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Running head: JUST WORLD BELIEFS AND SELF-ESTEEM

**To believe or not to believe in a just world? The psychological costs of threats to  
the belief in a just world and the role of attributions**

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**Abstract**

Belief in a Just World (BJW) research has typically studied how individuals maintain and defend their beliefs from possible threats. However, none of this work has examined the psychological costs of threats to one's BJW. In the present research we tested its consequences on self-esteem. Focusing on threats related to relevant ingroups, we aimed to (1) understand the role of group identification in these processes and (2) identify the psychological mechanisms that can counteract their possible negative effects. In two studies we found that for individuals who were highly identified with the involved groups, perceiving a threat to their BJW led to low self-esteem. Conversely, we did not find such effects for low identifiers. Finally, we also found that causal attributions have a protective role in these processes. Results showed that in the face of a threat to BJW, making weaker internal attributions mitigates its harmful impact on self-esteem.

*Keywords:* Belief in a just world, threat, self-esteem, group identification, causal attributions

**To believe or not to believe in a just world? The psychological costs of threats to the belief in a just world and the role of attributions**

The perception of the world as an orderly place where individuals have the power to decide their own fate has been extensively studied in social justice research (Hafer & Bègue, 2005). Specifically, it is central to just world theory that individuals need to believe that people generally get what they deserve and deserve what they get (Lerner, 1980). Apart from its importance for one's perception of control and stability over outcomes, it also has crucial psychological benefits (e.g., Dalbert, 2001; Major, 1994). In fact, endorsing a belief in a just world (BJW) is associated with lower depression and higher self-esteem (Dalbert, 2001; Lipkus, Dalbert, & Seigler, 1996; Ritter, Benson, & Snyder, 1990), higher life satisfaction (Dalbert, 1998), reduced stress (Tomaka & Blaskovich, 1994), successful adaptation to stressful events (Bonanno, Wortman et al., 2002), and higher life ambitions and goals (Mirels & Darland, 1990).

Along these lines, stress and coping models (e.g., Lazarus & Folkman, 1984) point to the significance of belief systems in determining the ways in which people respond to stressful events. Likewise, research has suggested that believing in a just world is an important coping resource for aiding people to appraise and adjust to stressful events (Dalbert, 1998; Hafer & Olson, 1998; Jost & Hunyady, 2002; Major, Quinton, & McCoy, 2002). For example, individuals may cope with negative events by feeling more confident and by increasing their perceptions of control and hope. Indeed, just world beliefs lead individuals to perceive their social environment as more stable and controllable, which in turn lowers perceptions of threat by unjust events (Major, Gramzow et al., 2002). These beliefs also reduce uncertainty and allow people to function more effectively (Fiske, 2004; Lerner, 1980; van den Bos & Lind, 2002).

Although the positive implications of BJW for well-being outcomes have been well documented, less research has focused on the psychological costs posed by threats to one's beliefs in a just world. In fact, to our knowledge no research has thus far examined these costs and how individuals might protect their self-esteem from such threats. To address this lacuna, the present research's approach is twofold: first, it analyses how group identification may determine the impact of a threat to one's BJW on self-esteem; and second, it examines the ways in which causal attributions may mitigate its psychological costs.

### **The impact of threats to one's BJW on self-esteem and the role of group identification**

Justice beliefs promote a basic human need of feeling like a person of worth (Fiske, 2004) and observed injustice threatens these beliefs, which in turn results in increased distress, perceived vulnerability, and negative affect (Janoff-Bulman, 1989; Kaiser, Vick, & Major, 2004; Lerner, 1977). Believing in a just world is a constant motivation in people's lives encouraged by a fundamental need for stability and control (Lerner, 1980). However, people can be "greatly troubled if they encounter evidence suggesting that the world is not really just or orderly after all" (Lerner & Miller, 1978, p. 1031). In a similar vein, research has noted that people need to organise their lives around principles of deservingness. In order to maintain these principles, there is a need to believe in a just world, and thus evidence of injustice poses a great threat to these beliefs (Lerner, 1980). For these reasons, people endeavour to maintain their BJW and to defend them from possible threats. A large body of work has shown that individuals react to threats to their BJW by defending and attempting to restore them (for reviews, see Greenberg, Solomon, & Pyszczynski, 1997; Hafer & Bègue, 2005). For example, research has shown that innocent victims threaten one's just world perceptions and thus

motivate people to blame and derogate the victim in order to maintain their beliefs (Lerner & Miller, 1978).

