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People regulate each other's emotion regulation.

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Author Note

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Data and analysis scripts for all the studies, as well as pre-registration documents for all experiments, can be accessed on ResearchBox at the following address:

https://researchbox.org/444&PEER_REVIEW_passcode=UYKDTJ.

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Abstract (180 words)

People often observe others suffering from feeling stressed or upset. But rather than always helping, observers sometimes withhold help and criticize the sufferer for their emotion instead. We argue that these unsupportive reactions reflect a motive to regulate other's emotion regulation. Demonstrating support for this motive, across four studies we show that observers' reactions to suffering depend on their beliefs about the sufferer's capacity to control their emotions. Specifically, if a sufferer is judged to lack control over their emotion, then sympathetic and accommodating responses ensue. But if a sufferer is judged as capable of making themselves feel better, then people are more likely to criticize and express frustration toward them. We also identify three cues that predict emotion control attributions: observers' judgments of their own emotion control (Study 1), judgments that an emotion is miscalibrated (Studies 3-4), and judgments of the sufferer's general capacity for rational thinking (Study 4). These results demonstrate that people want others to regulate their emotions on their own if they can, and track features of the person or situation that enable successful emotion regulation.

Keywords: interpersonal emotion regulation, control, sympathy, blame, close relationships

Introduction

People often see others feeling anxious, stressed, or upset and must decide how to react. Often these *observers* feel compassion for suffering others (hereafter, *sufferers*) and help them cope (Liu, Strube, & Thompson, 2021; Sprecher & Fehr, 2005) – but not always. Observers also sometimes leave the sufferer to cope with their emotions on their own (Dunkel-Schetter & Skokan, 1990; Taylor, 2011; Wortman & Lehman, 1985), and in extreme cases, react critically towards sufferers by telling them to “get over it,” expressing frustration or impatience at them, or invalidating the way that they feel (Zielinski & Veilleux, 2018; Liu et al., 2021). These behaviors are puzzling as they entail making someone who feels bad feel even worse. Why do observers sometimes withhold support and criticize sufferers for their suffering? We argue that these reactions reflect a motive to *regulate others’ emotion regulation*. Accordingly, observers attend to whether sufferers can regulate away their suffering on their own and criticize or support them depending on whether they need help, or alternatively, motivation, to stop suffering.

Helping someone cope with their suffering, either through direct assistance or through listening and sympathizing with them, comes with costs. People dislike being around someone who feels upset (Butler, 2015; Cialdini et al., 1987; Coyne et al., 1987; Wortman & Lehman, 1985) dislike feeling responsible for others’ emotional well-being (Wortman & Lehman, 1985), and find it effortful and draining to sympathize (Scheffer, Cameron Inzlicht, 2021). Given that sympathy and support are not free, it is useful to conceptualize supportive behavior in cost-benefit terms: People support others when they think that the benefits of support (such as successfully helping the sufferer) outweigh the costs of the emotional labor (Keltner, Kogan, Piff, & Saturn, 2014).

Accordingly, our core theoretical claim is that before helping a sufferer regulate their emotion, observers attend to whether the sufferer can regulate their emotion on their own – that is, whether the sufferer can *control* their emotional state. When a sufferer lacks control, they need outside help to feel better, and so it makes sense for observers to take on the costly activity of helping them. But when someone is capable of making themselves feel better, then they do not need outside assistance, and so observers can opt for a less costly option (e.g., withholding support) while still expecting a favorable outcome (i.e., the sufferer feeling better).

The contention that observers attend to a sufferer's capacity to control their suffering can also explain why they might react critically to other's suffering. Though criticism harms others by making them feel bad, it can play a constructive role in relationships by signaling to others that they are doing something wrong and motivating them to improve (Malle, Guglielmo, & Monroe, 2014; Sarin, Ho, Martin, & Cushman, 2021). But whether criticism is constructive depends in part on whether the target can control their behavior: When others can control their behavior, criticism can yield improvements in their behavior that outweigh its costs. For instance, if someone is not taking care of themselves because they are lazy, then the downstream benefits of spurring that person to take care of themselves may outweigh the harm caused by criticizing their laziness. However, if someone lacks the ability to take care of themselves, then there is nothing that person can do in response to criticism, and so there is no benefit from criticizing them and making them feel bad.

Outside the domain of emotion regulation, people criticize others in a way that is sensitive to their control (and so, sensitive to criticism's efficacy). For instance, people readily criticize others who have the capacity to solve their own problems (and choose not to act on that capacity) but withhold criticism from people who lack that capacity (Brickman et al., 1982;

Karasawa, 1991; Schwarzer & Weiner, 1991). We propose that a similar dynamic explains criticism within the domain of emotion regulation: Observers criticize sufferers to regulate their emotion regulation, and specifically, to induce sufferers to act on an untapped capacity to control their emotional suffering. This theory predicts that emotion criticism should depend on observers' beliefs that the sufferer in question can control their emotion, similar to the way that other forms of criticism and withholding of support also depend on inferences of control.

Preliminary evidence suggests that attributions of emotion control do indeed guide how observers react to others' emotions. Cusimano and Goodwin (2019) found across a series of vignette and autobiographical recall studies that most people judge thoughts and emotions as controllable. Moreover, subjects in these studies who inclined towards thinking that emotions are controllable also tended to think that others were responsible (and, in the case of objectionable emotions, blameworthy) for experiencing those emotions. Likewise, Tullett and Plaks (2016) found that individuals who believe that happiness is controllable are more likely to express blame towards individuals suffering from depression and less likely to donate to research on depression. The first goal of the present work was to build on these findings in three ways that stem from our core theory concerning perceived control. First, we demonstrate that attributions of emotion control correlate with explicitly unsupportive reactions in vignette and real-life settings (Studies 1-2). Second, we provide the first evidence that perceived control has a *causal* effect on observers' supportive and unsupportive reactions. We do this by manipulating features of the sufferer or their emotion that make the emotion seem controllable (Studies 3-4). And third, we show that attributions of control lead to criticism in part because they create a desire for sufferers to regulate their emotions on their own (Study 3).

The second major goal of the present work was to catalogue some of the cues that observers use to infer whether someone can control their suffering. Prior studies have suggested that people possess implicit, default expectations about how controllable emotions are and that these expectations guide their own emotion regulation efforts. For instance, individuals who believe that emotions are more controllable make greater attempts to regulate their own emotions (e.g., De Castella et al., 2013; Ford & Gross, 2018; Tamir, John, Srivastava & Gross, 2007). We hypothesized that, when assessing others' capacity for emotion control, people will draw on their implicit theories about how controllable emotions are. Accordingly, people who tend to think that they can control their emotions may also think others' can too, and so will be more critical of others who experience negative emotions. We test this prediction in Study 1.

In Studies 3 and 4, we investigate two cues to emotion control that involve inferences about whether someone can think rationally about their situation. Criticizing someone for overreacting is a common form of emotional invalidation (Wortman & Lehman, 1985; Zielinski & Veilleux, 2018). We propose that, when observers think that a sufferer is overreacting to their situation, they are more likely to think that sufferers can control their emotion, too. This prediction follows from the assumption that, when someone is overreacting, they can reappraise their emotion by challenging the way they are currently interpreting the situation (cf. Baron, Baron, Barber, & Nolen-Hoeksema, 1990; Lazarus, 1991). However, this opportunity to change one's mind through rational reappraisal is not afforded, at least not to the same degree, to someone who feels the same emotion but has accurately appraised their situation. And lastly, in Study 4, we investigate whether viewing a sufferer as being capable of clear, rational thinking leads observers to believe they are more capable of emotion regulation, and therefore more

responsible for making themselves feel better. We explain in detail how inferences about emotion calibration and the sufferer's capacity to think rationally interact in Studies 3–4.

The current studies

Overview. We theorize that people are prone to regulate others' emotion regulation and that this tendency explains unsupportive reactions to others' suffering. Below we report four studies that test predictions from this theory. Studies 1-2 test whether perceived control over suffering correlates with observers' supportive and unsupportive reactions in vignette (Study 1) and autobiographical recall (Study 2) tasks. We then investigate whether people use information about how calibrated a sufferer's emotion is to the situation (Studies 3 and 4), and information about the sufferer's capacity to think rationally (Study 4), to judge how much control the sufferer has. Across these studies we demonstrate that attributions of emotion control cause observers to withhold support and criticize sufferers for their negative emotions while identifying cues that inform commonplace attributions of emotion control.

