



Is the world a just place? Countering the negative consequences of pervasive discrimination by affirming the world as just

Katherine Stroebe^{1*}, John F. Dovidio², Manuela Barreto^{3,4},
 Naomi Ellemers³ and Melissa-Sue John⁵

¹University of Groningen, The Netherlands

²Yale University, New Haven, Connecticut, USA

³Leiden University, The Netherlands

⁴CIS-ISCTE, Lisbon, Portugal

⁵University of Connecticut, Storrs, Connecticut, USA

Two studies (a) explored the role of pervasiveness of discrimination (pervasive vs. rare) in determining targets' responses to discrimination, and (b) examined the extent to which threats to participants' worldview can account, in part, for detrimental effects of pervasive discrimination. As predicted, across both studies, pervasiveness of discrimination moderated the relationship between attributions to prejudice for failure to obtain a job and psychological well-being (depressed affect and state self-esteem). When discrimination was presented as pervasive, attributions to prejudice related to lower state self-esteem and greater depressed affect. When discrimination was portrayed as rare, attributions to prejudice were related to higher state self-esteem and unrelated to depressed affect. Study 2 further showed that being able to affirm the world as just countered the negative consequences of pervasive discrimination, whereas it did not influence responses to discrimination that was perceived as rare.

Whereas members of disadvantaged groups commonly experience discrimination, the psychological consequences of perceiving discrimination can vary substantially. Perceptions of discrimination can sometimes protect psychological well-being by allowing targets to attribute negative personal treatment and outcomes (e.g., job-related rejection) more externally (e.g., due to another's prejudice) than internally (e.g., self-blame for lack of ability) (Crocker & Major, 1989; Major, Kaiser, & McCoy, 2003). Perceptions of discrimination can also relate negatively to well-being, particularly if they suggest recurrent devaluation of one's group that represents a significant barrier to one's success (Schmitt & Branscombe, 2002b; Schmitt, Branscombe, & Postmes, 2003). We propose

This research was conducted while the first author was at Leiden University.

**Correspondence should be addressed to Dr Katherine Stroebe, University of Groningen, Grote Kruisstraat 2/1, 9712 TS Groningen, The Netherlands (e-mail: k.e.stroebe@rug.nl).*

that the same personal experience of discrimination can have very different implications for well-being, depending on individuals' construal of the likelihood that this situation will reoccur again in the future (see also Schmitt & Branscombe, 2002b). In addition to these implications at the individual and the group level, we argue that this type of discrimination may, at a societal level, threaten a basic individual need: the need to see the world as a just place in which people receive equitable outcomes (Lerner & Miller, 1978).

In the present research, consisting of two studies, participants were exposed to the *same* situation of discrimination, but we systematically portrayed the discrimination as pervasive or rare. We hypothesized that studying the perceived prevalence of discrimination as a moderator of the relationship between attributions to discrimination and well-being would help to integrate prior research in this area (see also Schmitt & Branscombe, 2002b), which suggests that perceptions of prejudice can either buffer or challenge well-being, and create a more comprehensive theoretical understanding of vulnerability and resilience when confronted with discrimination. In addition, the present research (Study 2) sheds light on the processes underlying responses to discrimination. This research goes beyond previous work by proposing that pervasive discrimination may be harmful not only because of its negative implications for oneself and the groups one is a member of but also because it can threaten the way people want to view society - specifically, their need to see the world as a just place.

We were able to locate two sets of experimental studies that directly manipulated the pervasiveness of discrimination and considered its effects on well-being. Schmitt *et al.* (2003, Study 1) found that women who read information that discrimination against women was pervasive demonstrated lower levels of personal self-esteem than did women who read that discrimination against women was rare. However, Major, Kaiser, O'Brien, and McCoy (2007, Study 3) failed to replicate this overall effect with the same manipulation. Only one study (Schmitt *et al.*, 2003, Study 2) considered responses to *personal* discrimination. Women who received failure feedback in a mock interview reported lower levels of positive affect and private collective self-esteem when they were led to believe that bias was contextually pervasive (i.e., 19 out of 20 interviewers were biased) than did women who were led to believe that bias was rare (only 1 out of 20 interviewers was biased). This research therefore suggests that the extent to which a personal discrimination experience has negative consequences for well-being depends on the perceived pervasiveness of discrimination.

In the present research, we build on this idea that attributions to discrimination can have either negative consequences for well-being or be self-protective depending on the perceived pervasiveness of such discrimination. However, the two studies we present extend previous efforts in three different ways. First, we explicitly focus on the *relation* between attributions to discrimination and well-being and examine how pervasiveness manipulations *moderate* this relation. Second, the outcomes of primary interest in the present research were personal well-being (performance self-esteem, depressed affect) and emotional reaction to injustice (anger). Third (in Study 2), we investigate how threats to just-world perceptions contribute to the negative consequences of pervasive (vs. rare) discrimination. We integrate principles underlying research on individual worldviews with work on pervasiveness of discrimination, specifically by considering the extent to which the negative consequences of experiencing pervasive discrimination may challenge individuals' need to see the world as just.

STUDY I

Study 1 examined how women's attribution of failure to the prejudice of another is associated with performance self-esteem and well-being. We presented women with a scenario adapted from a prior paradigm used by Schmitt and Branscombe (2002a; see also Major *et al.*, 2003) and commonly used in this area. Participants imagined that they had failed to obtain a job and their failure could readily be attributed to the gender-based prejudice of the male interviewer. In addition, however, we manipulated whether this type of discrimination was pervasive or rare and measured attributions to prejudice, psychological well-being and emotional reaction to injustice.

We predicted that when discrimination was pervasive attributions to another's prejudice would be related to lower performance self-esteem and greater depressed affect (Branscombe, Schmitt, & Harvey, 1999). However, consistent with the idea that attributing personal failure to the prejudice of another person can buffer personal well-being (Major *et al.*, 2007), we predicted that greater attributions to another's prejudice would be self-protective when discrimination was rare, because it offers a salient external explanation for one's failure. In this case, attributions to prejudice would relate to higher performance self-esteem and lower levels of depressed affect. Thus, our primary prediction focused on the interactive effects of attributions to prejudice and whether discrimination was described as pervasive or rare, rather than on any general (main) effects of these variables. In addition, we predicted that attributions to prejudice would be generally associated with anger, because discrimination, be it pervasive or rare, violates norms of fairness and justice (Barreto & Ellemers, 2005; Hansen & Sassenberg, 2006).

