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Ghosts of the past and dreams of the future:

The impact of temporal focus on responses to contextual ingroup devaluation

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## Abstract

We investigated the impact of temporal focus on group members' responses to contextual ingroup devaluation. Four experimental studies demonstrated that following an induction of negative ingroup evaluation, participants primed with a past temporal focus reported behavioral intentions more consistent with this negative appraisal than participants primed with a future temporal focus. This effect was only apparent when a negative (but not a positive) evaluation was induced, and only among highly identified group members. Importantly, the interplay between temporal focus and group identification on relevant intentions was mediated by individual self-esteem, suggesting that focus on the future may be conducive to separating negative ingroup appraisals from individual self-evaluations. Taken together, the findings suggest that high-identifiers' responses to ingroup evaluations may be predicated on their temporal focus: a focus on the past may lock such individuals within their group's history, while a vision of the future may open up opportunities for change.

Keywords: temporal focus, ingroup devaluation, group identification, self-esteem

Ghosts of the past and dreams of the future: The impact of temporal focus on responses to contextual ingroup devaluation

The phenomenon of group stereotyping has been at the centre of social psychological research for decades. Although traditionally the focus was on exploring how stereotypes affect behavior and perceptions of those who are *stereotyping* (e.g., Devine, 1989; Gaertner & Dovidio, 1986), during the last decade the spotlight has shifted to those who are *being stereotyped* (e.g., Shih, Pittinsky, & Ambady, 1999; Spencer, Steele, & Quinn, 1999; Steele, Spencer, & Aronson, 2002; see also Major & O'Brien, 2005). The core question of this by now well-established area of research is: how do people react to situations or treatments that convey negative ingroup appraisals?

Depending on factors like group identification (Spears, Doosje, & Ellemers, 1997), the perceived permeability of intergroup boundaries, and the stability of prejudice (Ellemers, van Knippenberg, & Wilke, 1990; Jackson, Sullivan, Harnsih, & Hodge, 1996) individuals may choose from a number of strategies to deal with negative identity. They can dis-identify from the group or some of its characteristics and thus detach their individual self from the negative evaluation of their group (e.g., Pronin, Steele, & Ross, 2004). Alternatively, individuals may use social creativity to downplay the relevance of a negative stereotype (e.g., Jetten, Schmitt, Branscombe, & McKimmie, 2005). Finally, they might instead engage in action that directly challenges such negative evaluations— for example, by demonstrating behavior that is inconsistent with the stereotypes about their group (e.g., Hopkins et al., 2007). It is this latter response that we explore in the present paper: when do people react to negative ingroup appraisals by changing relevant behavior?

In the present paper we suggest that *temporal focus* may play an important role in determining how individuals react to negative information about their ingroup. Previous research provides evidence that a future time perspective (manipulated either by implicitly priming the future or explicitly asking participants to think about the future) can stimulate a more idealistic (and positive) self-perception (Kivetz & Tyler, 2007), and motivate action by increasing consistency between attitudes and behavior (Rabinovich, Morton, & Postmes, 2010). Similar effects are observed at the group level: differentiation from the past can contribute to positive group distinctiveness in the present (Mummendey, Klink, & Brown, 2001; Peetz, Gunn, & Wilson, 2010). In contrast, salience of the past can induce negative self-perceptions when that past seems inescapable—for example when others are expected to view the self through the negative history of one's group (Morton & Sonnenberg, 2011). Taken as a whole, this research suggests that maintaining a future temporal focus may release people from negative identities and motivate action inconsistent with negative ingroup evaluations, whereas a focus on the past may leave people mired in implications of negative feedback. Testing this suggestion empirically would have important implications for our theoretical understanding of group processes unfolding in response to negative feedback and stereotyping, as well as practical implications for motivating group change.

Below we start developing this perspective by briefly summarising research on responses to negative ingroup appraisals. We then turn to research on the effects of time perspective on self-perception and action. Finally, we present four empirical studies to demonstrate the effect of temporal focus on responses to situationally-induced negative ingroup evaluations.

*Dealing with negative ingroup identity*

Negative group appraisals can be historically determined (and thus relatively stable) or induced by the specific parameters of the social context (and thus flexible and subject to change). Early research found that group members who face permanently negative judgements of their group's merit (i.e. stigmatisation) tend to internalise negative stereotypes, which may lead to a decrease in self-esteem and well-being (e.g., Hogg & Turner, 1987). However, further research demonstrated that stigma is not always internalised and that pervasive discrimination can sometimes motivate group members to unite in defending their cause (e.g., Jetten, Branscombe, Schmitt, & Spears, 2001). The active resistance to negative evaluations of one's group has been linked to the maintenance of positive self-regard (e.g., Crocker & Major, 1989). Similarly, while research on stereotype threat generally demonstrates that implicit activation of negative ingroup evaluations leads to poor performance in a relevant domain (see Steele, Spencer, & Aronson, 2002, for review), recent research has revealed factors that allow group members to resist stereotype threat successfully by engaging with fellow group members (Smith & Postmes, 2011) and demonstrating stereotype-inconsistent behaviour (e.g., Aronson, Fried, & Good, 2002). These findings suggest that responses to negative identity are not uniform and can range from submitting to negative appraisals to actively resisting them.

Similar conclusions can be made from research on contextually induced negative appraisals. Research in the framework of self-categorisation theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) has demonstrated that negative (versus positive) appraisals of one's ingroup can be induced through making salient intergroup comparisons with better (versus worse) performing outgroups (e.g., Rabinovich, Morton, Postmes, & Verplanken, in press). Importantly, these ingroup

appraisals are internalised, leading group members to display behavior consistent with the appraisal of their group. However, other research has demonstrated that when negative group appraisals are imposed explicitly (rather than inferred through comparisons) these may be resisted rather than internalised (e.g., Shih et al., 2002; see also Hess, Hinson, & Statham, 2004). Similar conclusions are offered by research on perception of group-directed negative feedback: recipients of explicit criticism may become motivated to refute negative feedback and restore group image (see Rabinovich & Morton, 2010).

Overall, research on both historical and context-dependent group evaluations seems to suggest that there are two different ways of responding to negative stereotyping of one's group. One is to internalise the negative evaluation of one's group and thus replicate it through one's own behavior, thereby contributing to the status quo. The other is to actively refute the negative appraisal by demonstrating behavior inconsistent with it. It is crucial to understand what factors determine which of these routes is taken. In the present paper we aim to demonstrate that one of these factors is temporal focus.