Open Practices. Sample sizes and statistical analyses were preregistered for all studies. We report all manipulations and all measures used in our studies. As no subjects or data were removed prior to analysis, reported sample sizes represent the number of subjects who completed the study. Pre-registration documents, raw data, stimuli, and annotated R analysis scripts for each study are posted on ResearchBox:

https://researchbox.org/444&PEER_REVIEW_passcode=UYKDTJ. An online supplement is available; Table A1 in the Appendix summarizes its contents. Study 1 was conducted on University of [Redacted] undergraduates. Data for the remaining studies and pre-tests were collected on Amazon's Mechanical Turk (AMT). AMT subjects were required to be in the

United States and to have a HIT approval rating of at least 95%. All studies were approved by the University of [Redacted] Institutional Review Board.

Study 1

Subjects read four vignettes in which they imagined a close friend feeling upset, embarrassed, stressed, or distressed, and reported their reactions. We predicted that as subjects' perceptions of the target's emotion control increased, they would report decreased intentions to act supportively, and increased intentions to react critically. We also examined whether subjects who report finding it generally easier to regulate their emotions (Tamir et al., 2007; De Castella et al., 2013) would also judge the target as more able to regulate their emotions, which would in turn predict less supportive and more critical reactions to the target's emotional suffering.

Methods

Participants. 190 subjects (53% reported Female, 47% reported Male, mean age = 23 years, median age = 20 years, age range 18-72) were recruited from a university-administered subject pool. This sample size reflects one recruitment session, from which we expected to recruit 150-200 subjects. We preregistered that we would stop data collection after one recruitment session. No data were discarded. Our final sample size had a 99% chance to detect a small effect ($r = .3$) or larger (with alpha at the conventional 0.05 level).

Experimental context. Subjects filled out two surveys that ostensibly had nothing to do with one another except that both were included in a set of studies as part of the data collection session. In the first survey, subjects reported their reactions to four vignettes in which a close friend was described as experiencing a negative emotional reaction. In the second survey, which was ostensibly about the relationship between attitudes and life satisfaction, subjects reported how much control they believed they generally have over their own emotions. These two surveys

were separated by another experiment unrelated to emotion regulation, moral judgment, or sympathy. The order of the first survey, the distractor survey, and the second survey was the same across all subjects. We obtained age and gender information from a separate demographics survey collected at the end of the experimental session.

Vignette Task. In survey one, subjects read and reacted to four vignettes in which they were asked to imagine a hypothetical friend having an exaggerated negative emotional experience. For instance, one vignette described someone hiking, barely hurting his leg, and then having a severe reaction of distress in response to the injury. The other three vignettes described someone feeling sad about receiving an A- on an exam, someone feeling embarrassed about a very minor flaw in a cake, and someone feeling stressed about giving a short presentation in class. The order of the vignettes was randomized across subjects. Although the type of emotional reaction varied across vignettes, each vignette shared certain features. First, each emotional reaction occurred directly following some event (e.g., the target had just fallen and hurt his leg). Second, the emotion in each vignette was described as an intense emotion. Third, the emotional reaction was exaggerated relative to its eliciting circumstances (i.e., it was miscalibrated). The full text of each vignette is available in the Supplemental Materials.

Subjects responded to four questions for each vignette. These included (1) how much control the target has over the emotion (e.g., “If he wanted to, Arthur could choose to stop feeling distressed”), (2) how much sympathy the subject would feel (e.g., “I would feel a great deal of sympathy for Arthur”), and (3) whether they would try to make the person feel bad (e.g., “I would make Arthur feel bad for feeling this distressed”). This latter item was intended to capture critical reactions. Subjects responded to these questions using a 7-point agreement scale (1: strongly disagree, 7: strongly agree). A fourth question measured the perceived strength of

the target's emotion (e.g., "How much distress is Arthur experiencing?" 1: none at all, 7: a great deal of distress). Within each question, the name of the sufferer (who was always male) and the emotion label (distress, sadness, embarrassment, stress) matched the name of the character and the description of their emotion from the vignette. Vignettes were shown in a random order.

Emotion theory task. In survey two, subjects filled out a short survey about life satisfaction. In the first section of this survey, subjects responded to a 5-item Life Satisfaction Scale (Diener, Emmons, Larsen, & Griffin, 1985), followed by a 4-item Implicit Beliefs about Intelligence Scale (Dweck, 1999). They then filled out the Implicit Beliefs about Emotion Scale (Tamir et al., 2007; De Castella et al., 2013), indicating their agreement (1: strongly disagree, 5: strongly agree) with four statements about emotion control written in the first person: "If I want to, I can change the emotions that I have," "I can learn to control my emotions," "The truth is, I have very little control over my emotions," (R) and "No matter how hard I try, I can't really change the emotions that I have" (R).

Results

As planned, we averaged responses across the four vignettes. Subjects' judgments of control ($\alpha = .73$), sympathy ($\alpha = .68$), critical reactions ($\alpha = .70$), and emotion strength ($\alpha = .66$) demonstrated adequate reliability. As predicted, subjects' judgments of emotion control correlated negatively with sympathy towards the target, $r(188) = -0.44$, $p < .001$, 95% CI [-0.55, -0.32], and correlated positively with whether they would make the target feel bad for their emotional reaction, $r(188) = 0.45$, $p < .001$, 95% CI [0.33, 0.55] (Figure 1A-B). People who perceived the target's emotions as being stronger showed more sympathy, $r(188) = 0.28$, $p < .001$, 95% CI [0.14, 0.40], and were less likely to report making the person feel bad, $r(188) = -0.18$, $p = .01$, 95% CI [-0.32, -0.04]. However, there was no significant association between

emotion strength and control, $r(188) = -0.11$, $p = .13$, 95% CI [-0.25, 0.03]. The key correlations between control and sympathy, and between control and making the target feel bad, remained significant after controlling for perceived emotion strength.

Figure 1. Key findings from Study 1. (A) Subjects' control attributions (towards targets in the vignettes) negatively predicted their average sympathy reactions. (B) Subjects' control attributions (towards vignette targets) positively predicted their critical reactions.

We next analyzed the relationship between subjects' judgments of their own control over their emotions and their reactions to the targets in the vignette. We averaged subjects' responses to the Implicit Beliefs about Emotion Scale ($\alpha = 0.76$), and then measured the association between these scores and subjects' average control judgments, sympathetic reactions, critical reactions, and emotion strength judgments. As expected, subjects who thought they were more capable of controlling their own emotions tended to attribute more control to the targets in the vignettes, $r(188) = 0.29$, $p < .001$, 95% CI [0.15, 0.41]. However, subjects' implicit control

beliefs had no association with their perceptions of the intensity of the target's emotions, $r(188) = 0.02, p = .83, 95\% \text{ CI } [-0.13, 0.16]$. It is therefore unlikely that the relationship between subjects' implicit theories of control and their reactions to the targets' emotions are confounded by different perceptions of the severity of the target's emotions.

