

Caught in the Middle of Social Exclusion:

A Misguided and Counterproductive Reluctance to Speak Up

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### Abstract

One-person exclusion occurs when one person (the excluder) includes someone (the included) while excluding another (the rejected). Previous research has documented an involuntary excluder effect (IEE; Critcher & Zayas, 2014): The included is misperceived as an excluder, despite their participation in the exclusion being involuntary. The present research extends on this work in four primary ways. First, Studies 1-2 establish the generalizability of the IEE, finding that it emerges not only in *positive* one-person exclusion (when the rejected is excluded from an appealing task) but also *negative* one-person exclusion (when the rejected is spared from a burdensome experience). Second, Studies 1-3 find that the included—the target of the misperception—faces little pressure (internal or external) to proactively respond to the exclusion; instead, they prefer (and are expected) to remain silent. Third, and highlighting the maladaptiveness of the included’s predisposition toward inaction, Studies 3-4 find two (of three tested) strategies are quite effective in diminishing the IEE: reprimanding the excluder or expressing kindness to the rejected. Fourth, Study 5 finds that, in prospect, the included anticipate that they will feel more uncomfortable executing these strategies and do so with less success than they report after actually carrying them out. The included mispredict just how artfully they can word what can be a delicate message. Discussion focuses on the implications of these findings for addressing the concerning tension between the included’s misplaced reluctance to intervene and their potential for successfully addressing this common social conundrum.

KEYWORDS: exclusion, misforecasting, social perception, social misunderstanding

### Caught in the Middle of Social Exclusion:

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Exclusion is a defining feature of social life. Indeed, a majority of people report being ostracized at least once per day (Nezlek, Wesselmann, Wheeler, & Williams, 2012). Seventy-five percent of individuals report ever having received *the silent treatment* from a loved one (Faulkner, Williams, Sherman, & Williams, 1997). Although exclusion is ubiquitous—in that it occurs in breakrooms, at bars, and even on social media platforms—the social dynamics that characterize exclusion vary. Some acts of exclusion, such as a romantic partner’s disdainful silence, involve *one* person (an excluder) ignoring or neglecting another person (the rejected). In other cases, exclusion is perpetuated jointly: Together, *two* coworkers might decide to go for a coffee and not invite a third person.

Exclusion is typically studied in these contexts in which either one person or two people clearly and unambiguously exclude a third person. Such actions transmit pain and hurt; accordingly, it is unsurprising that the majority of research on exclusion has examined how exclusion thwarts fundamental needs (Williams, 2001, 2009) and brings about a variety of negative psychological and physiological consequences (Benos, Kalogeras, de Ruyter, & Wetzels, 2018; Yaakobi & Williams, 2016). Exclusion has such effects because, considered more generally, exclusion supplies social *information*. That is, acts of exclusion (and inclusion) reveal current (and likely future) patterns of social affiliation—who likes whom, who is likely to include whom in the future, etc. In this way, exclusion is not merely a presently awkward experience, but a harbinger of future social disconnect. As sociometer theory emphasizes, signals of low social worth threaten one’s fundamental sense of self-worth (Leary, 2005).

Consider further the case of two people jointly and unambiguously excluding a third person. The social dynamic this reflects is straightforward: The excluders like each other and don't care much for the rejected. Yet, social exclusion often takes other, less straightforward forms (see Jones, Carter-Sowell, Kelly, & Williams, 2009). One such variant is *one-person exclusion* (Chernyak & Zayas, 2009): social exclusion characterized by a single person (the excluder) actively including another person (the included), while excluding a third person (the rejected). This dynamic is more complicated. The excluder's role is straightforward: As the one perpetuating the exclusion, the excluder apparently likes the included but not the rejected. But the included's role is less clear. In their studies of one-person exclusion, Critcher and Zayas (2014) document an *involuntary excluder effect* (IEE): Social perceivers are systematically biased in how they make sense of this ambiguous dynamic, mistakenly categorizing those included by an excluder as being excluders themselves—e.g., overestimating their relative liking for the excluder and their intentions to perpetuate future exclusion against the rejected. In this way, the included is—in a sense—“caught in the middle”: They have been drawn into the exclusionary dynamics between the excluder and the rejected even though they have not initiated or displayed any exclusive behaviors, nor do they plan to do so in the future.

The present research builds on this research program by addressing four questions that speak to the IEE's robustness, how it can be addressed, and why it is stubbornly persistent. First, we consider whether the IEE is more robust than initially demonstrated. Does the IEE emerge not merely when people are left out of pleasant experiences, but costly ones as well (e.g., not being invited to spend a day doing yardwork)? After all, if the excluder is leaving the rejected out of something onerous or burdensome, then one might be slower to see the excluder and included as exclusion-perpetuating allies.

Our second through fourth foci consider how the IEE could be corrected as well as the reasons why it might naturally linger. Second, we aim to understand how the included is inclined (or not inclined) to respond to the social exclusion into which they are involuntarily thrust. For example, are included individuals predisposed to confront the excluder's actions or somehow signal to the rejected that they do not share the excluder's intentions? Third, given the IEE is a social misunderstanding, we explore what actions the included could take that would efficiently address these mistaken perceptions. Fourth, and building off the last two aims, we examine why the included may not be naturally inclined to take the very steps that could best address the IEE. In so doing, we highlight a forecasting error that provides inertia to the pernicious and lingering involuntary excluder effect.

### **Social Exclusion**

The typical focus of social exclusion research has been the profound psychological and behavioral consequences of being left out or ignored. Although there are taxonomic distinctions between variants of social exclusion—like that between ostracism (Williams, 2009) and rejection (Baumeister & Leary, 1995)—these research traditions largely reinforce a consistent message. People have a fundamental desire to be accepted and acknowledged by others; social exclusion thwarts these fundamental needs. As a result, exclusion typically prompts an immediate, involuntary adverse reaction: psychological distress that can take the form of anger, generalized anxiety, sadness, or even feelings of self-dehumanization (Fung & Alden, 2017; Mao, Liu, Jiang, & Zhang, 2018; Williams & Nida, 2011). Even relatively minimal forms of social exclusion—such as being left “out of the loop” about widely known information (Jones et al., 2011)—can wound (Löckenhoff et al., 2013)

The consequences of exclusion are not merely intrapersonal in nature, but also have downstream effects on broader social dynamics. Consider a common occurrence at many a workplace: coworkers gossiping in a breakroom corner. Even if the details of their conversation are not audible, that they are excluding others from this banter may be clearly visible. In such contexts, exclusion can lead to lower workplace engagement (Leung, Wu, Chen, & Young, 2011), withdrawal from citizenship behaviors in the organization (Hitlan, Clifton, & Desoto 2006), higher employee turnover (O'Reilly, Robinson, Berdahl, & Banki, 2015), and counterproductive hostility toward colleagues (Zhao, Peng, & Sheard 2013). In other words, exclusion produces not only personal distress, but has more widespread interpersonal consequences not merely at home but in the workplace.

Even further, the effects of exclusion are cumulative. The most damaging consequences of exclusion occur when people are *repeatedly* left out or ignored by others. Chronic exclusion is associated with depression (Brendgen, Wanner, Morin, & Vitaro, 2005), loneliness (Asher & Wheeler, 1985), aggression (Barnow, Lucht, & Freberger, 2005), antisocial behavior (Laird et al., 2001), gang membership (Dishion, Nelson, & Yasui, 2005), and even both homicide and suicide (Kim & Leventhal, 2008; Brunstein Klomek et al., 2007). Indeed, social exclusion can be so powerful that it has been referred to as a “social death” by some researchers (Mao et al., 2018).

### **The Involuntary Excluder Effect**

Of course, the dynamics that characterize social exclusion are not always straightforward. Ambiguous social dynamics—such as those present in one-person exclusion—give rise to the IEE: a misperception in which social perceivers believe that the included is more an ally of the excluder (and less an ally of the rejected) than is actually the case (Cricher & Zayas, 2014). This

effect was operationalized in two key ways. First, social observers (the rejected and outside observers to the dynamic) thought that the included possessed a more exclusive pattern of liking (preferring the excluder to the rejected) than those included (or considering a one-person exclusion dynamic from the vantage point of the included) reported. Second, social observers also overestimated the included's exclusive pattern of behavioral intentions—that is, how much the included would be interested in subsequently perpetuating the exclusion (by including only the excluder) as opposed to trying to restore inclusive harmony (by including both the excluder and the rejected) in an upcoming social interaction. Furthermore, the IEE emerged in response to an act of *intentional* exclusion by the excluder (and entails an overgeneralization of that exclusive act), but not an unintended occurrence of one person being left out of others' shared experience.

The involuntary excluder effect is consistent with, but not necessitated by, balance theory (Heider, 1946, 1958). Balance theory proposes that people aim to achieve a logical consonance in their view of their social worlds. In triadic relationships, balance can be achieved when all three people like each other, or when two people like each other but are assumed to have ill will toward (that is reciprocated from) a third person. This means that balance theory itself could anticipate a different interpretation of one-person exclusion that would also be characterized by balance: Dually put off by the distasteful bullying of the excluder, the included and the rejected could be mutual allies. For that reason, balance theory alone does not anticipate the IEE.

Another theoretical orientation is needed to resolve why people ultimately see the included as more of an excluder than a sympathetic ally of the rejected. Research and theorizing on the ostracism detection system (ODS; Spoor & Williams, 2007; Williams, 2009) offers this resolution. People's ODS carries with it a hypersensitive social cognitive lens that seeks to detect

and respond to environmental cues that signal the presence of exclusion. Because the cost of failing to detect exclusion is greater than the cost of falsely detecting it, the ODS is sensitive to these asymmetric incentives and thus seems preprogrammed to potentially err in one direction. This epitomizes the core insight of error management theory, which argues that social biases can often be traced to asymmetries in the costs of erring in one direction or the other (Haselton & Buss, 2000). As a result, the ODS can be activated when social threats are ambiguous (Smith & Williams, 2004) or even nonexistent (Spoor & Williams, 2007). In the language of the IEE, this occurs when the included—whose feelings and intentions in an act of one-person exclusion are largely ambiguous to the rejected—is (inaccurately) judged to be exclusive. That the ODS characterizes *social* perception explains why both the rejected *and* uninvolved outside observers show the IEE.

Although Critcher and Zayas (2014) both documented the IEE and identified several key features that characterize the effect, major questions remain about the robustness of the IEE and its potential, in practice, to persist as a social misperception. Let us first consider the question of the IEE's scope. When we think of one person including another while excluding a third, our minds (just as did previous research) naturally go to instances of excluders sharing coveted rewards. An excluder might invite the included (but not the rejected) to a backyard hangout, to attend a housewarming, or even to accompany them on a vacation. These are examples of what we call *positive* one-person exclusion. But in other cases, people exclusively foist burdensome invitations on others. An excluder might invite one person (but not another) to help them mow their backyard, to build IKEA furniture, or even to drop them off at the airport as they head away on vacation. We identify these as examples of *negative* one-person exclusion. What happens when people make such burdensome asks of one person (while not burdening another)? Does



negative one-person exclusion, which spares the rejected from becoming the excluder's personal assistant, also trigger the IEE?

One hint comes from research that speaks to the unconditional sting of exclusion. This work suggests that the ODS is activated even in cases in which exclusion does not seem undesirable. For example, when people are excluded by others with whom they have no desire to affiliate (e.g., Ku Klux Klan members) or when such inclusion carries a monetary penalty, exclusion still hurts (Gonalkorale & Williams, 2007). In light of that low threshold for *experiencing* the sting of exclusion, the IEE—which documents mistaken inferences, not automatic emotional responses—may be similarly easily triggered. And if the IEE is indeed so robust, it may suggest its scope has been underappreciated. Thus, demonstrating the robustness of the IEE across different contexts would further highlight the importance of identifying what strategies could most effectively clear up this social misperception.

In thinking about *how* to address the IEE, we consider *who* is in the best position to address it. Given the IEE describes misperceptions of the included, we ask what strategies the included could carry out to effectively address the social misperception that they too are an excluder. But in doing so, we are particularly interested in whether the included feel naturally inclined to carry out any such socially restorative actions. If they do not, it would be important to understand why the included is disinclined to take intervening steps, ones that could have the real potential to address the social misperception that is the IEE. Note how this approach—in which *the included* takes center stage—differs from extant research on exclusion.

This previous research has focused on the rejected, emphasizing that unambiguous exclusion is almost universally alarming and painful, at least initially (Williams, 2009). That said, rejected individuals who proactively seek out opportunities for social interaction (Zhao,

Peng, & Sheard, 2013), hold just world beliefs (Poon & Chen, 2014), and have dispositionally low levels of social anxiety (Zadro, Boland, & Richardson, 2006) all have speedier recoveries from exclusion. External interventions can also help. After the rejected experience exclusion, encouraging a turn to religion (Aydin, Fischer, & Frey, 2010), facilitating inclusion by someone else (Tang & Richardson, 2013), or simply distracting the excluded (Tamplin-Wilson, Smith, Morgan, & Maras, 2019) have been shown to diminish or eliminate many of the negative consequences of rejection.

Of course, one-person exclusion—and the IEE—are different in that the rejected (as well as other witnesses to the interaction) *misperceive* the true scope of exclusion. But given the hypersensitive ODS encourages them to see the included as more of an excluder than is warranted, there is a real question of whether the included can efficiently correct these misperceptions. After all, their prosocial overtures may be dismissed as cheap talk or expressions of pity or guilt instead of true social interest (Williams, 2007; Williams & Zadro, 2005). On the other hand, given that rejected individuals are vigilant for signs of social acceptance (Maner et al., 2007; Rudert, Hales, Greifeneder, & Williams, 2017), such acts may be sufficient to convince the rejected that the included is indeed more of an ally than first seemed. We identify and ultimately test three ways that the included could respond following one-person exclusion.

First, the included could *reprimand* the excluder—telling them publicly that they should have included the rejected. Similarly forceful overtures—such as direct callouts of misbehavior—can be effective in changing others' behavior and eliciting apologies for misdeeds (Chaney, Sanchez, Alt, & Shih, 2020; Mallet & Wagner, 2011), but also run the risk of inflaming already tense social dynamics (see Overall & McNulty, 2017, for one such example). Second, the included could attempt to *justify* the excluder's action—offering a less aggressive attribution for

the act of exclusion (e.g., that the excluder had assumed the rejected was uninterested in joining). Such a strategy would be a form of social reappraisal (e.g., Holmstrom, 2015). Third, the included could offer a direct expression of *kindness* to the rejected—expressing disappointment that they were not included and saying that they hoped to socialize with the rejected soon. While such an expression of warmth might help to serve as a signal of the included’ support, it might also run the risk of appearing condescending or hollow (Fisher, Nadler, & Witcher-Alagna, 1982). More broadly, these three approaches differ in: (1) whether the communication is directed at the excluder (reprimand) or the rejected (justify, kindness), (2) whether it draws attention only to the previous exclusion (reprimand, justify) or also to future social interaction (kindness), as well as (3) the extent to which the exclusion is construed as an unfortunate misunderstanding (justify) as opposed to genuine mistreatment (reprimand, kindness). Of course, no finite list of strategies includes every possible approach the included could take; we return to this topic in more depth in the General Discussion.

