

**In Self-Defense: Reappraisal Buffers the Negative Impact of Low Procedural Fairness  
on Performance**

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### Abstract

Contrary to an often-found result in the organizational justice literature, we suggest that there may be circumstances under which organization members will not perform poorly in response to being on the receiving end of low procedural fairness. To explain the theoretical mechanism, we integrate the group engagement model of justice with the emotion regulation perspective. Specifically, we argue that the detrimental effect of lower procedural fairness on performance is attenuated when individuals engage in reappraisal. Moreover, this is the case because reappraisal makes lower procedural fairness less likely to undermine self-perceived standing in the organization. Three experiments and a multisource survey among employees reveal support for these predictions. This research contributes to the organizational justice literature by showing that reappraisal can help maintain performance when people have experienced low procedural fairness, extending the typical finding that low procedural fairness undermines performance. Theoretical and practical implications, limitations, and suggestions for future research are discussed.

### Public Significance Statement

This research suggests that the emotion regulation strategy of reappraisal (i.e., reinterpreting an adverse situation to reduce its threatening impact) buffers the negative effect of unfair decision-making procedures on employee performance. It does so by reducing the detrimental influence that unfair procedures have on employees' sense of standing in the organization.

*Keywords:* procedural fairness, self-perceived standing, emotion regulation, reappraisal

A basic tenet of the organizational justice literature is that employees' beliefs and behaviors are greatly influenced by the fairness of their treatment in the workplace (e.g., Colquitt, Greenberg, & Zapata-Phelan, 2005; Lind & Tyler, 1988). For example, in-role and extra-role performance suffer when members perceive they are on the receiving end of decision-making procedures that they perceive as unfair (i.e., low procedural fairness; see Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Colquitt et al., 2013 for meta-analyses). One prominent explanation of such effects is provided by the group engagement model (Tyler & Blader, 2003), which proposes that low procedural fairness lowers people's perceptions of their standing within the organization; these perceptions of lowered standing, in turn, decrease employees' willingness to contribute to the organization, thereby leading to reduced performance (see Blader & Tyler, 2009; van Dijke, De Cremer, Mayer, & Van Quaquebeke, 2012 for empirical evidence).

Given the practical and theoretical significance associated with the ubiquitous finding that low procedural fairness undermines performance, it is intriguing to consider when this may not be the case. Drawing on a theoretical perspective that has not been well integrated with the justice literature enables us to speak to this question. More specifically, the most influential account of emotion regulation, namely, the process model set forth by (Gross, 1998b, 2013) suggests that people may use one of the emotion regulation strategies identified in the model – reappraisal – to change their cognitive representation of the situation in which they find themselves in ways that allow them to remain actively engaged. We propose that reappraisal attenuates the negative effects of low procedural fairness on people's self-perceived standing as organization members. As such, reappraisal may buffer against the typically adverse effect of low procedural fairness on performance. The present research thus evaluates whether reappraisal provides a means through which organization members may deal with low procedural fairness in ways that allow them to maintain a relatively high level

of performance.

More generally, we seek to integrate two bodies of knowledge that surprisingly have been disconnected to this point: the organizational justice literature and the emotion regulation literature. In so doing, we seek to offer contributions to both areas. First, our research seeks to extend prior theorizing on procedural fairness. Existing theory, in particular fairness theory (Folger & Cropanzano, 2001) and fairness heuristic theory (Lind, Kray, & Thompson, 2001) acknowledge that (re)appraisal (i.e., [re]evaluation or [re]estimation) plays a role in the formation of fairness judgments and that this process is driven by an accuracy or sense-making motive, in which people try to assess what is going on (Barclay, Bashshur, & Fortin, 2017; Jones & Skarlicki, 2013). However, based on the emotion regulation literature we suggest that people may reappraise low procedural fairness because it enables them to have a more positive psychological experience than they would have in the absence of reappraisal. Put differently, people may well know what is going on but do not like what they see. As such, we test a process associated with reappraisal that is conceptually distinct from accuracy or sense-making.

Second, although appraisals essentially are cognitive interpretations (Ochsner & Gross, 2005), emotion regulation research has rarely considered how reappraisal may influence cognitive inferences; instead it has focused on affective or behavioral outcomes. We evaluate whether reappraisal shapes specific cognitive inferences (i.e., self-perceived standing) that can counter people's tendencies to perform less well in response to low procedural fairness. Finally, the few studies on the effects of reappraisal on work performance have produced inconsistent results (Liu, Prati, Perrewé, & Brymer, 2010; Wallace, Edwards, Shull, & Finch, 2009). We think it more logical that it is not reappraisal itself (as a *main effect*) that influences performance; rather, it can help employees perform well in the face of psychological adversity in particular, such as when they are on the receiving end of low

procedural fairness. In other words, reappraisal may influence performance through its *moderating influence* on the relationship between procedural fairness and performance.

It is important to emphasize that the logic underlying the present research is not intended to give license to organizations to exhibit low procedural fairness and then put the onus on their members to find a way to cope with it via reappraisal. Rather, the unfortunate reality is that organizational membership frequently subjects employees to experiences of low procedural fairness (Johnson, Lanaj, & Barnes, 2014; Scott, Garza, Conlon, & Kim, 2014) and, consequently, threats to their self-perceived standing in the organization. Whereas we certainly do not condone managers behaving in procedurally unfair ways, the present studies evaluate whether there is something employees can take upon themselves to do, and thereby alleviate the reduced sense of standing and lowered performance that often accompany being on the receiving end of low procedural performance. In any event, by not addressing the source of unfairness itself, reappraisal may have the somewhat paradoxical effect of inducing employees to accept toxic organizational environments.

### **Theoretical Background**

#### **Strand 1: Procedural Fairness**

Many studies have shown that employees care deeply not only about the fairness of their outcomes (e.g., salary, promotion opportunities; Adams, 1965), but also about the fairness of decision-making procedures that are used to allocate outcomes to organization members, which is referred to as procedural fairness (Lind & Tyler, 1988). Various elements influence people's perceptions of the fairness of the procedures. For example, procedures are perceived as fairer when they are less biased by the enacting authority's self-interest (De Cremer, 2004) or when they more allow employees to voice their opinion (Thibaut & Walker, 1975).

As noted, one explanation for the established positive relationship between procedural

fairness and each of in-role and extra-role performance is offered by the group engagement model (Tyler & Blader, 2003), which integrates and extends insights of the earlier group value (Lind & Tyler, 1988) and relational model (Tyler & Lind, 1992). More specifically, the group engagement model builds on social identity theory to suggest that people's willingness to display group-benefitting performance is a function of whether the feedback they receive from those groups helps them create and maintain a positive identity (Tajfel & Turner, 1986). One important basis of positive identity is people's sense of standing within the collective. Standing refers to the respect, admiration, and regard that employees believe they have in the eyes of others (Blader & Yu, 2017). One source of identity-relevant information, in turn, is procedural fairness. Specifically, being treated with higher procedural fairness signals that one is considered to be in higher standing (van Dijke & De Cremer, 2008; van Prooijen, van den Bos, & Wilke, 2002). That is, higher procedural fairness increases employees' sense of overlap between the organization and themselves, which heightens their intrinsic motivation to perform and thereby contribute to the welfare of the group (Blader & Tyler, 2009; Tyler & Blader, 2003; van Dijke et al., 2012).

Research on the group engagement model has traditionally not emphasized the cognitive operations involved in judging whether a procedure is fair vs. unfair. Instead, it has emphasized that certain characteristics of procedures (e.g., being allowed vs. denied voice in decision making processes) shape self-related judgments, such as perceptions of one's own standing, which subsequently influence performance. Other work has, however, focused explicitly on how fairness judgments are formed, showing that employees appraise and reappraise fairness-related information as a result of ongoing attempts to make sense of or understand the situations in which they find themselves (Jones & Skarlicki, 2013). One influential theory in this regard is fairness theory (Folger & Cropanzano, 2001), which builds on counterfactual thinking research. A counterfactual thought is a mental representation of an

alternative past, used to evaluate a current event (Roese, 1997). For instance, when an employee is denied a promotion, she might try to make sense of the situation by thinking, “If only my supervisor had more convincingly supported my case to higher management I might have been promoted.” According to fairness theory people engage in counterfactual thinking to establish whether an adverse event is *unfair* (rather than merely unfavorable). The strongest judgments of unfairness result if counterfactual thinking suggest that: (1) a negative situation *would* have been different had the authority acted differently, (2) the authority *could* have acted differently, and (3) the authority *should* have acted differently (see Nicklin, Greenbaum, McNall, Folger, & Williams 2011 for supportive evidence).