#### *Temporal focus, self-perception, and action*

The idea that time plays an important role in group processes by providing a canvas on which group identities are mapped out has been articulated in some previous theorizing (e.g., Condor, 1996; Reicher, 2004). Most group identities are closely connected to notions of the past (e.g., by "origin myths", Anderson, 1991) and are projected into the future through political rhetoric and collective action (e.g., Reicher & Hopkins, 2001; Reicher, 2004). Recently, however, it has been suggested that time is not just a canvas against which alternative visions of identity are played out. In fact, awareness of a specific time modus (past, present or future) affects not

just *who* we think we are, but also *how* we think (and feel) about ourselves (cf. Wakslak et al., 2008). In particular Kivetz and Tyler (2007) have demonstrated that activating a future temporal focus (e.g., by making participants think about their future) leads to a more idealistic (and by implication more positive) self-image and that this translates into behavioral choices consistent with this image. Thus thinking about the future seems to be linked to an ideal self, and may precipitate forms of action directed toward realising that ideal self in the future.

Given that a future time perspective makes people focus on what they really believe and aspire to, it is perhaps unsurprising that a future temporal focus also leads to higher attitude-behavior consistency. For example, Rabinovich, Morton and Postmes (2010) demonstrated that participants primed with the future in a preliminary task were more likely to make behavioral choices consistent with their pre-measured attitudes (e.g., participants with positive attitudes to saving tended to opt for choices that give higher delayed rather than immediate pay-offs). This finding supports the idea that thinking about the future triggers intentions and behavior consistent with one's ideals and aspirations.

This has implications not just for individual thought and behavior, but also for group processes and collective behavior. For example, it has been argued that group identification and group image depend on perceived continuity of the group and its ideals into the future (Jetten, Iyer, Tsivrikos, & Young, 2007): groups whose aspirations are seen as non-viable cannot attract followers and inspire action. However, it is not just the future that may be a resource for building up collective identities. The past can also be drawn on in ways that create and maintain a positive group identity. For example, when group's past is perceived negatively, actively contrasting the present with that past can highlight the group's improvement

(Mummendey, Klink, & Brown, 2001, see also Eibach & Ehrlinger, 2006). In other words, the past can be used as a springboard for the future: groups may derive the idea of who they are at present from the images of who they were in the past but are no longer. Interestingly, similar processes are revealed at the individual level: comparisons with negative pasts can boost individual self-esteem, while making salient past successes does not result in a symmetrical drop in self-evaluation (Zell & Alicke, 2010; see also Ross & Wilson, 2002; Wilson, Gunn, & Ross, 2009).

Although contrasting away from negative pasts can sometimes enhance self- and group-evaluations at present, disengaging from the past is not always possible. Support for this idea comes from research by Morton and Sonnenberg (2011) in which German participants were asked to describe what it means to be German to an ingroup or outgroup (i.e. English) audience with the past or the future made salient. When German identity was expressed to an English audience against the backdrop of the past, positive self-regard was compromised, arguably because the negative implications of the past were not so easily disengaged from under these conditions. Accordingly within groups that are negatively defined by their past, focusing on the future might instead be liberating, and might allow people to think about their groups and their self in ways that are unconstrained by historical stereotypes (see also Morton, Rabinovich, & Postmes, in press).

Overall, previous research seems to converge on the idea that although contrasting with the past can be used strategically to enhance a group's image, the viability of this strategy is limited by the specific features of that past and the extent to which situations permit such disengagement. In comparison, the future is less pre-defined and therefore offers wider possibilities for re-imagining one's group and one's self. As such, a future temporal focus may help people to step outside the negative



appraisals of their group and precipitate actions that could, indeed, lead the group towards future that is closer to some ideal. In contrast, a focus on the past may result in group members being psychologically “locked” within the group’s past, being unable to move towards a more positive group image.

Although these ideas follow from previous research, they have never been empirically tested. While previous research has demonstrated that variations in temporal focus affect patterns of ingroup stereotyping (Morton et al., in press), the effects of this on stereotype-relevant behavior is as yet unexplored. More importantly, research in this domain has tended to make use of natural group memberships with historically determined stereotypes. Thus, to some extent, the stereotypes being investigated are confounded with the past. This raises the question of whether temporal focus affects responses to devaluation per se, or whether these ideas are limited to specific groups with specific histories. Answering these questions would have important implications for our theoretical understanding of group stereotyping and its effects on individual action, as well as practical implications for feedback communication and behavior change.

#### *Present research*

In the present research we were interested in the effects of temporal focus on group members’ responses to context-dependent negative group appraisals. From previous research, we know that intergroup comparisons with better-performing outgroups (upward comparisons) often lead ingroup stereotype to shift towards a more negative evaluation on the dimension of comparison. In particular, studies by Rabinovich and colleagues (in press) have demonstrated that British participants who compared their national group to a stereotypically “green” country (i.e. Sweden) subsequently saw their own country as less environmentally friendly than those who

compared their group to a less “green” country (i.e. the USA). Importantly, these situationally-induced negative ingroup evaluations were internalised and translated into correspondent individual values, intentions, and actions (all of which became less environmentally friendly after inducing negative ingroup evaluations).

In the present research we tested whether this internalisation of situationally-induced ingroup appraisals is altered by activating a specific temporal focus (past versus future). Based on the previous research, we expected that activating a past focus in the context of negative group appraisals would result in group members becoming “locked” into these and expressing behavior consistent with the appraisal of their group. In contrast, we expected that a future temporal focus would enable group members to break away with negative ingroup evaluations and report more positive individual intentions.

We tested these predictions in the domain of environmental behavior, the same context that was used in previous research on intergroup comparisons, ingroup stereotyping, and individual action (see Rabinovich et al., in press). In line with this previous research, a negative appraisal of the national ingroup (Britain) was induced by making salient comparisons with a country that stereotypically outperforms the ingroup in the environmental domain (i.e. Sweden). We hypothesised that participants primed with a past temporal focus after the induction of this negative ingroup appraisal would act in line with the negative appraisal of their group and express relatively low willingness to engage in environmentally friendly behavior. Conversely, we expected that participants primed with a future temporal focus would be more able to break away from the negative ingroup appraisal and thus would express stronger intentions to behave in an environmentally sustainable manner.

## PILOT STUDY

Before testing how temporal focus affects responses to situationally-induced ingroup appraisals, it was important to first establish our manipulation of temporal focus. To do this, we conducted a pilot study using forty-one first year psychology students (78% female, mean age = 20.07,  $SD = 4.08$ ). The study had a between-subject design with two experimental conditions: future vs. past temporal focus, to which participants were assigned randomly. The manipulation was adapted from that used by Morton and colleagues (in press). This was presented as a language ability and sentence construction task. In this task participants were asked to unscramble eight “scrambled” sentences (e.g., “year I Paris going to am next”). In the past focus condition all sentences were in the past tense; in the future temporal focus condition the same sentences were phrased using the future tense. By unscrambling sentences in a specific tense participants’ attention was focused on either the past or the future.