Previous work has also shown that threats to just world beliefs are more important when they are more proximate to one's world. For example, Correia, Vala, and Aguiar (2007) found that participants' BJW was more threatened by the suffering of an ingroup than an outgroup victim. Drawing on these findings, in the present work we propose that threats to BJW associated with an ingroup should be threatening only for those who feel more connected and committed to the group. In fact, different scholars have provided some support to this idea by suggesting that people who are highly identified with their ingroups should be more aware of the justice concerns related to these groups (e.g., Correia et al., 2012; Clayton & Opatow, 2003; Homvall & Bobocel, 2008). In line with this perspective, O'Brien and Major (2005) demonstrated that the impact of system-justifying beliefs on self-esteem is moderated by minority group identification among low-status groups. The authors found that for individuals who were highly identified with their minority group, system-justifying beliefs were negatively associated with self-esteem; whilst for low identifiers, these beliefs were positively related to self-esteem.

Overall, in the present work we propose that in the face of a threat to one's BJW, identifying with the involved groups should determine the strength of the impact of these threats have on self-esteem. More specifically, given that a BJW threat involving one's group is also closely related to the self, we propose that individuals who are highly identified with groups facing these threats should feel that their BJW is vulnerable and show lower self-esteem. In contrast, for those who have low levels of identification, a threat involving their group should not impact on their self-esteem

given that these individuals are, to a certain extent, not psychologically associated with the group.

### **The role of causal attributions in buffering threats to BJW**

It is important for one's psychological well-being to believe that one has control of her/his outcomes (e.g., Miller & Seligman, 1975; Reis, Sheldon, Gable, Roscoes, & Ryan, 2000; Taylor & Brown, 1988; Warren & McEachren, 1983). In fact, constructs related to personal control such as internal locus of control are among the strongest personality correlates of psychological well-being (DeNeve & Cooper, 1998; Diener, Oishi, & Lucas, 2003). Perceiving control is critical for one's adaptation and psychological resilience (Wahl, Becker, Burmedi, & Schilling, 2004). For example, Lang and Heckhausen (2001) found that perceived personal control was associated with positive life satisfaction and positive affect.

According to earlier research, attributions to positive and negative outcomes are crucial mediators of affective reactions to these outcomes (Abramson, Seligman, & Teasdale, 1978; McFarland & Ross, 1982; Weiner, 1982, 1986). For example, Kluegel and Smith (1986) showed that internal attributions to success were associated with feelings of confidence and happiness. Conversely, making stable, internal attributions for undesirable outcomes is associated with poor psychological adjustment (Peterson, Seligman, & Vaillant, 1988).

More specifically, attributing negative events to external factors (i.e., something or someone in the environment) can be protective of self-esteem and affect, whilst making internal attributions (i.e., an aspect of the self) leads to low self-esteem and negative affect (e.g., Abramson et al., 1978; Weiner, 1995). Parallel research exploring responses to prejudice and discrimination, for example, has shown that individuals can protect their self-esteem by making external attributions for negative outcomes, such as



attributing the outcome to prejudice (Crocker & Major, 1989; Major, Kaiser, & McCoy, 2003; Major, Quinton, & Schmader, 2003).

In the present research we propose that confronting people with a threat to their BJW involving their ingroup(s) should result in compromised self-esteem when they are highly identified with those groups. In order to protect their self-esteem from such a threat, people may shift from internal to external attributions. There is, in fact, evidence for this idea by previous research showing that, individuals with a strong belief in a just world make more internal and fewer external attributions (Hafer & Correy, 1999). Thus, when individuals face a threat to their BJW, they should be more inclined to make weaker internal attributions to negative events and stronger external attributions in order to protect their self-esteem. We believe that this effect is particularly pronounced for those who are highly identified with the groups involved. For those who are less identified, these threats should not affect their self-esteem. Given that for these individuals a threat to their BJW does not have psychological costs it should not affect their causal attributions.