Fairness theory emphasizes how people appraise adversity using counterfactual cognitions to form procedural fairness judgments. Fairness heuristic theory (Lind et al., 2001) specifically addresses *reappraisal* of procedural fairness information, also from a sense-making perspective. This theory argues that organization members rely on fairness information as a simple (and imperfect) decision heuristic to determine whether they can trust authorities to not exploit them. They do so because analyzing all factors relevant to the assessment of authority trustworthiness would overwhelm their cognitive capacities. The theory also notes that due to this limited cognitive capacity, “once a general fairness judgment is generated, it will be assumed to be accurate, and any incoming information relevant to the fairness of treatment will be reinterpreted and assimilated to be congruent with the existing general fairness judgment” (unless the incoming information is vastly discrepant from the extant fairness judgment, which may trigger a process of re-evaluation of that judgment) (Lind et al., 2001, p. 76-77, our parentheses added).

In the following section we draw on the emotion regulation literature to delineate a reappraisal process that is conceptually distinct from the one identified in the above-described theories of fairness. Specifically, we reason that when people experience the

situation that they are in as aversive (e.g., they have been treated with low procedural fairness), they may engage in reappraisal not only to better understand the situation they are in but also in an attempt to perceive themselves in a more positive light (e.g., in the face of low procedural fairness). Based on this reasoning, the present research evaluates whether engaging in reappraisal buffers against the typically adverse effects of lower procedural fairness on people's sense of standing and subsequent performance in the workplace.

### **Strand 2: Emotion Regulation**

The core questions in theory and research on emotion regulation are how people shape their experience and expression of emotions (e.g., Côté, 2005; Gross, 1998b; Webb, Miles, & Sheeran, 2012). A major tenet of emotion regulation theory is that people seek to reduce or manage negative emotions (Gross, 2013). To do so, they employ strategies referring to different aspects of an emotion trajectory. Specifically, in the modal framework of emotion (Frijda, Kuipers, & ter Schure, 1989; Han, Lerner, & Keltner, 2007), it is posited that emotions evolve in the following sequence: situation-attention-appraisal-response. Hence, while relevant situations may provide the onset of an emotion trajectory, these situations can be attended to in different ways. Once attention is devoted, an individual makes interpretations, and ultimately responds physiologically, experientially, and behaviorally. All these steps allow for different emotion regulation strategies, which are specified in the process model (Gross, 1998b). For instance, specific situations may be sought or avoided, circumstances may be modified, or attention differentially deployed. In the subsequent appraisal phase individuals may engage in cognitive strategies that allow for reappraisal, thus viewing the situation and themselves in a more positive light. In the response phase individuals may modulate their behavioral reactions so that it does not reflect the experienced emotion, that is, they may engage in suppression.

In the present research, we identify reappraisal as a strategy that may be particularly



likely to attenuate the harmful effect of low procedural fairness on people's sense of standing as organization members and their subsequent performance in the organization. Many accounts of emotion place the appraisal (i.e., evaluation or estimation) component at the forefront in defining and studying emotional experience (e.g., Scherer, Schorr, & Johnstone, 2001). Specifically, discrete emotions are believed to result from a certain appraisal of the current situation and one's own role in it. For instance, fear indicates the presence of a threat, anger the presence of a competitor, and so on (Frijda, Kuipers, & Ter Schure, 1989). Reappraisal is defined as "cognitively transforming the situation so as to alter its emotional impact" (Gross, 1998b). Research has shown that reappraisal can be successful in reducing negative emotions (Feinberg, Willer, Antonenko, & John, 2012; Gross, 1998a; Szasz, Szentagotai, & Hofmann, 2011; Wolgast, Lundh, & Viborg, 2011).

We posit that the reappraisal component of emotion regulation reflects a more general tendency that people may undertake to have positive (or less negative) psychological experiences. Such positive experiences include perceiving oneself in a desirable light in addition to feeling desirable emotions. In support of this idea, some studies suggest that reappraisal has behavioral and self-relevant consequences beyond the direct experience and expression of emotions. For instance, reappraisal can decrease avoidance of the adverse situations (Wolgast et al., 2011) and it can foster positive self-evaluations (Nezlek & Kuppens, 2008). In the present research, we consider the possibility that reappraisal can influence a known elicitor of people's self-evaluations: perceptions of their sense of standing as organization members (Tyler & Blader, 2003).

### **Integration: Reappraisal as a Buffer Against Low Procedural Fairness**

The group engagement model posits that people's performance in groups and organizations is positively related to the extent to which they perceive themselves as having high standing, which in turn is a function of how fairly they believe they were treated by an

authority (Tyler & Blader, 2003). Emotion regulation theory and research posit that negative emotional trajectories may be altered by engaging in reappraisal. Specifically, reappraisal can help people to reduce the adverse impact of negative situational cues on the experienced emotional trajectory and subsequent behaviors. As noted, the latter may reflect a more general desire on people's part to have positive psychological experiences. We therefore expect that reappraisal may buffer people against the tendency for low procedural fairness to reduce their sense of standing, in which case their subsequent performance in the organization is less likely to be adversely affected.

More specifically, low procedural fairness constitutes an aversive experience for people in the workplace (Oh & Farh, 2017; Rodriguez Mosquera, Fischer, Manstead, & Zaalberg, 2008; Weiss, Suckow, & Cropanzano, 1999). The reappraisal process itself takes the form of cognitive reinterpretation (Ochsner & Gross, 2005) in which the stimulus (e.g. perceived unfairness) is not attended to less but rather cognitively reappraised. Examples of reappraisal that would leave one's self-perceived standing intact in response to low procedural justice include, "The organization generally does not care much about being procedurally fair, hence, any low procedural fairness that I experience is not directed to me in particular," or, "My boss was not procedurally fair to me, but s/he did not want to hurt me; s/he simply was going through a rough patch in his/her life at that time."<sup>1</sup> In short, we posit that such reappraisals allow recipients of low procedural fairness to not take it "personally," which in turn can buffer against a reduced sense of standing and thereby enable them to perform in the organization at a relatively high level. The reasoning set forth above leads to the following hypotheses:

*Hypothesis 1; Engaging in reappraisal buffers against the tendency for lower procedural fairness to lead to lower levels of performance.*

*Hypothesis 2: Engaging in reappraisal buffers against the tendency for lower*

*procedural fairness to reduce performance by attenuating the link between lower procedural fairness and a reduced sense of standing as organization members.*

We tested our hypotheses in three experiments and in a multisource field study conducted among employees of various organizations. Among the reasons we conducted the field study was to evaluate if the results from the controlled experiments generalize to actual work situations. Data and stimulus materials are available at <https://osf.io/cezvt/>

## Study 1

### Method

**Design and participants.** We employed a 2 (procedural fairness; low vs. high)  $\times$  2 (reappraisal; present vs. absent) design. Power analysis (Faul, Erdfelder, Lang, & Buchner, 2007) indicates that the minimum  $N$  to detect a medium sized interaction effect (i.e.,  $f = .25$ ) in this design with  $\alpha = .05$  and power = .80 is 128. We therefore ran this study for one week in the lab of a Dutch business school among undergraduate students. From experience we knew to expect between 120 and 170 participants during a week. This way, we recruited 165 undergraduate students who participated in exchange for course credit. Participants were randomly assigned to one of four conditions in our design. Based on criteria explained below, we excluded fifteen participants from analyses. Of the remaining 141 participants, 86 were male and 55 were female. Their mean age was 19.96 years ( $SD = 1.52$ ). This study was declared exempt from approval by the Institutional Review Board (IRB) of the institution where the first author was employed.

**Procedure.** Participants were seated in separate cubicles and completed all materials on a personal computer. We used the procedure previously employed by Van Dijke, De Cremer, Brebels, & Van Quaquebeke (2015, see also Van Dijke, Wildschut, Leunissen, & Sedikides, 2015). Specifically, participants were told that they would engage in a brief procedure to select one of them for a leadership position in a “group decision-making study”

that would start a few weeks later. We mentioned that other students who had previously taken part as leaders found being a leader to be a highly rewarding experience. Moreover, leaders would receive higher monetary rewards or extra course credit. We also explained that a research assistant would conduct the actual selection and this person might contact them later during the selection procedure.

We then introduced a commonly used *reappraisal manipulation* (taken from Gross 1998a). In the control condition, we asked participants to consider why they would be a good candidate for the role of group leader. In the reappraisal condition, we also asked participants to consider why they would be a good candidate for the role of group leader, but also noted that during any upcoming interaction with the research assistant, they should rethink their situation “in such a way that you remain calm and dispassionate. Should you feel aversive emotions in any of the upcoming situations, try to reappraise the situation, i.e., do your best to reinterpret the situation.”

Then, we introduced the *procedural fairness manipulation* by either allowing or denying participants voice in the decision about the selection of the leader role in the upcoming study (taken from Van Dijke, De Cremer, et al. 2015, Van Dijke, Wildschut, et al. 2015; see e.g., Avery & Quiñones 2002, Van den Bos 1999 for similar manipulations). Participants in the high procedural fairness condition could indicate in a message to the research assistant information about their suitability and motivation for the leader role; participants in the low procedural fairness conditions were informed by the research assistant that they would not receive this opportunity.

After participants waited for another minute, they learned that the research assistant had collected the necessary information and suggested suitable team leaders to the experimenters. This was followed by the procedural fairness manipulation check (described below). Subsequently, participants were told that the selection procedure was finished and that they

would receive an email in a few days informing them about the group decision study and the role they would play in it.