The most clearly pertinent question is whether these strategies work: Do they correct the IEE, or are they dismissed as superficial niceties that do not prompt people to update their impressions of the included? If one or more of these approaches could be identified as particularly efficient in addressing the IEE, this would raise a related question: Is the IEE merely a short-lived social misperception, one that is organically and quickly corrected in practice? Here, we consider whether the included are actually inclined to enact these relatively simple strategies. And if the included are reluctant to do so, why is that the case? Addressing these questions would move beyond previous research’s identification of the IEE as a robust social misperception to understanding the intrapersonal and interpersonal dynamics that in combination have the potential to quash the IEE but also encourage it to linger.

In one-person exclusion, the included—by definition—are involuntarily drawn into an act of social exclusion. On the one hand, one might suspect this would make the included eager to clarify the involuntary nature of their role in the exclusion. By a different perspective, the included might feel that they have been thrust into an awkward situation not of their own doing, thus making them reluctant to play an active role in resolving any awkwardness. After all, previous research has found that people are reluctant to get involved in contexts in which they are unsure if they have psychological standing (Miller, Effron, & Zak, 2009). And unpublished research has found that people are particularly reluctant to directly confront another, even when the chance of a confrontation turning truly unpleasant is small (Dungan & Epley, 2021). This establishes a tension: The person who may be in the best position to address the misperceptions underlying the IEE may be particularly disinclined to get involved.

Although we have already highlighted how the three strategies we will examine differ, the three approaches are similar in that they all involve the included proactively wading into the messiness of this situation. If the included is reluctant to participate further in these dynamics, they may be predisposed against taking *any* of these approaches. That people are reluctant to insert themselves into social conflict is purely descriptive. Psychologically, people may display such reluctance—and perhaps an inappropriate degree of reluctance—to the extent that they (mis)forecast how such intervention would actually unfold. For example, forecasters tend to exaggerate how poorly difficult conversations (Levine & Cohen, 2018) and direct confrontations (Dungan & Epley, 2021) will go. Further, they overestimate how awkward (Kumar & Epley, 2018) and uncomfortable (Gromet & Pronin, 2009) such episodes will be. This led us to predict that any reluctance that the included has to intervening may be driven in part by their (misguided) sense that such intervention would not go well. Examining whether such

misforecasts occur—and as will be developed in our studies, understanding the more specific form they take—will allow us to more precisely identify what inaccurate worries paralyze the included, thereby allowing the IEE to persist.

### **Overview of the Present Research**

Across five studies (and three supplementary studies), we: 1) test whether the involuntary excluder effect extends to negative one-person exclusion, 2) examine the included's baseline predisposition to actively respond to one-person exclusion, 3) test the effectiveness of different strategies the included could enact, and 4) connect the included's reluctance to take a more active role to a misforecast of how such involvement would come to pass. That is, first, we examine whether the IEE—the misperception of the included as an excluder—occurs even when the rejected is spared from a relatively unpleasant task or burdensome social request (Studies 1-3). Second, we measure whether people—both the included themselves and others observing the situation—think the included should (and would) stay out of things or directly respond to the exclusion (Studies 1-2, Supplemental Studies A and B). Third, we gradually home in on which strategy or strategies may most effectively correct the IEE, both using scenarios that standardize the strategies' enactment (Study 3) and through a multi-stage, laboratory, yoked design that nudged some participants to enact these strategies as they saw fit (Study 4). Fourth, we used forecaster-experiencer designs to examine whether and how the included misforecast the challenge of actively intervening. This allowed us to test whether such misforecasts underpin the included's hesitation to become involved. Furthermore, we ask whether the included's counterproductive predisposition toward inaction eases after actually attempting to engage in one of the strategies, thereby revealing just how undaunting intervening can be (Study 5, Supplemental Study C).

Consistent with Simmons, Nelson, and Simonsohn (2011), we report how we determined our sample size as well as all data exclusions (if any), manipulation, and measures. For more information, see: [https://osf.io/xu9d4/?view\\_only=c305a37686ab43e0838798f4bd19f352](https://osf.io/xu9d4/?view_only=c305a37686ab43e0838798f4bd19f352). One difficulty—confronted in most research—is that we did not know our examined effect sizes a priori. Recognizing this typical problem, Simmons, Nelson, and Simonsohn (2013) suggested a floor of 50 participants per cell, below which additional justification would be required. We instead recruited more than 100 participants per cell on average. For lab studies, this reflected the maximum number of participants we could recruit during the time—either one or two semester—from an undergraduate subject pool. For the online studies, we maximized our sample size in light of the funding lab’s resources (distributed across all studies run that month). Guided by a desire to maximize statistical power, our studies that used scenario-based methods (Studies 2 and 3) had participants consider four one-person exclusion situations and were analyzed using mixed models.

### **Study 1**

Study 1 had two goals. First, we tested whether the IEE would emerge even when the excluder invited the included but not the rejected to participate in an arduous and unappealing task: reading and transcribing by hand lengthy passages of dense text. To that end, we designed what was ostensibly a three-person paradigm in which one person had the option of including one or both others in this laborious task. In reality, only one participant took part at a time, for the other two people were preprogrammed. Participants were randomly assigned to be either the one person included in the task (*included* role condition) or the one person rejected from participating in this task (*rejected* role condition). If the IEE does indeed extend to such acts of negative one-person exclusion, we should continue to find evidence of it in this paradigm. That

is, we predicted that rejected participants would misperceive the included as having more exclusive patterns of liking (for the excluder over the rejected) and more exclusive behavioral intentions (desiring to perpetuate further exclusion when organizing a future fun task instead of behaving all-inclusively) than the included would report.

Second, we wanted to understand how people believed the included would and should respond to one-person exclusion. After all, the IEE describes a misperception of *the included's* attitudes and behavioral intentions. Presumably, the included—as the person about whom there are misperceptions—is particularly well positioned to clear up those misunderstandings. We asked all participants—those rejected and those included—how the included would and should respond when caught in the middle of one-person exclusion. Three possible courses of action were suggested: *reprimand* the excluder for their act of exclusion; *justify* the excluder's behavior to the rejected with a defusing, benign excuse; or directly express *kindness* to the rejected. As a point of comparison, we also offered a fourth possibility: to do nothing. These measures permitted us to understand which actions the included endorsed (and the rejected expected of the included) over simply saying nothing (and leaving the IEE unaddressed).

## Method

**Participants and design.** One hundred forty-six undergraduates from an American university participated in exchange for course credit. Participants were randomly assigned to either the *included* or *rejected* role condition. Ten participants failed a memory-based attention check (see Supplemental Materials) and were excluded from all analyses. Retaining those participants does not change the results that we report below.

**Procedure.** Upon arriving at the laboratory, participants were greeted by a research assistant who announced that the session would begin when three scheduled participants had

arrived. After several minutes, participants were led to individual rooms, where instructions were provided on a computer. Participants were told that the purpose of the study was to assess “communication and decision-making in group settings.” This served as a cover story for what was actually the focus of the study, a key decision by another (actually preprogrammed) member of the group (the excluder) to include one other (the included) while excluding the other (the rejected).

In order to determine who would be able to make this decision, participants took part in a procedure that would be used to select a single *interviewer* (who would ultimately become the excluder) and two *answerers* (who would ultimately be included or rejected). Participants were asked to guess a number between 1 and 2,000. Supposedly, whoever guessed closest to the true value—always said to be 296—would become the interviewer. Regardless of the participant’s guess (which was never “296”), they were informed that they were not closest and thus were one of the two answerers.

At that point, participants were told that the interviewer would select three questions—from a list of ten possible questions—to ask both answerers. As participants understood it, the purpose of these questions was to help the interviewer decide whether to include one or both answerers in an upcoming “collaborative speech task.” That future task was described to sound quite unappealing. Participants were told that the task involved taking “turns reading lengthy passages out loud to the other participant(s). The other participant(s) will be attempting to write the passage (either in cursive or normal script) out as quickly and accurately as possible.” Although completing transcriptions is hardly a reward, we also provided participants with an example passage that might be used in the task (adapted from an advanced LSAT Reading Comprehension passage; see Figure 1) to make sure the task appeared tedious and dull.



At that point, participants responded to the three questions that the interviewer had supposedly selected (e.g., “In what ways do you hope to have a conventional or unconventional life?”) To bolster the cover story, each question prompt had a number (#4, #6, or #7) attached to it. Participants had 60 seconds to type their own response. At that point, they were shown the other answer’s supposed response (a prewritten response shown to all participants) for 30 seconds. Finally, participants were directed to a screen with a loading gif for 30 seconds. During this time, the interviewer was ostensibly deciding which participant(s) to include in the collaborative speech task. Those assigned to the *rejected* condition learned that the interviewer had chosen only the other answerer. Those assigned to the *included* condition learned that the interviewer had chosen only the participant.

Participants then completed three sets of measures in the order described below. After they completed these measures, included participants were told that due to time constraints, they would not complete the collaborative speech task:

***Exclusive pattern of liking by included.*** To avoid making our focus transparent, we had participants indicate how much they themselves liked the interviewer and the other answerer as well as how much they thought the other two participants liked the others. All responses were made on 7-point scales anchored at 1 (*not at all*) and 7 (*very much*). An exclusive pattern of liking (real or perceived) is reflected by higher values on the following difference score (Critcher & Zayas, 2014): how much the included likes (or is assumed to like) the excluder minus how much the included likes (or is assumed to like) the rejected.

***Exclusive behavioral intentions of the included.*** This measure opened by informing participants that the included would be leading a fun final activity and would decide who should accompany them to complete that task. As we explained, “This activity will involve considering

some of the funniest cartoons that appeared in major newspapers in 2017.” Depending on participants’ role condition, either they themselves (included role condition) or the other answerer (rejected role condition) would be the one deciding who would get an invitation. For the *rejected*, they estimated how likely it was that the other answerer would include only the interviewer (thereby perpetuating the exclusion), both the interviewer and the participant himself or herself (thereby behaving in an all-inclusive manner), or only the participant (thereby excluding the excluder).<sup>1</sup> The *included* indicated how likely it was that they themselves would include only the interviewer, both the interviewer and the other answerer, or only the answerer. These responses were made on 7-point scales anchored at 1 (*not at all*) and 7 (*extremely*). Following Critcher and Zayas (2014), an exclusive pattern of behavioral intentions was reflected by (actual or estimated) intentions to perpetuate exclusion (by including only the excluder) minus intentions to behave in an all-inclusive manner (by including the excluder and the rejected).

***Endorsements of the included’s possible courses of action.*** The final two sets of measures probed the extent to which the included—if given the opportunity—*should* and *would* intervene in the dynamic that had just unfolded. For both the should and would measures, participants saw four possible actions that the included could take: do nothing and stay out of it (i.e., *do nothing*), tell the interviewer that the interviewer should have included the other answerer in the collaborative speech task (i.e., *reprimand* the excluder), tell the other answerer that the interviewer did not invite the other answerer to participate in the collaborative speech task because the interviewer did not know if the other answerer wanted to do it (i.e., *justify* the excluder’s behavior to the rejected), and tell the other answerer that the included was

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<sup>1</sup> Neither the parenthetical recharacterizations of the behavior nor the terms excluder, included, or rejected were used in the measures themselves.

disappointed that the other answerer was not included in the collaborative speech task but that the included hoped to do something similar with them (i.e., express *kindness* to the rejected). The included rated whether they would or should take each of the four approaches (for a total of 8 responses). The rejected also offered these opinions about what the included would or should do. Each item was responded to on a 7-point scale anchored at 1 (*definitely [should/would] not*) and 7 (*definitely [should/would]*). The would and should responses were highly correlated ( $r = .65$ ) and thus were averaged into a single *response-endorsement* composite.

## Results

We begin by testing whether the IEE emerges even when the excluder invites the included to participate in an unfun, laborious task from which the rejected is excluded (or, perhaps, spared)—i.e., negative one-person exclusion. We then proceed to examine how participants thought the included would and should respond to the one-person exclusion.

**Exclusive pattern of liking by included.** We found clear evidence of an IEE: Participants who were rejected assumed that the included possessed a more exclusive pattern of liking ( $M = 0.84, SD = 1.40$ ) than the included actually reported ( $M = 0.03, SD = 1.35$ ),  $t(134) = 3.43, p = .001, d = 0.59$ . Stated differently, participants who were spared from having to participate in the onerous transcription task incorrectly thought that the included was particularly fond of the excluder.

**Exclusive pattern of behavioral intentions by the included.** The IEE also emerged on the included's behavioral intentions. Rejected participants believed that the included was more likely to perpetuate exclusion ( $M = 0.63, SD = 1.81$ ) than the included indicated ( $M = -0.90, SD = 2.25$ ),  $t(134) = 4.24, p < .001, d = 0.75$ . Combined with the above analyses, there is strong

evidence that the IEE emerges not only when one is excluded from a pleasant task (Critcher & Zayas, 2014) but from an unpleasant one as well.

**Endorsements of the included’s possible courses of action.** Finally, we examined how participants thought the included would and should respond to this one-person exclusion, which—as just reviewed—gave rise to the IEE. We submitted participants’ response-endorsement composites to a 2 (role: rejected or included) X 4(strategy: do nothing, reprimand, justify, and kindness) mixed-model ANOVA, with only the first factor manipulated between subjects. Most clearly, this analysis yielded a significant main effect of strategy,  $F(3, 132) = 68.41, p < .001, \eta^2_p = .338$ . This effect was qualified by a more modest interaction with role,  $F(3, 132) = 4.17, p = .006, \eta^2_p = .030$ .

The interaction reflects that the pattern of means varies slightly by condition (see Table 1). However, what is consistent is that—regardless of role—participants thought the included would or should stay out of things. That is, for both roles, doing nothing was endorsed more strongly than reprimanding the excluder,  $ts > 5.36, ps < .001, ds > 0.60$ , justifying the excluder’s behavior,  $ts > 7.75, ps < .001, ds > 0.88$ , and expressing kindness to the rejected,  $ts > 4.38, ps < .001, ds > 0.49$ .<sup>2</sup> Rejected participants did endorse the justify strategy—in which the included would provide a benign justification for the excluder’s act of exclusion—more than the included did,  $t(134) = 2.71, p = .008, d = 0.47$ . This finding is itself intriguing, but not one we focus on further.

## Discussion

Study 1 provided clear evidence of the robustness of the IEE. Even when the rejected are excluded from an unappealing task, they overestimate how much the included are: (1) especially

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<sup>2</sup> Supplemental analyses that analyzed the “would” and “should” variables separately each confirmed that doing nothing was endorsed significantly more strongly than each of the other three strategies.

fond of the excluder and (2) eager to perpetuate additional exclusion of the rejected from a subsequent, desirable task. On the surface, excluding the rejected from an unpleasant task might be seen to be an act of kindness by the excluder, one that the rejected might assume would encourage the included to resent the excluder. Instead, the rejected seemed to think that the included would clearly be partial toward the person who had drawn them into drudgery. This speaks to just how commonplace the IEE may be, occurring not merely in situations in which the excluder selectively shares a social reward but even in those in which the excluder selectively shares a social burden.