### **Current research**

Previous work has demonstrated that self-esteem is affected by different aspects of justice such as perceived treatment by others (Smith, Tyler, Huo, Ortiz, & Lind, 1998), perceived fairness of procedures (Koper, Van Knippenberg, Bouhuijs, Vermunt, & Wilke, 1993), perceived unfairness (De Cremer & Sedikides, 2008), and system-justifying beliefs (O'Brien & Major, 2005). In the present research we conducted two studies testing the prediction that identification moderates the impact of a threat to one's BJW on self-esteem. Furthermore, drawing on work in the field of causal attributions (e.g., Weiner, 1995), our research also had the goal of understanding how individuals protect themselves from threats to their BJW. In order to provide a thorough test of our

hypotheses, in each study we used a different research design and threat to BJW. In Study 1, we tested the moderating role of group identification with a cross-sectional design. In Study 2, we tested the moderating role of group identification in the context of an experiment in which we manipulated threats to BJW. In addition, Study 2 examined our predictions relating to the protective role of attributions on self-esteem.

Across the two studies we predicted that for individuals who were highly identified with the involved groups, facing a threat to BJW associated with their group should result in compromised self-esteem. In Study 2, specifically, we predicted that highly identified individuals should be able to protect their self-esteem by making weaker internal and stronger external attributions. Across the two studies, we did not expect significant effects for those who were less identified with the involved groups.

### **Study 1**

Following in the footsteps of prior BJW research (e.g., Lerner & Miller, 1978), in this study we induced a threat to BJW by asking university students to read a cover story of a fellow student who had suffered an accident for which s/he was not responsible (i.e., an “innocent victim”). In line with research showing that an ingroup victim is more threatening to people’s BJW than an outgroup victim (Correia et al., 2007), the text highlighted the fact that the victim was an ingroup member. The degree of perceived threat was measured by assessing participants’ BJW. We predicted that for university students who were highly identified with their university, a threat to BJW would be associated with lower self-esteem. In contrast, no significant effects were predicted for those who had low identification levels.

## Method

**Participants and procedure.** Fifty-nine university students volunteered to participate in this study. The sample was comprised of 9 males and 50 females, and their age ranged from 18 to 50 years old ( $M = 23.80$ ,  $SD = 6.66$ ).

All participants read a cover story about another student who had been contaminated with HIV in a blood transfusion. The bogus story highlighted the fact that the student was from the same university but that s/he preferred to be anonymous, so we called this person “X” and did not provide any additional information. To ensure that participants read the text carefully, there was a question asking in which university the interviewee was enrolled and whether they thought that s/he was innocent. These questions were followed by threat to BJW, identification, and self-esteem measures.

**Measures.** Responses to all items were made on 7-point scales with endpoints ranging from 1 “*strongly disagree*” to 7 “*strongly agree*”.

***Threat to a belief in a just world.*** BJW was assessed by adapting five items from the Dalbert, Montada and Schmitt’s (1987) belief in a just world measure (e.g., “I think basically the world is a just place”; reverse-coded,  $\alpha = .60$ ). A high score indicated a higher threat to BJW.

***Group identification.*** We adapted the three items from Leach et al.’s (2008) centrality subscale (e.g., “I often think about the fact that I am student from university x”) to assess the extent to which participants were identified with their university. The alpha coefficient was .86.

***Self-esteem.*** In order to measure self-esteem we adapted six items from the social and performance subscales of Heatherton and Polivy’s (1991) State Self-Esteem Scale (“I feel self-conscious”, “I am worried about what other people think of me”, “I feel inferior to others at this moment”, “I am worried about looking foolish”, “I feel that

I am having trouble understanding things that I read”, and “I feel confident about my abilities”). We used a state self-esteem scale because this measure is sensitive to manipulations and momentary fluctuations (Heatherton & Polivy, 1991). However, we used a shorter version of the original measure in order to reduce the demand on our participants. We selected the six items that were the most relevant for the study’s context. After reverse scoring the appropriate items, a high score in this scale indicated high state self-esteem ( $\alpha=.80$ ).