Subjects' beliefs about their own emotion control predicted how they reacted to the targets. Subjects who reported higher emotional self-control tended to feel less sympathy for the targets in the vignettes, $r(188) = -0.17, p = .02, 95\% \text{ CI } [-0.30, -0.03]$. Results from a planned mediation analysis were consistent with a causal model in which implicit theories of emotion control indirectly influence sympathy via their effect on more specific attributions of control to the vignettes' protagonists ($a = 0.46, p < .001, b = -0.40, p < .001, \text{indirect effect} = -0.18, 95\% \text{ CI } [-0.30, -0.09]$).¹ As planned, we repeated this analysis on critical reactions. Unlike sympathy, implicit theories of emotion did not correlate with critical reactions, $r(188) = 0.06, p = .38, 95\% \text{ CI } [-0.08, 0.20]$. However, mediation analysis was also consistent with a causal model in which implicit theories of emotion control indirectly influence critical reactions through their effect on target-specific attributions of control ($a = 0.46, p < .001, b = 0.44, p < .001, \text{indirect effect} = 0.20, 95\% \text{ CI } [0.10, 0.32]$). Given the absence of any overall correlation between implicit

¹ This causal model is more plausible than its opposite, in which implicit beliefs about emotion changed because of how subjects responded to the vignettes. Prior work demonstrates that people's implicit beliefs about emotion are a relatively stable psychological trait (Tamir et al., 2007; De Castella et al., 2013). Additionally, our study was specifically designed to minimize any connection between reactions to the vignette and implicit beliefs. For instance, we measured vignette reactions and implicit beliefs in separate surveys. Additionally, the language used to measure control changed across measures: The word "control" appears in the implicit beliefs scale, but not in the vignette survey measuring attributions of emotion control. It is therefore unlikely that participants changed their generalized beliefs about their own emotion control based how they responded to the vignettes.

theories of emotion control and critical reactions, these analyses suggest that there may an unmeasured suppressor reducing this correlation.²

Discussion

Study 1 examined subjects' responses to four hypothetical situations in which a close friend was described as suffering from a negative emotion that was exaggerated relative to its eliciting circumstances. Consistent with our hypotheses, we observed that attributions of a sufferer's ability to control their emotions correlated negatively with intended supportive reactions towards the sufferer (sympathy), and correlated positively with intended critical reactions (deliberately making the sufferer feel bad). We also found that subjects' beliefs in their own emotional self-control predicted their attributions of the targets' control, as well as their sympathy towards those targets (though not subjects' critical reactions towards them). However, results from Study 1 are only correlational and take place in the context of a hypothetical vignette. We address these limitations in the following studies.

Study 2

Study 2 comprised an autobiographical recall task in which we probed people's recent supportive and critical reactions towards others. We asked subjects to write about a recent time in which someone they knew felt a strong negative emotion, and to report what they thought of the person at the time as well as how they behaved. We predicted that people's supportive and

² Interpreting mediation requires caution (Fiedler, Harris, & Schott, 2018). In subsequent studies, we address some limitations in Study 1 by measuring multiple competing mediators (Study 3), causally manipulating perceived emotion control (Studies 3 and 4), and demonstrating moderated mediation (Study 4).

critical reactions towards their close other would vary with the degree of control they had attributed to the individual.

Methods

Participants. We recruited 298 subjects from Amazon's Mechanical Turk (52% reported Female, 48% reported male, mean age = 36 years, median age = 33 years, range 18-75 years). This yielded >95% power to detect associations of $r = .20$ or greater (with alpha at the conventional 0.05 level).

Procedures. Subjects were informed that we were conducting a study on how people behave in close relationships. We asked them to think of someone with whom they are close and with whom they frequently interact (hereafter, the *target*), such as a good friend, romantic partner, or family member. Subjects provided the target's initials, sex, and age, as well as the nature of their relationship with the target. We then instructed them to try and think about the most recent time that they were present while the target was experiencing a strong negative emotion (e.g., sad, upset, anxious, or stressed).

Subjects indicated which emotion the other person experienced (from a list of "upset," "anxious," "stressed," or "sad") and how long ago the event took place. They then reported what caused the emotion by completing a sentence fragment. For instance, if subjects had indicated that the close other felt "upset," then they were instructed to complete the sentence fragment, "[Initials] felt [upset] about...". For this question, as well as all remaining ones, the initials and emotion type were dynamically inserted to match the information reported at the start of the survey. Subjects then answered remaining questions about the situation in two batches, reported below. For each set of questions, the original description of the emotion provided by the subject

was shown at the top of the screen. All ratings were made on 7-point scales (1 = *not at all accurate*; 7 = *completely accurate*).

Judgments about the emotion. Subjects then rated the accuracy of five statements about what they thought about the target's emotion at the time. These included perceived (i) emotion strength ("At the time, I thought that [Initials] felt extremely upset"), (ii) how unfortunate it was that the target felt the emotion ("At the time, I thought that it was unfortunate for [him] that [initials] felt [upset]"), and (iii) emotion control ("At the time, I thought that [initials] could choose to stop feeling [upset] if [he] tried hard enough"), as well as two statements about whether the emotion was diagnostic of something bad about the target, including (iv) character ("At the time, I thought that it reflected poorly on [Initials]'s moral character") and (v) fault ("[Initials] felt [upset] because of something [he] was at fault for"). These statements were presented in random order.

Cognitive and behavioral reactions. Finally, subjects reported how they felt and behaved in response to the target's emotion, by indicating how accurately each of the following statements described their reaction on a 7-point rating scale (1 = *not at all accurate*; 7 = *completely accurate*). Two items measured supportive feelings including (i) "I felt sympathy for [initials] for feeling [upset]" and (ii) "I felt bad for [initials] that [he] felt this [upset]". Two items measured critical feelings (iii) "I felt annoyed at [initials] for feeling this [upset]" and (iv) "I did not want to be around [initials] at this time". Two items measured supportive behaviors including (v) "I accommodated [initials] as much as [he] wanted" and (vi) "I spent a lot of effort and time trying to make [initials] feel better." Finally, two items measured critical behaviors including (vii) "I criticized [initials] for feeling as [upset] as [he] did" and (viii) "I expressed frustration at [initials] for feeling this [upset]". These statements were presented in random order.

Finally, subjects reported their gender, age, political orientation, and religiosity.

Results

As planned, we created composite measures of supportive feelings ($\rho = .81$), critical feelings ($\rho = .84$), supportive behaviors ($\rho = .79$), and critical behaviors ($\rho = .82$) by averaging together subjects' accuracy ratings for the two statements for each construct³. Subjects predominately recalled situations in which their spouse or romantic partner ($n = 128$), or close friend ($n = 78$), felt a negative emotion, typically feeling upset ($n = 115$) or sad ($n = 103$). One-third of subjects wrote about an event that occurred in the last week, and 56% wrote about a time in the past month. On average, subjects judged that the target's emotion was strong ($M = 5.81$, $SD = 1.25$) and that it was unfortunate for the target that they felt this way ($M = 5.40$, $SD = 1.65$). Additionally, on average subjects reacted supportively: They generally accommodated their close other ($M = 5.49$, $SD = 1.55$) and devoted time and effort to make them feel better ($M = 5.29$, $SD = 1.55$), while typically not criticizing ($M = 1.96$, $SD = 1.59$) or expressing frustration towards them ($M = 2.34$, $SD = 1.85$).

As planned, we examined the correlation between the four reactions and subjects' judgments of the target's emotion control, their fault in creating the situation, and whether their emotion indicated poor moral character. Perceptions of fault and negative moral character were associated with all four reaction types. However, as predicted, when subjects attributed greater emotion control to their close other they were less likely to have supportive feelings toward that person, $r(296) = -0.41$, $p < .001$, 95% CI [-0.50, -0.31], less likely to act supportively, $r(296) = -0.27$, $p < .001$, 95% CI [-0.38, -0.17], more likely to have critical feelings toward that person,

³ Following the recommendation of Eisinga, Grotenhuis, and Pelzer (2013), we report the Spearman-Brown coefficient (ρ) for the reliability of our two-item scales.

$r(296) = 0.47, p < .001$, 95% CI [0.37, 0.55], and more likely to criticize them, $r(296) = 0.49, p < .001$, 95% CI [0.40, 0.57] (see Figure 2, below). Follow-up analyses showed that increases in control attributions predicted decreases in supportive feelings ($b = -0.22, SE = 0.05, t = -4.97, p < .001, R_b^2 = .08$) and behavior ($b = -0.15, SE = 0.05, t = -3.10, p = .002, R_b^2 = .03$), and increases in critical feelings ($b = 0.19, SE = 0.05, t = 3.89, p < .001, R_b^2 = .18$) and behavior ($b = 0.16, SE = 0.04, t = 3.87, p < .001, R_b^2 = .24$), even when accounting for variation in perceived fault and negative moral character judgments. Finally, we observe the same relationship between control and supportive and unsupportive reactions in subsequent analyses that bypass statistical control entirely, as when we test only the subset of subjects (53%) who reported that the emotion was completely undiagnostic of the target's character (moral character ≤ 2), and unambiguously not the fault of the target either (fault ≤ 2) (see Supplemental Materials).