To assess *performance*, we subsequently introduced an anagram task (taken from Van Dijke, Wildschut, et al. 2015). The task consisted of 100 anagrams, ranging from three to six letters. Participants learned that this task was part of the research assistant's Master's thesis. Participants were told that the more anagrams they solved the more helpful it would be to the research assistant, and that the number of anagrams solved would not affect any compensation to themselves. Moreover, they were free to quit at any moment by clicking the stop button. Thus, the measure of performance was a laboratory analogue of extra-role performance, in that the number of anagrams participants solved had no bearing on any material outcome for them, although solving more was more helpful to the research assistant (Van Dijke, De Cremer, et al., 2015; Van Dijke, Wildschut, et al., 2015). After doing as many of the anagrams task as they chose to do, participants were fully debriefed.

Seven participants (three in the no voice and four in the voice condition) could not be included in the analyses because of a coding error (i.e., the reappraisal variable was not saved to the data file). We further excluded three participants because they indicated they had no interest in taking part in the upcoming group decision making study, two participants because they expressed that they would not be good group leaders in the upcoming study, two participants because they did not understand that they could stop at any time (i.e., after having been in the cubicle for almost half an hour longer than all other participants, the experimenter reminded them that they could hit the stop button and leave, which they did immediately), and one participant because he did not take the task seriously, completing all 100 anagrams incorrectly in 19 seconds. The likelihood of cases being excluded did not significantly differ between conditions (Fisher exact test  $p = .319$ ).

**Measures.** We checked the procedural fairness manipulation by asking how “fair” and

“just” participants found the way in which the research assistant had made the decision ( $M = 3.79$ ,  $SD = 1.57$ ,  $\alpha = .92$ ; taken from Van Dijke, De Cremer, et al. 2015). These items were on seven-point scales (1 = *not at all*, 7 = *very much so*).

Performance was measured with the number of anagrams that participants solved ( $M = 15.47$ ,  $SD = 22.09$ ).

## Results

**Check of the procedural fairness manipulation.** A Reappraisal  $\times$  Procedural Fairness ANOVA on the procedural fairness manipulation check showed only a significant main effect of procedural fairness. Participants in the low procedural fairness condition (i.e., those who were denied voice) reported lower fairness ( $M = 3.01$ ,  $SD = 1.44$ ) than participants in the high procedural fairness condition (i.e., those who were granted voice) ( $M = 4.62$ ,  $SD = 1.26$ ),  $F(1,137) = 50.72$ ,  $p < .001$ ,  $\eta^2 = .27$ ,  $b = -1.85$ ,  $se = .33$ ,  $t = -5.67$ ,  $p < .001$ .

**Performance.** Performance (i.e., number of anagrams solved) is a count variable. Initial Poisson regression indicated overdispersion in the data (i.e., the likelihood-ratio test for alpha = 0,  $\chi^2(1) = 869.56$ ,  $p < .001$ ). Thus, Poisson regression can produce misleading results. We therefore used negative binomial regression with robust standard errors (Cohen, Cohen, West, & Aiken, 2003). This analysis revealed a significant effect of reappraisal,  $b = .37$ ,  $se = .17$ ,  $z = 2.19$ ,  $p = .028$ , but no significant effect of procedural justice,  $b = .21$ ,  $se = .18$ ,  $z = 1.17$ ,  $p = .246$ . Most importantly, the Reappraisal  $\times$  Procedural Fairness interaction was significant,  $b = -.59$ ,  $se = .27$ ,  $z = -2.19$ ,  $p = .028$  (Figure 1).

Consistent with Hypothesis 1, simple effect analyses revealed that among participants who were denied voice (low fairness), reappraisal resulted in significantly higher performance ( $M = 17.82$ ,  $SD = 2.05$ ) compared to the control condition ( $M = 12.24$ ,  $SD = 2.19$ ),  $b = 5.67$ ,  $se = 2.63$ ,  $z = 2.16$ ,  $p = .031$ . However, among participants who received voice (high fairness), performance was not significantly different in the reappraisal condition

( $M = 14.52$ ,  $SD = 2.23$ ) versus the control condition ( $M = 18.00$ ,  $SD = 2.16$ ),  $b = -3.49$ ,  $se = 3.46$ ,  $z = 1.01$ ,  $p = .313$ .<sup>2</sup>

Hypothesis 1 posited that reappraisal (vs. the control condition) weakens the adverse influence of low (vs. high) procedural fairness. This implies that when reappraisal is low (i.e., in the control condition) low (vs. high) procedural fairness should decrease performance. In contrast, in the reappraisal condition, procedural fairness is less likely to influence performance. The pattern graphed in Figure 1 is consistent with these predictions. The results of further simple effect analyses provided more formal support: among participants in the control condition, low procedural fairness (i.e., being denied voice) resulted in marginally significantly lower performance ( $M = 12.24$ ,  $SD = 2.19$ ) than high fairness (i.e., being granted voice) ( $M = 18.00$ ,  $SD = 2.16$ ),  $b = 5.79$ ,  $se = 3.28$ ,  $z = 1.76$ ,  $p = .078$ . In the reappraisal condition, the difference in performance between participants experiencing low procedural fairness ( $M = 17.82$ ,  $SD = 2.05$ ) and high procedural fairness ( $M = 14.52$ ,  $SD = 2.23$ ) was not significant,  $b = -3.32$ ,  $se = 2.85$ ,  $z = -1.17$ ,  $p = .242$ .

### **Discussion of Study 1 and Introduction to Studies 2a and 2b**

Study 1 reveals support for Hypothesis 1 in showing that the typically harmful effect of lower procedural fairness on performance was eliminated among individuals who had engaged in reappraisal. Notably, the results on the perceived fairness manipulation check showed that reappraisal did not influence fairness judgements in response to receiving vs. being denied voice. That is, the interaction effect between procedural fairness and reappraisal on the fairness manipulation check was not significant.

In Study 2a we evaluated further whether reappraisal influenced people's *reactions* to the level of procedural fairness they perceived, in particular, whether reappraisal buffered against the adverse tendency for lower procedural fairness to elicit a reduced sense of standing. In Study 2b we tested if a reduced sense of standing, in turn, lowered performance,

Thus, Study 2a and Study 2b causally evaluated the mechanism deemed to be responsible for the results of Study 1, by testing the full model set forth in Hypothesis 2. Moreover, whereas the predicted interaction set forth in Hypothesis 1 between reappraisal and procedural fairness and the simple effect of reappraisal (vs. control) on performance among participants in the low procedural fairness condition were statistically significant, the simple effect of high (vs. low) procedural fairness on performance in the control condition was only marginally significant (albeit in the predicted direction). Hence, it seemed important to evaluate further the interactive relationship between procedural fairness and reappraisal.

Furthermore, because the validity of the reappraisal manipulation had been established in prior research, we did not include a separate manipulation check for it; but, for purposes of completeness we decided to do so in Study 2a.

In Studies 2a and 2b, we used the recommended strategy for establishing mediation when the mediator (i.e., standing) can be manipulated as well as measured, that is, an experimental causal chain strategy (Spencer, Zanna, & Fong, 2005; Stone-Romero & Rosopa, 2008). In Study 2a we evaluated whether induced reappraisal (present vs. absent) and procedural fairness (high versus low) interacted to influence the hypothesized mediator, self-perceived standing, in the same way that the two independent variables influenced performance in Study 1. In Study 2b we manipulated the hypothesized mediator, self-perceived standing (high vs. low) along with reappraisal (present or absent). Then, participants engaged in the same performance task as in Study 1. The primary prediction of Study 2b was that participants would perform better when they experienced high (vs. low) standing.

## Study 2a

### Method

**Participants and design.** As noted, power analysis revealed that 128 participants are



required to detect an effect size  $f = .25$  with  $\alpha = .05$  and power = .80. We used Amazon Mechanical Turk (MTurk) to recruit participants. In order to be able to remove inattentive participants and participants who did not understand the instructions and still have sufficient statistical power, we invited 200 participants. We followed recommendations to improve data quality by only recruiting participants from the US with at least 50 completed tasks and a high ratio (95%) of approved-versus-submitted tasks (Hauser & Schwarz, 2015; Litman, Robinson, & Rosenzweig, 2015; Peer, Vosgerau, & Acquisti, 2014). Research recommends sampling only those workers with a high reputation, as they have been found to be more attentive in online tasks (Peer, Vosgerau, & Acquisti, 2014). Their attention is bolstered by the fact that requesters can see their percentage of successfully completed tasks, which means these participants risk losing their reputation, and thus their access to certain tasks, by failing to complete too many tasks (Paolacci, Chandler, & Ipeirotis, 2010; Peer et al., 2014). Participants were paid \$1. Based on criteria explained below, we excluded 27 participants. The likelihood of cases being excluded did not significantly differ between conditions (Fisher exact test  $p = .337$ ). Of the remaining 173 participants, 82 were male and 91 were female. Their mean age was 40.98 years ( $SD = 12.29$ ). We randomly assigned participants to one of four conditions that resulted from orthogonally manipulating reappraisal (present or absent) and procedural fairness (low vs. high). This study was declared exempt from approval by the IRB of the institution where the first author was employed.

