a recall paradigm). Future work might compare pre-reach-out and post-reach-out closeness to examine how reaching out affects the closeness felt by each party.

Final Remarks

Altogether, this research identifies a robust tendency to underestimate how much others appreciate being reached out to and shows through both mediation and moderation evidence that a differential focus on feelings of responder surprise is one underlying explanation. Although this work is not explicitly related to the COVID-19 pandemic, it is not lost on us that the findings offer particular relevance during a global pandemic that has separated millions of people from their social contacts for a prolonged period of time. We would thus be remiss if we did not acknowledge the implications for the millions who are now starting to reconnect or are contemplating reconnecting with both close and distant contacts as efforts to mitigate the pandemic progress. For those treading back into the social milieu with caution and trepidation, feeling woefully out of practice and unsure, our work provides robust evidence and an encouraging green light to go ahead and surprise someone by reaching out. Such reach-outs are likely to be appreciated more than one thinks.

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