In addition, Study 1 allowed us to gain initial insights into why the social misperceptions underlying the IEE might be especially resilient. The included and rejected alike thought that the included would and even should do nothing; they did not expect the included to take it upon themselves to attempt to rectify the situation. Both the included's predisposition toward inaction as well as the rejected's lack of expectation of action are recipes for maintenance of continued social misunderstandings. One possibility is that the included suspected that the rejected was likely fine with not having to take part in an unfun task, explaining the inclination toward inaction. Of course, this does not explain why the included was more inclined to remain silent than to justify the excluder's behavior on these very grounds or express direct kindness to the person who might draw the wrong conclusions from being left out. We return to these questions later by testing whether the perception that the included would and should tilt toward inaction holds when the rejected are excluded from *desirable* activities—i.e., positive one-person exclusion.

## Study 2

Study 2 built on Study 1 in three ways. First, whereas Study 1 featured a (staged) one-person exclusion interaction that unfolded live, Study 2 utilized a simulation paradigm. Participants vividly simulated four different one-person exclusion scenarios from the perspective of the included, the rejected, or an uninvolved outside observer. In each of the four scenarios, the excluder extended an exclusive invitation to the included, but not the rejected. More specifically, the excluder invited the included, but not the rejected, to do one of four chores: (1) help the excluder move, (2) build IKEA furniture with the excluder, (3) pick the excluder up from the airport, or (4) help the excluder with some yard work. After reading each scenario, participants—just as in Study 1—made judgments about the social dynamics of the situation (i.e., how much each person liked the others) and indicated the extent to which the included would and should speak up. Although this simulation paradigm lacks Study 1’s interactive realism, it more precisely standardizes the information at participants’ disposal, and thus allows us to test for the IEE across multiple situations in which an unappealing social burden might be foisted upon the included (but not the rejected). Critcher and Zayas (2014) found that asking people to consider one-person exclusion through the eyes of the included or the rejected was sufficient to produce the different patterns of social perceptions that underlie the IEE.

Second, in order to more precisely probe the role of the costly nature of the inclusion in producing (and potentially reducing) the IEE in negative one-person exclusion situations, we experimentally varied the scope of the cost(s) of being included. Although it is unlikely that participants would find the prospect of building IKEA furniture or doing yardwork to be particularly entertaining (few people pay for the opportunity to do, but are instead more likely to be paid for doing, these activities), it is difficult to develop an absolute standard for what constitutes an unfun task. After all, suffering alongside a friend can have redeeming qualities.

For this reason, we instead manipulated whether we made salient additional burdens that inclusion would carry. For example, we varied whether as part of picking someone up from the airport one would also have to pay an expensive bridge toll, or whether as part of spending the day helping someone build IKEA furniture one would have to cancel lunch plans. This would allow us to test whether the IEE emerges even when additional costs are made explicit, and also whether the size of the IEE consistently varies with these experimentally manipulated costs. Robustness and relative insensitivity to this factor would further attest to the occurrence of the IEE even in negative one-person exclusion.

A third new feature of Study 2 is the addition of a neutral outside observer condition. These participants did not consider the one-person exclusion from the vantage point of someone actually in the situation (i.e., the included or the rejected), but simply learned about the dynamics that unfolded among three other people. This serves as something of a control condition. If the IEE is indeed a *social* misperception, one that reflects the hypersensitive lens of the ostracism detection system, then we should see that these outside observers see more evidence of exclusive attitudes and intent by the included than is warranted. But also, if the IEE is in part driven by considering being personally rejected—especially given this can inspire a *hostile cognitive mindset* that the world is conspiring against the self (DeWall, Twenge, Gitter, & Baumeister, 2009)—then those taking the vantage point of the rejected may be even more certain of the included’s exclusionary attitudes and intentions than the outside observer is.<sup>3</sup>

## Method

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<sup>3</sup> Critcher and Zayas (2014)—in studying positive one-person exclusion—found that outside observers’ estimates were always different from those considering situations from the vantage point of the included, but only sometimes different from those taking the vantage point of the rejected. The present study has more than ten times the sample size of that used in Critcher and Zayas (2014); thus, we include the condition to determine whether both effects are indeed robust in a negative one-person exclusion context.

**Participants and design.** In an effort to achieve a particularly large sample size, we recruited participants simultaneously from an American university subject pool (for course credit) as well as from Americans on Amazon Mechanical Turk (for payment). These 1,125 participants were randomly assigned to one of six conditions in a 3(vantage point: included, rejected, or observer) X 2(cost: explicit or control) full-factorial design. Two hundred thirty-five participants failed a memory-based attention check (see Supplemental Materials) designed to screen out inattentive participants. This left 890 participants in the analyses reported below. In the Supplemental Materials, we reconducted these analyses with all participants; those results reinforce all of the findings reported here.

**Procedure and materials.** Participants were asked to vividly simulate four different scenarios that featured an act of negative one-person exclusion. The four scenarios were presented to participants in a random order. Regardless of participants' vantage point condition, the social dynamic described was identical. The vantage point was manipulated by modifying which protagonist was described using the label "You" instead of a non-descript third-person descriptor (e.g., "Person A").

Each of the scenarios began with one person (the one who would ultimately be rejected) behaving all-inclusively and extending a positive social invitation (i.e., going for a cup of coffee, eating lunch together, grabbing a frozen yogurt, hiking as a group) to the other two. At that point, another person (the excluder) included the third person (the included)—but not the rejected—to engage in a laborious and unappealing chore. That is, the excluder invited the included but not the rejected to: help the excluder move, to assist the excluder build IKEA furniture, to pick up the excluder from the airport, or to spend a day doing yardwork with the excluder. (The exact wording of each scenario can be found on the OSF page.)



Of course, when one person imposes on another, there is often an additional, accompanying cost imposed on the one included. For participants assigned to the *explicit cost* condition, we made clear that such costs were indeed involved. That is, some participants also learned that: helping the excluder move would lead the included to have to take a day off of work, assisting the excluder build IKEA furniture would lead the included to have to miss a lunch they had planned, driving to the airport would require the included to incur an expensive toll, and doing yardwork would cause the included to miss a baseball game that they had tickets for. In this way, participants in the *control cost* condition merely learned about the burden included in the direct ask. Participants in the explicit cost condition were aware both of that basic burden and the extra costs that complying with the request would entail.

Following each scenario, participants completed two measures, adapted from Study 1, that would permit identification of the involuntary excluder effect: perceived exclusive pattern of liking by the included and perceived exclusive behavioral intentions of the included. After proceeding through all four scenarios, participants completed the response-endorsement measures, which asked participants to indicate how they believed the included would and should respond in such situations.

***Perceived exclusive pattern of liking by included.*** Participants were asked to consider all of the information in the scenario and indicate the extent to which they believed each person in the scenario liked one another. As in Study 1, all responses were made on 7-point scales anchored at 1 (*not at all*) and 7 (*very much*). We calculated a difference score: how much the included was perceived to like the excluder minus how much the included was perceived to like the rejected. Higher values indicate a greater perceived exclusive pattern of liking by the included.

***Perceived exclusive behavioral intentions of the included.*** For each scenario, participants were asked to consider a particular activity that the included was said to enjoy (i.e., grabbing a drink after work on Wednesdays, going to the movies on Sunday afternoons, getting brunch on the weekend, or going bowling). Then, participants were asked to indicate—the next time that the included were to partake in that activity—how likely the included would be to invite: just the excluder, just the rejected, or both the excluder and the rejected. These responses were made on 7-point scales anchored at 1 (*not at all*) and 7 (*extremely*). We calculated a difference score that reflected a perceived exclusive pattern of behavioral intentions (the intention to include only the excluder minus the intention to behave all-inclusively by including the excluder and the rejected).

***Endorsements of the included's possible courses of action.*** For this measure, all participants saw a graphic that summarized the dynamic that had unfolded in each of the four scenarios. This depiction reminded rejected and included vantage point condition participants which person's vantage point they had been taking (see Figure 2). Then, participants were asked to consider what they believed that the included (either the participants themselves [included vantage point condition] or another person [rejected and observer vantage point conditions] should and would do in such situations. In this way, participants commented on the dynamic that had unfolded in all of the scenarios (as opposed to commenting on each scenario one at a time). As in Study 1, participants saw four possible courses of action that the included could take: (1) do nothing (“Do nothing (Stay out of it)”), (2) reprimand the excluder (“Tell [the excluder] that [the excluder] should have invited [the rejected] as well”), (3) justify the excluder's behavior to the rejected by reappraising what had happened (“Tell [the rejected] that [the excluder] did not invite [the rejected] because [the excluder] did not know if [the rejected] wanted to be there”),

and (4) express kindness to the rejected (“Tell [the rejected] that [the included] was disappointed that [the rejected] was not invited and that [the included] would like to hang out with [the rejected] soon”). These four options were presented in a randomized order for each participant.

All participants provided 8 ratings. Four indicated the extent to which they themselves or another *would* take each possible course of action. The other four ratings indicated the extent to which they or another *should* take each possible course of action. These ratings were made on 7-point scales anchored at 1 (*definitely should/would not*) and 7 (*definitely should/would*). As in Study 1, the would and should responses were strongly correlated ( $r = .65$ ). As before, we averaged the measures into a single *response endorsement* composite.

## Results

To begin, we examined whether the IEE would emerge in these negative one-person exclusion scenarios, and whether such an effect would continue to emerge even when additional costs to being included were highlighted. After testing whether those considering the situations from the vantage point of the rejected saw the included as more exclusive than did those taking the vantage point of the included, we considered how these two conditions compared to those considering one-person exclusion from an outside observer’s vantage point. Finally, we examine participants’ perspective on how the included would and should respond to the one-person exclusion, including whether the relative endorsement of doing nothing (as opposed to taking a more proactive approach) differed based on the vantage point and explicit cost manipulations.

To account for non-independence in the data set (i.e., participants responded to the same four scenarios), we used mixed models (Judd, Westfall, & Kenny, 2017). To test for the presence of the IEE, we predicted one of the two DVs (i.e., exclusive pattern of liking and exclusive behavioral intentions). We included two fixed effects: vantage point (rejected, included or

observer) and cost (+1: explicit, -1: control). We also included their interaction. These models included random effects of participant and scenario. Differences between the included and rejected vantage points reflect the IEE. Additionally, comparisons between the rejected and observer vantage points test to what extent the IEE solely reflects the social cynicism (or ODS hypersensitivity) of those taking the rejected's and an outside observer's vantage point alike, or whether considering the situation through the eyes of the rejected in particular exacerbates these misperceptions (as a hostile cognitive mindset account would reflect).

**Perceived exclusive pattern of liking by included.** In predicting perceptions of an exclusive pattern of liking by the included, we observed a large main effect of vantage point,  $F(2, 884) = 70.24, p < .001$ . The Vantage Point X Cost interaction was small by comparison,  $F(2, 884) = 2.97, p = .052$ . Given the interaction did not reach significance, we merely unpacked the main effect of vantage point. Interested readers can consult Table 2 for a more detailed exposition of the effect of vantage point within the explicit cost and control cost conditions.

First, we replicated the IEE. Participants who considered the situations from the vantage point of the rejected believed that the included possessed a more exclusive pattern of liking than those in the included vantage point condition,  $t(884) = 11.64, p < .001$ . Second, we asked whether the IEE would extend to uninvolved social observers. It did: Those who considered the situations from the vantage point of an outside observer also thought that the included would show more of an exclusive pattern of liking than did those in the included vantage point condition,  $t(884) = 7.73, p < .001$ . Finally, we found that those who considered actually being in the rejected's shoes showed a heightened IEE compared to those who merely considered the situations from an observer's vantage point,  $t(884) = 3.38, p < .001$ .

**Perceived exclusive pattern of behavioral intentions of the included.** As before, we observed a large main effect of vantage point,  $F(2, 884) = 128.35, p < .001$ . Once again, the Vantage Point X Cost interaction was quite small in comparison, but did achieve statistical significance in this case,  $F(2, 884) = 7.88, p < .001$ . For this reason, we tested the effects of vantage point separately for those in the explicit cost and control conditions. But as can be seen in Table 2, the patterns were the same; the interaction merely reflected that the magnitude of simple effects varies by the explicit cost condition.

First, we replicated the IEE: Rejected vantage point participants thought the included was more likely to have exclusive behavioral intentions than those who had considered the situations from the included's vantage point (explicit cost:  $t(884) = 8.27, p < .001$ ; control cost:  $t(884) = 14.32, p < .001$ ). Once again, we found that the IEE extended to social observers: Those who took the vantage point of an outside observer also thought that the included would have more exclusive behavioral intentions than the included vantage point participants thought (explicit cost:  $t(884) = 4.76, p < .001$ ; control cost:  $t(884) = 9.81, p < .001$ ). And finally, we found that those taking the vantage point of the rejected showed a stronger IEE than did an outside observer (explicit cost:  $t(884) = 3.13, p = .002$ ; control cost:  $t(884) = 3.90, p < .001$ ). In other words, despite some variability in the size of these effects that was attributable to the cost manipulation, the clearest takeaway is that the IEE emerged quite strongly and consistently regardless of how much of an explicit cost being included by the excluder carried.

**Endorsements of the included's possible courses of action.** How did participants believe that the included should and would respond in situations where such one-person exclusion occurred? We submitted participants' response-endorsement composites to a 3(vantage point: included, rejected, or observer) X 2(cost: explicit or control) X 4(strategy: do nothing,

reprimand, justify, and kindness) mixed-model ANOVA, with the first two factors manipulated between subjects. Of central importance, we observed a main effect of strategy,  $F(3, 2652) = 118.62, p < .001, \eta_p^2 = .118$ . This effect was qualified by participants' vantage point,  $F(6, 2652) = 8.10, p < .001, \eta_p^2 = .018$ , as well as by the cost manipulation,  $F(3, 2652) = 5.83, p < .001, \eta_p^2 = .007$ . The three-way interaction did not reach statistical significance,  $F(6, 2652) = 1.92, p = .073, \eta_p^2 = .004$ . Full model output is presented in the Supplemental Materials.

The interactions reflect that there was some difference in the relative endorsement of the strategies as a function of participants' vantage point assignment as well as whether the additional costs had been made explicit. Note that these interactive effects are small compared to what was a clear consensus on how the included would and should behave. This relative uniformity of opinion is also apparent in Table 3. That is, regardless of participants' vantage point condition, participants endorsed inaction over reprimanding the excluder,  $ts > 3.01, ps < .004$ ; offering justification for the included's behavior,  $ts > 7.48, ps < .001$ ; and expressing kindness to the rejected,  $ts > 4.17, ps < .001$ . Similarly, regardless of the cost manipulation, participants endorsed inaction over the reprimand strategy,  $ts > 4.56, ps < .001$ ; the justify strategy,  $ts > 10.82, p < .001$ ; and the kindness strategy,  $ts > 4.70, ps < .001$ . In summary, despite some variability in the size of these effects as a function of our manipulations, there was a clear sense that the included would and should stay out of things.