**Procedure.** Upon opening the link to the study, the participants learned that its aim was to evaluate a new task that was to be used for personnel selection purposes. This task focused on the assessment of cognitive processes among people who work together in a team. We also informed participants that the study would be conducted by a research assistant. Finally, we told participants that in order to improve the assessment task we would measure their performance, their experience of the task and their interaction with the research assistant.

After measuring demographics, we started the study.

Participants were informed that there were two types of group tasks: an “information processing” task and a “creativity” task. After briefly explaining both tasks, we informed participants that, for the assessment to be effective, it was important that the task they did linked well with their motivation. Therefore, we asked them to indicate which specific task they wanted to do and why. We then informed participants that the research assistant would soon respond to their provided motivation. We then introduced the same *reappraisal manipulation* as in Study 1 and a manipulation check.

Then, we introduced the *procedural fairness manipulation*, as in Study 1, by either allowing or denying participants to have voice in the research assistant’s decision about which task the participant would actually do. Specifically, participants in the high procedural fairness condition received the following message from the research assistant: “Thank you for providing your motivation. I will read and consider it when assigning tasks to you.” In the low procedural fairness condition, participants received the following message: “I will not consider your motivation and simply assign a task to you.”

We then informed participants that we wanted to assess their experience of the task thus far and their interaction with the research assistant. At this point, we assessed the procedural fairness manipulation check and participants’ self-perceived standing.

We then simulated trying to connect participants with four other MTurk workers. After some time, participants learned that the connection had failed and that there would be no group task. The study was therefore over. We drew on this part of the procedure from De Cremer, van Dijke, Schminke, De Schutter, and Stouten (2018). Finally, we debriefed participants.<sup>3</sup>

To evaluate if participants were sufficiently engaged with the study and understood the instructions we checked all provided motivations. Based on this, we removed 27 participants

who had not provided a serious motivation. Some participants had simply copied the instructions they received and pasted these in the text box. Others had not understood the instructions and explained what motivates them in their interactions with their colleagues or supervisor at work (e.g., “My goal is to be promoted in our department and that's also my motivation in doing my assignments”). Still others provided nonsensical responses (e.g., “I am motivated by compelling opportunities that feature robots or zombies”).

**Measures.** We assessed all items on seven-point scales (1 = *not at all*, 7 = *very much so*). We checked the reappraisal manipulation with the item “When providing my motivation, I tried to reappraise any negative emotions I felt.” We checked the procedural fairness manipulation with the same items that were used in Study 1.

We measured *self-perceived standing* with a six-item scale from Tyler & Blader (2002), slightly adapted to the current context. Sample items are, “The research assistant respects my contributions,” and “The research assistant approves of how I do my task.”

## Results

**Checks of the manipulations.** Participants in the reappraisal condition were more likely to indicate that they engaged in reappraisal ( $M = 5.05$ ,  $SD = 1.84$ ) than participants in the control condition ( $M = 3.89$ ,  $SD = 1.81$ ),  $F(1,171) = 17.48$ ,  $p < .001$ ,  $\eta^2 = .09$ . We did not include procedural fairness as an independent variable in this analysis, because it was manipulated after the measure of reappraisal.

An ANOVA on the procedural fairness check showed a highly significant main effect of procedural fairness. Participants in the low procedural fairness condition (i.e., those who were denied voice) reported lower fairness ( $M = 3.90$ ,  $SD = 1.79$ ) than participants in the high procedural fairness condition (i.e., those who were granted voice) ( $M = 5.54$ ,  $SD = 1.14$ ),  $F(1,169) = 52.98$ ,  $p < .001$ ,  $\eta^2 = .24$ . This analysis also revealed a smaller but still significant effect of reappraisal. Participants in the reappraisal condition reported higher

fairness ( $M = 4.95$ ,  $SD = 1.58$ ) than participants in the control condition ( $M = 4.44$ ,  $SD = 1.82$ ),  $F(1,169) = 5.88$ ,  $p = .016$ ,  $\eta^2 = .03$ . As in Study 1, the Reappraisal  $\times$  Procedural Fairness interaction did not significantly influence fairness perceptions,  $F(1,169) = 2.56$ ,  $p = .111$ ,  $\eta^2 = .02$ .

**Standing.** An ANOVA on self-perceived standing revealed main effects of procedural fairness,  $F(1,169) = 89.92$ ,  $p < .001$ ,  $\eta^2 = .35$  and reappraisal,  $F(1,169) = 7.70$ ,  $p = .006$ ,  $\eta^2 = .04$ . Of greater importance, these main effects were qualified by the predicted Reappraisal  $\times$  Procedural Fairness interaction,  $F(1,169) = 5.36$ ,  $p = .022$ ,  $\eta^2 = .03$  (Figure 2).

Consistent with Hypothesis 2, simple effect analyses showed among participants who were denied voice (low fairness), reappraisal resulted in higher self-perceived standing ( $M = 3.97$ ,  $SD = 1.63$ ) compared to the control condition ( $M = 3.00$ ,  $SD = 1.31$ ),  $F(1,169) = 13.53$ , mean difference =  $-.97$ ,  $se = .27$ ,  $p < .001$ ,  $\eta^2 = .07$ . Among participants who received voice (high fairness), self-perceived standing was not significantly different in the reappraisal condition ( $M = 5.34$ ,  $SD = .94$ ) versus the control condition ( $M = 5.26$ ,  $SD = .98$ ),  $F(1,169) = .10$ , mean difference =  $-.09$ ,  $se = .28$ ,  $p = .750$ ,  $\eta^2 = .001$ .

Further simple effect analyses showed that among participants in the control condition, low procedural fairness (i.e., being denied voice) resulted in significantly lower self-perceived standing ( $M = 3.00$ ,  $SD = 1.31$ ) compared to high fairness (i.e., being granted voice) ( $M = 5.26$ ,  $SD = .98$ ),  $F(1,169) = 71.85$ , mean difference =  $-2.26$ ,  $se = .27$ ,  $p < .001$ ,  $\eta^2 = .30$ . Among participants in the reappraisal condition, the difference in standing between low fairness ( $M = 3.97$ ,  $SD = 1.63$ ) and high fairness ( $M = 5.34$ ,  $SD = .94$ ) was also significant but less pronounced,  $F(1,169) = 24.90$ , mean difference =  $-1.37$ ,  $se = .28$ ,  $p < .001$ ,  $\eta^2 = .13$ .

In sum, Study 2a shows that the typically harmful effect of lower procedural fairness on perceptions of one's standing (observed in the control condition) was attenuated among

individuals who had engaged in reappraisal.

### Study 2b

Study 2b represents the second step of the causal chain test (Spencer, Zanna, & Fong, 2005; Stone-Romero & Rosopa, 2008). We evaluated whether information about one's standing in the eyes of the authority influences performance. We also evaluated on an exploratory basis whether this effect was moderated by reappraisal to confirm the theoretical reasoning that moderation takes place on the first leg (that is, reappraisal moderates the effect of procedural fairness on self-perceived standing, as in Study 2a) and not on the second (that is, reappraisal is less likely to moderate the effect of standing on performance, evaluated in Study 2b).

### Method

**Participants and design.** As in Study 2a, we invited 200 participants via MTurk and paid them \$1. As in Study 2a, we only included participants from the US with at least 50 completed tasks and a 95% ratio of approved-versus-submitted tasks. Of the participants, 117 were male and 83 were female. Their mean age was 39.31 years ( $SD = 12.95$ ). Unlike in Study 1 and 2a there were no bases for excluding any participants, so we included all of them in the analyses. We randomly assigned participants to one of four conditions that resulted from orthogonally manipulating reappraisal (present or absent) and standing (low vs. high).

**Procedure.** We used the same procedure as in Study 2a with the following two exceptions. First, we did not invite participants to provide their motivation to do one of the two tasks. Second, after having *manipulated reappraisal* (vs. control), we did not manipulate procedural fairness but instead directly *manipulated participants' standing*. Self-perceived personal standing has been shown in prior research to be affected by the standing of the (sub)group that one belongs to (e.g., Chen, Brockner, & Greenberg, 2003; Ellemers, Wilke, & Van Knippenberg, 1993). We also operationalized personal standing accordingly.

Specifically, in the high standing conditions, the research assistant communicated: “Thank you for participating in this research. The group task will start soon. This is an important study to us due to the fact that MTurkers are well representative of society.” In the low standing conditions, the research assistant communicated: “Thank you for participating in this research. The group task will start soon. This is just a pilot study because MTurkers do not represent society very well due to their low standing.”

After ostensibly attempting to connect participants with four other MTurk workers and failing at this, we informed participants that the connection had failed and that there would be no group task and that the study was over. Then, we introduced the same task that we had used in Study 1, asking them whether they would be willing to voluntarily help the research assistant with his own research, and that we could not provide payment for this participation. After participants completed as many anagrams as they wanted, we debriefed them.