## **Results and Discussion**

**Preliminary analyses.** All participants reported that the victim was enrolled in the correct university and that s/he was innocent. An inspection of the means reveals that threat to BJW ( $M = 4.89, SD = 0.80$ ), identification with their university ( $M = 4.65, SD = 1.32$ ), and self-esteem ( $M = 5.46, SD = 1.10$ ) were above the midpoints of the scales. Threat to BJW was not correlated with identification or self-esteem,  $r = -.07, p = .579$  and  $r = -.20, p = .127$ , respectively. Identification was also not correlated with self-esteem,  $r = -.07, p = .606$ . Age did not correlate with any of the key variables and was not included in further analyses.

**The moderating role of identification.** Using regression analyses, we assessed whether identification moderated the relationship between threat to BJW and state self-esteem. For the regression analysis, gender, threat to BJW, identification, and the interaction between threat to BJW and identification were entered simultaneously. All variables were centred (Aiken & West, 1991), except gender, which was contrast coded (-1 = females, +1 = males).

Gender, threat to BJW, and identification did not independently predict self-esteem,  $\beta = -.04, t(54) = 0.19, p = .853$ ,  $\beta = -.29, t(54) = 1.74, p = .090$ , and  $\beta = -.09, t(54) = 0.83, p = .411$ , respectively. However, the interaction term between threat to

BJW and identification shown in Figure 1 was significant,  $\beta = -.45$ ,  $t(54) = 3.26$ ,  $p = .002$ . In line with predictions, simple slope analysis revealed that at high levels of identification, a threat to BJW was associated with lower self-esteem,  $\beta = -.89$ ,  $t(54) = 3.61$ ,  $p < .001$ . At low levels of identification, a threat to BJW was not correlated with self-esteem,  $\beta = .31$ ,  $t(54) = 1.26$ ,  $p = .214^1$ .

In this study we obtained support for our prediction that identification moderates the relationship between a threat to one's BJW and self-esteem. Overall, we found that for highly identified students, a threatened BJW after reading about an accident of a fellow student was associated with lower state self-esteem. In contrast, no significant associations were found for those who were less identified with their university. These null findings are consistent with the idea that low identifiers were less psychologically involved with their group and situation, and hence did not significantly experience consequences for their self-esteem.

## Study 2

The aim of this study was to replicate our previous findings with an experimental design and to also analyse whether individuals, in the face of a threat to their BJW, would be inclined to make weaker internal and stronger external attributions in order to protect their self-esteem.

Drawing on previous research, one could argue that the causal possibilities between our variables might be different from those that we hypothesised. For example, although BJW and identification were not correlated in Study 1, O'Brien and Major (2005) found significant correlations between different measures of perceived justice and identification among different ethnic groups. A possible explanation is that, in the face of adversity, individuals might disidentify with their group in order to maintain their justice beliefs (see also Correia et al., 2012). Another causal possibility in our

model is that low self-esteem increases individuals' perceptions of threat. For instance, Kernis (2005) showed that fluctuations of individuals' self-esteem are a significant vulnerability factor in leading people to be particularly reactive to injustice (see also, De Cremer & Sedikides, 2005). Overall, given these alternative causal explanations, it is crucial to test our predictions with a design that serves to maintain an orthogonal assessment of a threat to BJW and group identification, and that also allows testing the causal impact of these threats on self-esteem.

Therefore, we tested our predictions experimentally, whilst examining the protective effects of causal attributions. Although Study 1 provided an important test of our predictions, it was based on an indirect threat caused by an unfair event involving a fellow ingroup member. With the aim of strengthening the test of our hypothesis, in this study we led participants to believe that their group has to endure injustice. More specifically, we randomly assigned university students to read an article describing either that the world is not just (threat to BJW condition) or that it is just (no threat to BJW condition) at their university.

We maintained our predictions such that for students who are highly identified, a threat to their BJW leads to lower self-esteem. We also tested whether the effect of a threat to their BJW on self-esteem through attributions is moderated by identification. More specifically, for highly identified individuals, reading that the world is unjust in their institution should lead them to make weaker internal attributions and stronger external attributions, which in turn should be associated with positive self-esteem. No effects were expected for those who were less identified with their university.