After completing this task, participants were asked to think about their next birthday and briefly describe how they imagine it, for example, what they would do and who they would invite (presented as an “imagination task”). Then they were asked to indicate how easy it was for them to imagine themselves at their next birthday (on an 11-point scale from 0 “very difficult” to 10 “very easy”). Analysis of this data revealed that participants found it significantly easier to imagine their next birthday when the future had been primed ( $M = 8.14$ ,  $SD = 1.88$ ) relative to when the past had been primed ( $M = 5.65$ ,  $SD = 2.01$ ):  $t(39) = 4.11$ ,  $p < 0.001$ ,  $d = 1.28$ . This establishes that the manipulation of future (versus past) focus facilitates future-oriented thinking—or more specifically, the ability to imagine the self in the future.

## EXPERIMENT 1

## Method

*Participants and design*

Participants were 55 University students who were British nationals (34 female, 21 male, mean age = 19.15,  $SD = 1.04$ ) recruited via a participant pool. The study had a between-subject design with two experimental conditions: future vs. past temporal focus. Participants were assigned to each of the conditions randomly. The key dependent variables were intentions to behave in an environmentally friendly way and willingness to donate time to an environmental organisation.

*Procedure and measures*

Participants completed the study online. The study was presented as three separate surveys on unrelated topics. On the first page participants were asked to read a short text about the environmental performance of Sweden (a group that is perceived to be environmentally superior to the British ingroup among the target population: Rabinovich et al., in press). The text conveyed the idea that Sweden was doing extremely well in terms of sustainability without harming its economy, and this leaves no excuse for other developed countries not to take environmental action. Our assumption was that this presentation would reflect badly on the ingroup (i.e., induce an idea that the ingroup was performing poorly on the environmental dimension). After reading the text, participants responded to several questions to check their understanding of the text. They were then asked to reflect on Britain's environmental record and to write down their ideas. Finally, participants rated Britain's performance in the environmental domain on a 7-point scale (from 1 "worst possible" to 7 "best possible").

After that participants completed the temporal focus manipulation validated in the Pilot Study. After the manipulation task, participants completed a measure of environmental intentions. To measure these, participants were asked how likely they were to perform seven different environmentally friendly behaviors (e.g., reducing water use, recycling waste, etc.) on a 7-point scale (from 1 “very unlikely” to 7 “very likely”), all items were averaged to form a single measure of intentions ( $\alpha = .79$ ). They were then asked an open-ended question about how many hours a month they would be prepared to dedicate to volunteering for an environmental organisation. After completing the questionnaire participants were thanked and directed to a debriefing page.

## Results

*Manipulation check.* To check whether our procedure created a negative image of ingroup’s environmental performance, we conducted a one-sample t-test on participants’ evaluation of Britain’s environmental performance (measured before the temporal focus manipulation). The scale mid-point (4) was used as a test value. The analysis demonstrated that participants’ evaluations of ingroup’s environmental performance fell below the mid-point of the scale ( $M = 3.49$ ,  $SD = 0.94$ ,  $t(54) = -4.02$ ,  $p < 0.001$ ). Thus participants evaluated their ingroup’s environmental performance negatively.

*Main analysis.* Although environmental intentions and volunteering were positively correlated, this correlation was only moderate,  $r(53) = .39$ ,  $p = .004$ , thus we retained these as separate dependent measures. Prior to the analysis the measure of intended volunteering was checked for outliers and no outliers were found. To test whether priming future versus past temporal focus affected participants’ willingness to engage in domain-relevant behavior, we conducted two independent samples t-tests

on these dependent variables. The analysis demonstrated that participants in the future focus condition reported stronger intentions to engage in environmentally friendly behavior ( $M = 4.16$ ,  $SD = 1.01$ ) than participants in the past focus condition:  $M = 3.60$ ,  $SD = 1.02$ ,  $t(54) = 2.03$ ,  $p = .047$ ,  $d = 0.55$ . Participants in the future focus condition also intended to volunteer marginally more hours to an environmental cause ( $M = 5.44$ ,  $SD = 5.38$ ) than participants in the past focus condition:  $M = 3.14$ ,  $SD = 3.30$ ,  $t(43.82) = 1.90$ ,  $p = .064$ ,  $d = 0.52$ .

### Discussion

Study 1 provides initial support for our hypotheses. It demonstrates that following the induction of a negative appraisal of their ingroup's environmental performance, participants with a past focus reported weaker intentions to engage in environmentally sustainable behavior than participants with a future focus. The limitation of the present study, however, is that it does not provide evidence that the observed effects are due to acceptance (or rejection) of negative ingroup evaluations. In other words, we do not know whether the observed effects are due to the impact of temporal focus on responses to negative ingroup appraisals, or due to the effect of temporal focus per se (motivating positive intentions independently of the specific context of ingroup appraisal).

In response to this limitation, Study 2 investigated how temporal focus affects behavior in response to different ingroup appraisals. To achieve this aim we orthogonally manipulated temporal focus and the valence of ingroup appraisals (again through intergroup comparison context, see Rabinovich et al., in press). We expected that the effect of future (versus past) focus on facilitating positive behavioural intentions would be limited to the condition in which a negative group appraisal had

been induced. In the context of positive appraisals of the group, we did not expect an effect of temporal focus on behavioural intentions.

## EXPERIMENT 2

### Method

#### *Participants and design*

Participants were 99 British adults (44 female, 53 male, 3 unidentified, mean age = 32.41,  $SD = 13.67$ ) recruited in public places. The study had a 2 (ingroup appraisal: positive vs. negative) x 2 (temporal focus: future vs. past) between-group design. Participants were assigned to each of the four conditions randomly. The key dependent variable was intended amount of donation to an environmental organisation.

#### *Procedure and measures*

Participants were asked to complete a short questionnaire. On the first page evaluation of ingroup environmental performance was manipulated. Participants were asked to read a short text about the environmental performance of foreign countries. In the negative ingroup appraisal condition, participants read about Sweden (as in Study 1). In the positive ingroup appraisal condition, participants instead read about the environmental performance of the USA (a group that is stereotyped as environmentally unfriendly in the target population: Rabinovich et al., in press). The text in this condition discussed poor environmental performance of the USA and suggested that this shows other developed countries what they should *not* be doing. Our assumption was that comparisons with the poorly performing USA would induce a positive appraisal of the ingroup on the environmental dimension. In both conditions participants answered several questions to check their understanding of the text and were then asked to reflect on how Britain's environmental record compares to either

Swedish (negative appraisal) or American (positive appraisal) record and to write down their thoughts. Finally, participants were asked to evaluate Britain's environmental performance on a 7-point scale, from 1 "worst possible" to 7 "best possible" (manipulation check).