**Measures.** We checked the reappraisal manipulation with the same item as in Study 2a. We checked the standing manipulation with a manipulation check taken from De Cremer (2003), and slightly adapted to fit the current context. Participants indicated whether the research assistant “...respects me” (1 = *strongly disagree*; 7 = *strongly agree*) ( $M = 4.25$ ,  $SD = 1.77$ ).

Performance was assessed by the number of anagrams that participants solved ( $M = 4.61$ ,  $SD = 12.04$ ).

## **Results and Discussion**

**Checks of the manipulations.** Participants in the reappraisal condition were more likely to indicate that they engaged in reappraisal ( $M = 4.67$ ,  $SD = 1.81$ ) than participants in the control condition ( $M = 3.39$ ,  $SD = 1.63$ ),  $F(1,198) = 16.39$ ,  $p < .001$ ,  $\eta^2 = .08$ . We did not include standing as an independent variable in this analysis, because it was manipulated after the measure of reappraisal.

An ANOVA on the standing manipulation check showed only a significant main effect of standing. Participants in the low standing condition reported lower standing ( $M = 3.12$ ,  $SD = 1.59$ ) compared to participants in the high standing condition ( $M = 5.39$ ,  $SD = 1.06$ ),  $F(1,196) = 142.09$ ,  $p < .001$ ,  $\eta^2 = .42$ . Hence, our manipulation of subgroup standing reliably led to variations in self-perceived personal standing.

**Performance.** Performance (i.e., number of anagrams solved) is a count variable. Therefore, as in Study 1, we used negative binomial regression with robust standard errors to test if standing, reappraisal, or the Reappraisal  $\times$  Standing interaction influenced performance. This analysis revealed only the predicted main effect of standing,  $b = .68$ ,  $se = .15$ ,  $z = 4.61$ ,  $p < .001$ . Participants with high standing performed better ( $M = 7.38$ ,  $SD = 16.25$ ) than participants with low standing ( $M = 1.88$ ,  $SD = 3.85$ ). The main effect of Reappraisal and the Reappraisal  $\times$  Procedural Fairness interaction did not significantly influence standing,  $b = -.03$ ,  $se = .15$ ,  $z = -.1$ ,  $p = .829$  and  $b = -.13$ ,  $se = .15$ ,  $z = -.85$ ,  $p = .393$ , respectively.

Finding no evidence that reappraisal buffers the effect of standing on performance is in line with research findings that individuals are less effective at reappraising unambiguous self-threatening information (such as believing or being informed that one is of low standing) than more ambiguous self-threatening information (such as not receiving voice, Salas, Radovic, & Turnbull, 2012; Webb et al., 2012).

### Study 3

Research shows that people care about their standing even in short-lived laboratory situations (e.g., van Dijke et al., 2012). However, to evaluate the replicability and generalizability of Hypotheses 1 and 2, it is important to examine them in ongoing applied settings. Study 3 sought to evaluate the external validity of the previous studies in three ways: (1) by conducting the study in a field rather than laboratory setting, (2) by measuring

procedural fairness more broadly than voice (Colquitt, 2001), and (3) by including a measure of in-role as well as extra-role performance. In-role performance pertains to how well employees deliver against their actual job description; extra-role performance includes behaviors such as voluntarily helping one's supervisors and colleagues, speaking up to improve the way in which work is organized, and improving customer service. Whereas extra-role performance is more discretionary than in-role performance (Organ, 1988), prior theory (the group engagement model) and research (see Cohen-Charash & Spector, 2001; Colquitt et al., 2001) have suggested that procedural fairness is positively related to both types of performance. Hence, for purposes of greater generalizability, we included measures of both in-role and extra-role performance. In Study 3 we employed a multisource design, in which the predictor and mediating variables were based on the focal employee's self-reports whereas the criterion variables were completed by a co-worker.

Furthermore, Study 1 and 2a, showed that experimentally-manipulated reappraisal makes individuals display higher performance (Study 1) and experience higher self-perceived standing (Study 2a) in the face of low procedural fairness. In the field setting of Study 3 we operationalized reappraisal differently, i.e., via their participants' chronic tendencies to engage in reappraisal.

## **Method**

**Sample and Procedure.** Interaction effects are often suppressed in field studies, due to methodological and statistical reasons (McClelland & Judd, 1993). Power analysis indicated that 208 respondents are required to detect a small effect,  $f^2 = .03$ , with  $\alpha = .05$  and power = .80. In order to reach a broad sample of the working population, we recruited respondents via a professionally managed German survey panel (Sozioland). We only invited respondents with at least one year of work experience who worked under a direct supervisor. By clicking on a link in an email invitation, participants anonymously entered the survey. A total of 523



focal employees agreed to participate. Respondents were required to provide information to a co-worker regarding the research project, including a link to the survey. We offered all completing respondents the opportunity to participate in an online book store gift voucher lottery. Additionally, we allowed respondents to sign up in a separate database to be informed about the results. This study was declared exempt from approval by the IRB of the institution where the first author was employed.

We could only include data in our analyses from respondents who had matched coworker data. This resulted in 273 matched employee-coworker dyads. Respondents came from organizations in a variety of industries such as information and communication technology, government, biotechnology, insurance, financial, food service, retail, manufacturing, and medical. Of the focal employees, 56% were female. Furthermore, 10% had only a high school education, 33% had some college education (not leading to a bachelor or master degree), 23% had a bachelor degree, 31% had a master's degree and 2% had a doctoral degree. Their mean age was 42.30 ( $SD = 10.37$ ). Respondents worked, on average, for 10.44 years in their current organizations ( $SD = 10.59$ ).<sup>3</sup>

We were unable to obtain demographic background information of 19 (out of the 273) matched coworkers. Of the matched coworkers for whom we did obtain demographics, 48% were female. Their mean age was 41.05 ( $SD = 9.54$ ). Moreover, 10% had only a high school education, 61% had vocational education or some college education (not leading to a bachelor or master's degree), 5% had a bachelor degree, 21% had a master's degree and 2% had a doctoral degree.

**Measures.** We assessed *procedural fairness* with the scale developed and validated by (Colquitt, 2001). A sample item (preceded by the stem, "The following questions are about the procedures that were used to arrive at your salary") is: "Have you been able to express your views and feelings during those procedures?" (1 = *to a small extent*; 5 = *to a large*

*extent*).

We measured individual differences in *reappraisal* with the six-item scale validated by (Gross & John, 2003). A sample item is, “When I want to feel less negative emotion, I change the way I’m thinking about the situation” (1 = *strongly disagree*; 7 = *strongly agree*).

We measured *self-perceived standing* of the focal employee with an eight-item scale from Tyler and Blader (2002). A sample item is, “Most members of the organization respect me” (1 = *strongly disagree*; 5 = *strongly agree*).

We measured *performance* of the focal employees (as rated by their coworker) with two scales. First, we measured extra-role performance with a five-item scale developed by (Bettencourt & Brown, 1997). The items were introduced as follows: “If your colleague does not have direct customers, please focus on the group that is the closest proxy for customers in his/her context (e.g., patients, students, etc.). A sample item is, “This coworker often goes above and beyond the call of duty when serving customers.”

Second, we measured in-role performance with a four-item scale developed by Van Dyne & LePine (1998). A sample items is, “This co-worker performs the tasks that are expected as part of the job.”

## **Results**

Table 1 presents means, standard deviations, reliability coefficients, and correlations between the study variables.

We assessed the validity of our measurement model with Confirmatory Factor Analyses (CFA; Anderson & Gerbing 1988). The initial measurement model had five latent factors (i.e., procedural fairness, reappraisal, self-perceived standing, extra-role, and in-role performance) and 29 indicators. The resulting model had an acceptable fit ( $\chi^2(395) = 834.22$ ,  $p < .001$ ; CFI = .93; RMSEA = .064 [.058, .070]). We also estimated a one-factor model with all of the items loading onto a single factor. This model had unacceptable fit ( $\chi^2(402) =$

3600.28,  $p < .001$ ; CFI = .46; RMSEA = .171 [.166, .176]. The five-factor model also fit the data significantly better than the one-factor model ( $\chi^2(7)$  difference = 2766.06,  $p < .001$ ).

We tested our hypotheses with Ordinary Least Squares (OLS) regression. In step 1, we regressed the criterion variables (i.e., in-role, extra-role performance and self-perceived standing, in separate analyses) on procedural fairness and reappraisal. In step 2 we entered the Procedural Fairness  $\times$  Reappraisal interaction. The interaction term was based on mean-centered versions of the predictors (Cohen et al., 2003).

As shown in Table 2, procedural fairness interacted with reappraisal to predict each of in-role performance, extra-role performance and self-perceived standing (Figure 3).