## Method

**Participants and procedure.** Sixty-four university students volunteered to participate in this study. The sample was comprised of 25 males and 39 females, and their age ranged from 17 to 54 years old ( $M = 22.81$ ,  $SD = 7.60$ ).

Students responded to a questionnaire booklet that was divided into two parts. The first part assessed identification with their university and was introduced as a pilot study to validate a new questionnaire measure. The second part had our manipulation (threat vs. no threat) that contained a bogus report of an external assessment of their university. This text conveyed BJW's main idea that people get what they deserve and deserve what they get: (threat condition between parenthesis) "For those who break the rules, there *are* (aren't any) penalties or social and academic shame. For those who obey the rules there *are* (aren't any) rewards and academic recognition. Fortunately (Unfortunately), this university is *just* (not just)". Participants then responded to a number of measures assessing perceived justice in their university, attributions, and state self-esteem.

**Measures.** All responses were made on 7-point scales with endpoints ranging from 1 "*strongly disagree*" to 7 "*strongly agree*".

**Group identification.** We adapted the same items used in Study 1 to measure the extent to which participants were identified with their university ( $\alpha = .89$ ).

**Manipulation check.** We checked our manipulation with the items "I think that in this university people suffer unjust treatment"; "This university is a just place" (reverse-coded); and with two items adapted from Lipkus et al., 1996 BJW scale: "I feel that people in this university treat each other with the respect that they deserve" (reverse-coded); and "I feel that in this university people earn the punishments and

rewards they get” (reverse-coded). These items were also measured on a 7-point scale;  $\alpha = .77$ .

**Attributions.** We measured the extent to which participants attributed negative events to internal and external causes using Janoff-Bulman’s (1989) eight-item scale (e.g., internal attributions subscale: “Through our actions we can prevent bad things from happening to us”; and external attributions subscale: “Bad events are distributed to people at random”). The alpha coefficients for the internal and external attributions subscales were .80 and .70 respectively.

**State self-esteem.** Participants completed the same six-item measure used in Study 1 ( $\alpha = .82$ ).

## Results

**Preliminary analyses.** Inspection of the manipulation check showed that participants reported the world is more just in their university in the no threat condition ( $M = 5.69, SD = 0.91$ ) than in the threat condition ( $M = 4.95, SD = 0.76$ ),  $F(1,62) = 12.25, p = .001$ .

There was an effect of gender revealing that men tended to make more internal attributions to negative events ( $M = 4.53, SD = 1.17$ ) than women ( $M = 3.80, SD = 0.97$ ),  $F(1,63) = 6.70, p = .012$ . Although age was not correlated with any of the key variables, we also controlled for age given that in our sample men ( $M = 25.93, SD = 1.49$ ) tended to be older than women ( $M = 21.59, SD = 1.21$ ),  $F(1, 66) = 5.10, p = .027$ .

**The hypothesised model.** In order to test our full model we followed Muller, Judd, and Yzerbyt’s (2005) guidelines for testing moderation in the context of intervening variables. In this analysis we predicted a suppression effect, which is characterised by two opposing effects: a direct and negative effect (i.e., threat to BJW on self-esteem), and an indirect and positive effect (i.e., threat to BJW on self-esteem



via attributions). In this type of analysis the direct effect tends to be larger than the total effect given that the direct effect is cancelled out by the indirect effect (Paulhus, Robins, Trzesniewski, & Tracy, 2004). In the analyses below, all variables were centred and the experimental condition was coded “+1” threat and “-1” no threat.

In a first step we tested the moderation effects found in our previous study. In this analysis, the experimental condition was introduced as the independent variable, identification with the university as the moderator, and self-esteem as the dependent variable. The Threat to BJW X Identification interaction was marginally significant,  $\beta = -.20$ ,  $t(58) = 1.70$ ,  $p = .095$ . Simple slope analysis suggested that for those who were highly identified (+1SD), threat to BJW had a negative effect on self-esteem,  $\beta = -.57$ ,  $t(58) = 2.52$ ,  $p = .015$  (see Figure 2). In contrast, the simple slope at low identification (-1SD) was non-significant,  $\beta = -.02$ ,  $t(58) = 0.09$ ,  $p = .927^2$ .

