

## RESEARCH ARTICLE

## “Self-promotion”: How regulatory focus affects the pursuit of self-interest at the expense of the group

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### Abstract

Self-interested behavior may have positive consequences for individual group-members, but also negatively affects the outcomes of the group when group-level and individual-level interests are misaligned. In two studies, we examined such self-interested, group-undermining behavior from the perspective of regulatory focus theory. We predicted that when individual and group interests are out of alignment, individuals under promotion focus would be more likely than individuals under prevention focus to pursue individual success at the expense of their group. Two studies provided support for this prediction. Promotion oriented individuals were more willing to act in their self-interest (at the expense of their group) than individuals under prevention focus when self-interested goals were not compatible with cooperation. No effect of regulatory focus on group loyalty was found when cooperation formed the only viable route to individual success. We discuss how these findings extend our understanding of the role of regulatory focus in social situations and of the practice of ensuring loyalty in contexts where individual and group goals are misaligned while cooperation is an important part of group success.

### Key Message

The results of two studies show that the adoption of a promotion (vs. prevention) focus causes group-members to become more willing to pursue individual success at the expense of their group when group and individual interests are misaligned.

In recent years, the practice of offering individual bonuses in the financial sector has attracted public scrutiny. According to critics of this practice (e.g., Taleb, 2009), the exorbitant incentives in the financial sector indirectly contributed to the global financial crisis. Being rewarded in this way was argued to lead employees in this sector to take undue risks in pursuit of short-term personal benefits, while at the same time neglecting to ensure the stability of the organizations they work for and of the global financial system as a whole. In other contexts, employees may attempt to increase their chances of obtaining a promotion by sabotaging the chances of their colleagues, or steal from the organization (e.g., Bennet & Robinson, 2000). As illustrated by these examples, undesirable

behavior in the workplace often involves sacrificing the success of the collective (i.e. the group/team or organization) for personal gain when individual-level and group-level goals are out of alignment. Indeed, in most organizations success depends on the willingness of employees to cooperate, and long-term interests are harmed when individuals pursue personal gain at the expense of the collective (Tyler, 2011). It is therefore important to understand when and why individuals are likely to engage in (or refrain from) such group-undermining behavior.

In this paper, we investigate this question from the perspective of regulatory focus theory (Higgins, 1997, 1998). We argue that a dominant promotion focus (a motivational orientation toward the approach of gains)

induces individuals to focus on ways to further their self-interest, even at the expense of the group. We argue that such group-undermining behavior reflects the individual's tendency to focus on the anticipated positive consequences (i.e., the possibility of personal gain) rather than on the anticipated negative consequences of his or her actions (i.e., the possibility of group-level loss).

In the following, we first discuss regulatory focus theory. We then explain how we think insights gained from this work can help understand when and why individuals sometimes choose to pursue their personal interests at the expense of others.

## REGULATORY FOCUS THEORY

Regulatory focus theory (Higgins, 1997, 1998; Molden, Lee, & Higgins, 2008) distinguishes between two motivational systems that regulate goal-directed behavior: promotion focus and prevention focus. Promotion and prevention foci serve different needs and differentially affect the manner in which goals are construed and pursued, and how success and failure of goal-achievement are experienced. Promotion and prevention foci vary in strength both chronically across individuals and momentarily across situations (Higgins, Friedman, Harlow, Idson, & Ayduk, & Taylor, 2001).

Promotion focus functions to serve the need for growth and accomplishment. Under promotion focus, motivation is experienced as desire, causing success during goal-pursuit to be seen as more positive than failure is seen as negative (Higgins, Bond, Klein, & Strauman, 1986; Shah & Higgins, 1997). Strategically, individuals under promotion focus are inclined to approach situations in which positive outcomes are present and avoid situations in which positive outcomes are absent (Molden, Lee, & Higgins 2008; Zou, Scholer, & Higgins, 2014). While under promotion focus, individuals experience cheerfulness when they are successful in the pursuit of their goals and dejection when they fail (e.g., Higgins *et al.*, 1986).

Prevention focus, by contrast, functions to serve the need for safety and security. Under prevention focus, motivation is experienced as necessity, causing failure of goal-pursuit to be seen as more negative than success is seen as positive. Strategically, individuals under prevention focus are inclined to avoid situations in which negative outcomes are present and approach situations in which negative outcomes are absent (Scholer, Stroessner, & Higgins, 2008; Scholer, Zou, Fujita, Stroessner, & Higgins, 2010). While under prevention focus, individuals experience quiescence when they are successful in the pursuit of their goals and agitation when they fail (e.g., Higgins *et al.*, 1986).

Work on regulatory focus theory suggests that the adoption of a promotion focus should generally have positive consequences for the work context. For example, Friedman and Forster (2001) show that the adoption of a promotion focus bolsters creativity, whereas the adoption of a prevention focus does not. As a result, promotion focus (compared with prevention focus) facilitates the detection of integrative solutions during negotiations (Galinsky, Leonardelli, Okhuysen, & Mussweiler, 2014). Furthermore, the motivation to outperform others in small groups has been linked to promotion focus, whereas the motivation not to perform worse than others has been linked to prevention focus (Faddegon, Ellemers, & Scheepers, 2009). Indeed, a recent meta-analysis on the effects of promotion and prevention in work settings shows that promotion focus, but not prevention focus, is associated with a host of positive work-related outcomes such as work-satisfaction and work-engagement, innovative performance, and task performance (Lanaj, Chang, & Johnson, 2012). Thus, the regulatory focus literature suggests that promotion focus generally has more positive effects in the work context than prevention focus.