Then participants completed the same temporal focus manipulation as used in Study 1. After answering a number of questions unrelated to the present study, participants were asked how much money they would be prepared to donate monthly to an environmental organisation of their choice (an open-ended question). After completing the questionnaire participants were thanked and debriefed.

### Results

*Manipulation check.* To check whether the manipulation of ingroup environmental appraisal was successful, we conducted a 2 (ingroup appraisal: positive vs. negative) x 2 (temporal focus: future vs. past) ANOVA on participants' evaluations of Britain's environmental record. The only significant effect was that of the ingroup appraisal manipulation. Participants in the positive appraisal condition evaluated Britain's environmental record more positively ( $M = 4.00$ ,  $SD = 0.93$ ) than participants in the negative appraisal condition:  $M = 3.58$ ,  $SD = 0.93$ ,  $F(97) = 4.09$ ,  $p = .046$ ,  $\eta^2_p = .05$ . This demonstrates that the manipulation of perceived ingroup environmental performance was successful. The average rating of ingroup performance in the negative appraisal condition was also significantly lower than the scale midpoint:  $t(47) = -3.09$ ,  $p = 0.003$ . Again, this establishes the effectiveness of this manipulation in inducing negative appraisals of the ingroup.

*Main analysis.* Prior to the analysis the measure of intended donation was checked for outliers. Two cases were identified as outliers (beyond three standard



deviations above the mean) and were excluded from the following analysis (final  $M = 4.41$ ,  $SD = 5.61$ ).

To test the hypothesis that temporal focus affects relevant behavioral intentions when a negative (but not positive) ingroup appraisal is induced we conducted a 2 (ingroup appraisal: positive vs. negative) x 2 (temporal focus: future vs. past) ANOVA with intended amount of donation as the dependent variable. As predicted, the analysis demonstrated that there was a significant interaction between ingroup appraisal and temporal focus:  $F(96) = 4.26$ ,  $p = .042$ ,  $\eta_p^2 = .04$ . Participants in the negative ingroup appraisal condition reported higher intended donations when a future (rather than past) temporal focus was primed:  $M_{future} = 6.75$ ,  $SD = 7.29$ ,  $M_{past} = 2.09$ ,  $SD = 3.12$ ,  $F(1, 96) = 8.81$ ,  $p = .004$ ,  $\eta_p^2 = .08$ . Intended donations of those in the positive appraisal condition were not affected by temporal focus:  $M_{future} = 4.46$ ,  $SD = 6.09$ ,  $M_{past} = 4.36$ ,  $SD = 4.36$ ,  $F(1, 96) = 0.004$ ,  $p = .950$ ,  $\eta_p^2 < .01$  (see Figure 1). Neither of the pairwise comparisons within past and future focus conditions reached statistical significance:  $F(1, 96) = 2.14$ ,  $p = .147$ ,  $\eta_p^2 = .02$ , and  $F(1, 96) = 2.13$ ,  $p = .148$ ,  $\eta_p^2 = .02$ , respectively.

## Discussion

Study 2 provides further support for our hypothesis. Replicating the pattern in Study 1, following the induction of a negative ingroup appraisal in the environmental domain, participants who were focused on the past reported weaker environmental intentions than participants who were focused on the future. In contrast, following the induction of a positive ingroup appraisal intentions were not affected by the temporal focus manipulation. This suggests that different temporal foci do not automatically translate into different patterns of intention. Contrary to what some previous research might suggest (e.g., Kivetz & Tyler, 2007), a future focus does not always lead to

more positive intentions than a past focus. Rather, the effects of temporal focus seem particularly important for understanding responses to devaluation. As we have argued, this may be because the past and the future mean different things in the context of devaluation—the past confers devaluation whereas the future represents the hope for change. The same is not true in the context of positive group appraisals where the past and the future are likely to hold equivalent (positive) meaning. Thus, against the backdrop of negative ingroup appraisals, it seems that a future focus allows group members to escape the situation of their group by expressing intentions that contradict the negative group image. Conversely, a past focus seems to tie individual responses to the negative ingroup image and precipitates patterns of intention that recreate the negative evaluations.

Although our predictions received support from Studies 1 and 2, based on our theoretical perspective, the observed effects should be more pronounced for those participants who strongly identify with the ingroup. Within the social identity and self-categorization perspective, there is a considerable evidence that highly identified group members are more likely to behave in line with ingroup norms and evaluations (Jetten, Postmes, & McAuliffe, 2002; Pickett, Bonner & Coleman, 2002), even when these are negative (e.g., Schmader, 2002). The reason is that high-identifiers are likely to assimilate themselves to group prototype (i.e., to engage in self-stereotyping). In other words, the ingroup image has direct implications for high-identifiers' sense of self because group norms and stereotypes are internalised (Jetten, Postmes, & McAuliffe, 2002; Spears, Doosje, & Ellemers, 1997). Among less identified individuals the value attached to the group is less consequential to their self. Thus, in the present context, high-identifiers should be more strongly affected by contextual devaluation of the ingroup.

If this is true high-identifiers' might also be more responsive to shifts in the temporal focus that surrounds ingroup appraisals. Among high identifiers particularly, in the context of negative group appraisals a focus on the past should result in a deeper drop in intentions, while a focus on the future should have a stronger positive effect. In contrast, low-identifiers would not be expected to be strongly affected by ingroup devaluation, which leaves little scope for any effect of temporal focus. Along these lines, we expected group identification to moderate the previously observed effects of temporal focus on responses to ingroup devaluation. Study 3 was designed to test this prediction.

### EXPERIMENT 3

#### Method

##### *Participants and design*

Participants were 58 University students, all British nationals (50 female, 8 male, mean age = 19.79,  $SD = 3.65$ ) recruited via a participant pool. The study had a between-subject design with two experimental conditions: future vs. past temporal focus. Participants were assigned to each of the conditions randomly. The key dependent variable was intentions to behave in an environmentally friendly way.