Method

Participants

Participants were 79 female introductory psychology students (mean age = 18.6, *SD* = 0.86) at a large university in the USA.

Procedure

Study 1 was a scenario study that was conducted with groups of up to 15 participants. Participants were asked to imagine a hypothetical selection procedure in which they would be applying for a job with high income and many opportunities for advancement, which was very attractive to them. Participants were then told that as part of the selection procedure they would take a career test and that the selection decision would be made by a male interviewer. To provide an opportunity to attribute their eventual outcome (failure to obtain the position) to the interviewer's prejudice, the person (Mr X) making the selections was described as, among other qualities, being politically conservative, having traditional views, and as having selected 80% men and 20% women for jobs so far.

Manipulation of pervasiveness of discrimination

Pervasiveness of discrimination rare (pervasive) was manipulated by giving participants information about the likelihood of encountering someone like Mr X in the future:

Times have currently changed and traditional views are dying out. Mr X is not the type of interviewer you are likely to meet (is the type of interviewer you are likely to meet) when searching for a job. This means that you are very likely to come in contact with other

interviewers who have a very different (the same) background, attitudes, and beliefs than (as) Mr X. Also they will not be (will be very) likely to treat men and women differently.

After further description of the career test, participants were asked to imagine receiving an evaluation from Mr X, telling them that he did not consider them suitable for a position at the company. Participants then completed a set of dependent measures.

Measures

Unless otherwise stated, all scales involved 1 (*not at all*) to 7 (*very much*) ratings. *Attributions to prejudice* were measured by asking participants to what extent they thought Mr X was (a) prejudiced and (b) sexist ($\alpha = .72$). Our check of the *Pervasiveness of Discrimination* manipulation consisted of one item: 'I am not likely to meet an interviewer with the same background as Mr X in the future'.

Affect was assessed using items from the Multiple Affect Adjective Check List (Zuckerman & Lubin, 1965) and Van Overwalle, Mervielde, and de Schuyter's (1995) measure of despair. Exploratory factor analysis using varimax rotation revealed two dimensions (eigenvalues > 1). Anger, loaded on one dimension (loading = .63), and six items loaded on another dimension, representing depressed affect: pessimistic (loading = .47), hopeless (loading = .79), desperate (loading = .61), fine (loading = $-.64$, reverse-coded), blue (loading = .50), discouraged (loading = .58). The composite scale of these items had high inter-item reliability ($\alpha = .77$).

The primary measure of self-esteem was Heatherton and Polivy's (1991) four-item performance personal state self-esteem subscale (e.g., 'I would feel confident about my ability', $\alpha = .72$; see also Hoyt, Aguilar, Kaiser, Blascovich, & Lee, 2007; McCoy & Major, 2003). A measure of global trait self-esteem (Rosenberg, 1979) was also included ($\alpha = .80$).

Results

Manipulation checks

Our manipulation of Mr X's action was intended to be equally credible and recognized as equivalently prejudiced in the rare and pervasive discrimination conditions. However, it was expected to be seen as a more common event in the pervasive versus rare condition (see Table 1, for means). Consistent with our objectives, a 2 (Pervasiveness of Discrimination: pervasive/rare) between-subjects analysis of variance (ANOVA) on attributions to prejudice revealed no effect of the manipulation, $F(1,77) < 1$.

Table 1. Means and standard deviations for the measures in Study 1 as a function of pervasiveness

	Rare		Pervasive	
	M	SD	M	SD
Attributions to prejudice	5.73 ^a	1.06	5.55 ^a	1.10
Credibility	6.05 ^a	0.92	6.03 ^a	0.99
Manipulation check of pervasiveness	3.51 ^a	1.53	5.08 ^b	1.21
Anger	5.05 ^a	1.16	4.58 ^a	1.46
Depressed affect	4.41 ^a	0.86	4.46 ^a	0.99
Performance self-esteem	3.30 ^a	0.89	3.35 ^a	0.92

Note. Means with a different superscript differ reliably from each other ($p < .001$).

Further supportive of the intended manipulation, the ANOVAs for each item representing the perceived pervasiveness of such behaviour revealed that participants in the pervasive condition had greater expectations of meeting someone like Mr X again in the future than did those in the rare condition, $F(1,77) = 24.75, p < .001, \eta^2 = .25$ (see Table 1).

Affect and self-esteem

For the main dependent measures (see Table 1), the primary analysis was a simultaneous multiple regression involving, as predictors, a continuous variable (Attributions to Prejudice), a categorical independent variable (Pervasiveness of Discrimination: pervasive vs. rare), and their interaction. Attributions to Prejudice were first centred, and then the centred term was used to calculate interactions with the categorical independent variable (Aiken & West, 1991).

The regression analysis for anger revealed a significant effect only for Attributions to Prejudice, $\beta = 0.34, t(75) = 2.35, p < .03$: greater attributions to prejudice predicted more anger.

The analysis of *depressed affect* revealed no main effect of Pervasiveness of Discrimination (pervasive vs. rare), $\beta = 0.05, t(75) = 0.43, p = .67$, or of Attributions to Prejudice, $\beta = -0.02, t(75) = -0.16, p = .87$. However, consistent with predictions, there was an interaction between Pervasiveness of Discrimination and Attributions to Prejudice, $\beta = 0.40, t(75) = 2.37, p < .02$. As expected, within the pervasive discrimination condition, greater attributions to prejudice were related to more depressed affect, $\beta = 0.49, t(36) = 3.19, p < .003$. In contrast, within the rare discrimination condition, greater attributions to prejudice were unrelated to depressed affect, $\beta = -0.02, t(39) = -0.16, p = .87$. The significant interaction term in the regression equation indicates that the simple slopes are significantly different from each other (Aiken & West, 1991).