Whereas we agree that promotion focus can have positive effects in the work context, we believe there may be important drawbacks, and that a note of caution is necessary. That is, we argue that the adoption of a promotion focus, but not the adoption of a prevention focus, may make individuals more likely to pursue their individual goals, even if this is at the expense of the others. There are several reasons why this should be the case. First of all, as noted earlier, such group undermining behavior involves the pursuit of positive outcomes at the individual level and the neglect of negative consequences of this behavior for others. Individuals under dominant promotion focus are more motivated to pursue gain than to avoid loss and thus should be most likely to engage in this type of behavior. By contrast, individuals under dominant prevention focus are more occupied with the avoidance of loss and thus should be less likely to pursue individual gain when this may have adverse effects too, and hence should be more likely to be more concerned about negative effects for their group.

Secondly, the pursuit of self-interest and the neglect of the collective are relevant to the questions regarding a focus on individual versus collective goals—another mindset linked to a promotion versus prevention focus. The work of Lee, Aaker, and Gardner (2000) shows that independent self-construals, in which individuals define themselves in terms of attributes that make them unique, are associated with the promotion focus. By contrast, interdependent self-construals, in which individuals perceive themselves in terms of their

connections to others and their embeddedness in a larger social whole, have been linked to prevention focus. In line with this work, Gu, Bohns, and Leonardelli (2013) showed that individuals under prevention focus evaluate their outcomes in relation to the outcomes of others (i.e., interdependently), whereas individuals under promotion focus evaluate their outcomes in absolute terms, independently of the outcomes of others. Because of the individualistic mindset it involves, the adoption of a promotion focus should thus cause individuals to become more likely to engage in behavior aimed at achieving individual-level goals and to ignore potential costs that others may incur as a result. This means that, when individual-level and group-level interests are out of alignment, the adoption of a promotion focus should make individuals more likely to pursue their self-interest at the expense of the group. By contrast, the adoption of a prevention focus, because it involves a more collectivist mindset, should cause individuals to be more likely to remain loyal to the group when opportunities arise to further their personal interest at the expense of the group.

Finally, recent research has linked regulatory focus with the domain of ethics and morality. This work shows that the effects of ethical and moral considerations on behavior tend to be orchestrated by a prevention focus, not a promotion focus. For example, a recent work shows that the adoption of a promotion focus, but not the adoption of a prevention focus, causes individuals to become more likely to detect (Ståhl & Zaal, 2015) and take advantage of (Gino & Margolis, 2011) opportunities for engaging in rewarding but unethical behavior. Furthermore, our previous research (Zaal, Van Laar, Ståhl, Ellemers, & Derks, 2011) shows that individuals under prevention focus, but not individuals under promotion focus, are motivated by moral considerations to take action to address social issues of concern to them. Insofar as individuals perceive group-undermining behavior as unethical then, this prior research suggests that the adoption of a prevention focus is more likely to lead them to abstain from this type of behavior than the adoption of a promotion focus.

For all of these reasons, we hypothesized that when individual and group interests are out of alignment, individuals under promotion focus should be more likely, than individuals under prevention focus, to pursue individual success at the expense of others. Two studies were conducted to test this prediction. We used different ways to test our prediction that promotion and prevention foci differentially affect commitment to group and individual goals. In Study 1, regulatory focus was assessed as a chronic individual difference variable before the start of the experiment. In Study 2,

regulatory focus was experimentally manipulated to identify it more clearly as the causal variable.

We used a paradigm in which participants worked as members of a group that was engaged in a competition with another group. To manipulate the alignment of group-level and individual-level goals, we experimentally varied the permeability of the boundary between the groups to be either open or closed (e.g., Ellemers, Van Knippenberg, & Wilke, 1993). In the open condition, the goals of the group and the individual were not aligned; participants in this condition had to decide whether to work in service of their group (winning the competition) or to work to further their own interest (individually entering the other, more successful group), which would also reduce the chances of their group to win the competition. This focal (open) condition was contrasted with a (closed) control condition in which the interests of the individual and group were aligned. In this closed condition, the group boundary was impermeable, and the only way for individual group members to succeed was to cooperate with the group. The inclusion of this closed control condition allowed us to rule out the possibility that individuals under promotion focus are in general less willing to cooperate than individuals under prevention focus. Instead, we argue this should be particularly the case when the pursuit of individual-level goals undermines the achievement of group-level goals.

## STUDY 1

### Method

#### Participants and Design

Eighty-eight students from Leiden university ( $M_{\text{age}} = 21.65$  years,  $SD = 4.09$ ) gave their informed consent to participate in this study in exchange for €4.50 or course credit. Promotion and prevention foci were assessed as individual difference variables before the experiment. We manipulated the presence of opportunities for furthering one's individual goals at the expense of the group (permeability: open or closed) in a between-participants experimental design. Intentions of working for the group versus for the self, as well as actual effort spent toward individual and group success, served as the dependent variables.

#### Procedure

Participants were told that they would be taking part in two unrelated studies: a short survey and an experiment. The short survey consisted of the premeasure of

regulatory focus. We measured the participants' chronic prevention ( $\alpha = .81$ ) and promotion focus ( $\alpha = .68$ ) using the Regulatory Focus Questionnaire (Higgins *et al.*, 2001) and created a regulatory focus dominance measure by subtracting the standardized prevention scores from the standardized promotion scores (e.g., Keller & Bless, 2006; Sassenberg, Jonas, Shah, & Brazy, 2007; Zaal, Van Laar, Ståhl, Ellemers, & Derks, 2012). High scores on this variable indicate a dominant promotion focus; low scores indicate a dominant prevention focus.