We further specified the nature of these interactions with simple slope tests. In line with Hypothesis 1, these analyses showed that when procedural fairness was relatively low (1 *SD* below the mean), reappraisal was significantly and positively related to in-role performance ( $\beta = .32$ , 95% CI [.14; .51]), extra-role performance ( $\beta = .41$  95% CI [.23; .59]), and self-perceived standing ( $\beta = .35$ , 95% CI [.18; .52]). When procedural fairness was relatively high (1 *SD* above the mean), reappraisal was not significantly related to in-role performance ( $\beta = .01$ , 95% CI [-.15; .17]), extra-role performance ( $\beta = .16$  95% CI [.0007; .31]), and self-perceived standing ( $\beta = .07$ , 95% CI [-.09; .22]).

Further simple slopes analyses showed that among individuals who engaged in reappraisal to a lesser degree (1 *SD* below the mean), lower procedural fairness was associated with reduced in-role performance ( $\beta = .22$ , 95% CI [.05; .39]), extra-role performance ( $\beta = .21$  95% CI [.05; .37]), and self-perceived standing ( $\beta = .39$ , 95% CI [.23; .55]). However, among individuals who engaged in reappraisal to a greater degree (1 *SD* above the mean), procedural fairness was not significantly related to in-role performance ( $\beta = -.10$ , 95% CI [-.27; .08]), extra-role performance ( $\beta = -.04$ , 95% CI [-.21; .12]), and self-perceived standing ( $\beta = .11$ , 95% CI [-.05; .28]).

**Moderated mediation analyses.** We then tested if reappraisal predicts a weaker relationship between low (vs. high) procedural fairness and lowered performance *because* reappraisal predicts a weaker relationship between low (vs. high) procedural fairness and perceptions of lowered standing (Hypothesis 2). Table 2 shows that when self-perceived standing was entered as a predictor in the regression, the Procedural Fairness  $\times$  Reappraisal interaction on both types of performance was reduced. This provides initial evidence for the proposed mediating role of self-perceived standing.

We directly tested the indirect relationship between the Procedural Fairness  $\times$  Reappraisal interaction and in-role and extra-role performance, via self-perceived standing with moderated mediation analyses using the PROCESS macro (A. F. Hayes 2013; 5,000 resamples; Model 8). In line with Hypothesis 2, the conditional effects analyses showed that, among employees who engaged in reappraisal to a lesser degree (1 *SD* below the mean), the indirect relationship of procedural fairness with in-role and extra role performance, via self-perceived standing, was significant (*indirect effect* = .18, 95% CI [.10, .28], *indirect effect* = .14, 95% CI [.07, .23], respectively). However, among employees who engaged in reappraisal to a greater degree (1 *SD* above the mean), the indirect relationship of procedural fairness, via self-perceived standing, was not significant with either in-role, *indirect effect* = .05, 95% CI [-.04, .14], or extra-role performance, *indirect effect* = .04, 95% CI [-.02, .12].

In sum, Study 3 showed that engaging in reappraisal was associated with a weakened link between lower procedural fairness and reduced levels of performance. Moreover, this weakened link resulted because reappraisal was associated with an attenuated association between lower procedural fairness and perceptions of lower standing.<sup>5, 6</sup>

### General Discussion

Across multiple studies we found that reappraisal buffered against the tendency for lower procedural fairness to lead to, or be associated with, lower performance. We found

evidence for the buffering role of experimentally-induced reappraisal (Study 1) as well as for individual differences in engaging in reappraisal (Study 3). We also found reappraisal to play a buffering role when procedural fairness was operationalized either in specific terms (whether people had voice into an authority's decisions, as in Study 1) or in multi-faceted ways (as in Study 3). Finally, reappraisal moderated the effect of procedural fairness on an objective measure of extra-role performance (Study 1) and the relationship between procedural fairness and extra-role and in-role performance as reported by others (Study 3).

Our research also shows *why* reappraisal moderated the effect of procedural fairness on performance. Specifically, reappraisal (vs. a control condition) buffers against the tendency for lower procedural justice to lower self-perceived standing (Study 2a); we also know from Study 2b that lower standing causes lowered performance. In Study 3 we conceptually replicated these results in a design in which we measured the mediator by showing that lower procedural fairness was not associated with lowered perceptions of standing for individuals who are chronically predisposed to engage in reappraisal to feel better. Consequently, Study 3 also showed that lower procedural fairness was not associated with lower performance among those who are dispositionally inclined to engage in reappraisal to a greater degree.

### **Theoretical Implications**

**Justice theory.** The present findings contribute to justice theory in at least three ways. First, fairness theory (Folger & Cropanzano, 2001) argues that people use counterfactual reasoning to evaluate whether an adverse situation that they are in is unfair. Fairness heuristic theory (Lind et al., 2001) argues that people reappraise new procedural fairness information to bring it in line with their established fairness judgment. Both theories emphasize that (re)appraisal results from the operation of an accuracy or sense-making motive (Barclay et al., 2017; Jones & Skarlicki, 2013). Our research is different from this prior work in two ways. First, our findings are consistent with the notion that people engage

in reappraisal not only to reduce uncertainty or determine what is going on in adverse situations, but also because they want to judge their standing in the eyes of others less negatively (e.g., in response to being treated with low procedural fairness). Such reappraisal is not necessarily aimed at accurately assessing or understanding the situation that one is in.

Second, reappraisal does not necessarily influence the effect of procedural elements (such as receiving vs. being denied voice) on fairness perceptions. Note that reappraisal did not moderate the effect of the voice manipulation on the manipulation check measure of perceived fairness in Studies 1 and 2a. However, reappraisal did influence people's *reactions* to their perceptions of procedural fairness, such that the tendency for lower procedural fairness to lead to a reduced sense of standing was attenuated among those who engaged in greater reappraisal. This is consistent with the view that reappraisal is a motivated act to engender more positive psychological experiences after experiencing unfairness.

Third, our research extends the group engagement model by showing that people can actively reappraise the meaning of an important determinant of identity, that is, procedural fairness information. Our research thus suggests that people are motivated processors of procedural fairness information. Especially, where there are interdependencies, such as between leaders and followers at work, such motivated information processing seems to reflect people's desire or tendency to engage in healthy self-regulation despite adverse circumstances.

**Emotion regulation theory.** Although appraisals of situations are considered cognitive reinterpretations (Ochsner & Gross, 2005), emotion regulation research has rarely considered how reappraisal may influence cognitive inferences. Instead, it has examined how it shapes the subsequent trajectory of affect and behavior (Webb et al., 2012). By connecting the group engagement model with theory on emotion regulation, we offer a prediction of how reappraisal shapes specific cognitive inferences that help people respond resiliently to being

treated with lower procedural fairness, that is, by allowing employees to experience high standing in the face of low procedural fairness.

Second, much of the emotion regulation research has been conducted in the laboratory, focusing on the role of reappraisal in fundamental psychological processes such as the experience of positive and negative affect (e.g., Gross 1998a) and performance on cognitive tasks (e.g., J. P. Hayes et al. 2010, Richards, Butler, & Gross 2003). We know of only two research projects that tested if reappraisal predicts employees' work performance, and this research revealed inconsistent results. Liu et al. (2010, Study 2) and Wallace et al. (2009, Study 1) found that reappraisal predicts higher employee performance. However, other studies found no relationship between reappraisal and performance (Liu et al. 2010, Study 1; Wallace et al. 2009, Study 2). Our research suggests that it may be more sensible to conceptualize reappraisal as a moderator. Reappraisal itself may not increase performance, but it can help employees show higher levels of performance under conditions of self-threat.

Finally, we know of only two studies that addressed how reappraisal may help coping with organizational adversity more broadly. Chi & Liang (2013) showed in a cross-sectional field study that abusive supervision was relatively weakly related to emotional exhaustion and psychological withdrawal among employees with stronger tendencies to reappraise. Matta, Erol-Korkmaz, Johnson, & Biçaksiz (2014) showed in a cross-sectional experience sampling study that adversity predicted deviance via the mediating mechanism of negative affect, and that the relationship between adversity and deviance was weaker among employees higher in reappraisal. Matta et al. (2014) included overall fairness perceptions in their research. However, they did not test whether reappraisal buffers the relationship between fairness perceptions and deviance. Thus, our research extends previous work in at least three ways. First, our experiments afford evidence high in internal validity for our hypotheses. Second, instead of focusing on psychological withdrawal or deviance, we show

that reappraisal lets employees who are treated with low procedural fairness exhibit relatively unimpaired performance. Third, we show that reappraisal can affect cognitive inferences that people make (cf. Ochsner and Gross 2005), in particular, their beliefs about their standing as organization members.

### **Practical Implications**

Prior research has identified retaliation, passive withdrawal, or organizational exit as common behavioral responses to being on the receiving end of low procedural fairness (Colquitt et al., 2013). Our research indicates that some employees (those relatively high in the tendency to reappraise) can maintain relatively high levels of perceived standing and performance in their organization in response to low procedural fairness, and thereby not additionally harm themselves (e.g., their performance-based reputation). However, by not addressing the source of unfairness, reappraisal may perpetuate unfairness. Managers should thus be aware that high performance does not mean that all is well in the organization. Rather, potential sources of low procedural fairness need to be addressed.