The regression analysis for *performance self-esteem* did not demonstrate an effect for Pervasiveness of Discrimination, $\beta = 0.03, t(75) = 0.25, p = .81$, but did show one for Attributions to Prejudice, $\beta = 0.35, t(75) = 2.28, p < .03$. Overall greater attributions to prejudice were related to lower levels of performance self-esteem. This effect was qualified by the predicted Pervasiveness of Discrimination \times Attributions to Prejudice interaction, $\beta = -0.51, t(75) = -3.39, p < .001$. As expected, within the pervasive discrimination condition, greater attributions to prejudice predicted lower performance self-esteem, $\beta = -0.39, t(36) = -2.51, p < .02$. Within the rare discrimination condition, greater attributions to prejudice predicted higher performance self-esteem, $\beta = 0.34, t(39) = 2.29, p < .03$. The analysis of the general measure of trait self-esteem (Rosenberg, 1979) also yielded a Pervasiveness of Discrimination \times Attributions to Prejudice interaction, $\beta = -0.43, t(75) = -2.78, p < .001$. Within the pervasive discrimination condition, greater attributions to prejudice predicted lower global self-esteem, $\beta = -0.42, t(36) = -2.77, p < .01$; within the rare discrimination condition, attributions were not significantly related to global self-esteem, $\beta = 0.18, t(39) = 1.14, p = .26$.

Discussion

Supportive of our hypotheses, pervasiveness of discrimination moderated the relationship between attributions to prejudice and personal well-being. When gender

discrimination was presented as pervasive, women's stronger attributions to the interviewer's prejudice for their failure predicted more depressed affect and lower levels of performance self-esteem. By contrast, when personal failure was attributed to the prejudice of the interviewer and this discrimination was perceived as rare, attributions to prejudice were unrelated to depressed affect and, suggesting the buffering effects of perceived discrimination, were positively related to performance self-esteem. It is possible that the effect for self-esteem was stronger than that for depressed affect because the self-esteem measure is more directly related to expectations of future *performance* (and thus to information that discrimination is rare), whereas depressed affect is an emotional response anchored in the failure experience that is less immediately influenced by future possibilities. Consistent with this explanation, attributions to prejudice had a weaker relationship with global self-esteem than performance self-esteem in the rare discrimination condition. Thus when discrimination is perceived as rare, the buffering effect of attributions to prejudice appears to influence the specific aspect of self-esteem that is most situationally relevant (e.g., performance self-esteem) but when discrimination is perceived as pervasive, attributions to prejudice may have broader negative impact (e.g., on global self-esteem, motivation to achieve).

Also, regardless of whether discrimination was perceived as pervasive or rare, stronger attributions for failure to the prejudice of the male interviewer were related to anger, a result consistent with prior research indicating that being treated unfairly elicits emotions directed outwardly at the cause of illegitimate treatment (Barreto & Ellemers, 2005; Hansen & Sassenberg, 2006).

Although our findings are consistent with our hypotheses and are in line with prior theory and research (Branscombe *et al.*, 1999; Schmitt *et al.*, 2003), one might argue for a different order of causality, specifically that levels of well-being predict attributions to discrimination. Although the nature of our design permits such an argument and could be seen as an alternative explanation for our main effect (i.e., that levels of well-being predict attributions to discrimination), it does not account for the overall pattern of findings, specifically the moderation by pervasiveness, as parsimoniously as the position that guided the present research.

STUDY 2

Study 2 aimed to offer converging evidence that pervasiveness of discrimination moderates the relation between attributions to discrimination and well-being. Additionally, we examined a potential reason *why* people suffer from making attributions to prejudice when discrimination seems pervasive, namely because such systematic bias undermines people's just world beliefs. Previous researchers have examined why targets suffer from pervasive discrimination have generally emphasized the expectation of *future* discrimination and group devaluation as important reasons (Branscombe *et al.*, 1999; Kaiser, Major, & McCoy, 2004; Leonardelli & Tormala, 2003; Schmitt & Branscombe, 2002b; Schmitt *et al.*, 2003). In addition, pervasive discrimination may be seen by targets as directly hindering the achievement of *personal* goals, producing feelings of helplessness, and thus increasing vulnerability to depression (Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009). While acknowledging the evidence for these interpretations, we propose another reason why making attributions to another's prejudice for one's failure can be detrimental to one's psychological well-being. We argue that discrimination that is perceived to be pervasive within society also threatens people's *worldview* that the

world functions on the basis of principles of fairness and equality. Discrimination that is experienced as rare would, by virtue of its incidental nature, not be considered diagnostic of how the world normally functions and therefore not threaten this worldview.

Although some prior research has considered the relation between people's cultural worldviews and the experience of pervasive discrimination, that research focused on responses to discrimination that are motivated by system legitimizing beliefs. System legitimizing beliefs represent the need to preserve one's specific view of the social system and status arrangements within society (Jost & Banaji, 1994). Major *et al.* (2007, Study 3), found that individuals who endorsed beliefs in meritocracy (a system legitimizing belief) suffered more from pervasive discrimination and reported lower levels of personal self-esteem. Similarly, Foster, Sloto, and Ruby (2006) provided correlational evidence showing that individually held meritocracy beliefs predicted lower performance self-esteem primarily among women who reported relatively frequent past experiences of discrimination (see also Foster & Tsarfati, 2005).

In Study 2, we extend prior work by *manipulating* general perceptions of the world as fair with information that gave people the opportunity to re-establish perceptions of the world as just, but in a way that was not directly related to our discrimination scenarios or to specific meritocracy beliefs. We studied the effects of this manipulation on the relation between the experience of prejudice and well-being. Theories relating to equity and justice assume that the perception of the world as just plays a fundamental role in human motivation (Lerner & Miller, 1978). This need represents a view of how the world should function. A wide range of events involving unjust treatment can threaten beliefs in a just world such as learning about victims of sexual assault, robbery, or cancer (Hafer & Bègue, 2005). We propose that one possible reason why pervasive discrimination undermines well-being is that pervasive but not rare discrimination may influence general views about how society functions and the extent to which societal processes are generally fair and just. To the extent that this is the case, explicitly having one's just-world views re-established or affirmed should counter these effects and alleviate the negative well-being effects of attributions to prejudice after experiencing pervasive discrimination. Therefore, whereas previous research studied the role of individual differences in cultural worldviews (e.g., meritocracy beliefs; Jost & Banaji, 1994), the present study focused on a situational intervention that re-established perceptions of the world as just to counter the threat posed by pervasive discrimination.