Participants were then informed that the first study was completed and that the second study would now commence. This part of the experiment was introduced as a study on competition between groups. To create different groups, all participants were (ostensibly at random) assigned to a team of 4 individuals (Team B) and told that they were going to compete with another team of 4 (Team A). In reality, no teams were formed and all participants worked individually throughout the entire experiment. To increase involvement in the competition, and to ensure that the task would be equally involving for individuals under promotion and prevention focus, participants were informed that the winning team would get to take part in a fun and interesting follow-up task (a positive end-state), whereas the losing team would have to take part in a tedious task (an negative end-state) (e.g., Wright, Taylor, & Moghaddam, 1990).

Participants were then told that the competition would consist of two rounds: a preliminary and a final round. To allow for the later manipulation of permeability, participants were informed that the team that would win the preliminary round would get the chance to influence the rules of the final round.

At this point the preliminary round commenced. This round consisted of an anagram-task. Participants tried to solve as many five-letter anagrams (e.g., KTAES [SKATE]) as possible in 3 minutes. To create a status difference between the teams, all participants were then informed that their team had solved slightly fewer anagrams than the other team, and that they had thus lost the preliminary (Ellemers, Knippenberg, & Wilke, 1993; Ellemers, Spears, & Doosje, 1997).

To introduce the *manipulation of permeability*, participants were told that team A, because it had won the preliminary, would now get to decide whether or not to let one member of the participant's team join team A after the final (Ellemers *et al.*, 1997; Wright *et al.*, 1990). If team A would allow this, it was explained, then the members of the participant's team would each have to choose between working for their group (to win the final as a team) or working individually (to gain entry into team A) during the final. Working individually, participants were told, would raise their chances of

individually entering team A, but would not count toward the total score of team A. By contrast, if team A would not allow a member of team B to enter their team, participants were told, then they would have to work for their team if they wanted to win the competition. Finally, all participants were informed that working for themselves during the final would not help their *team* win the competition, and that working for their team during the final would not increase their chances of *individually* entering team A.

At this point, the *permeability* of the high status group was manipulated. In the *closed* condition, participants were informed that team A had decided not to give the members of Team B the chance to enter team A. In the *open* condition, participants were informed that Team A had decided to let the member of Team B with the highest individual score in the final enter Team A. Thus, whereas participants in both conditions were informed that working for their team would increase the chances of their team to win the final, only the participants in the *open* condition were informed that working for themselves would increase their chances of individually entering Team A. At this point, the dependent variables were measured.

## Measures

All variables were measured on 9-point Likert scales ranging from 1 (*completely disagree*) to 9 (*completely agree*), unless otherwise reported.

**Manipulation check.** The effectiveness of the manipulation of permeability was checked with two items (e.g., "It is possible/impossible [reverse scored] for a member of my team to enter team A",  $r(88) = .90, p < .001$ ).

The *perceived difficulty of the anagram task* was measured as a control variable using two items (e.g., "I think the anagram task is very difficult/not difficult at all [reverse scored]",  $r(59) = .71, p < .001$ ).<sup>1</sup>

<sup>1</sup>To make sure that differences in the number of anagrams solved for the group and for the self were due to participants' level of motivation, not their level of ability. We measured the perceived difficulty of the anagram task with the intention of using it as a control variable. Due to a programming error, however, the perceived difficulty of the anagram task was not measured for the first 18 participants. Controlling for perceived difficulty would thus have had the unfortunate consequence of lowering the sample size considerably. We therefore did not control for difficulty in the analyses of the number of anagrams solved for the group and for the self that are reported in the main text. Additional analyses revealed that controlling for the perceived difficulty of the anagram task did not change the fact that the interactions between permeability and regulatory focus on the number of anagrams solved for the self ( $p = .24$ ) and for the group ( $p = .46$ ) were nonsignificant.

Participants' intention to work for the self versus for the group was measured with six items (e.g., "I intend to solve as many anagrams as possible for myself during the final", "I intend to solve as many anagrams as possible for my team during the final" [reverse scored],  $\alpha = .78$ ). High scores on this variable indicate a preference for the pursuit of individual success over group success.

At this point, the final round of the competition began. Participants had unlimited time to solve up to 150 five-letter anagrams. Before attempting to solve each anagram, participants had to decide whether they wanted to solve this anagram for their personal benefit (to gain entry into Team A) or for the benefit of their team (to win the group competition against Team A). They were informed that they could stop at any point during the final. The number of anagrams participants solved for their team and for themselves were recorded and served as the measures of effort invested in the self and in the group (Ellemers, Pagliaro, Barreto, & Leach, 2008). Finally, all participants were debriefed, thanked, and paid.

## Results

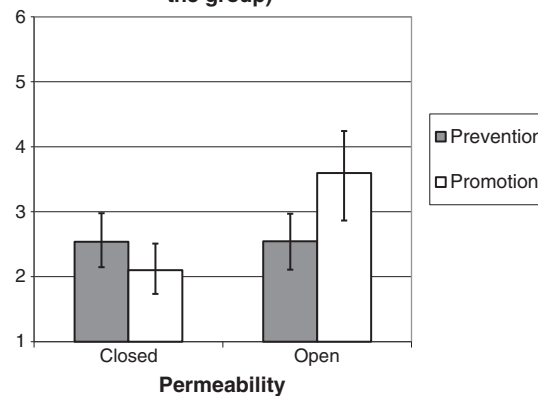
### Manipulation Check

As intended, an analysis of variance (ANOVA) on the manipulation check showed that participants in the open condition perceived more opportunities to individually enter Team A ( $M = 7.35$ ,  $SD = 1.11$ ) than participants in the closed condition ( $M = 3.27$ ,  $SD = 2.56$ ,  $F[1, 87] = 89.51$ ,  $p < .001$ ,  $\eta^2 = 0.51$ ).