Figure 2. Means and standard errors for agreement with statements describing supportive and critical reactions toward a close other, in Study 2.

Discussion

Study 2 investigated whether people's real-life responses to close others' emotional suffering are associated with their assessments of other's ability to control their suffering. As expected, we found that perceived control predicted increased self-reported sympathetic feelings (such as sympathy) and sympathetic behavior (such as investing effort towards helping the person feel better), and predicted decreased self-reported unsympathetic feelings (such as annoyance) and unsympathetic behavior (such as expressing frustration). Importantly, perceived control predicted these reactions independently of other canonical predictors of sympathy and punitiveness; namely, perceived fault for causing the eliciting situation in the first place, and perceptions of poor moral character. Thus, perceptions of control correlated with supportive and

critical behavior in real-life interpersonal relationships, just as they did in the hypothetical vignettes used in Study 1.

Study 3

Thinking that others can control their emotions is associated with decreased sympathy and increased criticism – but does judging that someone can control their emotions *cause* observers to react these ways? To test this, Studies 3 and 4 manipulate a feature of the sufferer's emotion that we hypothesized affects attributions of emotion control; namely, *emotion calibration*. We predicted that manipulating how calibrated a sufferer's emotion seemed, given their situation, would affect observers' judgments of how controllable that emotion was. In turn, these judgments of emotion control should lead to less supportive reactions and more critical reactions. This procedure provides one way to test whether changing perceived control has downstream consequences for observers' reactions.

Study 3 also had two ancillary goals. First, we tested whether people's critical reactions are associated with a desire for the sufferer to regulate their emotions on their own. We predicted that perceived emotion control (which itself would vary as a function of emotion calibration), would predict a desire for the sufferer to self-regulate, which would in turn predict critical and supportive reactions. Second, we sought to rule out a salient alternative reason why people would react negatively towards others with miscalibrated emotions; namely, because they simply disliked the sufferer and therefore want to distance themselves from such individuals. Accordingly, critical reactions may stem from a desire to terminate their relationship with the sufferer, rather than from a more constructive desire to get that person to take responsibility for their suffering. However, even if this motivation is relevant to explaining subjects' critical

reactions, we predicted that it would not fully capture people's responses. The desire to hold a sufferer responsible for their emotional suffering should still predict people's reactions even after accounting for the desire for permanent social distance from the sufferer.

Methods

Pretest. We conducted a pretest on Amazon's Mechanical Turk ($N = 120$; 39% reported Female, 61% reported Male, mean age = 35 years, median age = 34 years, age range 20-64 years) to investigate whether people view emotional over-reactions as more controllable than calibrated emotional reactions. We constructed six scenarios that featured a target experiencing a strong negative emotion. Within each scenario we varied whether the person's emotional reaction was caused by something serious and personally relevant, or by something unserious or personally irrelevant, or both (see Supplemental Materials for the text of all vignettes). All subjects rated how calibrated the sufferer's emotion was as well as how much control the sufferer had over the emotion. Consistent with our main prediction, subjects judged the target as having more emotion control in the miscalibrated emotion condition (i.e., the weakly-eliciting situation; $M = 5.10$, $SD = 1.46$) than in the calibrated emotion condition (i.e., strongly-eliciting situation; $M = 4.20$, $SD = 1.38$), $t(119) = -6.42$, $p < .001$, 95% CI $[-1.18, -0.62]$, $d = -0.63$. This effect was strongest in a scenario comparing someone who felt upset after learning that someone they used to know died (calibrated) with the same person feeling equally upset learning about a statistic regarding teen deaths (miscalibrated). To cost-effectively maximize power, we used this vignette, described in detail below, for Studies 3 and 4.

Participants. We recruited 300 people (40% reported Female, 60% reported Male, mean age = 35 years, median age = 32 years; age range 20-69 years) from Amazon's Mechanical Turk

to participate in the main task for Study 3. This sample size yielded >85% chance to detect an effect size of $d = .3$ or greater (with alpha at the conventional 0.05 level).

Procedure. Subjects read a scenario from the pretest in which they were prompted to envisage a close friend's strong emotional reaction during a car ride on the way to a wedding. The key moment of the vignette read as follows:

You pick Jamie up from the airport. But instead of looking excited about the trip he seems lethargic and in low spirits. This does not change as you drive to the wedding. When you bring up the wedding, he tries to show some enthusiasm but it is painfully obvious that his mind is elsewhere. He looks unhappy the entire time. In fact, at several points in the drive he seems to be on the verge of crying. It is clear that Jamie is upset about something. If he stays this way, people at the wedding will be able to tell and you are certain that it will detract from the happy day.

Half of subjects then read that Jamie's emotion was caused by a personal and highly negative event (calibrated condition):

When you ask him what is going on, Jamie tells you that he was talking to his mother right before the trip started and she gave him some news. Apparently, she just learned that a friend of his from high-school named Tommy has committed suicide.

The other half read that Jamie's emotion was caused a highly negative event but one that is not personally relevant to Jamie at all (miscalibrated condition):

When you ask him what is going on, Jamie tells you that he was talking to his mother right before the trip started and she gave him some news. Apparently, the National Institute of Health released a report saying that teen suicide increased by 1% last year.

All subjects then read:

When Jamie stops talking, he shrinks into his seat and resumes staring off into the distance. You have about half an hour left in your drive. You are worried about Jamie's state being a drain on the festivities about to unfold. How would you think about and react to Jamie in this situation?

Thus, in both conditions, Jamie feels upset about events that he had no role in causing, and that he currently has no means of fixing. Additionally, Jamie's emotion in both conditions is pro-social, and reflects a morally admirable regard for life. However, as in the pretest, we hypothesized that because the NIH report is largely irrelevant to Jamie's life and current situation, subjects would judge Jamie's emotion as miscalibrated and therefore controllable.

After reading the vignette, subjects reported their agreement with statements comprising our dependent measures (1: strongly disagree, 7: strongly agree). One item measured perceived emotion control ("If Jamie wanted to, he could choose to stop feeling upset for the duration of the wedding"). One item measured perceived emotion strength ("Jamie is feeling extremely upset"). One item measured perceived emotion calibration ("It objectively makes sense for Jamie to feel as upset as he does about what happened"). Two items measured a desire for Jamie to regulate his own emotions ("I would want Jamie to try harder on his own to make himself feel better" and "I would want Jamie to make himself feel better without my help"). Two items measured dislike toward Jamie, which we operationalized as a desire to socially distance oneself from him – "I would decide that Jamie is no longer someone I will be friends with" and "I would no longer want to have a close relationship with Jamie (even if he stopped feeling upset)."

Finally, subjects responded to four items measuring how they would treat Jamie in this situation. Two items measured critical reactions ("I would make it clear to Jamie that I feel impatient with him for still feeling this upset" and "I would express frustration toward Jamie for feeling this

upset”). And two more items measured supportive reactions (“I would feel a great deal of sympathy for Jamie” and “I would do everything I could to accommodate Jamie”). All items were shown on the same page in a random order.

Results

Confirming that our manipulation was successful, subjects judged the miscalibrated emotion to make less sense ($M = 3.67$, $SD = 1.97$) than the calibrated emotion ($M = 6.00$, $SD = 1.17$), $t(244.84) = 12.51$, $p < .001$, 95% CI [1.96, 2.7], $d = 1.44$.⁴ As expected, subjects attributed more emotion control in the miscalibrated condition ($M = 4.89$, $SD = 1.71$) compared to the calibrated condition ($M = 3.50$, $SD = 1.92$), $t(293.51) = -6.62$, $p < .001$, 95% CI [-1.8, -0.98], $d = -0.77$. We also observed a smaller, but still significant difference in perceived emotion strength: Jamie’s emotion was seen as slightly weaker in the miscalibrated condition ($M = 5.72$, $SD = 1.31$) compared to the calibrated condition ($M = 6.08$, $SD = 1.19$), $t(296.03) = 2.49$, $p = .013$, 95% CI [0.07, 0.64], $d = 0.29$.