We re-established the world as just by, after manipulating personally experienced gender discrimination as rare or pervasive, presenting female participants with information that affirmed or did not affirm a view of the world as fair and just in a domain that was *unrelated to the experience of discrimination* in a situation that did not have direct, material consequences for the participant (see also Braman & Lambert, 2001). Research on just world beliefs indicates that reading about individuals who experience very unpleasant and thus threatening events (such as a painful car accident) but seeing this victim as deserving of his/her fate (a criminal) can reduce the threat to one's just world beliefs posed by this event (e.g., Hafer, 2000b). In line with this research, after exposing participants in Study 2 to discrimination that was described as pervasive or rare, we presented participants with the description of (a) an event, the death in a car accident of a criminal who had taken another's life, that affirmed the world as fair and just (just-world affirmation condition); (b) an alternative event, the death in a car accident of a surgeon who had previously saved another's life, which continues to portray the

world as unjust (non-affirmation condition); or (c), a chef winning a prize for cooking (control condition).

Pilot testing ($N = 26$) indeed revealed the intended differences among these conditions, $F(2,23) = 6.64$, $p < .01$, $\eta^2 = 0.37$, in how these descriptions affected perceptions of the world as just ('I feel that people who meet with misfortune have brought it on themselves'; 'I get the feeling that justice is done'; $r[24] = .45$, $p = .02$). Respondents saw the world as most just after reading about the criminal's fatal accident ($M = 4.00$ $SD = 1.22$) and the least just after reading about the surgeon's fatal accident ($M = 2.11$ $SD = 1.08$); the control condition was, as expected, in between ($M = 3.28$ $SD = 0.94$).

In Study 2, we predicted that when just world beliefs are not affirmed after pervasive discrimination, attributions to prejudice should relate to depressed affect and lower performance self-esteem, as in Study 1. However, when targets' view of the world as just is affirmed, this should buffer participants from the negative consequences of experiencing discrimination such that attributions to prejudice do not relate to depressed affect or lowered performance self-esteem. When discrimination is perceived as rare, we expected that the relation between attributions to prejudice and self-esteem and depressed affect would not be influenced by the affirmation manipulation, and that we would replicate Study 1 across the affirmation conditions.

Method

Participants

One hundred and fifty-one female participants ($M_{\text{age}} = 31.40$; $SD_{\text{age}} = 12.02$) took part in this study. Participants were recruited on Internet volunteer sites (craigslist.com, backpage.com) and were eligible to win a \$50.00 gift certificate for their involvement. The study employed a 2 (Pervasiveness of Discrimination: pervasive vs. rare) \times 3 (Affirmation of the World as Just: just-world affirmation [criminal victim]/non-affirmation [surgeon victim]/control [no victim]) design.

Procedure

The procedure for Study 2, which was conducted via Internet, was similar to that of Study 1 with a few minor changes to make the study more relevant for participants. We adjusted the job description (i.e., work for a highly renowned company) and alleged aim of the selection procedure test (i.e., assess competence in a work setting). The manipulation of *Pervasiveness of Discrimination* (pervasive vs. rare) occurred in the same way as in Study 1. Participants also received the same feedback as in Study 1.

Following the feedback, participants were told that the research involved the influence of selection procedures on reading comprehension, and thus participants were asked to carefully read newspaper articles that contained the *just-world affirmation* manipulation. Participants read about an innocent victim, the car driver Eric A., who had been involved in a car accident and died (having been trapped and suffered considerable pain). This part of the story was constructed such that the driver was not to blame for this (to be perceived as) tragic accident. This part of the story served to (in the case of pervasive discrimination further) threaten the world as just. In the *just-world affirmation* condition participants then read that the driver of the car, Eric A., was a criminal who had brutally murdered a young woman but got let off his lifelong prison

sentence due to a technicality. In the *non-affirmation* condition, which continued to portray the world as unjust, participants read the driver of the car, Eric A., was a surgeon who had recently miraculously saved the life of a young woman and had employed a new surgical technique in doing so. In the *control* condition, there was no mention of a fatal car accident or victim. Therefore, while unrelated to death, this story would be perceived as non-threatening and, although it depicts an equity outcome, it does not represent an episode of 'justice being done', which is central in more global just-world beliefs (see also Hafer, 2000a). The article explained that the chef had made a menu containing exquisite fish and different types of meat, followed by an outstanding range of desserts. Participants then read that the award winning chef was Eric A. who had become known statewide because of his excellent cooking skills. After reading the newspaper article, participants completed a set of dependent measures.

Dependent measures

Our *manipulation check of pervasiveness of discrimination* consisted of an additional item, 'Many interviewers have as traditional views as Mr X', $r(142) = .66$. With respect to the *manipulation check for affirmation of the world as just*, we measured *comprehension* of the newspaper article by asking participants to indicate whether the person, Eric A., described in the newspaper article was a cook, criminal or surgeon. *Attributions to prejudice* were assessed as in Study 1 by asking participants to what extent they found Mr X prejudiced and sexist ($\alpha = .77$). *Affect* was assessed with anger, that consisted of two additional items in comparison to Study 1 (i.e., cooperative, agreeable, both items reverse-scored, $\alpha = .75$; see also Zuckerman & Lubin, 1965) and the same measure of depressed affect as in Study 1 ($\alpha = .87$). State self-esteem in the performance domain was assessed with same Heatherton and Polivy (1991) personal state self-esteem scale as in Study 1 ($\alpha = .86$).

Results

Manipulation checks

A 2 (Pervasiveness of Discrimination: pervasive vs. rare) \times 3 (Affirmation of the World as Just: affirmation/non-affirmation/control) between-subjects ANOVA on the manipulation check of pervasiveness of discrimination revealed only, as expected, a significant main effect of Pervasiveness of Discrimination, $F(1,136) = 29.91$, $p < .001$, $\eta^2 = .18$. Participants in the pervasive discrimination condition reported a greater likelihood of encountering people with similar backgrounds or views as Mr X again in the future ($M = 4.60$, $SD = 1.37$) than participants in the rare discrimination condition ($M = 3.34$, $SD = 1.40$).

The manipulation check of the world as just, the measure of *newspaper comprehension*, revealed that six participants had incorrectly remembered the occupation of Erik A. (i.e., the main character in the newspaper article). These participants were not included in further analyses.