### Intentions to Work for the Self versus For the Group

Participants' intention to work for the self versus for the group was analyzed using regression analyses. In step 1, the effect-coded manipulation of permeability ( $-1$  for the closed condition,  $1$  for the open condition) and the standardized regulatory focus scale were entered. Their interaction term was entered in step 2. The results revealed the predicted interaction between the manipulation of permeability and the regulatory focus,  $\beta = .31$ ,  $t(84) = 3.12$ ,  $p = .002$ ,  $\Delta R^2 = 0.09$  (Figure 1). As expected, simple slope analysis (Aiken & West, 1991) showed that the intention to work for the self versus for the group was higher in the open condition than in the closed condition among individuals with a chronically dominant promotion focus,  $B = 0.75$ ,  $SE = 0.17$ ,  $t(84) = 4.43$ ,  $p < .001$ , but not among individuals with a chronically dominant prevention focus,  $B = 0.004$ ,  $SE = 0.17$ ,  $t(84) = 0.02$ ,  $p = .98$ . Viewed

Intentions to work for the self (vs. for the group)



**Fig. 1:** Intentions to work for the self (versus for the group) as a function of chronic regulatory focus and permeability (Study 1), the error bars represent bootstrapped 95% confidence intervals

differently, the results showed that in the open condition, chronic promotion focus increased participants' intention work for themselves versus for their group,  $B = 0.52$ ,  $SE = 0.17$ ,  $t(84) = 3.04$ ,  $p = .003$ . There was no such effect of regulatory focus in the closed condition,  $B = -0.22$ ,  $SE = 0.16$ ,  $t(84) = 1.33$ ,  $p = .19$ .

Follow-up analyses, treating promotion and prevention foci as separate predictors of individuals' intention to work for self versus for the group, revealed a significant interaction between permeability and the promotion scale,  $\beta = 0.38$ ,  $t(84) = 3.83$ ,  $p < .001$ ,  $\Delta R^2 = 0.14$ , but not between permeability and the prevention scale,  $\beta = -0.06$ ,  $t(84) = -0.53$ ,  $p = .60$ . Simple slope analyses showed that intentions to work for the self were higher in the open condition than in the closed condition among individuals with a relatively strong promotion focus ( $+1 SD$ ),  $B = 0.84$ ,  $SE = 0.17$ ,  $t(84) = 4.96$ ,  $p < .001$ , but not among participants with a relatively weak promotion focus ( $-1 SD$ ),  $B = -0.09$ ,  $SE = 0.17$ ,  $t(84) = 0.59$ ,  $p = .60$ . Thus, individuals under promotion focus (but not individuals under prevention focus) showed stronger intentions to work for the self (versus for the group) in the open condition than in the closed condition. Follow-up analyses revealed that these effects were primarily pulled by individual differences in promotion focus.

### Anagrams Solved for the Group and for the Self

The number of anagrams participants solved for themselves and for their group were analyzed separately with regression analyses. In both analyses, we entered the effect-coded manipulation of permeability and the standardized regulatory focus scale in the first step. In

the second step, we entered their interaction term. While the effects were in the predicted direction, regulatory focus did not significantly moderate the effects of permeability on the number of anagrams participants solved for their group,  $\beta = -0.09$ ,  $t(84) = -0.80$ ,  $p = .43$ , nor on the number of anagrams they solved for themselves,  $\beta = 0.09$ ,  $t(84) = 0.86$ ,  $p = .39$ .<sup>2</sup>

## Discussion

Study 1 offered some initial evidence for our prediction regarding the effect of regulatory focus on the choice between pursuing individual and group status improvement. We predicted that the adoption of a promotion focus should cause individuals to become more likely to take advantage of the presence of opportunities for the advancement of personal goals at the expense of effort toward the goals of the group. Analysis of the measure of participants' stated intentions to work for the group vs. for the self offered strong evidence in support of this prediction: Individuals under promotion focus (but not individuals under prevention focus) showed stronger intentions to work for the self (vs. for the group) in the open condition than in the closed condition. Additional analyses revealed that individual differences in promotion focus were responsible for this effect. However, evidence was less clear when we observed the extent to which participants actually worked for themselves or for their group.

In retrospect, the anagram task used in Study 1 may have been less than ideally suited to provide a test of our predictions, as it offered participants considerable freedom in deciding how long they would participate in the task. This made it possible for participants to work *both* for the group *and* for the self (i.e., by solving many anagrams—working sometimes for their own benefit and sometimes for the benefit of the group), or *neither* for the group *nor* for the self (i.e., by solving only a few anagrams). In addition, the freedom to quit the anagram task at any time may have caused people who were frustrated with the task to quit early, resulting in inflated error and lowering the power of the task as a test of our predictions. In line with this

interpretation, inspection of the anagram data showed a very large spread in the total number of anagrams participants solved ( $Range = 4$  to  $127$ ,  $M = 32.25$ ,  $SD = 23.64$ ) and a nonsignificant negative correlation between the number of anagrams solved for the group and for the self,  $r(88) = -.14$ ,  $p = .20$ . Thus, the freedom participants had to quit the anagram task whenever they wanted might have reduced the extent to which they perceived a trade-off between working for the group and working for the self, decreasing the suitability of this task to demonstrate the hypothesized effects.