The finding that induced reappraisal likewise produced higher self-perceived standing and higher performance in the face of low procedural fairness suggests that stimulating reappraisal may be warranted for managers who want to help their employees, but who are themselves relatively powerless to do anything directly about certain unfair organizational conditions. Such managers may help their people deal with such conditions by fostering reappraisals. Managers may encourage other forms or elicitors of reappraisal, such as asking employees to re-imagine difficult clients as little children, as in the case of flight attendants (Hochschild, 1983), to adapt on-site jargon as in the case of Disney (Van Maanen & Kunda, 1989), or to reappraise errors as learning opportunities (Keith & Frese, 2008).

### **Limitations and Suggestions for Future Research**

We wish to acknowledge several limitations of our studies, which could stimulate



future research. First, we predicted and found that reappraisal counteracts the harmful effects of lower procedural fairness on performance. Yet, arguably, some unfairness experiences may simply be too extreme to reappraise (Gilliland, 2008; Lind et al., 2001). In addition to reappraisal, the process model of emotion regulation also identifies emotional suppression as a strategy that may allow people to remain present in the situation (rather than withdraw). Suppression refers to modulating behavioral responses to an experienced emotion; it does not alter one's perception and interpretation of the situation that one is in. We found no role for suppression in buffering the effect of low procedural fairness on self-perceived standing or performance (see Footnote 5). However, when a negative experience cannot be reappraised, suppression may be a useful strategy, not by facilitating high performance, but by curbing retaliatory responses which, if left unchecked, could lead to a downward spiral in the relationship between managers and their direct reports.

Second, reappraisal is often conceptualized as resulting from the desire to experience less negative and more positive emotions (see also Footnote 6). We suggested that the processes associated with emotional regulation reflect a more general desire for positive psychological experiences, which may include self-perceived standing (cf. Nezlek & Kuppens, 2008; Wolgast et al., 2011). Focusing on self-perceived standing allowed us to connect reappraisal with the group engagement model, which can account for the effect of procedural fairness on performance (Tyler & Blader, 2003). However, it is possible that reappraisal has downstream effects on emotions (e.g., self-conscious emotions such as shame, guilt or pride) via self-perceived standing. Future work should evaluate this possibility.

Continuing with scrutinizing our process lens, we reasoned based on the group engagement model that the heightened sense of standing engendered by reappraisal improves performance because of organization members' greater intrinsic motivation to benefit the

collective (Blader & Tyler, 2009). Notwithstanding the confirmed mediation via standing, there may also be additional, currently untested processes at play. For instance, greater performance may have resulted from reappraisal heightening employees' sense of self-efficacy. If so, then reappraisal not only may heighten performance intended to benefit the organization, but its performance-benefitting effect should also be detectable in other domains, such as when employees try to outperform colleagues to increase their own chances of promotion. In other words, the benefits of reappraisal on performance may extend beyond the boundaries suggested by the group engagement model.

Third, our findings show that reappraisal reduces the impact of low (vs. high) procedural fairness on performance by reducing the impact of low (vs. high) procedural fairness on self-perceived standing. However, we do not know what and how exactly participants reappraised. Did they reinterpret the situation in such a way as to make it less personal (e.g., emphasizing that the organization is unfair to all its members) or did they reappraise other aspects of the situation? Future research thus needs to delineate the specific nature of people's reappraisals in response to being on the receiving end of low procedural fairness.

In closing, by examining the role of reappraisal when people experience low procedural fairness, we extend justice theory (i.e., the group engagement model) and demonstrate when and why employees may be able to maintain relatively high levels of performance. They do so by securing a sense of higher standing in the face of lower procedural fairness.

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## Footnotes

1. Note that both examples of reappraisal go beyond the operation of counterfactuals proposed in fairness theory: in both cases the justice agent *could* have acted differently, the situation *would* have been less aversive had the justice agent acted differently, and the agent *should* have acted differently. Hence, in both examples, the justice agent acted procedurally unfairly, and reappraisal had the effect of minimizing its negative implications for people's sense of standing as organization members.
2. The a priori power analysis for Study 1 assumed that we would use an ANOVA to test Hypothesis 1. A reviewer comment suggested that given the count nature of and overdispersion in our dependent variable, it should be analyzed with robust negative binomial regression, which we now report in the text. The ANOVA results were very similar to the regression results, including a significant interaction between reappraisal and procedural fairness,  $F(1, 137) = 4.42, p = .037, \eta^2 = .03$ . There was one difference: the simple effect of reappraisal (vs. control) in the no voice condition was only marginally significant in the ANOVA,  $F(1,137) = 3.47, p = .065, \eta^2 = .03$  but significant in the now applied appropriate negative binomial regression.
3. In a pilot that we conducted for an unrelated project ( $N = 200$ ) on Prolific Academic we used a procedure that was similar to that of Study 2a and 2b, including a voice manipulation (as in Study 2a), a group task that failed to start (as in Study 2a-b), and the anagram task (as in Study 2b). We did not manipulate reappraisal in this pilot. At the end of the study we asked participants if they had noticed something suspicious or out of the ordinary. Only six participants expressed some disbelief that they had interacted with a research assistant or that they would interact with other group members. In sum, it seems that the procedure that we used convinced almost all participants that they interacted with real others.
4. Employees with and without a matched colleague did not significantly differ in terms of

demographics. Relative to employees without a matched coworker, employees with a matched coworker indicated higher procedural fairness ( $M = 4.64$ ,  $SD = 1.42$  vs.  $M = 4.15$ ,  $SD = 1.51$ ;  $t = 3.87$ ,  $p < .001$ ), reappraisal ( $M = 4.88$ ,  $SD = 1.14$  vs.  $M = 4.55$ ,  $t = 3.20$ ,  $p = .001$ ) and standing ( $M = 5.68$ ,  $SD = 1.01$  vs.  $M = 5.47$ ,  $SD = 1.09$ ,  $t = 2.31$ ,  $p = .021$ ).

However, the correlations between these variables, which form the basis of the estimated regression coefficients in our analyses, did not significantly differ between employees with and without a matched colleague. Thus, especially combined with the results of Studies 1, 2a, and 2b, it seems unlikely that the results of Study 3 are an artifact of a selection bias.

5. Emotion regulation researchers commonly contrast reappraisal with emotional suppression (i.e., modulating behavioral responses to an experienced emotion). Because suppression does not alter one's perception of the situation that one is in and because high performance in the face of lower procedural fairness relies on such an altered perception (i.e., high self-perceived standing), suppression was expected to be less likely to buffer against the tendency for lower procedural fairness to reduce performance. To evaluate this possibility, we measured suppression with Gross and John's (2003) four-item scale (e.g., "I keep my emotions to myself"; 1 = *strongly disagree*; 7 = *strongly agree*;  $\alpha = .85$ ,  $M = 3.95$ ,  $SD = 1.48$ ). CFA showed acceptable fit for the six-factor model,  $\chi^2(511) = 996.88$ ,  $p < .001$ ; CFI = .93; RMSEA = .059 [.054, .065]. The fit of the five-factor model (with the reappraisal and suppression items loading onto one factor) was unacceptable,  $\chi^2(516) = 1445.58$ ,  $p < .001$ ; CFI = .86; RMSEA = .081 [.076, .086], and inferior to that of the six-factor model,  $\chi^2(5) = 448.70$ ,  $p < .001$ .

OLS regression analyses revealed no significant Procedural Fairness  $\times$  Suppression interaction on standing ( $\beta = .06$ ,  $t = .93$ ,  $p = .356$ ), in-role performance ( $\beta = .03$ ,  $t = .49$ ,  $p = .623$ ), or extra-role performance ( $\beta = .06$ ,  $t = .93$ ,  $p = .356$ ). The results on the Procedural Fairness  $\times$  Reappraisal interaction were unchanged when we included suppression and the

Procedural Fairness  $\times$  Suppression interaction in the analyses. Thus, it was not any aspect of emotional regulation, but rather reappraisal in particular that moderated the relationship between procedural fairness and performance.

6. The reappraisal scale contains five items that refer to reappraisal in the service of feeling better. However, the sixth item is somewhat different: “I control my emotions by changing the way I think about the situation I’m in.” Analyses with this item removed from the reappraisal scale revealed similar, if not slightly stronger results as those presented in the text for Study 3.

Table 1

Means, Standard Deviations, Reliabilities, and Correlations between Study 3 Variables

	Mean ( <i>SD</i> )	1	2	3	4	5	6
(1) Reappraisal	4.88 (1.14)		.89				
(2) Procedural fairness	4.64 (1.42)	.91	.32 (<.001)				
(3) 1 × 2	.31 (.99)	.01 (.820)	.13 (.032)				
(4) Standing	5.68 (1.01)	.32 (<.001)	.27 (<.001)	-.11 (.071)	.88		
(5) Extra-role performance	5.52 (1.33)	.17 (.005)	.29 (<.001)	-.09 (.149)	.41 (<.001)	.93	
(6) In-role performance	5.78 (.95)	.11 (.071)	.16 (.007)	-.13 (.027)	.46 (<.001)	.40 (<.001)	.94

*Note.*  $N = 273$ ; Cronbach's  $\alpha$  coefficients are presented on the main diagonal. Two-sided  $p$ -values are presented within brackets.