As in Study 1, an ANOVA on *attributions to prejudice* revealed no significant main or interaction effects, $F_s < 2.19$, $p > .12$, $\eta^2 < .03$. Therefore, as expected, our manipulations did not influence the extent to which targets attributed their negative outcomes to discrimination.

Affect and self-esteem

In order to test our main hypotheses for Study 2 concerning the influence of an affirmation of the world as just, we conducted regression analyses involving a continuous participant variable, Attributions to Prejudice (centred), and two categorical independent variables: Pervasiveness of Discrimination (rare, pervasive) and Affirmation of the World as Just (just-world affirmation, non-affirmation, control) (see Table 2 for means). The three-level affirmation condition was coded into two orthogonal vectors. One vector compared the control condition to the non-affirmation condition (0, +1, -1). The other vector directly tested our main prediction about the effects of re-establishing a just world; it compared the combination of the control and non-affirmation conditions to the just-world affirmation condition (+2, -1, -1). Interactions and subsequent analyses were conducted in accordance with procedures outlined by Aiken and West (1991). Note that based on our hypotheses we predicted a significant three-way interaction involving the vector comparing the just-world affirmation condition to the combination of the non-affirmation and control conditions: the just-world affirmation condition (but not the non-affirmation condition or control condition) was hypothesized to alleviate the threat to a just world posed by *pervasive* discrimination, whereas this condition would not be relevant under *rare* discrimination.

Table 2. Means for measures in Study 2 as a function of pervasiveness and affirmation of the world as just

Variable	Condition	Control		Non-affirmation		Just-world affirmation	
		M	SD	M	SD	M	SD
Manipulation check of pervasiveness	Rare	3.86 ^a	1.65	2.80 ^a	1.11	3.42 ^a	1.25
	Pervasive	4.71 ^b	1.19	4.58 ^b	1.40	4.56 ^b	1.53
Attribution to prejudice	Rare	5.29 ^a	1.68	5.64 ^a	1.76	5.84 ^a	0.88
	Pervasive	5.57 ^a	1.51	5.22 ^a	1.51	4.92 ^a	1.60
Anger	Rare	4.63 ^a	1.51	5.18 ^a	1.30	4.44 ^a	1.77
	Pervasive	4.51 ^a	1.70	4.77 ^a	1.46	4.55 ^a	1.16
Depressed affect	Rare	3.25 ^a	1.48	4.17 ^a	1.15	3.27 ^a	1.38
	Pervasive	3.67 ^a	1.57	4.25 ^a	1.34	3.70 ^a	1.40
Performance self-esteem	Rare	4.37 ^a	1.49	3.58 ^a	1.51	4.36 ^a	1.26
	Pervasive	4.26 ^a	1.54	3.70 ^a	1.28	3.94 ^a	1.34

Note. Means within columns or rows with a different superscript differ reliably from each other according to Tukey *post hoc* comparisons ($p < .05$).

The regression analyses for other-directed affect, *anger*, revealed a significant main effect of Attributions to Prejudice only, $\beta = 0.36$, $t(124) = 2.27$, $p = .03$. Greater attributions to prejudice predicted more anger. No other main or interaction effects were significant.

The regression representing the fully saturated model for *depressed affect* revealed a significant effect involving the vector comparing the non-affirmation and control conditions, $\beta = 0.25$, $t(124) = 2.17$, $p < .04$. Participants experienced more depressed affect in the non-affirmation condition ($M = 4.21$, $SD = 1.24$), which continued to

emphasize the world as unjust, than in the control condition ($M = 3.48$, $SD = 1.51$). However, there were no interactions involving this vector.

Of primary relevance to our hypotheses, we also obtained the predicted three-way interaction involving the vector comparing the just-world affirmation condition to the combination of non-affirmation and control conditions, pervasiveness of discrimination, and perceptions of prejudice, $\beta = -0.42$, $t(124) = -2.54$, $p < .02$. As illustrated in Figure 1, when discrimination was described as pervasive, across both the non-affirmation and control conditions, greater attributions to prejudice were related to higher levels of depressed affect, $\beta = 0.50$, $t(45) = 3.87$, $p < .001$, the result we obtained in Study 1. Moreover, this effect was obtained separately for both the non-affirmation condition, $\beta = 0.59$, $t = 3.53$, $p < .002$, and the control condition, $\beta = 0.49$, $t = 2.53$, $p < .02$. However, in the just-world affirmation condition, which was designed to re-establish the world as just, perceptions of prejudice were related to lower levels of depressed affect, $\beta = -0.47$, $t(25) = -2.65$, $p < .01$.

As in Study 1, when discrimination was described as rare, perceptions of prejudice were unrelated to depressed affect. In particular, in the rare discrimination condition, the interaction between perceptions of prejudice and the vector representing the just-world affirmation versus non-affirmation and control conditions was non-significant, $\beta = 0.05$, $t(56) = 0.34$, $p < .73$, as was the main effect of Attributions to Prejudice, $\beta = 0.22$, $t(56) = 1.39$, $p < .17$.

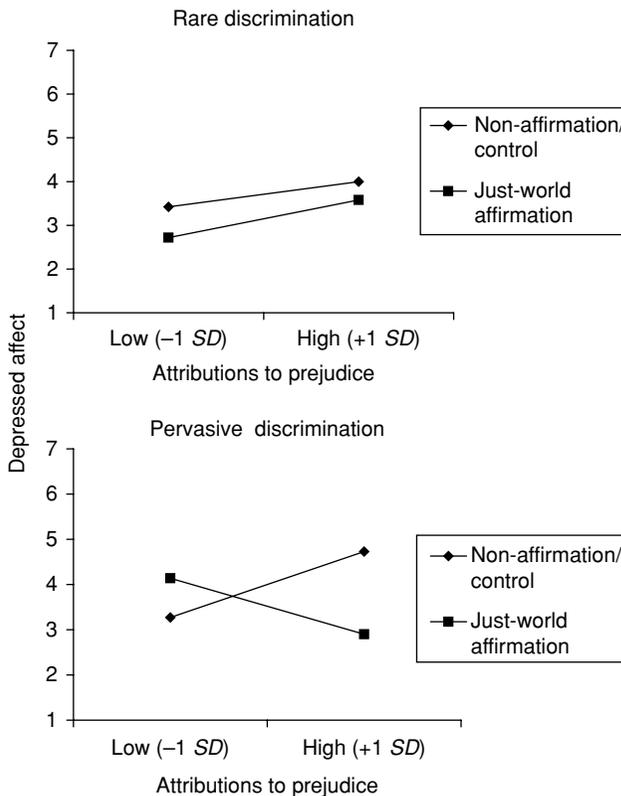


Figure 1. Reported depressed affect as a function of attributions to prejudice and affirmation of the world as just for perceptions of rare and pervasive discrimination (Study 2).