To increase the likelihood that the anagram task would be experienced by participants as requiring a trade-off between the pursuit of individual and group goals, in Study 2, we changed the instructions. This time, all participants worked on solving anagrams for exactly 4 minutes and hence had to choose how many of these minutes they wanted to devote to pursuing their individual goals or the group's goals. In addition, Study 2 included a manipulation of regulatory focus instead of a measure of individual differences in promotion and prevention focus, to obtain more direct evidence for a causal relation between the adoption of a particular regulatory focus and the pursuit of individual versus group goals.

## STUDY 2

### Method

#### Participants and Design

Fifty-nine students from Leiden University ( $M_{age} = 20.39$  years,  $SD = 5.12$ ) gave their informed consent to participate in this study in exchange for €4.50 or course credit. They were randomly assigned to the conditions of a 2 (regulatory focus: promotion or prevention)  $\times$  2 (permeability: open or closed) between participants factorial design. Intentions of working for the group versus for the self, as well as effort spent toward individual and group success again served as the dependent variables.

#### Procedure

Study 2 employed the same procedure as Study 1, with the exception of the added manipulation of regulatory focus and the changes that were made to the anagram task. In the first part of the experiment, we manipulated regulatory focus with an adapted version of the procedure suggested by Higgins and colleagues (Higgins, Roney, Crowe, & Hymes, 1994; see also Zaal *et al.*,

<sup>2</sup>On a descriptive level, the number of anagrams solved for the group was lower in the open condition than in the closed condition among individuals under dominant promotion focus ( $M_{closed} = 31.07$ ,  $M_{open} = 25.24$ ). Among individuals under the dominant prevention focus, slightly more anagrams were solved for the group in the open condition ( $M_{closed} = 30.15$ ,  $M_{open} = 32.62$ ). The number of anagrams participants solved for themselves was higher in the open condition than in the closed condition among individuals under dominant promotion focus ( $M_{closed} = 0.78$ ,  $M_{open} = 4.35$ ), as well as among individuals under chronic dominant prevention focus ( $M_{closed} = 1.39$ ,  $M_{open} = 3.11$ ).

2011, 2012). Participants wrote about what they would ideally like to achieve (*promotion condition*) or felt they ought to achieve (*prevention condition*) in their working life. According to Higgins et al. (1994), the priming of ideals leads individuals to adopt a promotion focus, whereas the priming of oughts causes them to adopt a prevention focus. Participants were then informed that the first part of the experiment was completed, and that the second part of the experiment would commence. The procedure of the second part of the experiment was identical to the one used in Study 1 up to the measurement of the dependent variables.

## Measures

The manipulation check of permeability consisted of the same two items as in Study 1,  $r(59) = .79, p < .001$ .

The perceived difficulty of the anagram task was measured with the same two items as in Study 1,  $r(59) = .71, p < .001$ .

We measured participants' intentions to work for the group versus for the self with the same six items as in Study 1,  $\alpha = .90$  to allow for a replication of the results of Study 1.

At this point, the final round of the competition began. In contrast to Study 1, the anagram task lasted exactly 4 minutes. Participants were not allowed to end the task before the 4 minutes were over, but they were free to solve as few anagrams as they wanted. As in Study 1, participants had to decide whether they wanted to solve each anagram for their personal benefit (to gain entry into Team A) or for the benefit of their team (to win the group competition against Team A). As in Study 1, the number of anagrams participants solved for their team and for themselves were recorded to serve as dependent measures (e.g., Ellemers et al., 2008). The number of anagrams solved for the group and the number of anagrams solved for the self were negatively correlated,  $r(59) = -.44, p < .001$ . Finally, all participants were debriefed, thanked, and paid.

## Results

### Analyses

The manipulation check and the intention measure were analyzed with ANOVA using the manipulations of permeability and regulatory focus as independent variables. The numbers of anagrams participants solved for themselves and for their group were analyzed with separate analyses of covariance using the manipulations of permeability and regulatory focus as independent variables and the perceived difficulty of the anagram

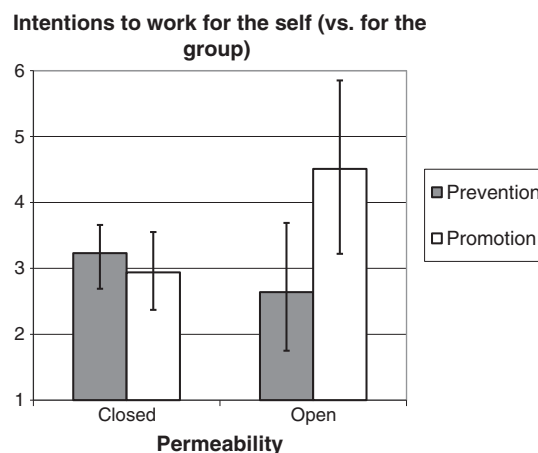
task as a covariate. Significant interactions were further analyzed with simple effects analyses (Aiken & West, 1991).

### Manipulation Check

As intended, an ANOVA on the manipulation check showed that participants in the open condition saw more opportunities for individually entering Team A ( $M = 7.16, SD = 1.60$ ) than participants in the closed condition ( $M = 1.77, SD = 1.37, F[1, 57] = 187.17, p < .001, \eta^2 = 0.77$ ). No other effects emerged ( $p$ 's  $> .68$ ).