##### *Procedure and measures*

One month before participating in the main experiment participants attended a preliminary session where among other measures (unrelated to the present study) they completed a measure of identification as British. Nine items adapted from Doosje, Ellemers and Spears (1995) and Luhtanen and Crocker (1992) were used to measure identification (e.g., "I feel solidarity with other British people", "Being British is an important reflection of who I am";  $\alpha = .89$ ). All items were averaged to form a single

measure of identification with higher scores indicating stronger identification with the British ingroup. Participants were asked to generate a personal identification code that was used to link their responses in the two sessions (preliminary and experimental).

Participants were recruited from the initial pool to participate in the experimental session a month later. Those who signed up for participation were asked to complete an online survey. The procedure for inducing negative appraisals of the ingroup's environmental performance and the manipulation of temporal focus were identical to those used in the previous studies. Given the absence of temporal focus effects in response to positive ingroup appraisals (Study 2), and the desire to elaborate on responses to negative group evaluations as a function of group identification, in this study we induced a negative ingroup appraisal across all participants. Following this, temporal focus was manipulated (past versus future).

After completing the manipulations participants completed a measure of environmental intentions. To demonstrate generalisability beyond Study 1, a new list of environmental behaviors was used in the intention measure (e.g., persuading friends to join environmental activities, changing one's behavior in any way because of the environmental concerns; six items overall,  $\alpha = .73$ ). Participants indicated how likely they were to perform each of these behaviors during the next month on a 7-point scale (from 1 "very unlikely" to 7 "very likely"). The items were averaged to form a single measure of intentions. After completing the questionnaire participants were asked to reproduce their identification code; then they were thanked and directed to a debriefing page.

## Results

*Manipulation check.* Again we conducted a manipulation check by comparing participants' average evaluation of Britain's environmental record to the mid-point of

the scale. The analysis demonstrated that participants' evaluations of ingroup environmental performance fell below the mid-point of the scale:  $M = 3.59$ ,  $SD = 0.93$ ,  $t(57) = -3.31$ ,  $p = 0.002$ . Thus our participants appraised the ingroup's environmental performance negatively. We also compared the level of ingroup identification in two experimental conditions and no significant differences were found:  $t(57) = 1.02$ ,  $p = 0.342$ . Thus it was appropriate to treat identification as a second independent variable in the analyses. The correlation between identification and ingroup appraisal was not significant:  $r(57) = .207$ ,  $p = .115$ .

*Main analysis.* To test the hypothesis that temporal focus affects individual behavioral intentions following negative group-level feedback among high- (but not low-) identifiers, we conducted a moderated regression analysis with environmental intentions as a dependent variable. Identification (centred) and temporal focus condition (0 = past, 1 = future) were entered as predictors at Step 1, and the interaction between these two variables was included at Step 2.

The analysis met the requirements for significant moderation. At Step 1, entry of the main effect terms contributed significantly to variance explained,  $R^2_{ch} = .22$ ,  $F_{ch}(2, 56) = 5.35$ ,  $p = .009$ . Inspection of the regression coefficients at this step revealed that this was due to a significant main effect of temporal focus:  $\beta = .37$ ,  $t(56) = 2.33$ ,  $p = .025$ . Participants in the future focus condition reported more positive intentions than participants in the past focus condition. The main effect of identification was not significant,  $\beta = -.19$ ,  $t(56) = 1.17$ ,  $p = .247$ . At Step 2, inclusion of the interaction term produced a further significant increment in variance explained,  $R^2_{ch} = .08$ ,  $F_{ch}(1, 55) = 4.36$ ,  $p = .044$ . This interaction was graphed and explored using simple slope analysis (see Figure 2). As can be seen, the main effect of temporal focus was limited to high identifiers: High-identifiers in the future focus condition reported stronger

intentions than high identifiers in the past focus condition:  $\beta = .69$ ,  $t(55) = 3.20$ ,  $p = .003$ . For low-identifiers, temporal focus did not affect environmental intentions:  $\beta = .08$ ,  $t(55) = 0.37$ ,  $p = .715$ .

### Discussion

Study 3 provides further support for our theorising by demonstrating that temporal perspective affects responses to contextual ingroup devaluation for high-identifiers but not for low-identifiers. This suggests that for temporal perspective to have an effect on responses to ingroup appraisals, these appraisals must be self-relevant and attached to a group with which people identify. In line with previous research, high-identifiers are more affected by the evaluations of their group because these evaluations reflect an internalised aspect of their self (Jetten et al., 2002, Spears et al., 1997). Expanding this picture, the present studies show that while negative appraisals can become determining of high-identifiers' behavior when they are focused on the past, a focus on the future may liberate high-identifiers from contextual devaluation of their group.

### EXPERIMENT 4

Studies 1-3 show that temporal focus affects responses to negative ingroup appraisals, particularly among highly identified group members. Thus far, however, we have not considered the processes that might underlie the observed effects of temporal focus. The aim of Study 4 was to address this gap in our research.

Our perspective suggests that the reason why group appraisals affect relevant behaviour among high-identifiers, is because ingroup appraisals are self-relevant to them. Following on from this, we suggest that when the past is in focus negative group appraisals impinge on high-identifiers' self and result in behavior that further confirms the negative evaluation of their group. In comparison, when the focus is on

the future, high-identifiers may be able to disconnect their self and their behaviour from negative appraisals of their group. This logic suggests that some aspect of the self might be the mediating mechanism behind the effects we have observed.

Previous research suggests that the self-esteem of high-identifiers can suffer in response to contextual group devaluation. There is ample evidence that ability to think positively about one's group (ingroup favouritism) is related to self-esteem (Gramzow & Gaertner, 2005) and conversely that negative feedback on one's group's performance can result in reduced personal self-esteem (see Ellemers, Spears, & Doosje, 2002, for overview). Low-identifiers, in comparison, are more likely to respond to group devaluation by dis-identifying from the group and thus protecting their personal self from the negative implications of collective appraisals (e.g., Ellemers, 1993). In line with these findings, we reasoned that self-esteem might be the specific aspect of the self that mediates the effects of temporal focus and identification on behaviour in response to ingroup devaluation.

More specifically, we expected negative ingroup appraisals to result in decreased individual self-esteem, but only for strongly identified group members. However, we also expected that this undermined self-esteem among high-identifiers might be buffered by a focus on the future. Consistent with this broad idea, previous research suggests that a future focus facilitates optimism. For example, people are more likely to produce positive descriptions of future (rather than past) events (e.g., Newby-Clark & Ross, 2003; Hoorens, Smits, & Shepperd, 2008). Similarly, individuals tend to construe their time-line as a process of improvement (Wilson & Ross, 2001), and when thinking about the future, people tend to describe themselves in a more idealistic and positive way (Kivetz & Tyler, 2007) as compared to when they are focused on the past. Thus it seems that when focused on the future, people

are likely to experience a positive self-perception. These positive effects of temporal focus may be particularly apparent when self-esteem has suffered a blow, as in the case of high-identifiers exposed to negative evaluation of their ingroup. Among low-identifiers, temporal focus should not buffer self-esteem in response to negative ingroup appraisals because these appraisals are unlikely to compromise self-esteem in the first place.