The regression for performance self-esteem representing the fully saturated model revealed no significant effects. However, because we had *a priori* predictions about different patterns of results in the pervasive versus rare discrimination conditions, we examined the results within each of these conditions separately. The analysis for the pervasive discrimination condition yielded the anticipated interaction between perceptions of discrimination and affirmation condition (just-world affirmation vs. non-affirmation and control), $\beta = 0.27$, $t(122) = 2.25$, $p < .03$. As illustrated in Figure 2, when discrimination was described as pervasive, across both the non-affirmation and control conditions, greater attributions to prejudice were related to lower levels of performance self-esteem, $\beta = -0.31$, $t(44) = -2.17$, $p < .05$. Effects of similar magnitude were also observed when we considered the non-affirmation condition, $\beta = -0.38$, $t = -1.96$, $p < .06$, and the control condition separately, $\beta = -0.31$, $t = -1.43$, $p < .17$. By contrast, in the just-world affirmation condition, which was designed to re-establish the world as just, perceptions of prejudice were not related to performance self-esteem, $\beta = 0.20$, $t(24) = 0.99$, $p = .33$.

When discrimination was described as rare, perceptions of prejudice were unrelated to performance self-esteem. In particular, in the rare discrimination condition, the interaction between perception of prejudice and the vector representing the just-world affirmation versus non-affirmation and control conditions was non-significant, $\beta = 0.08$, $t(56) = 0.48$, $p = .63$, as was the main effect for Attributions to Prejudice, $\beta = 0.17$, $t(56) = 1.02$, $p < .31$.

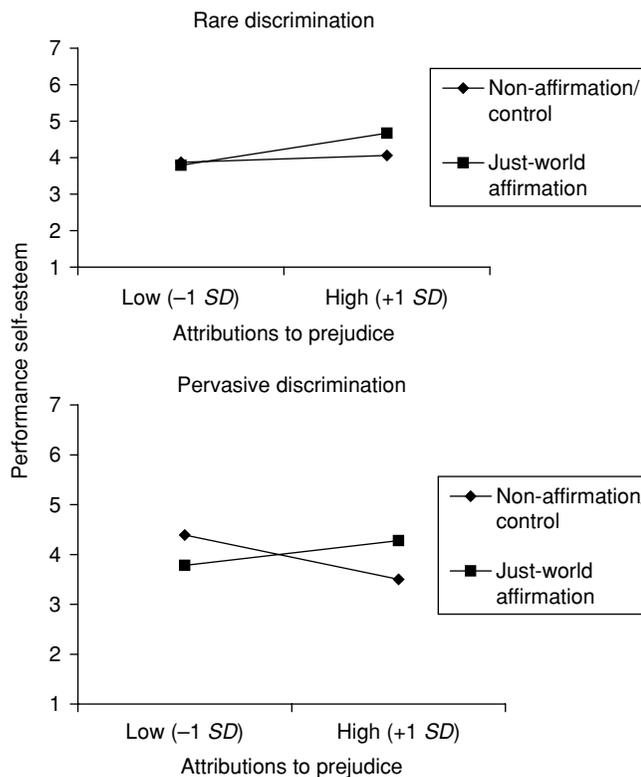


Figure 2. Reported performance self-esteem as a function of attributions to prejudice and affirmation of the world as just for perceptions of rare and pervasive discrimination (Study 2).

Discussion

Study 2 supported the hypothesis that discrimination that is perceived to be pervasive has negative psychological consequences for targets' well-being because it threatens core elements of a just world. Specifically, an affirmation of the world as just buffered targets from the negative consequences otherwise experienced when perceiving discrimination as pervasive. By contrast, affirmation of the world as just did not influence well-being when discrimination was perceived as rare, which does not challenge an overall belief of the world as just. In Study 2, attributions to prejudice within the rare discrimination conditions did not systematically predict either self-esteem or depressed affect, whereas in Study 1 in the rare discrimination condition these attributions related to higher self-esteem (but not to lower depressed affect). Overall, though, the results were generally compatible with our conclusion in Study 1 that the experience of discrimination as rare, regardless of how strongly targets feel discriminated against, does not harm targets' psychological well-being.

The different effects observed between the criminal's fatal accident and the chef's prize (the just-world affirmation and control conditions) suggest that, although a just world implies equity and legitimacy (Hafer, 2000b), the two are not synonymous. A just world is a more encompassing concept that has, at its essence, the belief that justice will ultimately be done (Lerner, 1980). Feelings of the legitimacy of a particular action are likely to be more specific and may not necessarily imply a just world more generally (Maes, 1998; Maes & Schmitt, 1999). Future research might thus directly investigate the potentially asymmetric relations between perceptions of a just world and of the legitimacy of a specific action. Because perceptions of a just world represent a more general world view, we suggest that restoring a sense of the world as just would have broader and stronger impact on people's subsequent responses than exposure to an event affirming legitimate treatment in a specific domain.

Future research might also consider alternative scenarios to those used in the present research. Besides demonstrating the generalizability of our effects, we note that the criminal who suffered the fatal accident was described as previously murdering a woman. This act could be construed as an extreme form of sexism, which might not only amplify feelings of the world as just but focus participants even more specifically on elements of a just world for sexist behaviours. Although the dynamics of such a construal would still be consistent with our basic premise, the use of alternative scenarios would reveal the potential robustness of our hypothesized effects.