We next turned to subjects’ stated motives and intended reactions in the scenario. We calculated composite measures of subjects’ reactions to Jamie by averaging their responses to the two self-regulation items ($\rho = .85$), dislike items ($\rho = .93$), supportive reaction items ($\rho = .85$) and critical reaction items ($\rho = .91$). As predicted, subjects reported a greater desire for Jamie to regulate his own emotions in the miscalibrated condition ($M = 4.49$, $SD = 1.66$) compared to the calibrated condition ($M = 3.79$, $SD = 1.81$), $t(295.05) = -3.51$, $p = .001$, 95% CI [-1.10, -0.31], $d = -0.41$. Subjects also reported a greater desire to end their relationship with Jamie when he experienced a miscalibrated emotion ($M = 3.14$, $SD = 1.92$) as opposed to a calibrated one ($M = 2.56$, $SD = 2.02$), $t(296.76) = -2.53$, $p = .012$, 95% CI [-1.02, -0.13], $d = -0.29$. As predicted,

⁴ All reported t-tests are Welch’s t-tests.

subjects were less supportive and more critical of Jamie when his emotion was miscalibrated. They reacted less supportively toward Jamie in the miscalibrated condition ($M = 4.64$, $SD = 1.55$) compared to the calibrated condition ($M = 5.90$, $SD = 1.07$), $t(267.08) = 8.21$, $p < .001$, 95% CI [0.96, 1.56], $d = 0.95$. And, they reacted more critically toward Jamie in the miscalibrated condition ($M = 3.87$, $SD = 1.85$) compared to the calibrated condition, in which they indicated only very weak intentions to engage in critical behavior ($M = 2.73$, $SD = 2.02$), $t(294.99) = -5.09$, $p < .001$, 95% CI [-1.58, -0.7], $d = -0.59$.

We expected differences in subjects' reactions to stem from differences in the perceived controllability of Jamie's emotion across the two conditions. To test whether our results were consistent with this causal model, we conducted a series of mediation analyses with the calibration manipulation as the independent variable, control as the hypothesized mediator, and either desires or intended reactions as the dependent variables.⁵ As expected, our results were consistent with causal models in which perceived emotion control mediates the condition difference in the desire for the sufferer to regulate his own negative emotion ($a = 1.39$, $p < .001$; $b = 0.61$, $p < .001$, ab [indirect effect index] = 0.85, 95 CI [0.58, 0.1.14]; $c = 0.71$, $p < .001$; $c' = -0.14$, $p = .39$), and also the condition differences in supportive reactions ($a = 1.39$, $p < .001$; $b = -0.20$, $p < .001$, $ab = -0.27$, 95 CI [-0.43; -0.15]; $c = -1.26$, $p < .001$; $c' = -0.99$, $p < .001$), and

⁵ Our mediation analyses test a causal model in which control causes reactions toward the sufferer rather than the other way around. This assumption reflects our theorizing in the Introduction that attending to another person's capacity for control provides a reasonable strategy for figuring out the costs and benefits of different reactions. It is also consistent with findings, outside the context of interpersonal emotion regulation, that document a causal effect of control on critical (and other) reactions (see reviews in Malle et al., 2014; Weiner, 1995). Some prior work has proposed the opposite causal story; namely that someone's desire to criticize another person causes them to inflate their attributions of control (Alicke, 2000). However, evidence for this theory is controversial (cf. Malle et al. 2014). Moreover, results from Study 4 speak against this alternative model by showing that emotion miscalibration does not always lead people to want to criticize others nor attribute high emotion control to others.

critical reactions ($a = 1.39, p < .001$; $b = 0.68, p < .001$, $ab = 0.95$, 95 CI [0.66, 1.28]; $c = 1.14, p < .001$; $c' = 0.19, p = .307$). We also observed evidence consistent with a model in which control mediates the differences in observers' desire to end the relationship ($a = 1.39, p < .001$; $b = 0.58, p < .001$, $ab = 0.80$, 95 CI [0.54, 1.09]; $c = 0.58, p < .001$; $c' = -0.23, p = .272$). Figure 3 depicts these mediation analyses. Notably, these mediation findings held when conducting planned multiple mediation analyses controlling for the indirect effects of perceived emotion strength (see Supplemental Materials). In other words, the criticism and lack of support directed towards the sufferer of the miscalibrated emotion does not occur simply because they were seen as experiencing weaker emotions.

Figure 3. Control mediated differences in (a) the desire for the sufferer to regulate his own emotion, (b) the desire to end one's relationship with the sufferer, (c) critical reactions, and (d) supportive reactions in Study 3.

As discussed in the introduction to this study, there is an alternative proximate motive to people's supportive and critical reactions, namely strong antipathy felt towards the sufferer, accompanied by a desire to end the relationship. We predicted that the desire for the sufferer to

regulate their own emotion would reliably predict people's reactions even accounting for the desire for relationship termination caused by miscalibrated negative emotions. To test this, we conducted a series of multiple mediation analyses testing a model in which the desire for Jamie to regulate his own emotion mediates condition differences in supportive or critical reactions while also accounting for changes in the desire for relationship termination across conditions. These analyses also examined evidence for the more complete serial mediation model hypothesized in the introduction to this study; namely, that miscalibrated emotions lead to inferences of higher control, which generate a desire for the sufferer to regulate his own negative emotion, which in turn predict supportive and critical responses.

Our predictions were confirmed for both critical and supportive reactions. For critical reactions, we observed support for the predicted serial mediation model, such that decreased emotion calibration predicted increased judgments of emotion control, which predicted greater desires for the sufferer to regulate his own negative emotions, which in turn predicted more critical reactions (*indirect effect*: $b = 0.25$, $se = 0.06$, $z = 4.49$, $p < .001$). Similarly, for supportive reactions, we observed support for the predicted serial mediation between calibration, control, desire for self-regulation, and supportive reactions (*indirect effect*: $b = -0.21$, $SE = 0.06$, $z = -3.71$, $p < .001$, 95% CI [-0.33, -0.10]). See Supplemental Materials for full model output.

Discussion

As expected, observers were less supportive and more critical of an individual who experienced a negative emotion that was miscalibrated, rather than calibrated, to its eliciting circumstances. This appears to be because observers judged the sufferer of a miscalibrated emotion as better able to regulate away his emotion on his own. Concordant with this judgment, observers also wanted the sufferer of a miscalibrated emotion to self-regulate his emotion,

whereas they wanted this to a lesser extent when his emotion was well calibrated. In turn, observers expressed stronger intentions to criticize the sufferer of a miscalibrated emotion, and weaker intentions to support him. Thus, we observed evidence consistent with a path running from emotional miscalibration, to increased control, then increased desire for emotional self-regulation, and finally to increased intention to criticize and withhold support. We also found that emotional miscalibration caused observers to dislike the sufferer to a greater extent, such that they sometimes wanted to break off their relationship with him. But, while this desire did somewhat predict observers' critical and supportive reactions, the primary path through control and desired self-regulation withstood controlling for it.

Study 3 therefore provides positive evidence that manipulating emotion control by changing the perceived calibration (or rationality) of an emotion evokes a desire for a sufferer to regulate an emotion on his or her own, and that this predicts critical responses. This is, to our knowledge, the first study to successfully manipulate perceived emotion control and show a downstream effect on observers' reactions. In a follow-up study, reported in the Supplemental Materials, we replicate these results and demonstrate that differences in perceived emotion control specifically reflect judgments that the target can more easily reappraise their emotion (as opposed to suppress the emotion).

Study 4

Study 4 builds on the proposal that people treat miscalibrated emotions as more controllable because they believe that people can change their irrational emotions through rational reasoning. According to this intuitive theory, when a person suffers from a miscalibrated emotion, they can choose to feel better by updating their incorrect appraisal of their situation. It

is this opportunity to rationally fix a miscalibrated emotion, and lack of opportunity to fix an already-calibrated emotion, that explains why miscalibrated suffering seems more controllable than calibrated suffering. If people conceptualize emotion change this way, then attributions of emotion control over miscalibrated emotions should depend on the sufferer being capable of clear, rational reasoning in the first place. When the sufferer is capable of rational thinking, then as noted above, they have an opportunity to control their miscalibrated suffering through rational reappraisal. But if the sufferer lacks the ability to think rationally, then even if they put in effort to reappraise their emotion, they would be unable to appreciate the reasons that would fix their initial appraisal. Thus, observers should attribute emotion control to sufferers only when their suffering is miscalibrated *and* they have the capacity to recognize this fact. And, if attributions of control guide decisions to react critically, then it is only in these situations that observers should criticize sufferers. Figure 4 displays a graphical representation of this reasoning.