In a second step we tested the Threat to BJW X Identification interaction on internal and external attributions. Results showed that this interaction was non-significant for external attributions,  $\beta = -.06$ ,  $t(58) = 0.58$ ,  $p = .568$ , but that it was significant for internal attributions,  $\beta = -.22$ ,  $t(58) = 2.25$ ,  $p = .028$ . Simple slope analysis indicated that for those who were highly identified (+1SD), a threat to BJW reduced their internal attributions,  $\beta = -.47$ ,  $t(58) = 2.47$ ,  $p = .016$  (see Figure 3). The simple slope for low identifiers (-1SD) was non-significant,  $\beta = .14$ ,  $t(58) = 0.76$ ,  $p = .452^3$ . For the remaining analysis below, we focused only on internal attributions given that there were no moderation effects on external attributions. Furthermore, there was no direct effect of threat to BJW on external attributions,  $\beta = .14$ ,  $t(58) = 0.96$ ,  $p = .342$ , and thus threat to BJW could not possibly impact on self-esteem via external attributions.

In a following step, we tested the Threat to BJW X Identification interaction again on self-esteem but controlling for internal attributions. Results showed that the interaction was significant,  $\beta = -.31$ ,  $t(57) = 2.77$ ,  $p = .008$ . Simple slope analysis showed that for those who were highly identified (+1SD), threat to BJW had a negative impact on their self-esteem,  $\beta = -.80$ ,  $t(57) = 3.69$ ,  $p < .001$ . The simple slope for those low in identification (-1SD) was non-significant,  $\beta = .05$ ,  $t(57) = 0.25$ ,  $p = .807$ . Importantly, both the interaction and the simple slope for high identifiers were strengthened when controlling for internal attributions in comparison with the results found in the first step of this analysis.

Finally, we tested the indirect effect of Threat to BJW X Identification on self-esteem via internal attributions. In this regression we introduced the experimental condition as the independent variable, identification with the university as the moderator, internal attributions as the suppressor variable, and self-esteem as the dependent variable. Using Hayes' (2012) SPSS macro, we allowed the threat to BJW to interact with identification to predict self-esteem directly (as in the first step of the current analysis and as in Study 1) and also indirectly through attributions. We used bootstrapping statistics to test whether the indirect path via the suppressor (i.e., internal attributions) at different levels of the moderator (i.e., identification) does significantly differ from zero. The indirect effect is considered significant when zero is not included within the confidence intervals (CI) provided by the bootstrapping procedure. Bias-corrected bootstrapping (1000 bootstraps) yielded for high levels of identification (+1SD) a significant indirect effect via internal attributions,  $\beta = .23$ , 95% CI = 0.069 to 0.489 (see Figure 4). Conversely, for low levels of identification (-1SD) the indirect effect was not significant,  $\beta = -.07$ , 95% CI = -0.353 to 0.114.

## Discussion

Results supported our argument in showing a suppression effect that included the two opposing paths: (1) a direct effect that replicated Study 1's findings and indicated that for highly identified individuals, a threat to their BJW had negative implications for their self-esteem and (2) an opposing indirect effect showing that for individuals who were highly identified with their university, being in the threat condition decreases their internal attributions to negative events, which is in turn predicted higher self-esteem. In contrast, for those individuals who were less identified, a threat to their BJW did not impact on their self-esteem as they were psychologically less associated with the involved group. Our results supported the predicted causal effects such that a threat to BJW impacts on both internal attributions and self-esteem.

Of importance, we found neither moderation nor suppressor effects with external attributions. Research has argued that making an internal attribution to a negative event (e.g., perceived discrimination) can have stronger affective implications than an external attribution (Schmitt & Branscombe, 2002). One of the reasons is that internal attributions have negative consequences that go beyond the present situation, which is not the case of external attributions. In this study's scenario, individuals faced a threat to their BJW because of their group membership (i.e., university). Thus, attributing negative events related to the group to internal causes suggests that these individuals might have future negative experiences in similar circumstances. That is perhaps why in this study our predictions were supported by internal but not by external attributions. It appears that in this context and in order to protect from a threat to one's BJW it becomes more important to change one's internal rather than external attributions.