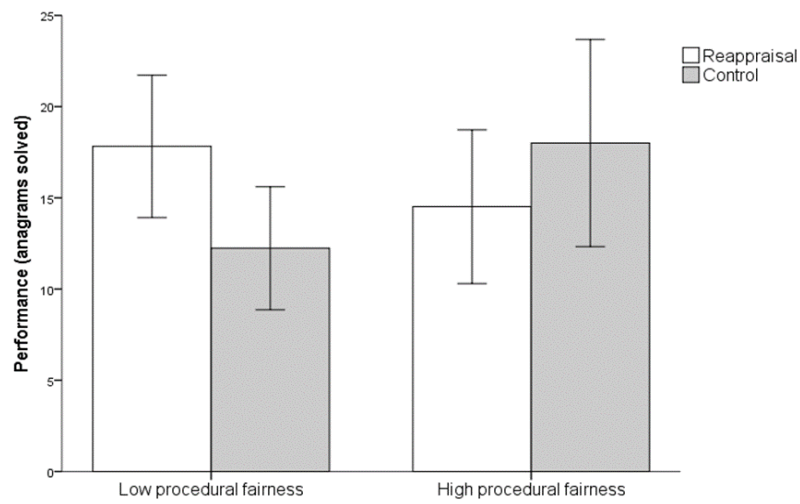
Table 2  
Regression Results of Study 3

Criterion variable	Standing	Extra-role performance	In-role performance
Step 1, $R^2$ , $R^2_{adj}$	.13 (<.001) .13	.09 (<.001) .09	.03 (.015), .02
Procedural fairness	.26, 4.30 (< .001)	.09, 1.41 (.161)	.06, 1.01 (.311)
Reappraisal	.19, 3.15 (.002)	.27, 4.34 (< .001)	.14, 2.28 (.024)
Step 2, $R^2$ , $R^2_{adj}$ , $\Delta R^2$	.15 (<.001) .14, .02 (.014)	.11 (<.001) .10, .02 (.032)	.05 (.001) .04, .02 (.010)
Procedural fairness (PF)	.27, 4.57 (< .001)	.10, 1.63 (.105)	.08, 1.29 (.200)
Reappraisal	.23, 3.76 (< .001)	.30, 4.81 (< .001)	.19, 2.95 (.003)
PF $\times$ Reappraisal	-.15, -2.47 (.014)	-.13, -2.16 (.032)	-.17, -2.61 (.010)
Step 3, $R^2$ , $R^2_{adj}$ , $\Delta R^2$		.21 (<.001) .20, .10 (<.001)	.23, (<.001) .22, .17 (<.001)
Procedural fairness		.01, .10 (.919)	-.04, -.71 (.480)
Reappraisal		.23, 3.67 (<.001)	.09, 1.45 (.148)
PF $\times$ Reappraisal		-.08, -1.40 (.164)	-.10, -1.70 (.091)
Standing		.34, 5.80 (< .001)	.45, 7.73 (< .001)

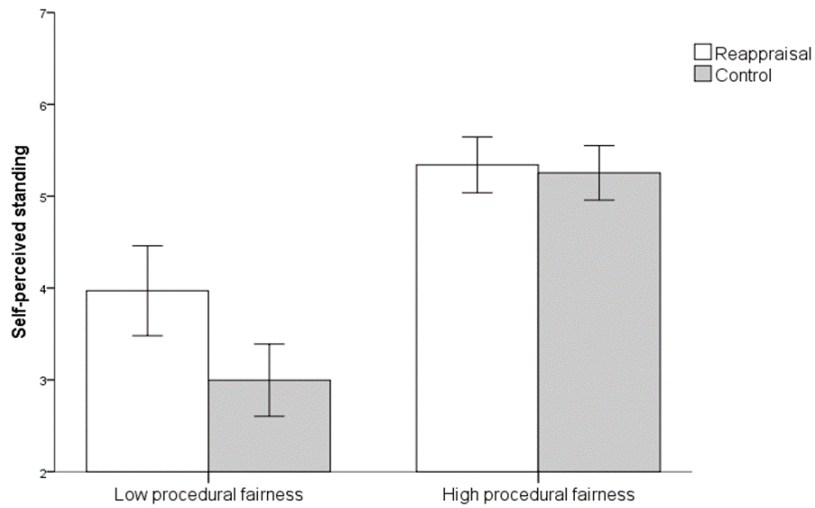
Notes.  $N = 273$ ; Table presents  $\beta$  coefficients,  $t$  values, and two-sided  $p$  values (in brackets).



## FIGURES



*Figure 1.* The effect of procedural justice on performance (number of anagrams solved correctly) as a function of reappraisal in Study 1. Error bars present 95% CIs.



*Figure 2.* The effect of procedural justice on self-perceived standing as a function of reappraisal in Study 2A. Error bars present 95% CIs.

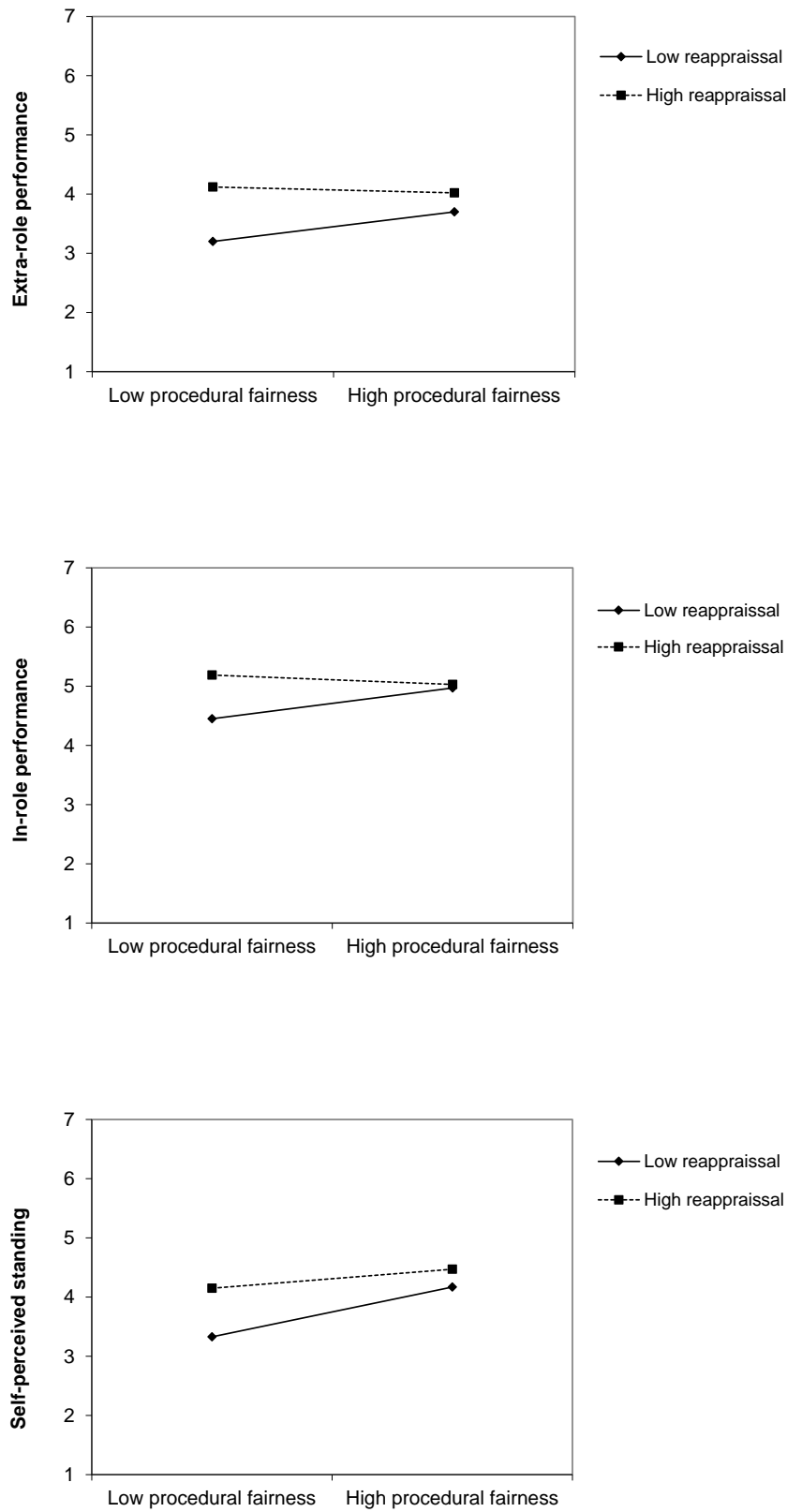


Figure 3. The relation between procedural justice and extra-role performance (top panel), in-role performance (middle panel) and self-perceived standing (lower panel) in Study 3.