## Discussion

Study 2 again found that the IEE extends to negative social exclusion. Furthermore, by varying the severity of the burden imposed on the included, we saw the IEE on one of our two measures was lessened, but such differences were small compared to the robust occurrence of the IEE regardless of these costs. Although this may reflect that there is some point at which the one-

person exclusion may not prompt an IEE (e.g., when the inclusion of the included is a pure abuse), a clear takeaway is that the IEE is remarkably robust even when the costs of inclusion are high.

Not only did those considering one-person exclusion from the vantage point of the rejected (versus the included) think that the included would be especially exclusive, but those in the observer vantage point condition did as well (though to a somewhat lesser extent). In other words, the IEE most clearly characterizes social perception more generally (and the hypersensitive social lens of the ODS), but may be somewhat stronger for those who are (even considering) being rejected (which may reflect the hostile cognitive mindset that even considering being rejected can inspire). These differences are not of central focus in the present paper, but we highlight them given they come from better-powered tests than those used by Critcher and Zayas (2014), which found middling support for the latter possibility.

Finally, our results reinforce that there are likely to be few pressures on the included—internal or socially imposed—to be proactive in addressing one-person exclusion. That is, there was a clear consensus that doing nothing—as opposed to three other possible courses of action—is how the included would and should respond. As a result, the social misunderstandings that underlie the IEE may go fairly unchecked. That said, and as alluded to in the discussion of Study 1, at least one of the strategies (reprimand) may not apply as naturally to the case of negative one-person exclusion as it does to positive one-person exclusion. After all, reprimanding the excluder for not including someone else in a negative task may come across more as a reluctance to help than as an attempt to foster group harmony. But the other two strategies do not seem to suffer the same ambiguous meaning. It would seem quite natural to justify to the rejected why the excluder might not have thought the rejected would want to have been invited to co-perform

an unpleasant chore. Furthermore, expressing kindness to the rejected is an action that can help to clarify one's interest in maintaining a relationship with a person, regardless of what action preceded it. Now that we have established the robustness of the IEE by showing it extends to negative one-person exclusion, our next study will probe the willingness to use and, newly, the usefulness of these strategies in reducing cynical social perceptions of the included in *positive* one-person exclusion as well.

### Study 3

Most centrally, Study 3 builds on the previous efforts by varying how the included responded to one-person exclusion—i.e., what *strategy* they actually employed—in order to assess the efficacy of each strategy in reducing perceptions of the included as an excluder. Like in Study 2, participants simulated four different one-person exclusion scenarios. We created four versions of each of the four scenarios that differed only in the included's final action: They either expressed *kindness* to the rejected (by indicating an interest in socializing in the future), *reprimanded* the excluder (by stating the excluder should have invited the rejected as well), offered a *justification* to the rejected for the excluder's behavior (that the excluder didn't think the rejected would want to join), or did nothing (a *control* condition in which there was no reference to the included's response). This allowed us to test whether the three active strategies influenced perceptions of the included as an excluder—i.e., whether the included was assumed to have less of an exclusive pattern of liking and behavioral intentions. We did not have strong *a priori* predictions about which of the strategies—if any—would be most effective in minimizing this sign of the IEE.

In Study 3, participants considered two negative one-person exclusion situations (like in Studies 1 and 2) and two positive one-person exclusion situations (like in Critcher & Zayas,



2014). Given that Study 3 utilized new or modified one-person exclusion scenarios, we conducted two supplementary studies—using these same scenarios—to determine whether those taking the vantage point of social observers (Supplemental Study A) or the included (Supplemental Study B) remained reluctant to endorse the included taking these proactive steps. After all, these strategies may come across differently in positive and negative one-person exclusion situations, so testing whether the low pressure of the included to act emerges robustly across these situations would be useful. Although these results are described more fully in the Supplemental Materials, such reluctance was still present, in negative and positive one-person exclusion alike. That is, those considering one-person exclusion from the vantage point of social observers ( $t_s > 8.47, p_s < .001$ ) as well as the included ( $t_s > 23.30, p_s < .001$ ) endorsed the included's inaction more than any of the other three strategies. In sum, there was again strong agreement—even for the positive one-person exclusion situations—that the included would and should not get involved.

That there is little pressure on the included to get involved only raises the stakes for Study 3's test of the strategies' ability to soften social perceptions of the included. Participants in Study 3 considered the situations from the vantage point of either the rejected or an outside observer. This would allow us to see whether the effects of the included's strategies robustly extended to all social perceivers. Especially given the finding in Study 2 that those considering one-person exclusion through the eyes of the rejected were more likely to see the included as an excluder, it would be important to see whether the strategies reduced such perceptions for all social perceivers. Given the IEE has been shown to characterize social perception more

generally, it is likely that strategies that soften the IEE would influence both those in the rejected and observer vantage point conditions alike.<sup>4</sup>

## Method

**Participants and design.** Four hundred seventy-seven Americans were recruited from AMT to take part in exchange for payment. We used a 2(vantage point: rejected or observer) X 2(valence: positive one-person exclusion or negative one-person exclusion) X 4(strategy: control, reprimand, justify, or kindness) mixed design. The first factor was manipulated between subjects. The second factor was varied within-subjects, as two scenarios included positive one-person exclusion and two described negative one-person exclusion. The third factor was manipulated within-subjects, but we counterbalanced which of the four strategies was matched with which of the four scenarios. Eighty-five participants failed a memory-based attention check and were excluded from all analyses. This left 392 participants in all analyses reported below. Interested readers can find the results of analyses that involve all participants in the Supplemental Materials.

**Procedure and materials.** As in Study 2, participants were asked to vividly simulate four different scenarios that featured an act of one-person exclusion. Each of the four scenarios were presented to participants in a random order. For all participants—regardless of whether they were in the rejected or observer vantage point condition—the social dynamic that unfolded had the same basic structure. First, the person who would ultimately be rejected behaved all inclusively. That is, the (soon-to-be-)rejected first invited the other two people to participate in a fun social activity (i.e., attending a birthday party, grabbing lunch together, going for a cup of

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<sup>4</sup> The goal of this study is to test what strategies reduce perceptions of the included as an excluder, not to ask whether any such reduction partially or completely eliminates the IEE. Study 4, which returns to a lab-based, staged one-person exclusion paradigm, will add an included condition, thus permitting these tests.

coffee, having dinner together). Second, one of those two invitees (the excluder) extended an invitation to the third person (the included), but not to the rejected. In the two positive one-person exclusion scenarios, the invitation was for an enticing, pleasant activity (i.e., a birthday party or a dinner); in the two negative one-person exclusion scenarios, an unappealing, arduous activity (i.e., helping the excluder move or build IKEA furniture). Although both the included and the excluder were always described using third-person descriptors (e.g., “Person J” and “Person K”), we manipulated vantage point by describing the rejected person as “You” (rejected vantage point) or with another third-person descriptor (observer vantage point). See the OSF page for the exact wording for each scenario.

In each scenario, it became clear that the rejected learned that the excluder had previously excluded the rejected by including only the included. For example, in one scenario, participants in the rejected [observer] condition learned, “While you [they] are all at a workout a few weeks later, it becomes clear from a conversation that Person J invited and hosted Person L for dinner, but didn't invite you [Person K].” Making explicit that the one-person exclusion was common knowledge set the stage for the included to potentially act. The scenario concluded with no information about the included’s next move (control strategy condition)<sup>5</sup> or with information that the included had engaged in one of the three strategies (reprimand, justify, or kindness strategy conditions).

When the included was said to reprimand the excluder, the included indicated to the rejected that they should have included the rejected as well (e.g., “In class, Person L tells Person J that Person J should have invited Person K [you] over for dinner as well.”). In the justify

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<sup>5</sup> This is premised on the assumption that simply providing no information about the included’s response offers a more conservative test than explicitly stating that the included decides not to act. In real life, there is always the uncertainty that an included person who has not yet acted may ultimately act.

condition, the included explained to the rejected that the excluder assumed the rejected would not want to be there (e.g., “In class, Person L tells Person K [you] that Person J did not invite Person K [you] over for dinner because Person J did not think Person K [you] wanted to come.”). Those in the kindness condition expressed disappointment that the rejected had not been included and indicated a hope to socialize soon (e.g., “In class, Person L tells Person K [you] they were disappointed Person K was [you were] not invited to Person J’s for dinner, and that they hope to spend time with you soon.”). We counterbalanced which strategy was associated with which scenario.

At this point, participants completed our two sets of measures that allowed us to extract the two markers of the IEE: perceived exclusive pattern of liking by the included and perceived exclusive pattern of behavioral intentions of the included. Afterwards, participants completed a measure (regarding how satisfied the rejected would likely be with the included’s approach) that is reported and discussed only in the Supplemental Materials.

***Perceived exclusive pattern of liking by included.*** That is, participants indicated how much they thought each person liked the other two on scales from 1 (*not at all*) to 7 (*very much*). How much the included was assumed to like the excluder minus how much the included was assumed to like the rejected reflected the perceived *exclusive pattern of liking*.

***Perceived exclusive behavioral intentions of the included.*** To measure the perceived exclusive pattern of behavioral intentions of the included, we provided the following prompt: “The next time that [the included] decides to organize a social event, how likely is it that [the included] will:” Participants again considered three possibilities: that the included would include only the excluder, only the rejected, or both the excluder and the rejected. As before, how much the included was assumed to be likely to include only the excluder (thereby perpetuating

exclusion) minus include both the rejected and the excluder (thereby behaving all-inclusively) reflected the perceived *exclusive pattern of behavioral intentions*.

## Results

We begin by testing whether the three strategies enacted by the included influence the extent to which the included is perceived to be an excluder, the social misperception that is characteristic of the IEE. In each model, we include one of the two composites. We include three fixed effects: vantage point (+1: rejected, -1: observer), strategy (control, reprimand, justify, or kindness), and valence (+1: positive one-person exclusion, -1: negative one-person exclusion). The model includes all three two-way interactions and the one three-way interaction. Participant and scenario were treated as random factors. To understand whether the strategies influence perceptions of the included as exclusive, we will: 1) probe main effects of strategy, and 2) assess such effects' robustness across our manipulations of vantage point and valence.

**Perceived exclusive pattern of liking by included.** Suggesting that the included's strategy influenced the perceptions of the included as an excluder, we observed a large main effect of strategy,  $F(3, 1162.16) = 47.24, p < .001$ . The size of this strategy effect did not depend on valence,  $F < 1$ . That said, the effect of strategy did depend on vantage point,  $F(3, 1161.78) = 4.18, p = .006$ , an effect that was further qualified by valence,  $F(3, 1446.72) = 3.29, p = .020$ . As can be seen in Table 4, regardless of the combination of valence and vantage point, participants who considered the control (no action) perceived the included as possessing more of an exclusive patterns of liking than did participants who considered an included who reprimanded the excluder,  $ts > 2.62, ps < .009$ , or expressed kindness to the rejected,  $ts > 2.12, ps < .034$ . In other words, the reprimand and kindness strategies reduced perceptions of the included as an excluder. As seen in Table 4, the effectiveness of the justify strategy was less consistent.

**Perceived exclusive behavioral intentions of the included.** Once again, we observed a large main effect of strategy,  $F(3, 1162.49) = 31.79, p < .001$ . This effect was neither qualified by a statistically significant Strategy X Valence interaction,  $F(3, 1425.02) = 1.30, p = .273$ , a Strategy X Vantage Point interaction,  $F(3, 1162.164) = 1.21, p = .305$ , nor a Strategy X Vantage Point X Valence interaction,  $F(3, 1424.28) = 1.50, p = .212$ . For that reason, we probed the effect of strategy by collapsing across the vantage point and valence manipulations. Similar to the effect of strategy on perceptions of the included's social preferences, we found that those in the control strategy condition assumed the included had more exclusive behavioral intentions than did those who reprimanded the excluder,  $t(1163.21) = 8.97, p < .001$ , and who expressed kindness to the rejected,  $t(1163.17) = 7.20, p < .001$ . Although we found that justifying the excluder's behavior did reduce perceptions of the included exclusive intentions,  $t(1161.34) = 3.50, p < .001$ , this strategy was less effective as compared to the other two,  $ts > 3.70, ps < .001$ .<sup>6</sup>

## Discussion

The present study built on the evidence that the involuntary excluder effect—a tendency for social observers to misperceive the included as being exclusive themselves—robustly emerges in both positive one-person exclusion (Critcher & Zayas, 2014) and negative one-person exclusion (Studies 1 and 2). Although participants in Studies 1 and 2 thought that the included would not and should not get involved, Study 3 found that the included's enactment of these very strategies reduced perception of the included as having exclusive social preferences and intentions. We found middling support for the possibility that justifying the excluder's actions

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<sup>6</sup> Whereas in Study 2, we found evidence that those in the rejected vantage point condition displayed more cynical perceptions of the included than did those in the observer vantage point condition, Study 3 replicated this finding only for perceived exclusive pattern of behavioral intentions,  $F(1, 390.44) = 4.13, p = .043$ , but not the perceived exclusive pattern of liking,  $F < 1$ . This mixed evidence is reminiscent of Critcher and Zayas's (2014) results, and reinforces that the IEE is mostly a social perception phenomenon.

can reduce the IEE. We observed more robust and consistent evidence—2.8 times stronger (on average)—that reprimanding the excluder or expressing kindness to the rejected might address the IEE.

This highlights a negative consequence of the included having little pressure to act: The very tactics that previous participants were reluctant to embrace had the potential to reduce the social misconceptions that underlie the involuntary excluder effect. Of course, one may wonder whether the included's disinclination to respond to the one-person exclusion will not impede, but only stall, correction of the IEE. Two reasons leave us pessimistic. First, Critcher and Zayas (2014) found that when the rejected had the opportunity to interact with the included, they were predisposed to interpret ambiguous slights from the included (e.g., needing to cut short an interaction) through a cynical lens. This highlights how the IEE can linger, and perhaps lead to long-term social estrangement through a self-fulfilling prophecy. Second, even if the included *does* eventually include the rejected on some outing, the rejected is unlikely to know whether such invitations are rarer (or less attractive) than those extended to the excluder. Few people have full visibility into others' social calendars. After stewing for a while on one's own (presumed) disfavored status, the rejected may find that even an invitation from the included is insufficient to correct the misperception that they are disfavored. In combination, this highlights why there is likely some urgency in correcting the mistaken inferences that one-person exclusion can cause—if possible, at the source. Study 4 further probes the possibility of such simple corrections.

#### Study 4

Thus far, we have made progress toward our first three goals. More specifically, we have shown that the IEE is particularly robust, emerging not only in positive but negative one-person

exclusion. Furthermore, we have found that the included faces little pressure—internal or external—to actively respond to one-person exclusion. And finally, Study 3 demonstrated the potential of the included, through what could be dismissed as cheap talk (e.g., How often do people politely promise to “grab coffee” with others and have no intention of following through?), to reduce perceptions of the included as an excluder.

Whereas Study 3’s results are heartening, they raise questions about how effective the strategies might be in reducing the IEE if participants *themselves* naturally employed them. That is, Study 3 standardized in the context of scenarios how the included enacted each strategy. This feature was ideal for an initial test of the strategies’ effectiveness, as it ensured that all participants were exposed to identical information about the social dynamic. Of course, in practice, communication—particularly in delicate interpersonal situations—can take many shapes and forms. Thus, a more naturalistic test of the strategies’ effectiveness would entail allowing actually included participants to compose messages—in their own words—that aimed to enact one of the strategies.<sup>7</sup> Given that Study 3 showed that kindness and reprimand were more effective than justify in reducing perceptions of the included as an excluder, Study 4 offers a test of the efficacy of these two strategies in a two-stage laboratory experiment.