Although our focus was on situationally induced threat to beliefs in the world and affirmation interventions to restore perceptions of a just world, future work might also productively consider the potential influence of individual differences in just-world beliefs (see Hafer & Bègue, 2005). To the extent that people with stronger just-world beliefs are more responsive to potential injustice (Lerner, 1980; see also Hafer & Bègue, 2005), we would expect that people who hold stronger just-world beliefs would be more negatively affected by attributions to another's prejudice when discrimination is pervasive and, perhaps, even more sensitive to our manipulation that challenges or reinforces the belief that the world is just.

Additional research might also productively consider other individual differences that could moderate the effects we observed. Strong group identification, for example, enables individuals to retain a meaningful self-concept in the face of discrimination (Branscombe *et al.*, 1999; McCoy & Major, 2003; Schmitt & Branscombe, 2002b). To the extent that an affirmation that the world is just may also relieve feelings of distress, it

might undermine people's motivation to strengthen group ties in the face of pervasive discrimination (Ellemers, Wilke, & van Knippenberg, 1993). Moreover, our research indicates that the experience of discrimination raises emotions related to injustice (anger). Yet, the context in which targets experience this injustice, and the extent to which targets can re-establish their beliefs with regard to the world surrounding them, not only determines whether their personal well-being in response to injustice suffers, it may also have implications for the extent to which targets are prepared to address injustice. Only when people had the world affirmed as just, were attributions to prejudice negatively related to emotions associated with *passivity* (i.e., depressed affect) while positively related to emotions associated with action orientation (i.e., anger). Indeed, prior research indicates that anger may be an important first step in addressing (personal) injustice and engaging in collective action (e.g., Wright, 1997).

Taken together, whereas research by Major *et al.* (2007) addresses whether discrimination threatens or confirms people's existing views of status arrangements within society, Study 2 demonstrated that the experience of pervasive discrimination threatens a different type of need, the need to see the world as a just place.

GENERAL DISCUSSION

The results of the present research have basic implications for understanding the dynamics underlying responses to discrimination. Prior research has largely focused on adverse psychological responses to discrimination in terms of its direct personal relevance for one's present and future outcomes. For instance, the discounting model (Crocker & Major, 1989) states that targets make attributions to discrimination to protect the self; similarly, the rejection identification model (Branscombe *et al.*, 1999) builds on the idea that peoples' responses to discrimination are determined by the extent they pose a threat to part of one's identity as a group member. More specifically, pervasive discrimination is thought to be harmful because it has negative future implications for the self.

The present research does not dispute these explanations, but it suggests an additional influence. Research on just world beliefs (e.g., Lerner & Miller, 1978) has shown that a threat to one's just-world beliefs does not necessarily have to be self-relevant to induce a need to re-establish the world as a just place (Lerner & Miller, 1978, p. 1041). Thus, responses to pervasive discrimination may be not only ego motivated but also system motivated, such as by the desire to see the world as a just place in which people get what they deserve.

We acknowledge that our work leaves a number of questions unanswered. Methodologically, one might question whether the scenario nature of our studies allows us to draw conclusions about how individuals respond to discrimination. We note, though, that, for both ethical and practical reasons, many other studies in the area of discrimination have also employed scenarios (e.g., Major *et al.*, 2003; Schmitt *et al.*, 2003, Study 1, Schmitt & Branscombe, 2002a; Stroebe, Ellemers, Barreto, & Mummendey, 2009, Study 2). Moreover, the conclusions from these scenario studies are in line with the results of research in which participants directly experience discrimination (i.e., Crocker, Voelkl, Testa, & Major, 1991; Branscombe *et al.*, 1999; Schmitt, Branscombe, Kobrynowicz, & Owen, 2002; Stroebe *et al.*, 2009, Study 1). In addition, our participants could readily imagine personally experiencing the situation we described ($M = 5.00$; $SD = 1.38$, on a 1 (= *notatall*) to 7 (= *verymuch*) scale in Study 1; not assessed in Study 2).

Indeed, because participants can imagine being discriminated against in 'real life', these situations may engage participants in ways in which discrimination that is confined to a discrete laboratory task cannot. Thus, we view these different methodologies as complementary, and see the value of future research pursuing these questions using a range of methodologies.

Conclusions

In conclusion, the present research offers an integration of seemingly conflicting research findings. We have provided evidence that the personal experience of discrimination can have very different implications for well-being, depending on the (future) perspective it offers to targets. Our research complements prior research by extending knowledge concerning the processes underlying pervasive discrimination. It provides evidence that not only the future negative implications for the self of perceiving discrimination as pervasive, but also the fact that it communicates to targets that the world is not a just place in which people get what they deserve, can account for the detrimental consequences of perceiving discrimination as pervasive.

Acknowledgements

This research was supported by a grant from the Leiden University Fund to the first author. The authors wish to thank Tom Postmes and Bernard Nijstad for their helpful comments on this manuscript.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- Barreto, M., & Ellemers, N. (2005). The perils of political correctness: Men's and women's responses to old-fashioned and modern sexist views. *Social Psychology Quarterly*, *68*, 75–88. doi:10.1177/019027250506800106
- Braman, A. C., & Lambert, A. J. (2001). Punishing individuals for their infirmities: Effects of personal responsibility, just-world beliefs, and in-group/out-group status. *Journal of Applied Psychology*, *31*, 1096–1109. doi:10.1111/j.1559-1816.2001.tb02664.x
- Branscombe, N. R., Schmitt, M. T., & Harvey, R. D. (1999). Perceiving pervasive discrimination among African Americans: Implications for group identification and well-being. *Journal of Personality and Social Psychology*, *77*, 135–149. doi:10.1037/0022-3514.77.1.135
- Crocker, J., & Major, B. (1989). Social stigma and self-esteem: The self-protective properties of stigma. *Psychological Review*, *96*, 608–630. doi:10.1037/0033-295X.96.4.608
- Crocker, J., Voelkl, K., Testa, M., & Major, B. (1991). Social stigma: The affective consequences of attributional ambiguity. *Journal of Personality and Social Psychology*, *60*, 218–228.
- Ellemers, N., Wilke, H., & van Knippenberg, A. (1993). Effects of the legitimacy of low group or individual status on individual and collective status-enhancement strategies. *Journal of Personality and Social Psychology*, *64*, 766–778. doi:10.1037/0022-3514.64.5.766
- Foster, M. D., Sloto, L., & Ruby, R. (2006). Responding to discrimination as a function of meritocracy beliefs and personal experiences: Testing the model of shattered assumptions. *Group Processes and Intergroup Relations*, *9*, 401–411. doi:10.1177/1368430206064641
- Foster, M. D., & Tsarfati, E. M. (2005). The effects of meritocracy beliefs on women's well-being after first-time gender discrimination. *Personality and Social Psychology Bulletin*, *31*, 1730–1738. doi:10.1177/0146167205278709