### Intention to Work for the Self versus For the Group

The results showed the predicted interaction between the manipulations of permeability and regulatory focus on participants' intentions to work for the self versus for the group,  $F(1, 55) = 5.60, p = .02, \eta^2 = 0.09$  (Figure 2). As expected, the results showed that among individuals under promotion focus, intentions to work for the self were stronger in the open condition,  $M = 4.51, SD = 2.55$ , than in the closed condition,  $M = 2.94, SD = 1.21, F(1, 55) = 6.01, p = .02$ . No difference was observed between the open condition,  $M = 2.64, SD = 1.98$ , and the closed condition,  $M = 3.23, SD = 0.90, F(1, 55) < 1, p = .37$ , among individuals under prevention focus. Viewed differently, the results showed that individuals under promotion focus had stronger intentions to work for the self versus for the group than individuals under prevention focus in the open condition,  $F(1, 55) = 7.95, p = .007$ , but not in the closed condition,  $F(1, 55) < 1, p = .64$ .



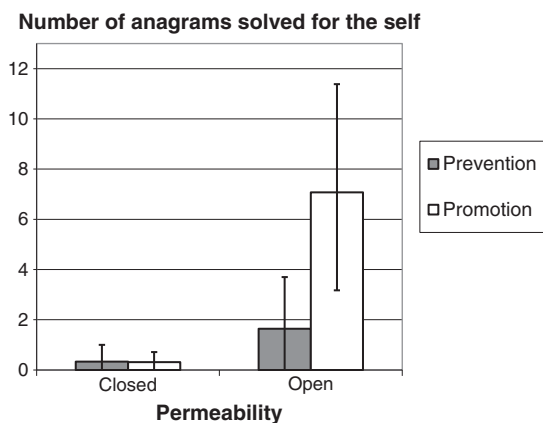
**Fig. 2:** Intentions to work for the self (versus for the group) as a function of the manipulations of permeability and regulatory focus (Study 2), the error bars represent bootstrapped 95% confidence intervals

### Working for the Self

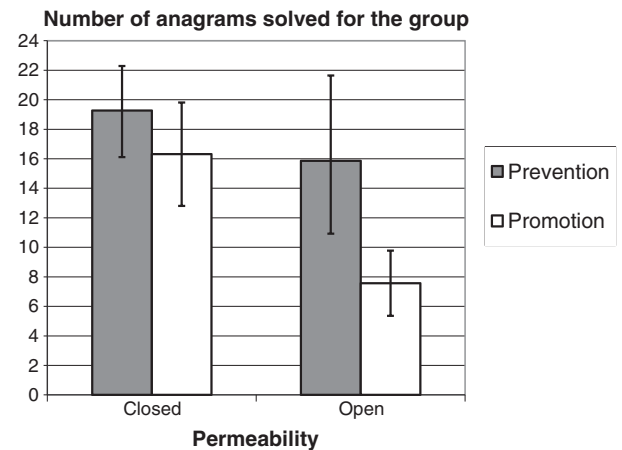
The results revealed the predicted interaction between the manipulations of regulatory focus and permeability on the number of anagrams participants solved for themselves,  $F(1, 54) = 4.44$ ,  $p = .04$ , and  $\eta_p^2 = .08$  (Figure 3). Further analyses showed that, as expected, individuals under promotion focus solved more anagrams for their personal benefit in the open condition,  $M = 7.07$ ,  $SD = 8.32$ , than in the closed condition,  $M = 0.31$ ,  $SD = 0.79$ ,  $F(1, 54) = 15.14$ ,  $p < .001$ . No difference between the open,  $M = 1.64$ ,  $SD = 4.03$ , and closed,  $M = 0.33$ ,  $SD = 1.29$ , conditions was observed among individuals under prevention focus,  $F(1, 54) < 1$ ,  $p = .38$ . Viewed differently, participants under promotion focus solved more anagrams for their personal benefit than individuals under prevention focus in the open condition,  $F(1, 54) = 9.72$ ,  $p = .003$ , but not in the closed condition,  $F(1, 54) < 1$ ,  $p = .84$ .

### Working for the Group

The results revealed the predicted interaction between the manipulations of permeability and regulatory focus on the number of anagrams participants solved for their team,  $F(1, 54) = 4.78$ ,  $p = .03$ ,  $\eta_p^2 = .08$  (Figure 4). Further analyses showed that, as expected, individuals under promotion focus solved fewer anagrams for their group in the open condition,  $M = 7.57$ ,  $SD = 4.57$ , than in the closed condition,  $M = 16.31$ ,  $SD = 7.51$ ,  $F(1, 54) = 10.24$ ,  $p = .002$ . No such difference between the open condition,  $M = 15.86$ ,  $SD = 10.53$ , and the closed condition,  $M = 19.27$ ,  $SD = 6.01$  was observed among individuals under prevention focus,  $F(1, 54) = 1.51$ ,  $p = .24$ . Viewed differently, participants under promotion focus



**Fig. 3:** Number of anagrams solved for the self as a function of the manipulations of permeability and regulatory focus (Study 2), the error bars represent bootstrapped 95% confidence intervals



**Fig. 4:** Number of anagrams solved for the group as a function of the manipulations of permeability and regulatory focus (Study 2), the error bars represent bootstrapped 95% confidence intervals

solved fewer anagrams for the group than individuals under prevention focus in the open condition,  $F(1, 54) = 13.86$ ,  $p < .001$ , but not in the closed condition,  $F(1, 54) < 1$ ,  $p = .47$ .