As in Study 1, participants in Study 4 took part in an ostensibly three-person paradigm in which one person had the option of including one or both of the others. Unlike Study 1, Study 4 featured positive one-person exclusion: What was actually a preprogrammed computerized participant either included (*included* role condition) or rejected (*rejected* role condition) participants from a *fun* task (rating humorous internet memes). Data collection for Study 4

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<sup>7</sup> Furthermore, for a reprimand of the excluder to influence the rejected’s perceptions, the rejected would of course either need to see, hear, or learn that such a reprimand had happened. In Study 3, the reprimand was described as happening in person. In Study 4, this will occur through an electronic message that the rejected is able to see.



comprised two waves: data for each wave was collected across the entirety of one university semester. All participants in the first wave were in the *included* role condition, whereas all participants in the second wave were in the *rejected* role condition. That participants were included or rejected enabled a direct test of the IEE by benchmarking the rejected's perceptions of the included's feelings and intentions against the included's actual feelings and intentions.

In the first wave, included participants were randomly assigned to one of three *strategy* conditions: reprimand, kindness, or control. After reading that they had been selected by an interviewer to participate in the fun meme rating task, these participants completed our main two sets of dependent measures: the exclusive pattern of liking and exclusive behavioral intentions. Then, included participants in the reprimand and kindness conditions were nudged to send a publicly viewable message—in their own words—to the rejected (either reprimanding the excluder for not including the rejected or expressing kindness to the rejected). Participants in the included control condition received no such instructions. In the second stage, rejected participants—after reading that they had not been included in the fun meme rating task—were randomly assigned to see one of the Wave 1 participants' reprimand message, kindness message, or no message at all. Thus, rejected participants (in Wave 2) saw messages that included participants (in Wave 1) had composed. Then, rejected participants completed the same two sets of dependent measures as the included. Comparing the size of the IEE across each of the three strategy conditions (reprimand, kindness, control), allowed us to test how effective the strategies—when carried out by included participants themselves—were in reducing the IEE.

## **Method**

**Participants.** Three hundred ninety-three undergraduate students from an American university participated in exchange for course credit. All participants were assigned to one of six

conditions in a 2(role: included or rejected) X 3(strategy: control, reprimand, or kindness) full-factorial design. Included participants were randomly assigned to one of the three strategy conditions. Rejected participants were yoked to a randomly selected included participant,<sup>8</sup> which determined their strategy condition.

**Procedure and materials.** The initial procedure was similar to that used in Study 1. Upon arriving at the laboratory, participants were greeted by a research assistant who announced that the session would begin when all three scheduled participants had arrived. Participants—after being led to individual rooms—were told that the focus of the session was on “communication and decision-making in group settings.” After a few minutes—regardless of whether three participants were actually present—the experiment began.

Participants first completed the number guessing task used in Study 1 (for which participants always were told that they did not have the closest guess). Next, participants read how *the interviewer* would select three questions that they themselves and another participant (i.e., the two *answerers*) would complete. As in Study 1, participants read that—on the basis of those answers—the interviewer would decide which of the answerers to include in the next task. However, unlike in Study 1, the next task was designed to be appealing: It ostensibly involved participants rating and discussing some of the funniest memes from 2018.

Participants then had 60 seconds to respond to each of the questions that the interviewer had supposedly selected and then 30 seconds to view the other answerer’s (actually preprogrammed) responses to those questions. Next, participants were directed to a screen with a

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<sup>8</sup> Independent coders—who were blind to hypotheses—agreed that thirteen included participants wrote invalid messages (gibberish or messages that did not follow instructions). These 13 participants—along with 2 additional participants who, due to experimenter error, were not yoked with a rejected participant—were not matched with a rejected participant and thus were not included in the analyses. This left 378 participants in all analyses involving the included role.

loading gif that clarified that the interviewer was deciding whether to include one (or both) of the answerers in the meme discussion task. At this point, the procedure diverged by role condition (included or rejected). We describe each, in turn:

*Wave 1: Included.* After the screen automatically advanced, included participants read that the interviewer had chosen them—and not the other answerer—to participate in the meme discussion task. At this point, included participants completed two sets of dependent measures: one set that related to how much each participant did (or was perceived to) like the other two participants, and another that asked about which of the other participants they planned to include in a separate final task. Although these measures are detailed below, recall that they are crucial for calculating how much the included actually displays an exclusive pattern of liking and exclusive behavioral intentions. For included participants in the control strategy condition, this concluded the study.

Included participants in the other two strategy conditions (reprimand and kindness) were prompted to send a message to one of the other participants in the session. As a reminder, accompanying the prompt was a graphic that depicted a summary of the interviewer’s decision about the meme discussion task (similar to Figure 2). More specifically, participants in the reprimand [kindness] strategy condition were instructed to send a message—in their own words—to the interviewer [the other answerer]:

“As part of this study, we are interested in how people communicate in different social situations. We’d like to see how you would send a message to the interviewer (the other answerer) communicating the following: *that the interviewer should have included the other answerer in the meme discussion task [that you were disappointed that they were not included in the meme discussion task, and that you hope to do something similar with*

*them*]. More specifically, we are interested in the content of your message – how you go about communicating this to the interviewer (the other answerer).”

After participants typed and submitted their message, participants saw a loading gif that reinforced that their message was being sent.

Next, participants in the reprimand and kindness strategy conditions were asked to reflect on the message that they had just sent. These participants completed three exploratory measures that assessed: (1) how much sending the message made them feel (un)comfortable, (2) how much the approach that they were asked to take felt (un)natural, and (3) if they were in a similar situation again—and were not instructed on how to respond—how willing they would be to take the general approach that they were instructed to take. Responses were made on 7-point scales anchored at 1 (*extremely uncomfortable / extremely unnatural / not at all willing*) and 7 (*extremely comfortable / extremely natural / extremely willing*).

*Wave 2: Rejected.* Each rejected participant was yoked to a randomly selected included participant. This determined both the strategy that the rejected was exposed to as well as (when applicable) the specific message content that the rejected saw.

First, all rejected participants saw a screen indicating that the interviewer had chosen the other answerer—and not them—to participate in the meme discussion task. Next, rejected participants in the control strategy condition completed the two sets of dependent measures that serve as markers of the IEE: the perceived exclusive pattern of liking by the included and the perceived exclusive behavioral intentions of the included. That is, these participants simply saw that they had been excluded by the interviewer and then completed the two key dependent variables. (For these participants, the yoking itself was not meaningful beyond condition assignment.)

However, rejected participants in the reprimand and kindness strategy conditions were told that the other answerer was being given a chance to direct a message at “the interviewer or to you.” These participants saw a loading screen with a gif that reinforced that the other answerer—if they wished—could compose and send such a message. After advancing the screen, participants saw a copy of the message that the yoked included participant had composed and directed either at the participant themselves (kindness message) or at the interviewer (reprimand message). After exposure to one of these messages, reprimand and kindness rejected participants completed the two sets of dependent measures: the perceived exclusive pattern of liking by the included, and the perceived exclusive behavioral intentions of the included.

***Exclusive pattern of liking by included.*** Participants indicated how much they themselves liked each of the other two participants. They also estimated how much the other two participants liked each other and liked the participants themselves. All six measures were responded to on 7-point scales anchored at 1 (*not at all*) and 7 (*very much*). An (actual or estimated) exclusive pattern of liking was calculated by subtracting the included’s (actual or perceived) liking of the rejected from the included’s (actual or perceived) liking of the excluder.

***Exclusive behavioral intentions of the included.*** Participants read that the included would lead a fun final activity in which invited participants would get to consider funny newspaper cartoons. Rejected participants considered how likely it was that the included would include: only the excluder, only the rejected, or both the excluder and the rejected. These responses were made on 7-point scales anchored at 1 (*not at all*) and 7 (*extremely*). Included participants expressed their own behavioral intentions on these same three measures. An (actual or estimated) exclusive pattern of behavioral intentions was calculated by subtracting the included’s (actual or estimated) intention to include both the excluder and the rejected from the

included's (actual or estimated) intention to perpetuate the exclusion (by including only the excluder).

## Results

To begin, we examined if the size of the IEE—i.e., a perception that the included possessed more exclusive patterns of liking and behavioral intentions than the included actually reported—depended on the strategy condition that participants were randomly assigned to. That is, would seeing that the included sent a message—either reprimanding the excluder or expressing kindness to the rejected—reduce the extent to which the included was misperceived as an excluder?

**Exclusive pattern of liking by included.** We submitted the exclusive pattern of liking composites to a two-way 2(role: included or rejected) X 3(strategy: control, reprimand, or kindness) ANOVA. This revealed a marginally significant interaction between Role and Strategy,  $F(2, 372) = 2.90, p = .056, \eta_p^2 = 0.015$  (see Table 5). Given our a priori predictions, we decomposed this interaction by conducting a series of planned contrasts that, in essence, tested for different 2 (role) X 2 (strategy) interactions. This allowed for more focused contrasts of how the included's strategy influenced the size of the IEE.

First, we observed a significant 2 (role: included or rejected) X 2 (strategy: control or reprimand) interaction,  $F(1, 372) = 4.60, p = .033$ . In the control strategy condition, rejected participants assumed that the included held a more exclusive pattern of liking than the included reported,  $t(372) = 2.33, p = .020, d = 0.41$ , therein displaying the involuntary excluder effect. But when the included reprimanded the excluder, this misperception evaporated,  $t < 1, d = -0.14$ .

Second, we did not observe a statistically significant 2 (role: included or rejected) X 2 (strategy: control or kindness) interaction,  $F < 1$ . In other words, merely expressing kindness did

not reduce perceptions of the included as holding an exclusive pattern of liking: The rejected still believed that the included held a more exclusive pattern of liking than the included reported,  $t(372) = 2.22, p = .027, d = 0.36$ .

We also observed a significant 2 (role: included or rejected) X 2 (strategy: kindness or reprimand) interaction,  $F(1, 372) = 4.19, p = .041$ . As foreshadowed by the patterns observed above, this reflected that the reprimand strategy was more effective than the kindness strategy at addressing false perceptions that the included held an exclusive pattern of liking.

**Exclusive behavioral intentions of the included.** Did the included's message strategy change the extent to which the rejected (falsely) perceived the included to hold exclusive behavioral intentions? To address this question, we submitted the exclusive pattern of behavioral intentions composites to a two-way 2(role: included or rejected) X 3(strategy: control, reprimand, or kindness) ANOVA. This revealed a significant interaction between Role and Strategy,  $F(2, 372) = 7.67, p = .001, \eta_p^2 = 0.040$  (see Table 5). As before, we conducted a series of planned contrasts that allowed us to compare each pair of strategy conditions.

First, we observed a significant 2(role: included or rejected) X 2(strategy: control or reprimand) interaction,  $F(1, 372) = 14.58, p < .001$ . In the control condition—in which there was no communication between the included and the rejected—we replicated the IEE: Rejected participants believed that the included would display more exclusive behavioral intentions than the included actually reported,  $t(372) = 5.16, p < .001, d = 1.00$ . However, when the included reprimanded the excluder for not including the rejected in the meme discussion task, the IEE was eliminated,  $t < 1, d = -0.05$ .

Although the kindness strategy did not influence the IEE with regard to a perceived exclusive pattern of liking, a 2(role: included or rejected) X 2(strategy: control or kindness)

interaction emerged in this case,  $F(1, 372) = 7.17, p = .008$ . That is, the included's expressing kindness to the rejected also eliminated the IEE with regard to an exclusive pattern of behavioral intentions,  $t(372) = 1.48, p = .140, d = 0.27$ .

Finally, we did not observe a statistically significant 2(role: included or rejected)  $\times$  2(strategy: control or kindness) interaction,  $F(1, 372) = 1.50, p = .221$ . In other words, the two strategies—reprimand and kindness—did not significantly differ in the extent to which they corrected the exaggerated perception that the included held an exclusive pattern of behavioral intentions.

## **Discussion**

Study 4 offered a comprehensive—and naturalistic—test of the included's capabilities to reduce the IEE. The results were highly encouraging: Nudging the included to speak up was highly effective in correcting the rejected's misperception. That said, there were some slight differences in the extent to which the two strategies—reprimanding the excluder or expressing kindness to the rejected—were effective. Taken together, the results of Studies 3-4 suggest that reprimanding the excluder might be a (slightly) more successful approach than expressing kindness to the rejected. This may be because reprimand represents a more assertive, direct signal of support than kindness. This interpretation is consistent with research that has shown how directly confronting individuals who express prejudice can be a powerful signal of one's allyship (Chaney & Sanchez, 2018; Gulker, Mark, & Montieth, 2012). We return to this point in the General Discussion, in which we more carefully consider what each of the different approaches signal to the rejected.

One further feature from Study 4 warrants brief mention: the exploratory measures that included participants completed after they enacted the strategies. As a reminder, participants



indicated how uncomfortable and unnatural they were to carry out, as well as how willing they would be to enact their assigned strategy in the future. Although we provide information on these responses in the Supplemental Materials, we do not discuss them further in the main text given there is not a normative benchmark by which to know whether enacting the strategies were surprisingly easy to carry out—i.e., whether the experience was less uncomfortable than the included had expected they would be. Study 5 addresses this question directly, and in so doing examines whether this might explain the included's prospective reluctance to carry them out.

### Study 5

The results of Studies 1-4 highlight a tension, one that offers both pessimism and optimism regarding the ability to correct the involuntary excluder effect. That is, the included—the person misperceived as an excluder—felt little inclination to speak up and insert themselves in the dynamics of one-person exclusion (Studies 1-3). Furthermore, others—both the rejected and observers—did not think that the included would or should do this. Yet, when the included actually did speak up either to directly confront the excluder or reach out to the rejected, they were largely effective in correcting the misperception at the heart of the IEE. The efficacy of the included's actions in reducing perceptions of the included as an excluder was evident both in scenarios that standardized this outreach (Study 3) and a yoked study that allowed the included to communicate in their own words (Study 4). These findings raise an important question: What is it about the prospect of intervening that leads the included to think that *no* action is warranted?

To answer this question, Study 5 used a forecaster-experiencer paradigm that focused squarely on the included's anticipated and experienced response to intervening in one-person exclusion. Of central interest are possible forecaster-experiencer mismatches: fears that forecasters may hold about intervening that, among experiencers, do not come to full fruition.

One focuses on the *experience* of using one of the active strategies; here, we ask whether the included forecast it will feel more uncomfortable or unnatural to execute a strategy than actually turns out to be the cases. The second focuses instead on the perceived *efficacy* of being proactive: We ask whether the included starts out more pessimistic that such an approach could be executed with tact as compared to their feelings after they enact a strategy. This allows us to ask whether: 1) the included's preemptive fears are exaggerated, and 2) whether such heightened fears explain their initial reluctance to intervene.