- Hafer, C. L. (2000a). Do innocent victims threaten the belief in a just world? Evidence from a modified Stroop task. *Journal of Personality and Social Psychology*, *79*, 165–173. doi:10.1037/0022-3514.79.2.165
- Hafer, C. L. (2000b). Investment in long term goals and commitment to just means drive the need to believe in a just world. *Personality and Social Psychology Bulletin*, *26*, 1059–1073. doi:10.1177/01461672002611004
- Hafer, C. L., & Bègue, L. (2005). Experimental research on just-world theory: Problems, developments and future challenges. *Psychological Bulletin*, *131*, 128–167. doi:10.1037/0033-2909.131.1.128
- Hansen, N., & Sassenberg, K. (2006). Does social identification harm or serve as a buffer? The impact of social identification on anger after experiencing social discrimination. *Personality and Social Psychology Bulletin*, *32*, 983–996. doi:10.1177/0146167206287639
- Hatzenbuehler, M. L., Nolen-Hoeksema, S., & Dovidio, J. F. (2009). How does stigma 'get under the skin'? The mediating role of emotion regulation. *Psychological Science*, *20*, 1282–1289. doi:10.1111/j.1467-9280.2009.02441.x
- Heatherton, T. F., & Polivy, J. (1991). Development and validation of a scale for measuring state self-esteem. *Journal of Personality and Social Psychology*, *60*, 895–910. doi:10.1037/0022-3514.60.6.895
- Hoyt, C. L., Aguilar, L., Kaiser, C. R., Blascovich, J., & Lee, K. (2007). The self-protective and undermining effects of attributional ambiguity. *Journal of Experimental Social Psychology*, *43*, 884–893. doi:10.1016/j.jesp.2006.10.013
- Jost, J. T., & Banaji, M. R. (1994). The role of stereotyping in system-justification and the production of false consciousness. *British Journal of Social Psychology*, *33*, 1–27.
- Kaiser, C. R., Major, B., & McCoy, S. K. (2004). Expectations about the future and the emotional consequences of perceiving prejudice. *Personality and Social Psychology Bulletin*, *30*, 173–184. doi:10.1177/0146167203259927
- Leonardelli, G. J., & Tormala, Z. L. (2003). The negative impact of perceiving discrimination on collective well-being: The mediating role of perceived ingroup status. *European Journal of Social Psychology*, *33*, 507–514. doi:10.1002/ejsp.159
- Lerner, M. J. (1980). *The belief in a just world: A fundamental delusion*. New York: Plenum Press.
- Lerner, M. J., & Miller, D. T. (1978). Just world research and the attribution process: Looking back and ahead. *Psychological Bulletin*, *85*, 1030–1051. doi:10.1037/0033-2909.85.5.1030
- Maes, J. (1998). Immanent justice and ultimate justice: Two ways of believing in justice. In L. Montada & M. J. Lerner (Eds.), *Responses to victimizations and belief in a just world* (pp. 9–40). New York: Plenum Press.
- Maes, J., & Schmitt, M. (1999). More on ultimate and immanent justice: Results from the research project 'Justice as a problem within reunified Germany'. *Social Justice Research*, *12*, 65–78. doi:10.1023/A:1022039624976
- Major, B., Kaiser, C. R., & McCoy, S. K. (2003). It's not my fault: When and why attributions to prejudice protect self-esteem. *Personality and Social Psychology Bulletin*, *29*, 772–781. doi:10.1177/0146167203029006009
- Major, B., Kaiser, C. R., O'Brien, L. T., & McCoy, S. (2007). Perceived discrimination as worldview threat or worldview confirmation: Implications for self-esteem. *Journal of Personality and Social Psychology*, *92*, 1068–1086. doi:10.1037/0022-3514.92.6.1068
- McCoy, S. K., & Major, B. (2003). Group identification moderates emotional responses to perceived prejudice. *Personality and Social Psychology Bulletin*, *29*, 1005–1017. doi:10.1177/0146167203253466
- Rosenberg, M. (1979). *Conceiving the self*. New York: Basic Books.
- Schmitt, M. T., & Branscombe, N. R. (2002a). The internal and external causal loci of attributions to prejudice. *Personality and Social Psychology Bulletin*, *28*, 620–628. doi:10.1177/0146167202288006

- Schmitt, M. T., & Branscombe, N. R. (2002b). The meaning and consequences of perceived discrimination in disadvantaged and privileged social groups. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 12, pp. 167-199). Chichester: Wiley.
- Schmitt, M. T., Branscombe, N. R., Kobrynowicz, D., & Owen, S. (2002). Perceiving discrimination against one's gender group has different implications for well-being in women and men. *Personality and Social Psychology Bulletin*, 28, 197-210. doi:10.1177/0146167202282006
- Schmitt, M. T., Branscombe, N. R., & Postmes, T. (2003). Women's emotional responses to the pervasiveness of gender discrimination. *European Journal of Social Psychology*, 33, 297-312. doi:10.1002/ejsp.147
- Stroebe, K., Ellemers, N., Barreto, M., & Mummendey, A. (2009). For better or for worse: The congruence of personal and group outcomes on targets' responses to discrimination. *European Journal of Social Psychology*, 39, 576-591. doi:10.1002/ejsp.557
- Van Overwalle, F., Mervielde, I., & De Schuyter, J. (1995). Structural modeling of the relationships between attributional dimensions, emotions, and performance of college freshmen. *Cognition and Emotion*, 9, 59-85. doi:10.1080/02699939508408965
- Wright, S. (1997). Ambiguity, social influence, and collective action: Generating collective protest in response to tokenism. *Personality and Social Psychology Bulletin*, 23, 1277-1290.
- Zuckerman, M., & Lubin, B. (1965). *Manual for the Multiple Affect Adjective Check List*. San Diego, CA: Educational and Industrial Testing Service.

Received 2 June 2009; revised version received 5 July 2010