Figure 4. Hypothesized relationship between observers' judgments of a sufferer's reasoning capacity, emotion calibration, and emotion control, and their reactions. Shaded boxes represent features of the sufferer we manipulated in Study 4.

This line of reasoning contrasts with an alternative hypothesis according to which observers' critical and unsupportive reactions result directly from the emotion's miscalibration. We tested one plausible alternative of this sort in Study 3, namely that observers dislike sufferers of miscalibrated emotions. However, alternative versions of this sort of hypothesis also exist – for instance, observers may experience strong transitory feelings of antipathy towards sufferers without necessarily wanting to end the relationship with them; or perhaps observers simply react negatively to miscalibrated emotions themselves, which causes them to shut down, withdraw support, and criticize, without discernible feelings of dislike towards the sufferer. Regardless of the specifics, the common thread running through these alternative explanations is that they bypass inferences of the sufferer's ability to control their miscalibrated emotions. Consequently, they all predict that observers will criticize someone who holds a miscalibrated emotion even if that person lacks control over it.

Study 4 tests this class of alternative explanations by comparing observers' reactions to other's miscalibrated emotion (relative to a calibrated emotion), when that person either possesses (or lacks) the capacity to reappraise it. According to our hypothesis, observers should criticize someone with a miscalibrated emotion only if they think that person has control over it. But according to the general alternative hypothesis just laid out, criticism does not depend on control, and so observers should criticize the sufferer of a miscalibrated emotion even when that person lacks the capacity to regulate it away. We further hypothesized that when a sufferer is incapable of cognitive reappraisal, this breaks the usual link between emotional miscalibration and inferences of emotion control. Accordingly, we predicted that the capacity to think rationally would moderate the causal link between emotion miscalibration and control, and therefore also

the link between emotion miscalibration and supportive and critical reactions (Figure 4).

Statistically speaking this is a test of moderated mediation which we test in Study 4. Study 4 therefore represents a strong test of our theory that everyday social criticism and disapproval is underpinned by a constructive rather than a destructive motivation, while also constituting a powerful means of ruling out a broad class of alternative hypotheses.

Methods

Design. Subjects read about the same event from Study 3. Subjects were randomly assigned to learn that the target's emotion was either calibrated (calibrated condition) or miscalibrated (miscalibrated condition). In the calibrated emotion condition, the friend is strongly upset about a severe event, namely, that a friend of theirs from high school just died by suicide (calibrated emotion condition). In the miscalibrated emotion condition, the friend is upset about a bad, but impersonal, event, namely that the National Institute of Health released a report saying that teen suicide increased by 1% last year.

We also manipulated whether the target was temporarily incapable of rational thinking. Half the subjects were randomly assigned to a "mental incapacity" condition, which stipulated that Jamie had suffered an injury that affected his ability to think clearly. In the control condition, we described Jamie as having suffered an equally serious physical injury, but which had preserved his ability to reason rationally (hereafter, "physical incapacity" condition).

Crossing these two manipulations – emotion calibration (calibrated vs miscalibrated) and incapacitation (mental vs physical) – yielded a four-cell between-subjects design.

Pretest. We conducted a pretest ($N=97$) to ensure that the two impairment conditions effectively manipulated perceived capacity without introducing any confounds. This pretest revealed that the impairment manipulation affected perceived capacities as expected. Jamie was

rated as less capable of thinking clearly and rationally in the mental impairment condition ($M = 3.62$, $SD = 1.60$) compared to the physical impairment condition ($M = 5.82$, $SD = 1.12$), $t(81.94) = -7.83$, $p < .001$, $d = 1.61$. Likewise, Jamie was rated as more physically capable in the mental impairment condition ($M = 4.83$, $SD = 1.20$) than the physical impairment condition ($M = 4.08$, $SD = 1.34$), $t(94.83) = 2.91$, $p = .004$, $d = .59$. Importantly, subjects were equally sympathetic towards mentally impaired Jamie ($M = 6.06$, $SD = 1.21$) and physically impaired Jamie ($M = 5.86$, $SD = 0.99$), $t(89.18) = 0.91$, $p = .367$, $d = .19$, notwithstanding that they judged mentally impaired Jamie to be slightly less likable ($M = 5.57$, $SD = 1.43$ vs. $M = 6.14$, $SD = 0.93$), $t(78.18) = -2.30$, $p = .024$, $d = .47$. Therefore, if, as we predict, subjects are more critical towards physical impaired Jamie, this cannot be because they are less sympathetic to his plight or found him less likable.

Participants. We recruited 399 people from Amazon's Mechanical Turk (52% reported Female, 48% reported Male, mean age = 38 years, median age = 34 years, age range 18-81 years). This resulted in above a 99% chance to detect our key predicted interaction ($\alpha = .05$), which comprised a full attenuation ($d = 0$) of the impact of emotion calibration on perceived control and criticism ($ds > .59$; observed in Study 3).

Procedure. Subjects were randomly assigned to one of the four experimental conditions at the beginning of the experiment. The complete vignette was divided between two pages. On the first page, subjects read a short passage setting up the scenario and then revealing that Jamie had been in an accident that resulted in either a mental or physical impairment. In the mental ailment condition, subjects read:

A few months ago, Jamie's car was struck from behind while he was waiting at a red light. The accident gave Jamie a concussion. While he has mostly recovered, he is still

dealing with side effects from the head trauma. For instance, he has difficulty thinking clearly or rationally. He also has difficulty controlling his thoughts and moods. You've seen him struggle with this ever since the accident. Luckily, the doctors strongly believe Jamie will be fully recovered in about a month.

By contrast, subjects assigned to the physical ailment condition read:

A few months ago, Jamie's car was struck from behind while he was waiting at a red light. The accident hurt his back. While he has mostly recovered, he is still dealing with side effects from the injury. For instance, he still has some stiffness and soreness in his back. He also has difficulty walking at a normal pace and getting up when he is sitting. You've seen him struggle with this ever since the accident. Luckily, the doctors strongly believe Jamie will be fully recovered in about a month.

All subjects then, on the next page, read the same story from Study 3 about picking up Jamie from the airport and learning that Jamie is obviously upset. They also learned whether Jamie's emotion is calibrated or miscalibrated. This text was unchanged from Study 3 to 4.

Finally, subjects reported their agreement with a series of statements about how they would react to Jamie. Agreement ratings were all made using the same 7-point rating scales (1: strongly disagree; 7: strongly agree). One item measured perceived emotion control ("If Jamie wanted to, he could choose to stop feeling upset"). Two items measured perceived emotion calibration ("It objectively makes sense for Jamie to feel as upset as he does about what happened" and "Jamie's reaction to the news he just learned is appropriate"). Two items measured supportive reactions ("I would feel a great deal of sympathy for Jamie feeling this upset" And "I would do everything I could to accommodate Jamie"). Two items measured our main DV of interest: critical reactions ("I would criticize Jamie for feeling this upset" and "I

would express frustration toward Jamie for feeling this upset”). And one item measured perceived emotion strength (“Jamie is feeling extremely upset”). The eight items were shown in random order. On the following page subjects were asked to briefly recall what Jamie was upset about. Subjects indicated their age and sex and were then debriefed.

Results

We averaged each pair of items measuring supportive reactions ($\rho = 0.81$), critical reactions ($\rho = 0.88$), and perceived emotion calibration ($\rho = 0.91$) to create composite indices. As planned, we conducted a series of ANOVAs regressing calibration, control, and criticism on impairment type (mental vs. physical), emotion calibration (calibrated vs. miscalibrated) and their interaction. We followed up these analyses with a pre-registered moderated-mediation analysis testing whether the manipulation of rational capacity moderated the causal path from emotion calibration to critical reactions respectively (via attributions of control). Key results are displayed in Figure 5.