Consider the first aspect, which centers on the included's forecasts of how enacting a strategy will *feel*. In general, wading into social drama is not something that people expect to relish (Latané & Nida, 1981). After all, addressing the excluder or the rejected could be understood as a form of "picking sides," something that bystanders to social drama are often reluctant to do (Leung, 1988). A reprimand—as a direct call-out of the excluder—might seem overly confrontational in prospect. And even kindness—as a straightforward display of compassion—might seem likely to feel awkwardly saccharine or even condescending. All of this would predispose the included to believe that enacting the strategies would be experientially uncomfortable and unpleasant.

Now, consider a distinct—but not necessarily mutually exclusive—possibility: That the included fear that they may not execute a strategy efficaciously. After all, stepping into the middle of a conflict is not guaranteed to turn out well. Efforts to diffuse conflict can be met with hostility and skepticism (Ross & Ward, 1995). At a more granular level, the included might worry that a reprimand might only *inflame* tensions: aggressively inserting oneself into (what might appear to be) others' business can often do more harm than good. And in some cases, even providing explicit support for others—via an expression of kindness—can backfire (Bolger,

Zuckerman, & Kessler, 2000; Shrout, Herman, & Bolger, 2006). All of this may fuel fears in the included that they will not be able to execute these strategies with aplomb.

In Study 5, all participants experienced a staged episode reflecting one-person exclusion from a positive event. All participants were the one who was included in a fun, pleasant task, while another (fictional) participant was excluded. The included either considered (as a forecaster) or actually carried out (as an experiencer) one of the two strategies examined in both Studies 3 and 4: reprimand or kindness. Forecasters estimated the likely experience and efficacy of taking their assigned approach. Experiencers, who had just taken one approach or the other, reported on these same variables. Finally, all participants indicated whether they *should* and *would* carry out that strategy in a similar one-person exclusion situation they might subsequently encounter.

This design allowed us to answer three key questions. First, we examined whether forecasters expressed concerns—about the experience and efficacy of acting in response to one-person exclusion—that were overblown compared to what experiencers reported. Second, we tested if actually carrying out a strategy—that is, having the experience of reprimanding the excluder or expressing kindness to the rejected—increased participants' reported willingness to take such an approach in the future. And third—if it were indeed the case that the included's concerns about the experience and/or efficacy of enacting the strategies were prospectively overblown—we could analyze whether a diminishment in these worries would explain any increase in experiencers' willingness to intervene in response to one-person exclusion.

## **Method**

**Participants.** Three hundred thirty-six participants were recruited from AMT to take part in exchange for payment. All participants were randomly assigned to one of four conditions in a

2(role: forecaster or experiencer) X 2(strategy: reprimand or kindness) full-factorial design.

Nine-two participants failed a memory-based attention check and were excluded from all analyses. This left 244 participants in all analyses reported below. In the Supplemental Materials, we report the results of analyses with all participants. Those results are consistent with the results reported below.

**Procedure and materials.** Participants first learned that they would be participating in a session on “communication and decision-making in group settings.” Ostensibly, each session would have three people. To reinforce this cover story, participants initially saw a loading gif and text that explained that the session would begin once two more AMT workers joined the session. After twelve seconds, a message appeared informing participants that two other workers had joined the session.

The procedure began much as did Study 4. That is, participants completed a number-guessing task, which always landed participants in the role of answerer (instead of interviewer). Participants learned that the interviewer would ask each answerer a series of questions and select one or both of the answerers to participate in an appealing meme-discussion task. And following the interview (in which participants wrote their own answers and saw ostensible responses from the other answerer), participants always learned that they themselves and not the other answerer would complete the appealing task with the interviewer.

At that point, all participants saw a graphic that illustrated the interviewer’s decision regarding participation in the meme discussion task. It reinforced that the interviewer had selected the participant and not the other answerer to participate (see Figure 2, for a reminder). Unlike in Study 4, all participants received information that cued them to different ways in which they might respond:

“For example, right now, you could take the following approach(es) in communicating with the other individuals in this session:

Approach A – You could send a message to the interviewer communicating the following:

*That the interviewer should have included the other answerer in the meme discussion task.*

Approach B – You could send a message to the other answerer communicating the following:

*That you were disappointed that they were not included in the meme discussion task, and that you hope to do something similar with them.*

Approach C – You could do nothing (and stay out of the situation).”

What participants saw next varied by *role* condition (forecaster or experiencer). Forecasters were asked to “consider being instructed to take a specific approach in communicating with other individuals in this session.” Experiencers were instead simply instructed to take a specific communication approach. Which one—A (reprimand) or B (kindness)—they were asked to consider (or actually enact) was randomly assigned as well.

Participants in the reprimand [kindness] condition saw the following instructions, which were direct instructions to experiencers but also presented (for their consideration) to forecasters:

“As part of this study, we are interested in how people communicate in different social situations. We’d like to see how you would send a message to the interviewer [the other answerer] communicating the following: *That the interviewer should have included the other answerer in the meme discussion task* [*That you were disappointed that they were not included in the meme discussion task, and that you hope to do something similar with them*].

More specifically, we are interested in the *content* of your message – how you go about communicating this to the interviewer [the other answerer]. So, in your own words, please compose a message to the interviewer [the other answerer] that communicates that the

interviewer should have included the other answerer in the meme discussion task [you were disappointed that they were not included in the meme discussion task, and that you hope to do something similar with them.”

Of course, forecasters merely considered sending a message to the interviewer or the other answerer; they did not have an opportunity to send such a message. Experiencers instead saw a text box at the bottom of the instructions that allowed them to compose a message that would be sent to the interviewer or the other answerer. After typing their message in the text box, experiencers advanced to a screen with a loading gif that reinforced that their message was being sent to either the interviewer or the other answerer.

Next, participants completed three sets of dependent measures presented in random order. Each measure asked participants to evaluate the strategy—either reprimanding the interviewer or expressing kindness to the other answerer—that they were asked to consider taking (forecasters) or instructed to actually take (experiencers):

*Experience composite.* Two items measured participants’ assessment of how enacting the strategy itself would go (forecasters) or how they felt it went (experiencers). A first item asked participants: “How much [did]/[would] taking this approach make you feel comfortable or uncomfortable?” A second item asked participants: “How much [did]/[would] this approach feel natural (like something you would feel fine doing) or unnatural to carry out?” These items were completed on 7-point scales anchored at 1 (*extremely uncomfortable/extremely unnatural*) and 7 (*extremely comfortable/extremely natural*). The two items were highly correlated ( $r = .80$ ) and were averaged to form an *experience composite*.

*Efficacy composite.* Participants completed two additional items that assessed the extent to which the strategy they considered taking or actually took would actually play out well, both

in terms of its (1) tactful implementation and (2) subsequent consequences. The first item asked participants: “How confident are you that you [did; would] tactfully pull off this approach?” The second item asked participants: “Do you feel like the outcome of this approach [will; would] ultimately be positive or negative?” Both items were completed on 7-point scales anchored at 1 (*not at all confident/extremely negative*) and 7 (*extremely confident/extremely positive*) and were averaged to form a *perceived outcome success composite* ( $r = .65$ ).<sup>9</sup>

*Strategy endorsement composite.* Participants completed two items that were designed to assess how much they believed they *would* and *should* enact the strategy that they considered or carried out. The first item began by asking participants to consider being in a similar situation in the future. Then, it asked participants to indicate “If you weren’t instructed on how to respond, how likely would you be to take this general approach?” The second item asked participants: “Do you feel like this approach is what you should take in this type of situation?” Both items were completed on 7-point scales anchored at 1 (*definitely would not/definitely should not*) and 7 (*definitely would/definitely should*). These items were averaged to form a *strategy endorsement composite* ( $r = .82$ ).

## Results

To begin, we wanted to assess to what extent participants—as a function of our manipulations—differed in how they evaluated the strategies as effective (efficacy composite), uncomfortable (experience composite), and approaches that they would or should enact in a future situation (strategy endorsement composite). To do this, we submitted each of these three composites to a 2 (role: forecaster or experiencer) X 2 (strategy: reprimand or kindness) ANOVA. In each case, we were particularly interested in the main effect of role, in order to

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<sup>9</sup> A two-factor solution identified the distinctness of these efficacy items from the experience items.

understand whether forecasters' expectations about a strategy differed from experiencers' actual experience having enacted the strategy.

**Experience composite.** We submitted the experience composite to a 2 (role: forecaster or experiencer) X 2 (strategy: reprimand or kindness) ANOVA. We observed a significant main effect of role,  $F(1, 240) = 17.12, p < .001, \eta_p^2 = .067$  (Table 6), but neither a significant main effect of strategy,  $F(1, 240) = 1.71, p = .192, \eta_p^2 = .067$ , nor a significant Role X Strategy interaction,  $F < 1$ . That is, relative to participants who actually enacted one of the strategies, forecasters overestimated the extent to which stepping in would be uncomfortable.

**Efficacy composite.** Did forecasters think they would be able to pull off a given strategy with the same degree of success that experiencers ultimately reported? In short, no: We observed a main effect of role,  $F(1, 240) = 20.95, p < .001, \eta_p^2 = .080$ . Although not of central interest, we also observed a main effect of strategy,  $F(1, 240) = 4.69, p = .031, \eta_p^2 = .019$ . However, we did not observe a statistically significant Role X Strategy interaction,  $F < 1$ . (See Table 6 for a more complete unpacking of means by conditions.) In other words, those who actually reached out with a message of reprimand or kindness felt their message would play out better than parallel forecasters had predicted.

**Strategy endorsement composite.** Finally, to test if forecasters and experiencers differed in their willingness to enact one of the strategies in the future, we submitted the strategy endorsement composite to a third 2(role: forecaster or experiencer) X 2(strategy: reprimand or kindness) ANOVA. Forecasters and experiencers did differ in the extent to which they endorsed enacting their assigned strategy,  $F(1, 240) = 10.07, p = .002, \eta_p^2 = .040$  (see Table 6). Experiencers—more so than forecasters—endorsed intervening in similar situations in the future.



Neither the main effect of strategy,  $F(1, 240) = 3.12, p = .079, \eta_p^2 = .013$ , nor the Role X Strategy interaction,  $F < 1$ , reached conventional levels of significance.

**Mediation.** Results from the above three models triangulate to reinforce this message: Relative to participants who actually enacted one of the strategies, forecasters overestimated the extent to which the experience of stepping into the social dynamic would be uncomfortable and awkward (experience composite), underestimated the extent to which they would execute the strategy with success (efficacy composite), and expressed less willingness to take their assigned approach in the future (strategy endorsement composite). The size of these misforecasts did not significantly vary by strategy (reprimand or kindness).

Did experiencers' reports that enacting the strategies was not as bad as forecasters feared (either with regard to the experience or perceived efficacy) explain experiencers' greater interest in enacting the strategy in the future? We regressed the strategy endorsement composite on the experience composite, the efficacy composite, role condition, strategy condition, and the interaction between role and strategy. We observed a sizable main effect of the experience composite,  $\beta = 0.61, 95\% \text{ CI} = [0.49, 0.73], t(238) = 10.05, p < .001$ . We also observed a more modest, but still significant, main effect of the efficacy composite,  $\beta = 0.18, 95\% \text{ CI} = [0.06, 0.30], t(238) = 2.87, p = .005$ . Note that the confidence intervals around the standardized betas do not overlap, speaking to the much stronger predictive power of the experience over the efficacy composite. Consistent with the possibility that the two composites fully mediated the forecaster-experiencer gap, the effect of role was no longer significant,  $t < 1$ . Furthermore, Hayes's (2014) PROCESS macro confirmed the significance of each indirect effect of the forecaster-experiencer gap on strategy endorsement: through the experience composite (95% CI = [-0.4928, -0.1487]) and through the efficacy composite (95% CI = [-0.2030, -0.0011]).

## Discussion

Although the IEE is robust, it is still amenable to correction by simple overtures from the included. Yet, included individuals are reluctant to enact such behaviors. Study 5 explored what may underlie the included's reluctance to proactively respond to one-person exclusion. In particular, the included held—in prospect—magnified worries that were reduced after actually executing a response strategy. More specifically, the included misforecast that the experience and efficacy of their intervention would be worse than was ultimately the case. However, overblown fears about the emotional discomfort of enacting a strategy—more so than doubts about a strategy's efficacy—drove the included's action inertia.

Of course, these findings raise a deeper question: What in particular is the included failing to appreciate in prospect that they *do* appreciate following experience? To more precisely investigate this, we conducted a follow-up study (Supplemental Study C) with 214 American undergraduates ( $N = 195$  after memory-based attention-check exclusions). All participants followed the procedure for the reprimand strategy condition. We focused on the reprimand strategy in particular for two reasons. First, although our findings in Study 5 were not significantly moderated by the strategy (kindness or reprimand), the forecaster-experiencer gap was directionally (but not significantly) smaller for reprimand. Supplemental Study C used a within-subjects experiencer-forecaster design, which offered greater statistical power to examine misforecasts about use of the reprimand strategy. Second, combining across Studies 3 and 4, we found the most consistent evidence that the reprimand strategy can address the IEE. As a result, better understanding what the included prospectively misconstrue about enacting the strategy is particularly useful.

In addition to the two-item experience and efficacy composites used in Study 5, we added in two additional composites that could yield insights into how forecasters were mispredicting the very nature of the reprimand message itself. More specifically, both forecasters and experiencers (in this case, manipulated within-subjects) reported how much their message would come (or did come) across as polite and aggressive (reverse-scored), as well as how much their message would be (or was) articulate and eloquent. This permitted a more nuanced test of what forecasters got wrong about the nature of their message—whether they thought they were misforecasting the *civility* of their message (polite, not angry) and/or the *verbal adroitness* of their communication (articulate, eloquent).

First, we examined the measures we used in Study 5: In prospect (compared to after executing the reprimand), the reprimand strategy seemed likely it would be more experientially uncomfortable, paired  $t(194) = 6.55, p < .001, d = 0.47$  and that it would ultimately prove less efficacious, paired  $t(194) = 6.36, p < .001, d = 0.46$ . But our new measures showed that what forecasters were mispredicting was not their ability to communicate in an articulate or eloquent fashion,  $t < 1, d = 0.06$ , but instead their ability to come off as civil and polite, paired  $t(194) = 6.54, p < .001, d = 0.47$ . The means are reported in the Supplemental Materials. In other words, the included failed to appreciate how much in practice they could navigate communicating in a reasonably agreeable way.<sup>10</sup> And as Study 4 found, the reprimands that people naturally generate—even if they are more civil and polite than first expected—are quite effective in correcting the IEE.

## General Discussion

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<sup>10</sup> Given that expressing kindness to the rejected has less potential to be uncivil, we doubt that forecasters' hesitancy about using that strategy takes the same form. Determining what underlies reluctance to use that strategy is a complementary question we leave to future research.

Social exclusion can be a potent act of social aggression. But what it signals about social attitudes and intentions of those it touches—particularly in the case of one-person exclusion—can be tricky to decipher. Previous research has demonstrated that in one-person exclusion, social perceivers (both those rejected and third-party observers) assume the included has more exclusive intentions than they actually report. But little is known about the generality of the involuntary excluder effect (the IEE), how those involuntarily drawn into the exclusionary dynamics are inclined to respond, what can be done to clear up the misunderstanding, and what barriers may prevent this from happening. To begin, we briefly review our empirical findings that made progress in addressing all four of these previously unexplored issues.