Importantly for the present research, for self-esteem to be the mediating mechanism behind the effects in our previous studies, it has to be linked to willingness to engage in action and successful performance. There is also ample evidence of this link (see Judge & Bono, 2001). In particular, self-esteem has been demonstrated to lead to persistence in the face of failure (McFarlin, Baumeister, & Blascovich, 1984; Shrauger & Sorman, 1977), as well as to willingness to take initiative (e.g., Buhrmester, Furman, Wittenberg, & Reis 1988; LePine & Van Dyne, 1998). It thus seems likely that if self-esteem represents an aspect of self-perception that motivates persistence and initiative, then self-esteem might be linked to willingness to engage in environmental action in the context of our studies (i.e. behavioral context salient to participants).

In sum, we predicted that the interaction between temporal focus and identification previously observed for intended behavior would also be present on a measure of self-esteem (our proposed mediator). In the context of negative ingroup appraisals, highly identified individuals were expected to experience a drop in self-esteem, and to consequently display reduced intentions to engage in behavior that could refute this negative appraisal. However, this effect of contextual devaluation on self-esteem among high-identifiers was expected to be buffered when these individuals are focused on the future rather than the past, thus facilitating action that



might counter the negative evaluation of their group. In contrast, low-identifiers were not expected to be affected by the negative ingroup appraisal or responsive to variations in temporal focus when evaluating their self or expressing their intentions. These predictions combine to suggest a pattern of mediated moderation (see Figure 3 for a graphic depiction of these predictions).

## Method

### *Participants and design*

Participants were 107 University students of British nationality (66 female, 38 male, 3 unidentified, mean age = 19.34,  $SD = 1.41$ ) recruited via a participant pool. Again, this study focused on responses to the induction of a negative ingroup appraisal and had two experimental conditions that varied between participants: future vs. past temporal focus. Participants were assigned to each of the conditions randomly. The key dependent variables were intentions to behave in an environmentally sustainable way and individual self-esteem.

### *Procedure and measures*

Participants completed the study online. The study was presented as a number of surveys on unrelated topics. On the first page, participants completed a measure of identification as British. The same measure as in Study 3 was used ( $\alpha = .89$ ). Participants responded to all items on a 7-point scale from 1 “strongly disagree” to 7 “strongly agree”. Items were averaged to form a single measure of identification. After that, participants completed a distracter task unrelated to the present study for approximately seven minutes.

Following the distracter task, negative ingroup appraisals were induced following the same procedure as the previous studies. That is, participants were asked to read a text about Sweden’s environmental performance and then reflect on how

Britain's performance looks in comparison. Participants were also asked to rate Britain's environmental performance on a scale from 1 "worst possible" to 7 "best possible".

Next participants completed the manipulation of temporal focus following the same procedure as the previous studies. After completing the manipulation, participants completed measures of individual self-esteem and environmental intentions.

Five items were used to measure self-esteem (e.g., "I can do most things just as well as others", "I have nothing to be proud of" (reversed);  $\alpha = .83$ ). Participants responded to the items on a 7-point scale from 1 "strongly disagree" to 7 "strongly agree", and the items were averaged to form a scale. To measure relevant behavioral intentions, participants were asked to indicate how likely they were to perform a number of environmentally friendly behaviors during the next month on a 7-point scale from 1 "very unlikely" to 7 "very likely" (e.g., decrease non-green energy consumption, use public transport, etc.; 9 items,  $\alpha = .76$ ). Again, all items were averaged to form a scale of environmental intentions. After completing the questionnaire participants were thanked and directed to a debriefing page.

## Results

*Preliminary analysis.* There were no significant differences between the experimental conditions on the measure of identification as British:  $t(97) = 0.21, p = .837$ . Thus it was appropriate to treat identification as an independent variable in the analysis. The correlation between identification and ingroup appraisal was not significant:  $r(97) = .170, p = .086$ . To make sure that the procedure successfully induced negative ingroup appraisal, we compared participants' evaluations of Britain's environmental record to the midpoint of the scale. Mean evaluation of

Britain's environmental performance was significantly lower than the mid-point of the scale:  $M = 3.50$ ,  $SD = 0.91$ ,  $t(97) = -5.77$ ,  $p < .001$ .

*Main analysis.* To test the hypothesised interaction between temporal focus and identification on behavioural intentions (the dependent measure) and self-esteem (the proposed mediator) we conducted the same moderated regression analysis as in Study 3.

As in the previous study, the analysis of intentions revealed a pattern of significant moderation. At Step 1, entry of the main effect terms did not contribute significantly to variance explained,  $R^2_{\text{ch}} = .01$ ,  $F_{\text{ch}}(2, 97) = 0.56$ ,  $p = .572$ : neither of the main effects were significant. At Step 2, inclusion of the interaction term produced a significant increment in variance explained,  $R^2_{\text{ch}} = .09$ ,  $F_{\text{ch}}(1, 96) = 9.07$ ,  $p = .003$ . See Figure 4 for a graphic depiction of this interaction. Replicating the previous study, among high-identifiers there was a significant effect of temporal focus on environmental intentions: high-identifiers in the future focus condition reported stronger intentions to behave environmentally than high-identifiers in the past focus condition:  $\beta = .29$ ,  $t(96) = 2.05$ ,  $p = .043$ . Contrary to the previous study, there was also a significant and opposing effect of temporal focus on environmental intentions among low-identifiers: low-identifiers in the future temporal focus condition reported weaker intentions to engage in sustainable behavior than low-identifiers in the past focus condition:  $\beta = -.31$ ,  $t(96) = -2.25$ ,  $p = .026$ .

#### *Mediation*

To begin testing for possible mediation, the above analysis was repeated with self-esteem as the dependent variable. Again, this analysis revealed a pattern of significant moderation. At Step 1, entry of the main effect terms contributed significantly to variance explained,  $R^2_{\text{ch}} = .11$ ,  $F_{\text{ch}}(2, 97) = 6.01$ ,  $p = .003$ . This result

was due to a significant main effect of identification:  $\beta = .33, t(96) = 3.42, p = .001$ .