Manipulation checks. As expected, we observed a main effect of the calibration manipulation on our composite perceived calibration ratings, $F(1, 395) = 421.29, p < .001, \eta_G^2 = 0.52$, such that emotions in the miscalibrated condition were judged as less calibrated ($M = 3.35, SD = 1.67$) than those in the calibrated condition ($M = 6.18, SD = 1.01$). Also as expected, for this measure, there was no main effect of impairment type, $F(1, 395) = 0.03, p = .871, \eta_G^2 < 0.01$, nor any interaction, $F(1, 395) = 0.06, p = .80, \eta_G^2 < 0.01$. We observed a small effect of calibration on perceived emotion strength such that subjects perceived Jamie’s emotional reaction in the miscalibrated condition as slightly less severe ($M = 5.97, SD = 1.07$) than in the calibrated condition ($M = 6.34, SD = 1.13$), $F(1, 395) = 11.05, p = .001, \eta_G^2 = 0.03$. However,

all results reported below replicated when controlling for perceived emotion strength. We next turn to the main DVs of interest: perceived control and critical reactions.

Perceived emotion control. Overall, subjects judged Jamie to have more control over his emotion in the miscalibrated emotion condition ($M = 3.24$, $SD = 1.57$) compared to the calibrated emotion condition ($M = 2.59$, $SD = 1.61$), $F(1, 395) = 15.75$, $p < .001$, $\eta_G^2 = 0.04$. Subjects also attributed more emotion control to Jamie in the physical incapacity condition ($M = 3.24$, $SD = 1.68$) than in the mental incapacity condition ($M = 2.57$, $SD = 1.48$), $F(1, 395) = 17.1$, $p < .001$, $\eta_G^2 = 0.04$. However, these results were qualified by the predicted interaction between impairment type and emotion calibration, $F(1, 395) = 8.24$, $p = .004$, $\eta_G^2 = 0.02$. In the physical impairment condition, there was a significant effect of calibration on perceived control, such that subjects rated Jamie as having more control over the miscalibrated emotion ($M = 3.76$, $SD = 1.57$) than the calibrated emotion ($M = 2.70$, $SD = 1.63$), $t(196.15) = 4.65$, $p < .001$, $d = .66$. In the mental impairment condition, however, there was no effect of calibration – subjects attributed the same low emotion control to Jamie regardless of whether his emotion was calibrated ($M = 2.50$, $SD = 1.59$) or miscalibrated ($M = 2.66$, $SD = 1.34$), $t(196.96) = 0.81$, $p = .421$, $d = .11$. These results held when controlling for perceived emotion strength.

Critical reactions. Subjects were no more critical towards Jamie in the physical impairment condition ($M = 2.07$, $SD = 1.53$) than in the mental impairment condition ($M = 1.92$, $SD = 1.37$), $F(1, 395) = 0.78$, $p = .378$, $\eta_G^2 < 0.01$, although they were more critical towards Jamie in the miscalibrated emotion condition ($M = 2.26$, $SD = 1.53$) than in the calibrated emotion condition ($M = 1.75$, $SD = 1.33$), $F(1, 395) = 12.59$, $p < .001$, $\eta_G^2 = 0.03$. However, again, these results were qualified by the predicted interaction between impairment type and calibration, $F(1, 395) = 4.28$, $p = .039$, $\eta_G^2 = 0.01$. In the physical impairment condition,

subjects were more critical when Jamie experienced a miscalibrated emotion ($M = 2.46$, $SD = 1.67$) than when he experienced a calibrated emotion ($M = 1.66$, $SD = 1.24$), $t(187.87) = 3.87$, $p < .001$, $d = .54$. However, this difference disappeared in the mental impairment condition: Subjects were not more likely to criticize Jamie in the miscalibrated emotion condition ($M = 2.03$, $SD = 1.34$) relative to the calibrated emotion condition ($M = 1.82$, $SD = 1.40$), $t(194.82) = 1.08$, $p = .281$, $d = .15$.

Figure 5. Mean (and standard error) of perceived emotion calibration, attributions of emotion control, and critical reactions across emotion calibration and incapacity conditions.

*** $p < .001$, ** $p < .01$, * $p < .05$.

We next conducted a planned moderated-mediation analysis on critical reactions described above. This analysis consisted of four separate results, which each aligned with our a priori predictions. First, we observed evidence consistent with perceived emotion control mediating the effect of emotion calibration on critical reactions ($a = -0.61$, $p < .001$, $b = 0.53$, $p < .001$; $ab = -0.47$, 95% CI $[-0.81; -0.15]$). Second, as noted above, the mental vs. physical impairment manipulation moderated the relationship between the calibration manipulation and

perceived emotion control, such that the calibration manipulation had a larger effect on control judgments in the physical impairment condition than it did in the mental impairment condition. Third, also as noted above, the impairment manipulation moderated the overall relationship between the calibration manipulation and critical reactions. And fourth, as predicted, the impairment manipulation did not moderate the relationship between control and critical reactions, $b = -0.09$, $t(393) = 1.11$, $p = .268$, $R_b^2 < 0.01$. In summary, informing subjects that the sufferer lacked the mental capacity to regulate away his emotion led them to no longer treat calibration as a cue to emotion control, and therefore to no longer criticize the sufferer more for experiencing miscalibrated as compared to calibrated emotions.

Supportive reactions. Turning to supportive reactions, overall, subjects were less supportive in the miscalibrated condition ($M = 5.25$, $SD = 1.39$) than they were in the calibrated condition ($M = 6.17$, $SD = 0.98$), $F(1, 395) = 57.97$, $p < .001$, $\eta_G^2 = 0.13$, but they were not significantly more supportive in the mental impairment condition ($M = 5.86$, $SD = 1.16$) than the physical impairment condition ($M = 5.58$, $SD = 1.39$), $F(1, 395) = 3.83$, $p = .051$, $\eta_G^2 = 0.01$. Contrary to our predictions, and in contrast to the results for critical reactions, we did not observe an interaction of impairment type and calibration on supportive reactions, $F(1, 395) = 1.60$, $p = .207$, $\eta_G^2 < 0.01$. Thus, we did not find support for the preregistered moderated-mediation hypothesis; subjects' supportive reactions were only partially consistent with our theorizing.

Discussion.

Results from Study 4 support the claim that criticism of others' emotional suffering reflects a desire to regulate others' emotion regulation. First, Study 4 reveals that observers infer emotion control by reasoning both about whether the sufferer is capable of rational thinking and whether, in the current moment, they are fulfilling that capacity. Accordingly, observers attribute

more emotion control to sufferers who have a miscalibrated emotion and who are capable of rationally reappraising their emotions, and attribute considerably less emotion control to sufferers whose emotion is already calibrated, or who cannot engage in rational reappraisal. Second, Study 4 provides further evidence that attributions of control, which are a product of these two cues, predict criticism of sufferers. In so doing, Study 4 also demonstrates that critical reactions do not simply reflect negative reactions to miscalibrated emotions: Even when an emotion is miscalibrated, observers do not criticize the sufferer if they believe that the sufferer cannot control their emotion. These results did not replicate for another type of unsupportive reaction, namely, withholding sympathy. Observers felt less sympathy for the sufferer when their emotion was miscalibrated regardless of whether they thought the sufferer could control their emotion. Thus, sympathy may not be governed by a motive to regulate others' emotion regulation in the same way that critical reactions are.

General Discussion

When someone feels anxious, upset, or distressed, they often benefit from seeking out and receiving support from others (Zaki, 2020). But there is no guarantee that observers will help them. Observers sometimes withhold help or criticize a sufferer for their suffering. We have argued that these reactions sometimes reflect judgments that a sufferer can exert control over their emotions, and specifically that, if they tried, they could choose to stop suffering. Accordingly, when observers infer that a sufferer can control their suffering, observers will withhold sympathy and criticize that person, and they will do so in part to spur the sufferer to exert control over how they feel. Ironically, this behavior entails making someone who feels bad feel even worse in order eventually to make them feel better.