First, we found that the IEE is much broader than previously demonstrated, in that it characterizes social perception of both positive *and* negative one-person exclusion (Studies 1-2). In other words, even when the included was offered an invitation that was actually an onerous request, they were still seen as more of an exclusive ally of the excluder than was actually the case. This further reinforces the hypersensitivity of the ostracism detection system and the robustness of the involuntary excluder effect. Second, we identified that the included is not under pressure—either from themselves or others—to intervene in the dynamics of one-person exclusion (Studies 1-3; Supplemental Studies A and B). Instead, those considering or experiencing one-person exclusion from the perspective of the included, the rejected, or an outside observer were unified in thinking the included would and should do nothing. In combination, these first two foci are potentially worrisome. If the IEE (a misperception about the included) is remarkably robust, and the included is inclined to remain silent, it raises the possibility that the included may be foregoing relatively simple actions that might have the potential of remedying the social misunderstanding.

Our third focus more directly explored this tension: We explored directly whether the included can indeed reduce perceptions of themselves as an excluder through strategies—*justifying* the exclusion, *reprimanding* the excluder, or expressing *kindness* to the rejected—they reported being disinclined to take. In scenarios that standardized the included’s execution of the strategies, we found that reprimand and kindness were most effective in reducing the exclusive social perceptions that characterize the IEE (Study 3). Study 4 built on this insight by using a two-wave, yoked laboratory study in which the included were nudged to—in their own words—reprimand the excluder or express kindness to the rejected. Although both strategies were effective in correcting at least one of two symptoms of the IEE (exaggerating the included’s exclusive pattern of liking and exclusive pattern of behavioral intentions), we found some evidence that reprimands’ effects were more robust. Fourth, Study 5 (and a follow-up, Supplemental Study C) offer evidence that the included’s action inertia was mostly strongly tied to (mis)forecasts about the *experience* of intervening, but also weakly (though still significantly) tied to concerns about the *efficacy* of any intervention. That is, until the included actually carried out one of the strategies, they clearly overestimated just how uncomfortable and unnatural it would be to carry one out. Such misforecasts primarily explained why the included were initially so reluctant to intervene.

Consider how these final findings complement previous efforts that have localized affective forecasting errors elsewhere. One class of such findings has focused on how people mispredict the duration of an event’s impact on one’s affective well-being (e.g., Wilson & Gilbert, 2003). In such studies, people correctly construe the focal emotion-eliciting event (“*Getting tenure will feel phenomenal*” or “*If my team loses, I’ll feel crushed*”), but they fail to appreciate how it will fade in prominence over time (“*Back to teaching and committee work, I*

*suppose*”) or be blunted by the psychological immune system (“*This gives us valuable time to rest and rebuild for next season*”; Gilbert, Driver-Linn, & Wilson, 2002; Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998). A second class of such findings shows people fail to appreciate how others will actually respond during social dynamics. For example, people are surprised by how kindly strangers respond to an attempt to strike up a conversation (Epley & Schroeder, 2014) or how generously people tend to give up their time when asked (Flynn & Lake, 2008). In such cases, people’s fears about how *others* will respond are typically unrealized. The present findings instead focus on how people prospectively misconstrue *their own* actions. For example, forecasters underappreciated how much reprimanding an excluder would actually be carried out with politeness and civility. We suspect future research will identify other ways in which people’s abstract plans feel prospectively intimidating before they take the form of more concrete and well-executed behaviors. And as the present work demonstrates, such misconstruals may be costly—for example, by discouraging actions that could correct social misperceptions.

### **Implications of the Present Research And Open Questions for Future Research**

Although the present research documented the robustness of the IEE (across both positive *and* negative one-person exclusion) and identified the included’s counterproductive (and explainable) reluctance to intervene, we proceed by giving more consideration to what the present findings suggest regarding the best way out of this conundrum. We begin by discussing in greater detail how the included should respond to one-person exclusion before turning to a more in-depth consideration of how to best motivate the included to actually take action. Finally, we consider whether the IEE is the only social misperception that arises from one-person exclusion. Especially with the present work’s examination of *negative* one-person exclusion (in

which the excluder spares the rejected from a taxing chore), we consider whether perceptions of the excluder—and not merely the included—may be too cynical.

**The included's proactive strategies.** We ultimately identified and tested three different ways in which the included might intervene in the dynamics of one-person exclusion: expressing *kindness* to the rejected, *reprimanding* the excluder, or *justifying* the exclusion to the rejected. In considering these strategies, we detailed what makes them similar to each other as well as different. Two strategies entail the included communicating with the rejected with other-regard (kindness, justify), whereas the other involves a more combative communication with the excluder (reprimand). Two strategies focus squarely on the previous exclusion (reprimand, justify), whereas the other also focused on future social interaction (kindness). Two strategies communicate that the exclusion should not have happened (kindness, reprimand), whereas the other encourages reappraisal of the exclusion as a benign misunderstanding (justify).

It is notable that it is the final distinction that separates the two approaches (reprimand and kindness) that tended to reduce perceptions of the included as an excluder more effectively than did the other (justify). This may provide hints as to why there was meaningful variation in how effectively the three strategies reduced the IEE. That is, it may be particularly valuable that the included explicitly acknowledge their discomfort with the excluder's actions. If this interpretation is correct, it may offer a useful guideline for how the IEE can best be corrected: Be direct with the rejected about what the included wished had happened, and don't simply help the rejected to rationalize the slight. Of course, just as there are different general *strategies* the included can take (e.g., reprimanding the excluder, justifying the exclusion to the rejected), each of those strategies can be enacted with different specific *tactics* (e.g., a more or less forceful call-

out of the excluder's behavior.) Future research may identify more fine-grained features that determine variation in strategy implementation effectiveness.

**Addressing the included's action inertia.** Our data suggest that a simple prod from the experimenter is sufficient to set the included in motion to correct the IEE. Of course, most real-world situations do not include experimenters who can nudge timely social actions. Thus, still unresolved is how the included—despite their misgivings—can be effectively coaxed to take a more proactive approach to addressing the IEE. We see three general solutions to this lingering challenge:

***Addressing the misconstrual via planning (instead of experience).*** First, there may be additional ways to help the included appreciate how intervention is less daunting than they initially feared. Consider again how the included did not fully appreciate how politely they could reprimand the excluder until they actually tried to do so. More specifically, putting the reprimand into words led the included to appreciate how their reprimands could be more civil than they first thought. Instead of putting these into *spoken* words, the included might benefit from merely thinking through what specifically they plan to say. Making such concrete plans may help prompt the realization that a reprimand need not be as antagonistic as it seems in the abstract, thereby making them more willing to intervene.

This discussion highlights a potential limitation of our staged one-person exclusion paradigms: When the included intervened, they were not able to directly observe how such intervention was taken. On the one hand, this feature is a strength. It allowed us to conclude that it was participants' misforecast of how *they* would actually carry out the strategy, not their groupmates' surprising receptivity to their message, that was behind their initial reluctance to



step in. On the other hand, it means that we do not know exactly how, for example, the excluder would respond to actually being reprimanded.

One possibility is that a reprimand could cause social tensions to escalate. On the other hand, Supplemental Study C did find that the included were surprised by just how politely they executed such reprimands. And in this context, it is worth reemphasizing that Study 4 found that such naturalistically formulated reprimands were effective in addressing the IEE. That reprimands can take a surprisingly gentle form—combined with the strong norms that promote civility (Fraser, 1990)—support the alternative possibility that excluders are quite unlikely to respond explosively when confronted. Whether the excluder will harbor negative feelings toward the included, and how this drawback should be balanced against the included being able to clarify their relationship with the rejected (i.e., address the IEE), involves a tradeoff. Of course, the type of person who most resents their social aggression being called out may be the type of person who is a less appealing relationship partner to begin with.

***Helping the included appreciate that inaction doesn't shield them from involvement.***

The included may feel that by not speaking up, they can avoid the social messiness that exists between the excluder and the rejected. And indeed, staying out of any social drama is typically an enticing course of action, even when the situations one observes are highly unsettling (see Brown, Craig, & Apfelbaum, 2021). Central to the IEE is that the included is (unwittingly) *already* drawn into these dynamics. What is unclear is the extent to which the included fully appreciates this. That is, the less they appreciate that they are misperceived by others as an excluder, the less they may be motivated to act. For these reasons, broader awareness of the IEE may be effective in motivating the included to actively *confront* the misperceptions. That is, once the included appreciates that “doing nothing” does not shield them from being drawn into the

exclusion, this may itself be the nudge they need to take a more proactive—and as the present work suggests, productive—approach.

This broader awareness and understanding of the IEE might also have consequences for the rejected. Making the rejected aware of the IEE might attenuate the rejected's inclination to label the included a social adversary. After all, being made aware of biases often helps people avoid committing corresponding missteps (Soll, Milkman, & Payne, 2016; Yoon, Scopelliti, & Morewedge, 2021). But here, we are actually less optimistic. In this case, the rejected may withhold judgment as they wait for clearer affiliative signals from the included. But as repeatedly demonstrated herein, the included is likely to remain silent on the matter. As a result, initial cynical suspicions regarding the included's status as a foe may return.

***More minimal(ly daunting) strategies?*** Finally, it is possible that even more minimal strategies than those explored herein may effectively reduce the IEE. For example, even subtle nonverbals—such as a nod of the head or a turn of the body—might be effective ways for the included to indicate that they sympathize with and support the rejected (DeWall, Maner, & Rouby, 2009; Parkinson, 2005). The included may be less hesitant to use these approaches. More generally, we encourage future research to consider tradeoffs between the effectiveness of different strategies in addressing the IEE and the included's reluctance to enact them.

**Negative one-person exclusion: Misperceptions of the excluder.** The involuntary excluder effect focuses on how social perceivers—both the rejected and bystanders—(mis)perceive the included. The present work's identification and examination of negative one-person exclusion raises the question of whether such contexts invite another social misperception, one that is an ambiguity that arises in cases of *negative* one-person exclusion in particular. In such situations, *the excluder* might include someone in a burdensome chore

because they do value the included (and thus felt comfortable asking the favor), because they are not particularly sensitive to the included's time, or perhaps due to some other factor that does not reflect on the excluder's regard for the included or the rejected.

In this vein, we suspect some examples of negative one-person exclusion signal more about who is available to help rather than who is liked (see Freedman, Williams, & Beer, 2016). The excluder might draw the included (but not the rejected) into an unfun, laborious task merely because they are around and free. A graduate student might ask another student (but not a third student) for help debugging some complex code only because they happen to walk by or sit just over a cubicle wall. Such alliances may thus reflect propinquity more than exclusivity. Of course, social observers—who view the excluder's actions through the hypersensitive lens of the ODS—might not be sensitive to these motivating factors that speak more to the situation than the people involved (Williams, 2009). This could produce a misperception that lies adjacent to the involuntary excluder effect—not one that characterizes the person involuntarily drawn into the exclusion, but the one directly perpetuating the “exclusion” itself. By this reasoning, *the excluder* may be seen as more of an excluder than is warranted.

Moreover, consider how a similar misperception may occur even when an excluder actually has *benevolent* intentions towards the rejected. Here, we draw on one of the contexts used in Studies 2 and 3: An excluder invites the included (but not the rejected) to pick them up from the airport. This exclusive invitation might reflect the excluder's kindheartedness toward the rejected: After all, the rejected is spared from spending several hours serving as the excluder's personal chauffeur. But, the rejected might not be attuned to how the excluder's behavior actually reflects this prosocial orientation. This implies a disheartening conclusion: That the excluder—even when *protecting* the rejected from realizing some social cost—could be

(mis)perceived as harboring exclusive intentions. The cynical lens of the ODS may bias people toward feeling painfully neglected—as opposed to kindly spared—by the excluder.

### **Conclusion**

We would like to believe that social misunderstandings are corrected through experience. The present paper identifies how a social misperception—the involuntary excluder effect—is both more robust than first documented and particularly resistant to organic correction. Despite these pessimistic premises, this work suggested multiple routes to overcoming these roadblocks. And, as is likely true of many social dilemmas, the most productive courses of action seemed more daunting in prospect than they ended up being in experience.

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**Table 1***Endorsement of Potential Strategies for the Included to Enact Following One-person Exclusion, by Role (Study 1)*

| Role           | Strategies               |                          |                          |                          |
|----------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                | Control (Do Nothing)     | Reprimand                | Justify                  | Kindness                 |
| Included       | 4.87 (1.72) <sub>a</sub> | 3.27 (1.53) <sub>b</sub> | 2.65 (1.34) <sub>c</sub> | 3.53 (1.56) <sub>b</sub> |
| Rejected       | 5.37 (1.17) <sub>a</sub> | 2.88 (1.28) <sub>c</sub> | 3.28 (1.36) <sub>b</sub> | 3.41 (1.38) <sub>b</sub> |
| <i>Overall</i> | 5.08 (1.53) <sub>a</sub> | 3.11 (1.44) <sub>c</sub> | 2.91 (1.38) <sub>c</sub> | 3.48 (1.48) <sub>b</sub> |

*Note.* Means (with accompanying standard deviations) in the same row that do not share the same subscript differ at the  $p < .01$  level.

**Table 2***Evidence of the IEE as a Function of Vantage Point Condition and Explicit Cost to the Included (Study 2)*

| Measure   | Cost           | Vantage Point            |                           |                           |
|---|----------------|--------------------------|---------------------------|---------------------------|
|   |                | Rejected                 | Included                  | Observer                  |
| Perceived exclusive pattern of liking by the included (excluder – rejected)       | Explicit       | 0.56 (1.66) <sub>a</sub> | -0.59 (1.77) <sub>b</sub> | 0.40 (1.65) <sub>a</sub>  |
|   | Control        | 0.97 (1.48) <sub>a</sub> | -0.03 (1.15) <sub>c</sub> | 0.49 (1.45) <sub>b</sub>  |
|   | <i>Overall</i> | 0.78 (1.58) <sub>a</sub> | -0.28 (1.49) <sub>c</sub> | 0.45 (1.55) <sub>b</sub>  |
| Perceived exclusive pattern of intentions (excluder only – excluder and rejected) | Explicit       | 0.35 (2.00) <sub>a</sub> | -1.37 (2.00) <sub>c</sub> | -0.32 (2.17) <sub>b</sub> |
|   | Control        | 0.76 (1.83) <sub>a</sub> | -2.02 (2.55) <sub>c</sub> | -0.02 (2.12) <sub>b</sub> |
|   | <i>Overall</i> | 0.57 (1.92) <sub>a</sub> | -1.72 (2.34) <sub>c</sub> | -0.16 (2.14) <sub>b</sub> |

*Note.* Means are averages of the raw data and make no attempt to adjust for the scenarios they come from, which produces some

departures between these raw summary statistics and the mixed models used to identify mean differences. Means within the same row that do not share the same subscript are significantly different at the  $p < .05$  level, as determined by a mixed model that includes participant and scenario as random factors. Exclusive pattern of liking is the difference between the included's perceived liking of the excluder minus liking of the rejected, with 0 reflecting no preference, and positive numbers reflecting greater liking of the excluder over the rejected. Perceived exclusive pattern of intentions is the difference between estimating the included would include the excluder only minus both the excluder and rejected, with 0 reflecting no difference in behavioral intentions, and positive numbers reflecting greater behavioral intentions to include only the excluder.