### **General discussion**

We conducted two studies to test the prediction that a threat to one's BJW may lead to compromised self-esteem. Whereas previous work examining the effects of injustice was centred for example on the justice appraisals of specific situations (e.g., Lupfer, Weeks, Doan, & Houston, 2000), our research focused on a general need to believe in justice. We thus predicted and found in both studies that a threat to BJW involving one's group negatively affects the self-esteem of high but not low identifiers. In Study 2, our results also suggested that individuals tend to make weaker internal attributions in the face of a threat to their BJW in order to counteract its costs.

Overall, our findings were in line with the argument that believing in a just world is vital for the ways in which people think of themselves (Lerner, 1987). More specifically, our results supported the contention that threats to one's BJW are likely to have a deleterious effect on psychological well-being (Janoff-Bulman, 1989; Kaiser, Vick, & Major, 2004; Lerner, 1977). Just world beliefs are a fundamental need in people's lives as they serve to maintain perceptions of stability and control (Lerner, 1980). Our findings suggest that when there is evidence of injustice, these basic beliefs are threatened and this has profound costs for self-esteem.

This effect was manifested only when individuals identified with the groups facing the threat to their BJW. Previous research had already argued that people are more generally concerned about justice when it relates to groups that are significant for them (e.g., Clayton & Opatow, 2003; Homvall & Bobocel, 2008). O'Brien and Major (2005), for example, had also demonstrated that examining the extent to which individuals are identified with their minority groups is crucial for understanding the effects of perceived justice on self-esteem. Overall, justice concerns only become significant for people when they are identified with the groups that are the targets of

these concerns. Highly identified individuals are known to share a feeling of common fate with other ingroup members (Jackson, 2002). Thus, these individuals are more inclined to feel that a threat involving their group is likely to have an impact on them, which results in more vulnerability to these perceptions. In sum, our findings are consistent with previous work noting that perceived injustice poses a threat to one's BJW (e.g., Lerner, 1980), but our research helps to understand the conditions under which these threats have negative implications for self-esteem.

Another novel finding was that highly identified individuals protect themselves from a threat to their BJW by decreasing their internal attributions for negative events. In line with previous work, our findings highlight the capacity of using the locus of causal attributions in order to protect one's self-esteem (e.g., Major et al., 2003, Weiner, 1995). More specifically, we found that highly identified individuals who face a threat to their BJW associated with their group tend to make weaker internal attributions. This mechanism prevents individuals from thinking that injustice is being caused by an aspect related to their self, and in this way protects their self-esteem. This finding is also in line with other mechanisms for protecting well-being in the face of negative events such as self-handicapping (e.g., Jones & Berglas, 1978) and excuse-making behaviours (Schlenker, Pontari, & Christopher, 2001).

### **Limitations and Future Research**

The current work has some limitations that may open new avenues for future research. The first limitation relates to the fact that our moderator (i.e., group identification) was measured in both studies instead of being manipulated. Although previous studies have successfully manipulated the salience of group identities (e.g., Doosje, Ellemers, & Spears, 1995), we decided not to manipulate identification, given the difficulty to experimentally manipulate existing group identities during the timespan

of an experiment (for a similar argument, see Ellemers, Spears, & Doosje, 2002; McCoy & Major, 2003). Despite this limitation, in both studies threat to BJW was not correlated with our identification measure, which supports the desired statistical independence between our independent and moderator variables.

Although previous research has pointed to the importance of a multidimensional perspective of identification (e.g., Ashmore, Deaux, & McLaughlin-Volpe, 2004), in our work we conceptualised identification as centrality (importance of the group to the self) and did not assess other components of identification. This was also the approach of O'Brien and Major (2005) who argued that centrality is an important moderator of the relationship between system-justifying beliefs and well-being. In order to improve our understanding of the moderating role of identification, future research in this topic should explore other dimensions of group identification.