### Discussion

The results of Study 2 provided evidence for our prediction that having opportunities for achieving individual-level goals can cause individuals under promotion focus to pursue such goals at the expense of the pursuit of group-level goals. When opportunities for the achievement of individual level goals were present (i.e., individually entering the more successful team A), the adoption of a promotion focus, compared with the adoption of a prevention focus, caused individuals to invest more effort in the pursuit of individual-level goals and less in the pursuit of group-level goals. No such differences were found when opportunities for individual status improvement were absent. Importantly, we found converging results in line with our predictions, regardless of whether we distinguished between those with a dominant focus on promotion rather than prevention based on an individual difference measure (Study 1) or experimentally induced participants to adopt a focus either on promotion or on prevention—regardless of more stable individual preferences (Study 2).

Extending the results of Study 1, where we found the predicted effects only on the self-report measure of intentions of pursuing group-level versus individual-level goals, Study 2 also showed the predicted effects on actual effort toward individual and group success. This suggests that our failure to find the predicted effects on



the behavioral measure in Study 1 indeed resulted from methodological problems associated with this measure. Thus, Study 2 replicated and extended the results of Study 1 by showing how adoption of a promotion focus can cause people to strive for individual-level goals, sacrificing the likelihood that the group might achieve its goals.

## GENERAL DISCUSSION

In the two studies, we investigated the effects of regulatory focus on the willingness to work for the group or for the self. We expected that, when group-level and individual-level interests are out of alignment, the tendency to act in self-interest at the expense of the group is motivated through a dominant promotion focus (a motivational orientation on the approach of gains). This prediction was investigated in two studies. Promotion and prevention foci were assessed as chronic individual difference variables in Study 1, and experimentally induced in Study 2. In both studies, we used a paradigm in which participants worked as group members in a competition with another group. We manipulated the alignment of group-level and individual-level interests by experimentally varying the permeability of the boundary between the groups to be either closed or open. Individual-level and group-level interests were aligned in the closed condition, where the only way to succeed individually was to cooperate with the other members of the group. By contrast, participants in the open condition could also choose to work for themselves. Doing so would give them a chance to succeed individually but would also harm the interests of their group. Participants' intentions to work for themselves or for their group, as well as actual effort invested in pursuit of group or individual success, were measured as the dependent variables in both studies.

As predicted, the results of both studies showed that when individual-level and group-level interests were out of alignment (i.e., in the open condition), the adoption of a promotion focus was associated with stronger intentions to work for the self and weaker intentions to work for the group, whereas the adoption of a prevention focus was not. Furthermore, Study 2 revealed that these intentions translated into behavior. When individual-level and group-level goals were out of alignment, the adoption of a promotion focus caused individuals to invest more effort into the achievement of the individual-level goal and less effort into the achievement of the group-level goal, whereas the adoption of a prevention focus did not. Importantly, no differences between promotion and prevention foci were found in the closed control condition, indicating that promotion

oriented individuals are not necessarily reluctant to invest in the group. Instead, they are more easily tempted than prevention oriented individuals to prioritize personal goals over group goals when there is a trade-off between them.

Importantly, similar results were found regardless of whether regulatory focus was operationalized as a chronic individual difference variable or manipulated. This not only attests to the robustness of the findings and the validity of the explanation in terms of differences in regulatory focus, it also reveals a possible way to intervene when the inclination to pursue individual goals is too costly from the point of view of the team or the organization as a whole. The present results suggest that regardless of more stable individual differences, it is possible to redirect people's attention to salient prevention goals, and that this will make them more willing to curb their personal interests and work together with others to achieve joint goals.

So why do promotion and prevention foci affect self-interested and group-serving behavior in this way? The adoption of a prevention focus is associated with an interdependent mindset, and a motivation to avoid negative outcomes, whereas the adoption of a promotion focus is associated with an independent mindset and accompanied by a motivation to pursue gain (e.g., Higgins, 1998; Lee *et al.*, 2000). Because of these dissimilarities between promotion and prevention motivations, we argued that the adoption of a promotion focus should be more conducive to the kind of individualistic behavior that harms the interests of others than the adoption of a prevention focus. However, although the present results fit our reasoning, we did not study the specific processes through which promotion and prevention foci lead to group-serving and self-serving behavior. Other interpretations of the present results may therefore be equally valid.

One such alternative interpretation is that a regulatory fit (Lee & Aaker, 2004) between the promotion focus and the goal that was served by participants' efforts to achieve individual success was responsible for the present results. That is, if participants perceived this individual goal (but not the group-goal) as a "gain", rather than as a "non-loss", then this might explain why promotion oriented individuals were more likely to seek individual success than individuals under prevention focus in the open condition. To rule out this possibility, we took care to balance statements relating to the goal participants worked toward (winning/not losing the competition) so that it represented both the presence of a positive end-state (i.e., a gain: getting to work on a fun task) and the absence of a negative end-state (i.e., a non-loss: not having to work on a tedious task) following the competition.

In addition, both working for the group and working for the self were ultimately aimed at achieving this goal. This means that, had we inadvertently created a fit between promotion focus and the goal participants pursued in the studies, this fit should have been present regardless of whether an individual-level or group-level strategy was used to achieve this goal. Furthermore, if this goal would show a better fit with promotion focus than prevention focus, we would expect to find higher effort (i.e., more anagrams solved) among promotion oriented individuals than among prevention oriented individuals across the board (i.e., a main effect of regulatory focus, independent of permeability). Because we find no such effect, we can rule out the possibility that the (individual or group) goal participants worked toward in the present studies fit a promotion focus.