High-identifiers reported higher self-esteem than low-identifiers. The effect of temporal focus condition was not significant,  $\beta = .05, t(96) = 0.42, p = .624$ . At Step 2, inclusion of the interaction term produced a further significant increase in variance explained,  $R^2_{\text{ch}} = .09, F_{\text{ch}}(1, 96) = 10.23, p = .002$ , see Figure 5. Consistent with expectations, among high-identifiers there was a significant effect of temporal focus on self-esteem: High-identifiers in the future focus condition reported higher self-esteem than those in the past focus condition:  $\beta = .35, t(96) = 2.65, p = .009$ .

Unexpectedly, among low-identifiers there was an opposing and marginally significant effect of temporal focus on self-esteem: low-identifiers in the future focus condition reported slightly lower self-esteem than participants in the past focus condition:  $\beta = -.25, t(96) = -1.92, p = .058$ .

The above analyses reveal parallel Identification x Temporal focus interactions on intentions (the outcome) and self-esteem (the proposed mediator). Given these parallel effects, mediation of the pattern on intentions via self-esteem was a possibility. To explore this possibility further, we conducted a final analysis to test for mediation. In this analysis, we again regressed intentions on temporal focus, identification, and their interaction, however in a final step we included self-esteem as an additional predictor. The results of this analysis met the conditions for mediation. Briefly, the previously reported interaction between temporal focus and identification ( $\beta = .490, p = .003$ ) was reduced with the inclusion of self-esteem in the model ( $\beta = .370, p = .029$ ). Importantly, with all predictors included in the model, self-esteem was itself a significant independent predictor of intentions ( $\beta = .244, p = .023$ ). This suggests that self-esteem, at least partially, mediated the effects of the significant interaction on intentions.<sup>1</sup> To further establish the case for mediation, we conducted a

bootstrapping analysis (Preacher & Hayes, 2008). The bias corrected bootstrap estimate of the indirect effect of the interaction between temporal focus and identification had a 95% confidence interval of 0.0102 to 0.4916. Again this supports a pattern of mediation on behavioral intentions via self-esteem.

### Discussion

Study 4 replicated the findings of the previous studies by demonstrating that temporal focus guides responses to negative ingroup appraisals, particularly among high-identifiers. In line with the previous studies, intentions to engage in behavior that contradicted the negative appraisal of the group was higher when the future rather than the past was in focus (Studies 1 & 2), but only among high identifiers (Study 3). However, unlike the previous study, this time low-identifiers were also affected by the temporal focus manipulation. Among low-identifiers, a future temporal focus resulted in reduced willingness to act and somewhat compromised self-esteem, although this latter effect was only marginal. It could be suggested that for low-identifiers future temporal focus coupled with salience of a less meaningful group membership could be de-motivating (cf. Jetten et al., 2008). This effect may also be specific to behaviors that require collective action (such as environmental protection) – when focused on the future, low-identifiers may realize the difficulty of coordinating future actions within a group that they are weakly connected to. Alternatively, low-identifiers may experience pessimism about the future actions of the ingroup (assuming that they do not evaluate highly the group that they do not identify with), and conclude that their individual action is meaningless because it does not have wider support. However, when speculating about the meaning of these unexpected effects among low-identifiers, it is important to note that they contrast from the general pattern observed across the previous three studies in which a future focus increased intentions (Studies

1 & 2), particularly among high-identifiers (Study 3). As such, while there were some significant effects among low-identifiers in this study, the responses of low-identifiers seem more variable (and therefore less predictable) than the responses of high-identifiers. Due to this inconsistency further research would be needed to explore the effects of temporal foci on low-identifiers and the additional factors that might determine these.

Most importantly, Study 4 provides support for the hypothesis that shifts in self-esteem may account for the effect of temporal focus on responses to contextual ingroup devaluation. The results show that a future temporal focus (relative to a past focus) resulted in elevated self-esteem among high-identifiers, and these shifts in self-evaluation translated into increased willingness to act in a way inconsistent with negative ingroup appraisal.

#### GENERAL DISCUSSION

The present research explored the role of temporal focus in responses to ingroup devaluation. Based on previous research on the effects of temporal focus on individual- and group-level processes (e.g., Kivetz & Tyler, 2007; Morton et al., in press; Rabinovich et al., 2010; Ross & Wilson, 2002), we suggested that a focus on the past may lock people into negative ingroup appraisals and result in patterns of intentions that confirm rather than refute these appraisals. Conversely, a focus on the future may motivate people to break away from negative ingroup evaluations by behaving in ways that contradict these appraisals.

The four studies presented here supported this idea. Participants primed with a past temporal focus consistently reported intentions more aligned with an experimentally-induced negative ingroup evaluation than participants primed with a future temporal focus (Studies 1 & 2). Rather than increasing positive intentions in

general, the effects of temporal focus were observed only in response to negative, rather than positive, evaluations of the ingroup (Study 2). As such, focusing on the future (versus the past) seems to be a particular resource for dealing with ingroup devaluation.

In addition, the positive effect of a future focus was limited to high-identifiers (Studies 3 & 4). This supports our contention that negative ingroup appraisals are particularly self-relevant for high-identifiers. Because their self is engaged, high-identifiers are also more responsive to factors (such as temporal focus) that buffer against negative ingroup appraisals. Consistent with this notion, and with our suggestion that the effects of temporal focus in combination with identification are mediated through the self, Study 4 revealed a pattern of significant mediation of these effects through self-esteem. Taken together, these studies suggest that past temporal focus may exacerbate the effects of ingroup devaluation by linking group members' self-esteem to the negative group appraisal and reducing intentions to engage in behavior inconsistent with this appraisal. Conversely, a focus on the future seems to allow high-identifiers to step out of this negative spiral and to think and act in ways that are not constrained by negative ingroup evaluations.

### *Implications*

The present research contributes towards a growing body of literature on the role of temporal focus in individual- and group-level psychological processes. Consistent with previous research, it demonstrates that temporal focus affects how individuals see themselves (cf. Kivetz & Tyler, 2007) and their groups (cf. Diekmann & Eagly, 2000, Morton et al., in press; Peetz et al., 2010). Importantly, our findings also suggest that the effect of temporal focus may be contingent on the specific social context. Unlike some previous studies (e.g., Kivetz & Tyler, 2007), we did not

observe a direct and unqualified effect of temporal focus on self-evaluation (self-esteem) and individual intentions. Instead, our data suggest that temporal focus may serve as a lens through which perceptions of social context, specifically ingroup evaluations, are filtered. Temporal focus may either block or intensify the impacts of negative ingroup evaluations on individual-level responses.