Consistent with this proposal, we found across all our studies that attributions of emotion control predicted subjects' intentions to withhold sympathy and criticize someone who felt distressed, sad, embarrassed, or stressed. Study 1 found that subjects' attributions of control correlated negatively with their sympathy for a sufferer, and positively with intentions to try to make the sufferer feel bad for their emotion. We replicated these findings in Study 2 using an autobiographical recall task wherein subjects reported being less supportive and more critical toward their friend or spouse when they thought that this person could make themselves feel better on their own.

In Studies 3-4, we manipulated emotion control by varying how well-calibrated a sufferer's emotion was to its eliciting circumstances. In theory, people should judge miscalibrated emotions (i.e., emotional overreactions) as more controllable than calibrated emotions in part because they think that those emotions are easier to rational re-evaluate. To test this, subjects read about a character who felt a strong emotion either in response to a highly personal event – learning that someone they knew died by suicide – or a highly impersonal event – learning that teen suicide increased by 1% in the United States. As expected, when the situation was highly impersonal, subjects reported that the character's reaction made little sense – in other words, they were overreacting. Consistent with our proposal, subjects thought that the character who was overacting, and who could choose to stop feeling upset, should try harder to stop feeling upset on their own. This desire for the sufferer to control their emotion in turn predicted subjects' tendency to react less supportively and more critically toward them.

Study 4 documented an additional cue that people integrate when judging how much control others have over their emotions: the general capacity to think rationally. If an individual lacks this capacity, then they should be unable to re-evaluate (and so control) their overreactions.

To test this line of reasoning, we manipulated whether the target had suffered either a concussion that impaired their ability to think rationally, or alternatively, an equally serious injury that had only physically debilitating effects. Observers' judgments of the physically injured individual were unchanged – they continued to judge this person as more capable of regulating away a miscalibrated emotion relative to a calibrated one (and they continued to criticize this person for their miscalibrated emotion). But subjects no longer made this distinction for the sufferer of a concussion, who was regarded as equally incapable of regulating away either emotion. And in turn, subjects withheld any intent to criticize or express frustration towards this individual even when this person was suffering from a miscalibrated emotion.

In sum, these studies show robust support for the connection between attributions of emotion control and people's reaction towards others' suffering. When observers believe that sufferers can control their emotions, they are more likely to report a desire for sufferers to do so, to withhold sympathy, and to criticize the sufferer for their emotion. Moreover, across Studies 1, 3 and 4, we document how attributions of emotion control vary across observers (via differences in their lay theories of emotion; Study 1), situations (via differences in a particular emotion's calibration to its environment; Studies 3-4), and sufferers (via differences in observers' perceptions of the sufferer's rational capacities; Study 4). Variation in each of these attributes provides evidence for a causal connection between control and supportive or critical reactions. Additionally, these all represent cues people likely use in everyday life – it may not be unusual for people to accuse another person of overreacting to some event, and to temper their criticism because they judge that person as incapable of rationally controlling their irrational reaction.

Relation to prior work

This theory represents two important departures from existing work on interpersonal emotion regulation. First, it imports moral constructs such as blame and criticism, and their precursors (namely, inferences of mental control), into the study of interpersonal emotion regulation. Second, it sheds a prior tendency amongst scholars to construe observers' unsupportive reactions as exclusively unintentional errors that observers make while trying to be supportive (e.g., Wortman & Lehman, 1985). Our results challenge this assumption by proposing that observers sometimes knowingly cause sufferers additional distress, and explain why, from the observers' point of view, critical and unsupportive reactions might seem like a rational reaction.

In documenting the intention to criticize close others, our findings complement recent research which has shown that people sometimes induce negative emotions (like anger) in others when they believe that doing so will positively affect others' performance (e.g., López-Pérez et al., 2017; Netzer, Van Kleef, Gerben & Tamir, 2015). This prior work, as well as the present studies, both explain the induction of negative emotions in others as rational in light of the perceived downstream positive effects that they can produce. However, our research also goes beyond this prior research in several ways. For instance, the contexts investigated in these recent studies were highly artificial laboratory contrivances, which although useful for establishing internal validity, lack the immediate application to real-world contexts that our studies provide. Furthermore, in these prior studies, subjects interacted with strangers, whereas our studies document intentional negativity towards close others. And most importantly, in these prior studies, observers induced emotions in others that those others would very likely induce in themselves – such as feeling angry before doing a competitive task – because those feelings are useful without being ego-threatening (Tamir, 2016). Our studies, by contrast, document the

induction of negative emotions that the target would likely not choose to induce in themselves, namely, feeling shame or guilt for one's suffering. In this way, our studies document an intention to produce thoroughly aversive experiences in sufferers – by criticizing them for their suffering – that seems not to have been previously documented.

Limitations and Future Directions

We have argued that people are sensitive to features of emotions, other individuals, and situations that make emotions more (or less) difficult to control. We found support for this claim; however, a few questions remain. Most importantly, how do people judge an emotion's calibration to its eliciting circumstances? One possibility is that people base their calibration judgments on their knowledge of which feelings and situations normally co-occur in daily life, or relatedly, whether the beliefs and desires underlying the emotion are themselves rational. Another possibility is that people judge emotion calibration in terms of how functional a given emotion is in the moment, independent of normalcy, e.g., stress would be judged as calibrated insofar as it motivates action that would be beneficial, regardless of how common it is under the circumstances (Tamir, 2016). In our view, how people evaluate emotions as calibrated is an open question, and answering it is a valuable goal for future research.

A second important question regards how accurately people judge others' cognitive control over their emotions. People are notoriously poor at reasoning about others' mental life. For instance, people often think that others' emotions are less strong than their own (McFarland & Miller, 1990). Most relevant to the current proposal, people tend to think that others have voluntary control over their beliefs even when those individuals deny such control (see specifically, Cusimano & Goodwin, 2020; Studies 1, 2, and 4). It is possible that observers

likewise overestimate the degree of control that others have over their emotions, relative to the control that those close others judge themselves to have. And it is also possible that observers overestimate others' emotion control relative to the control that those others in fact possess (though this is a more difficult question to answer, since gauging true control is not easy). Future research is needed to determine whether, and under what conditions, people form accurate judgments about others' capacity to regulate their emotions.

There are also many other cues people could use to derive attributions of emotion control. For instance, one relevant cue is time: As time passes following an adverse event, people are more capable of distracting themselves or distancing themselves from the event, or of finding meaning in it (Wilson & Gilbert, 2008). We might therefore predict that people will incorporate time in their judgments of emotion control by, for instance, judging that someone mourning the loss of a loved one is better able to regulate away that sadness several months or years after the death, compared to immediately following it. Likewise, children and young adults improve their capacity to regulate their emotions as they mature (e.g., Band & Weisz, 1988; Fields & Prinz, 1997; Harris, Olthof, & Terwogt, 1981). Therefore, another prediction that falls out of our hypothesis is that parents will be less supportive of older children's negative emotions compared with younger children's negative emotions, since inferences of emotion control should be tied to knowledge of the child's cognitive development. Some work has shown that parents who think their children's emotions are controllable are less supportive when their children emotionally suffer (Halberstadt et al., 2013), but no work has yet investigated whether these attributions of control reflect stable individual differences of the parents, inferences about children's developing capacity to regulate their emotions, or both. These questions mark important areas for future

research, and readily follow from our claim that people attend to the features of others that are relevant for assessing their capacity for emotion control.

Conclusion

People often seek out others to help regulate their own emotions. When will others join this effort, and react supportively, and when will they repudiate it, and criticize the sufferer? The present results bring moral psychology to bear on this dynamic in close relationships. They show that supportive or critical reactions depend in part on inferences that people make about the degree of control that a sufferer has over his or her emotions. When people think that someone can control their emotion, they react less supportively and more critically. Critical reactions can be either quite direct, in the form of explicit rebuke, or more indirect, in the form of expressed frustration and impatience. People infer emotion control by thinking about how well the emotion fits its eliciting situation, how cognitively capable the sufferer is, and how effective they themselves are at controlling their emotions. These results are consistent with everyday emotion regulation *regulation*, in which observers track features of people and situations that enable emotion regulation and expect and instigate others to regulate their own emotions if they can.

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Appendix A

Table A1

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https://researchbox.org/444&PEER_REVIEW_passcode=UYKDTJ)

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