**Table 3***Endorsement of Potential Strategies for the Included to Enact Following One-Person Exclusion, by Vantage Point and Cost (Study 2)*

| Vantage Point  | Cost           | Strategies               |                          |                          |                           |
|----------------|----------------|--------------------------|--------------------------|--------------------------|---------------------------|
|                |                | Control (Do Nothing)     | Reprimand                | Justify                  | Kindness                  |
| Included       | Explicit       | 4.57 (1.87) <sub>a</sub> | 3.96 (1.77) <sub>b</sub> | 2.82 (1.61) <sub>c</sub> | 3.67 (1.89) <sub>b</sub>  |
|                | Control        | 5.08 (1.78) <sub>a</sub> | 3.36 (1.81) <sub>b</sub> | 2.88 (1.70) <sub>c</sub> | 3.14 (1.72) <sub>bc</sub> |
|                | <i>Overall</i> | 4.85 (1.84) <sub>a</sub> | 3.63 (1.81) <sub>b</sub> | 2.85 (1.66) <sub>c</sub> | 3.38 (1.82) <sub>b</sub>  |
| Rejected       | Explicit       | 4.62 (1.54) <sub>a</sub> | 3.89 (1.54) <sub>b</sub> | 3.57 (1.49) <sub>b</sub> | 4.25 (1.49) <sub>a</sub>  |
|                | Control        | 4.78 (1.45) <sub>a</sub> | 3.69 (1.40) <sub>c</sub> | 3.65 (1.55) <sub>c</sub> | 4.03 (1.48) <sub>b</sub>  |
|                | <i>Overall</i> | 4.70 (1.49) <sub>a</sub> | 3.78 (1.47) <sub>c</sub> | 3.61 (1.52) <sub>c</sub> | 4.14 (1.48) <sub>b</sub>  |
| Observer       | Explicit       | 4.56 (1.51) <sub>a</sub> | 4.10 (1.64) <sub>b</sub> | 3.28 (1.53) <sub>c</sub> | 3.90 (1.56) <sub>b</sub>  |
|                | Control        | 4.65 (1.53) <sub>a</sub> | 4.15 (1.63) <sub>b</sub> | 3.65 (1.57) <sub>c</sub> | 4.01 (1.56) <sub>b</sub>  |
|                | <i>Overall</i> | 4.61 (1.52) <sub>a</sub> | 4.13 (1.63) <sub>b</sub> | 3.48 (1.56) <sub>c</sub> | 3.96 (1.56) <sub>c</sub>  |
| <i>Overall</i> | Explicit       | 4.59 (1.64) <sub>a</sub> | 3.97 (1.65) <sub>b</sub> | 3.24 (1.57) <sub>c</sub> | 3.96 (1.66) <sub>b</sub>  |
|                | Control        | 4.84 (1.60) <sub>a</sub> | 3.71 (1.64) <sub>b</sub> | 3.39 (1.65) <sub>c</sub> | 3.72 (1.64) <sub>b</sub>  |
|                | <i>Overall</i> | 4.72 (1.62) <sub>a</sub> | 3.83 (1.65) <sub>b</sub> | 3.32 (1.61) <sub>c</sub> | 3.83 (1.65) <sub>b</sub>  |

*Note.* Means reflect raw means from the data. Means within the same row that do not share the same subscript differ at the  $p < .05$

level. Numbers in the parentheses are *SDs*.

**Table 4**

*Evidence that the Included's Strategies Address Symptoms of the IEE as a Function of Vantage Point and Exclusion Valence (Study 3)*

| Measure   | Vantage Point   | Valence        | Strategies                |                            |                            |                            |
|---|-----------------|----------------|---------------------------|----------------------------|----------------------------|----------------------------|
|   |                 |                | Control (Do Nothing)      | Reprimand                  | Justify                    | Kindness                   |
| Perceived exclusive pattern of liking (excluder – rejected)                       | Rejected        | Negative       | 0.92 (1.41) <sub>a</sub>  | -0.03 (1.40) <sub>c</sub>  | 0.39 (1.31) <sub>b</sub>   | -0.31 (1.36) <sub>c</sub>  |
|   |                 | Positive       | 0.89 (1.53) <sub>a</sub>  | -0.37 (1.45) <sub>b</sub>  | 0.72 (1.83) <sub>a</sub>   | -0.61 (1.59) <sub>b</sub>  |
|   |                 | <i>Overall</i> | 0.90 (1.47) <sub>a</sub>  | -0.20 (1.43) <sub>c</sub>  | 0.55 (1.59) <sub>b</sub>   | -0.46 (1.49) <sub>c</sub>  |
|   | Observer        | Negative       | 0.51 (1.57) <sub>a</sub>  | -0.28 (1.23) <sub>b</sub>  | 0.47 (1.44) <sub>a</sub>   | -0.07 (1.69) <sub>b</sub>  |
|   |                 | Positive       | 0.62 (1.60) <sub>a</sub>  | -0.01 (1.33) <sub>bc</sub> | 0.17 (1.43) <sub>b</sub>   | -0.31 (1.77) <sub>c</sub>  |
|   |                 | <i>Overall</i> | 0.56 (1.58) <sub>a</sub>  | -0.16 (1.29) <sub>b</sub>  | 0.31 (1.44) <sub>a</sub>   | -0.20 (1.73) <sub>b</sub>  |
|   | <i>Combined</i> | Negative       | 0.74 (1.49) <sub>a</sub>  | -0.14 (1.34) <sub>b</sub>  | 0.42 (1.36) <sub>a</sub>   | -0.21 (1.50) <sub>b</sub>  |
|   |                 | Positive       | 0.78 (1.56) <sub>a</sub>  | -0.23 (1.41) <sub>c</sub>  | 0.48 (1.69) <sub>b</sub>   | -0.48 (1.67) <sub>c</sub>  |
|   |                 | <i>Overall</i> | 0.76 (1.52) <sub>a</sub>  | -0.18 (1.37) <sub>c</sub>  | 0.45 (1.53) <sub>b</sub>   | -0.35 (1.60) <sub>c</sub>  |
| Perceived exclusive pattern of intentions (excluder only – excluder and rejected) | Rejected        | Negative       | -0.25 (2.29) <sub>a</sub> | -1.16 (2.41) <sub>bc</sub> | -0.87 (2.54) <sub>ab</sub> | -1.64 (2.62) <sub>c</sub>  |
|   |                 | Positive       | -0.12 (2.54) <sub>a</sub> | -2.09 (2.53) <sub>c</sub>  | -0.50 (2.71) <sub>a</sub>  | -1.23 (2.48) <sub>b</sub>  |
|   |                 | <i>Overall</i> | -0.18 (2.41) <sub>a</sub> | -1.61 (2.51) <sub>c</sub>  | -0.69 (2.62) <sub>b</sub>  | -1.43 (2.55) <sub>c</sub>  |
|   | Observer        | Negative       | -0.70 (2.25) <sub>a</sub> | -1.87 (2.55) <sub>b</sub>  | -1.22 (2.48) <sub>a</sub>  | -1.42 (2.51) <sub>ab</sub> |
|   |                 | Positive       | -0.81 (2.60) <sub>a</sub> | -1.96 (2.65) <sub>b</sub>  | -1.20 (2.59) <sub>ab</sub> | -1.79 (2.51) <sub>b</sub>  |
|   |                 | <i>Overall</i> | -0.75 (2.42) <sub>a</sub> | -1.91 (2.59) <sub>c</sub>  | -1.21 (2.53) <sub>b</sub>  | -1.63 (2.51) <sub>bc</sub> |
|   | <i>Combined</i> | Negative       | -0.44 (2.28) <sub>a</sub> | -1.47 (2.49) <sub>b</sub>  | -1.01 (2.51) <sub>a</sub>  | -1.55 (2.58) <sub>b</sub>  |
|   |                 | Positive       | -0.40 (2.58) <sub>a</sub> | -2.04 (2.57) <sub>d</sub>  | -0.80 (2.67) <sub>b</sub>  | -1.47 (2.50) <sub>c</sub>  |
|   |                 | <i>Overall</i> | -0.42 (2.43) <sub>a</sub> | -1.73 (2.54) <sub>c</sub>  | -0.91 (2.60) <sub>b</sub>  | -1.51 (2.53) <sub>c</sub>  |

*Note.* Means reflect raw means. Means within the same row that do not share the same subscript are significantly different at the  $p <$

.05 level, as determined by a mixed model that includes participant and scenario as random factors.

**Table 5***Evidence of the IEE as a Function of Role Condition and Strategy Enacted by the Included (Study 4)*

| Measure  | Strategy  | Role                      |                           |
|--|-----------|---------------------------|---------------------------|
|  |           | Rejected                  | Included                  |
| Exclusive pattern of liking<br>(excluder – rejected)                       | Control   | 0.80 (1.21) <sub>a</sub>  | 0.25 (1.45) <sub>b</sub>  |
|  | Reprimand | 0.02 (1.34) <sub>a</sub>  | 0.19 (1.08) <sub>a</sub>  |
|  | Kindness  | 0.36 (1.25) <sub>a</sub>  | -0.15 (1.54) <sub>b</sub> |
| Exclusive pattern of intentions<br>(excluder only – excluder and rejected) | Control   | 0.44 (1.91) <sub>a</sub>  | -1.63 (2.19) <sub>b</sub> |
|  | Reprimand | -1.55 (2.43) <sub>a</sub> | -1.43 (2.61) <sub>a</sub> |
|  | Kindness  | -0.87 (1.91) <sub>a</sub> | -1.44 (2.33) <sub>a</sub> |

*Note.* Means reflect raw means from the data. Means within the same row that do not share the same subscript are significantly different at the  $p < .05$  level. Numbers in the parentheses are standard deviations.

**Table 6***Descriptive Statistics for the Three Dependent Variables, by Strategy and Role Condition (Study 5)*

| Strategy  | Role        | Efficacy     | Composite    |                      |
|-----------|-------------|--------------|--------------|----------------------|
|           |             |              | Experience   | Strategy endorsement |
| Reprimand | Forecaster  | 4.28 (1.52)* | 3.71 (1.78)* | 3.47 (1.89)          |
|           | Experiencer | 4.98 (1.08)  | 4.58 (1.91)  | 4.20 (2.00)          |
| Kindness  | Forecaster  | 4.56 (1.45)* | 3.95 (1.69)* | 3.85 (1.92)*         |
|           | Experiencer | 5.46 (1.27)  | 4.94 (1.62)  | 4.69 (1.80)          |
| Overall   | Forecaster  | 4.45 (1.48)* | 3.85 (1.73)* | 3.70 (1.91)*         |
|           | Experiencer | 5.25 (1.21)  | 4.78 (1.75)  | 4.47 (1.90)          |

*Note.* Means reflect raw means from the data. Numbers in the parentheses are *SDs*. Starred forecaster means are significantly different from the corresponding experiencer mean below it at the  $p < .05$  level.

**Figure 1**

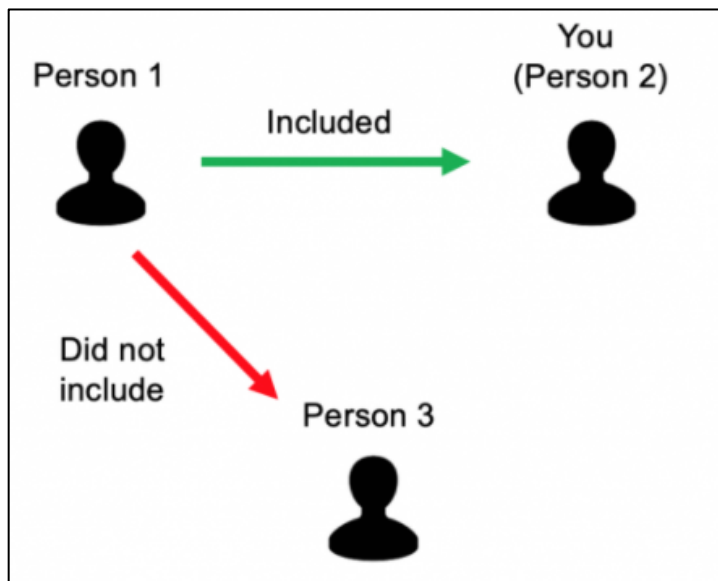
## Example Text that Included Participants Expected to Have to Transcribe (Study 1)

In tracing the changing face of the Irish landscape, scholars have traditionally relied primarily on evidence from historical documents. However, such documentary sources provide a fragmentary record at best. Reliable accounts are very scarce for many parts of Ireland prior to the seventeenth century, and many of the relevant documents from the sixteenth and seventeenth centuries focus selectively on matters relating to military or commercial interests. Studies of fossilized pollen grains preserved in peats and lake muds provide an additional means of investigating vegetative landscape change. Details of changes in vegetation resulting from both human activities and natural events are reflected in the kinds and quantities of minute pollen grains that become trapped in sediments. Analysis of samples can identify which kinds of plants produced the preserved pollen grains and when they were deposited, and in many cases the findings can serve to supplement or correct the documentary record. For example, analyses of samples from Long Lough in County Down have revealed significant patterns of cereal-grain pollen beginning by about 400 A.D. The substantial clay content of the soil in this part of Down makes cultivation by primitive tools difficult. Historians thought that such soils were not tilled to any significant extent until the introduction of the moldboard plough to Ireland in the seventh century A.D. Because cereal cultivation would have required tilling of the soil, the pollen evidence indicates that these soils must indeed have been successfully tilled before the introduction of the new plough. Another example concerns flax cultivation in County Down, one of the great linen-producing areas of Ireland during the eighteenth century. Some aspects of linen production in Down are well documented, but the documentary record tells little about the cultivation of flax, the plant from which linen is made, in that area. The record of eighteenth-century linen production in Down, together with the knowledge that flax cultivation had been established in Ireland centuries before that time, led some historians to surmise that this plant was being cultivated in Down before the eighteenth century. But pollen analyses indicate that this is not the case; flax pollen was found only in deposits laid down since the eighteenth century. It must be stressed, though, that there are limits to the ability of the pollen record to reflect the vegetative history of the landscape. For example, pollen analyses cannot identify the species, but only the genus or family, of some plants. Among these is madder, a cultivated dye plant of historical importance in Ireland. Madder belongs to a plant family that also comprises various native weeds, including goosegrass. If madder pollen were present in a deposit it would be indistinguishable from that of uncultivated native species.

*Note.* All participants in Study 1 saw this excerpt of text that was representative of the type of passage that they would have to either read out loud or transcribe if selected by the interviewer.

**Figure 2**

Participant-Presented Summary of the One-Person Exclusion Dynamic (Study 2)



*Note.* Before completing the measure that asked for endorsements of the included's possible courses of action, participants saw an image that depicted the dynamic that had unfolded in each of the four scenarios. The example image was displayed to those in the included condition. In the rejected condition, Person 3 was identified as "You." In the observer condition, there was no reference to "You."