A possible alternative approach to our data would be to consider that our manipulations have an effect on self-esteem to further impact on attributions (i.e., to reverse the relationship between attributions and self-esteem). Whereas this is a plausible interpretation, in the present research the aim was to test the possible mitigating role of attributions, instead of confirming or disconfirming the particular causal paths between attributions and self-esteem. We acknowledge that there are other alternative interpretations to the relationship between the key variables in our studies. However, we believe that our proposed model is more in line with just world theory and previous work in the field of attributions.

Finally, the critical Threat to BJW X Identification interaction effect on self-esteem was statistically significant in Study 1 and marginal in Study 2 when the suppressor variable (i.e., internal attributions) was not included in the equation. On the one hand, these findings may suggest that although reduced internal attributions

mitigated BJW threat, this mechanism did not fully counteract its negative effects. On the other hand, in Study 2, this direct effect was highly significant when the suppressor variable was included in the equation but only marginal when internal attributions were not included. This may suggest that in Study 2 individuals were somewhat in a better position (compared with Study 1) to fully counteract the negative effects of a threat to BJW. Although this is speculative and cannot be tested with our data, it might be an indication that different scenarios and threats might have different implications for how the processes discussed in our research evolve. For example, it could be interesting for future research to compare between scenarios that present a threat to BJW based on a rare and single event (such as the threat in Study 1) and threats that more permanently affect one's daily life (such as the threat in Study 2). Perhaps it is more difficult for attributions to fully counteract a specific and rare event (such as receiving a blood transfusion infected with HIV) than something more pervasive and in touch with one's day-to-day life (such as injustice at the university or work).

### **Conclusion and Implications**

Our findings supported the idea that a threat to one's BJW associated with a significant ingroup has deleterious consequences for self-esteem. It is important to note, however, that these results were found in an experimental setting where participants were presented with a single threat to their BJW. We expect that pervasive contact with these threats during the course of one's life should have a greater impact on self-esteem and psychological well-being. Our research showed that those who faced an isolated threat to their BJW protected themselves by perceiving that they have little responsibility for the cause of this threat. Nonetheless, this might be extremely different for individuals who live in corrupt societies, face daily injustices at work, or feel that other people never treat them fairly. In these cases, constantly avoiding to face the

causes of injustice or constantly making weaker internal attributions might prevent them from having a grasp of the specific characteristics of each situation and take action against unjust events. In the long term, blaming others for threatening events has negative implications for adaptation and well-being (Tennen & Affleck, 1990). For these reasons, we believe that pervasive perceptions of threats to one's BJW have deeper implications affecting self-esteem and people's motivations, which can place crucial limitations on academic or professional success. Mechanisms for counteracting these effects should focus not only on the resilience of its victims but also in providing social structures and support aiming at increasing the importance of justice in our society and its groups.



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## Footnotes

1. An alternative approach to this interaction is to consider that identification is associated with self-esteem and that this association is moderated by threat to BJW. An analysis of this interaction showed that when threat to BJW is high, identification tends to be negatively associated with self-esteem,  $\beta = -.28$ ,  $t(54) = 1.87$ ,  $p = .067$ . Conversely, when threat to BJW is low, identification is positively associated with self-esteem,  $\beta = .45$ ,  $t(54) = 2.96$ ,  $p = .005$ .
2. As discussed in Study 1, an alternative approach to the hypothesised interaction is to consider that threat to BJW is the moderator and identification the independent variable. Results of the alternative hypothesis on self-esteem showed that when the threat to BJW is high, identification is not associated with self-esteem,  $\beta = .03$ ,  $t(58) = 0.16$ ,  $p = .873$ . In contrast, when threat to BJW is low, identification is positively associated with self-esteem,  $\beta = .42$ ,  $t(58) = 2.43$ ,  $p = .018$ .
3. We also tested with internal attributions the alternative interpretation to our interaction. This analysis showed that, when threat to BJW is high, identification was not associated with internal attributions,  $\beta = -.02$ ,  $t(58) = 0.18$ ,  $p = .857$ . However, when threat to BJW is low, identification is positively associated with internal attributions,  $\beta = .42$ ,  $t(58) = 2.87$ ,  $p = .006$ .