Another possibility is that the present results are explained by the motivation to maintain the status quo, a motivation that has been linked to prevention focus in past research (e.g., Liberman, Idson, Camacho, & Higgins, 1999). In this view, prevention-oriented participants should be more motivated than those under promotion focus to maintain either their group-membership or their group's (lower) status during the final round of the competition. Such a status quo maintenance perspective can explain why prevention oriented individuals were found to be less willing than individuals under promotion focus to work for themselves during the final round of the competition. However, the motivation to maintain the status quo cannot explain prevention oriented individuals' willingness to work for their group, as this behavior did not help maintain either their group-membership or their group's (lower) status position. The motivation to maintain the status quo therefore cannot explain the current pattern of results.

Thus, rather than regulatory fit or status quo maintenance, an independent self-construal and a lower aversion to loss form a more likely explanation of why individuals under promotion focus are more willing than individuals under prevention focus to pursue individual success at the expense of others.

The present work clearly demonstrates that the adoption of a dominant promotion focus causes individuals to become more likely to pursue individual success at the expense of the group than the adoption of a dominant prevention focus. However, the results of present studies are less clear when it comes to the separate influence of promotion and prevention foci on the willingness to work for the group versus for the self. In Study 1, promotion focus appeared solely responsible for the effect of regulatory focus dominance on intentions to work for the self versus for the group. Intentions to

work for the self (versus for the group) were higher in the open condition than in the closed condition, but only among individuals with a strong promotion focus; the manipulation of permeability had no effect among individuals with a relatively weak promotion focus. However, in Study 2, no effect of permeability on participants' willingness to work for the group and for the self was found in the prevention condition, a result that should not have been found if promotion focus is solely responsible for individuals' preferences for individual-level goals over group-level goals. That is, had promotion focus been solely responsible for the present results (as Study 1 suggests), then the prevention prime should not have affected the dependent variables in Study 2. In that case, the prevention condition in Study 2 would have produced results similar to the effects of permeability at mean levels of promotion focus in Study 1: a lower willingness to work for the group and a higher willingness to work for the self in the open condition than in the closed condition. Unfortunately, no "neutral focus" control condition was included in Study 2, and we are thus not able to test the independent causal effects of promotion and prevention foci in that study. More research is thus needed to help further disentangle the separate effects of promotion and prevention foci on individuals' tendencies to pursue individual success at the expense of others.

### Implications

The current findings have important implications. First of all, whereas the majority of research on regulatory focus has examined responses of people working on individual tasks in relative isolation from others, the present results further our understanding of the role promotion and prevention play in *social* situations. Prior work (Lee *et al.*, 2000) shows how different self-construals affect individuals' regulatory focus; construing the self as independent of others activates the promotion focus, and construing the self as interdependent with others activates the prevention focus. The present findings resonate with this work, as both strands of research link differences in regulatory focus with emerging tendencies for self-serving and other-serving behavior. However, the current work also extends these findings by demonstrating the reverse causal relation; that is, how activating the promotion or prevention focus affects group-serving and self-serving behavior. Thus, the present results are the first to reveal that activating promotion or prevention focus affects the displays of group-serving and self-serving behavior.

The results of the present studies also qualify earlier findings that have suggested a link between promotion

focus and behavior in intergroup contexts (Sassenberg, Kessler, & Mummendey, 2003; see also Shah, Brazy, & Higgins, 2004). This prior work has documented that the adoption of a promotion focus causes individuals to display a stronger positive bias toward the ingroup, whereas the adoption of a prevention focus leads to a more negative bias toward the outgroup. These findings might raise the expectation that the adoption of a promotion focus can make group members more loyal to the group. The results of the present studies indicate that this approach can easily backfire. That is, as long as individual outcomes fully depend on the outcomes of the group, those with a promotion orientation may contribute to group outcomes as a way to benefit their personal interests. However, most real life situations are characterized by more ambiguous or mixed forms of interdependence, in which opportunities for individual goal achievement are present alongside or in competition with group goals. Under such circumstances, the adoption of a promotion focus likely causes individuals to pursue their self-interest at the expense of the group.

Thus, while prior research has emphasized how individuals with a promotion focus may contribute to work contexts (e.g., in terms of innovation, creativity, or ambition), the present results remind us that there may be a downside to primarily rewarding or encouraging promotion-focused individuals. In fact, our findings reveal some important benefits of also including and selecting prevention focused individuals and encouraging employees to adopt a prevention focus, particularly in contexts or organizations where people have to work together to achieve team or organizational goals. To help them recruit prevention oriented employees, and to encourage current employees to adopt a prevention focus, organizations may consider adapting the nature of the incentives and rewards they offer to match the needs characterizing those with a prevention focus, for example, by offering a greater job security instead of promotions or raises. The results of the present research suggest that such a strategy may help organizations create and maintain greater employee loyalty.

## CONCLUSION

Two studies investigated the role of promotion and prevention foci in individuals' willingness to work for the group or for the self. The results revealed that procedures that induce a particular regulatory focus can impact on efforts invested in the achievement of individual versus group-goals. Promotion oriented individuals were more willing to act in their self-interest (at the expense of their group), while individuals under

prevention focus were more inclined to remain loyal to the group when offered an opportunity to achieve individual success.

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