The present findings are in line with recent developments in research on group processes that explore the role of temporal factors in negative group stereotyping (e.g., Diekmann & Eagly, 2000, Morton et al., in press; Morton & Sonnenberg, 2011). Consistent with this previous research, our findings suggest that temporal perspective may change the way group members react to evaluations of their ingroup. The present research extends this previous work by demonstrating that the effects of temporal focus are evident not only with historically devalued or stereotyped groups (where stereotypes are rooted in the past and therefore logically follow from a past focus; e.g., Morton et al., in press; Morton & Sonnenberg, 2011), but also with evaluations that are situationally induced by intergroup comparisons. In addition, the present set of studies takes these earlier ideas further by demonstrating that temporal focus affects not only the way individuals think about ingroups (ingroup stereotypes), but also the ways in which they think about their self (i.e. self-esteem) and their actions (i.e. relevant behavioral intentions). Our findings also fit well with research on the role of temporal perspective in motivating individual action. Here it has also been shown that a future time perspective increases the consistency between individual action and broader attitudes and ideals (i.e. reduces the attitude-behavior gap, Rabinovich et al., 2010)<sup>2</sup>. These findings across different domains combine to show that time is a relevant context within which to understand a range of individual and group-related behavior.



Overall, the present paper provides an important link between previous research on group stereotyping and the developing area of research on temporal factors in social psychological processes. It demonstrates that temporal focus may be an important factor to consider when exploring responses to ingroup devaluation. At a theoretical level, our findings suggest that these responses depend not only on relatively static factors, such as perceptions of permeability and stability of social structure (e.g., Ellemers, van Knippenberg, & Wilke, 1990; Jackson, et al., 1996), but may also be affected by contextually-induced (and subtly manipulated) factors such as temporal focus. At an applied level, this suggests that a successful strategy aiming at affecting responses to negative stereotyping needs to include not only deconstruction of past and present social environments, but also an inspiring vision of the group's future that would shift the focus of attention to stereotype-inconsistent possibilities and motivate action to realize these.

#### *Limitations and further directions*

Although the findings demonstrate support for our predictions, it is not clear to what extent the effects of temporal focus that we have observed depend on a specific concept of the future, rather than more diffuse orientations in time. Our participants (mainly young people) may see the future as an opportunity for change and improvement. Although people generally do see progress as linear and the future as brighter than the past or the present (e.g., Wilson & Ross, 2001), this idea of inevitable progress may not be universally shared. Among chronically disadvantaged or marginalized groups, the future may be seen as either unpromising or unattainably remote, and therefore, thinking about the future may be less inspiring. On the other hand, it should be noted that in the present studies the effects of temporal focus seem to be due to an undermining effect of a past focus rather than elevating effect of a

future focus. In this sense, the effect of future focus seems *restorative* rather than straightforwardly beneficial. Although the young samples used in the present research may be unusually optimistic about the future, it is also unlikely that they would have an especially stark picture of the past. Thus the effects of this side of the manipulation are less easily explained with reference to the sample characteristics. Notwithstanding this, future research may need to explore the relationship between the observed effects and specific perceptions of the future and the past, and among participants from more diverse samples than represented here, particularly focusing on chronically (rather than situationally) devalued groups.

Although Study 2 demonstrated that temporal focus had no effect on responses to positive ingroup evaluations, at a theoretical level one may still wonder whether group members may be “locked in” positive ingroup evaluations when focused on the past. Our position is that the effects of temporal focus are specific to ingroup devaluation. In the context of devaluation, the future offers hope and the possibility for change—that is, in the future at least the world can be different and unconstrained by negative ingroup evaluations. The future does not hold this distinct meaning for positively evaluated groups. Although the future may also seem bright for such groups, this is not so different from their present or past. Consequently, we did not expect and did not find an effect of temporal focus in response to positive ingroup evaluations (Study 2). Notwithstanding this, future research may benefit from exploring the role of temporal focus on positively evaluated groups further. For example, in the context of social change and in response to the movement of other groups, it is possible that certain valued groups may feel that the future holds threat to their high status (e.g., ethnic majorities in increasingly ethnically diverse areas). In the context of changing intergroup relations, a focus on the future may not have a positive

impact on self-perception, although it may still elicit certain forms of action (e.g., discrimination).

Finally, it is also important to note that the present research focused on a domain inherently related to the concept of the future. Environmental protection is a future-oriented behavior. Although previous research demonstrates that temporal focus affects patterns of ingroup stereotyping in other domains (e.g., warmth and competence stereotypes among women: Morton et al., in press), future research could explore whether these effects translate into action in domains that are not explicitly future-oriented. Similarly, it would seem important for future research to explore these ideas in relation to actual behaviour in response to adverse ingroup evaluations, rather than simply relevant intentions.

### *Conclusion*

This paper explored the effect of temporal focus on responses to contextually-induced negative ingroup appraisals. In line with predictions based on previous research on the role of temporal factors in self-perception and group processes, our studies show that a past temporal focus results in group members expressing behavioral intentions that are consistent with negative ingroup evaluations, whereas a future focus prompts intentions that might challenge or contradict such group evaluations. In other words, participants who were focused on the future seemed able to step outside the negative evaluations of their group. This effect was demonstrated to be present only for highly identified group members, suggesting that participants' responses are contingent on a psychological connection to the negatively evaluated group. Further the combined effects of temporal focus and identification were mediated through individual self-esteem, demonstrating the interplay between individual- and group-level processes on intentions. More generally, the results

demonstrate that group members' responses to ingroup devaluation can be predicated on whether they are looking back on the past or forward towards the future. When focused on the past, people may become "locked into" negative evaluations of their group. A focus on the future, by comparison, can be liberating and may permit people to think and act in ways that free them from negative stereotypes.

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## Notes

1. Tests for possible interactions between self-esteem and temporal focus and between self-esteem and identification on intentions were not significant ( $\beta = -.110, p = .520$  and  $\beta = -.145, p = .174$  respectively) further supporting the interpretation of mediated moderation rather than moderated mediation (Muller, Judd, & Yzerbyt, 2005).
2. Some previous research has demonstrated that focus on the group's past can lead members of disadvantaged groups to be more optimistic than when they focus on the group's future (e.g., Eibach & Ehrlinger, 2006). In these studies participants were asked to focus specifically on the past conditions of their group – a situation that results in positive intragroup comparison (see also Spoor & Schmitt, 2011). In contrast, our studies prime temporal focus in an unspecific way and without encouraging participants to make explicit comparisons with their group's past. In this way we avoid intragroup comparison and instead focus on the effect that (general) temporal focus has on responses to negative intergroup comparisons.

Figure Captions

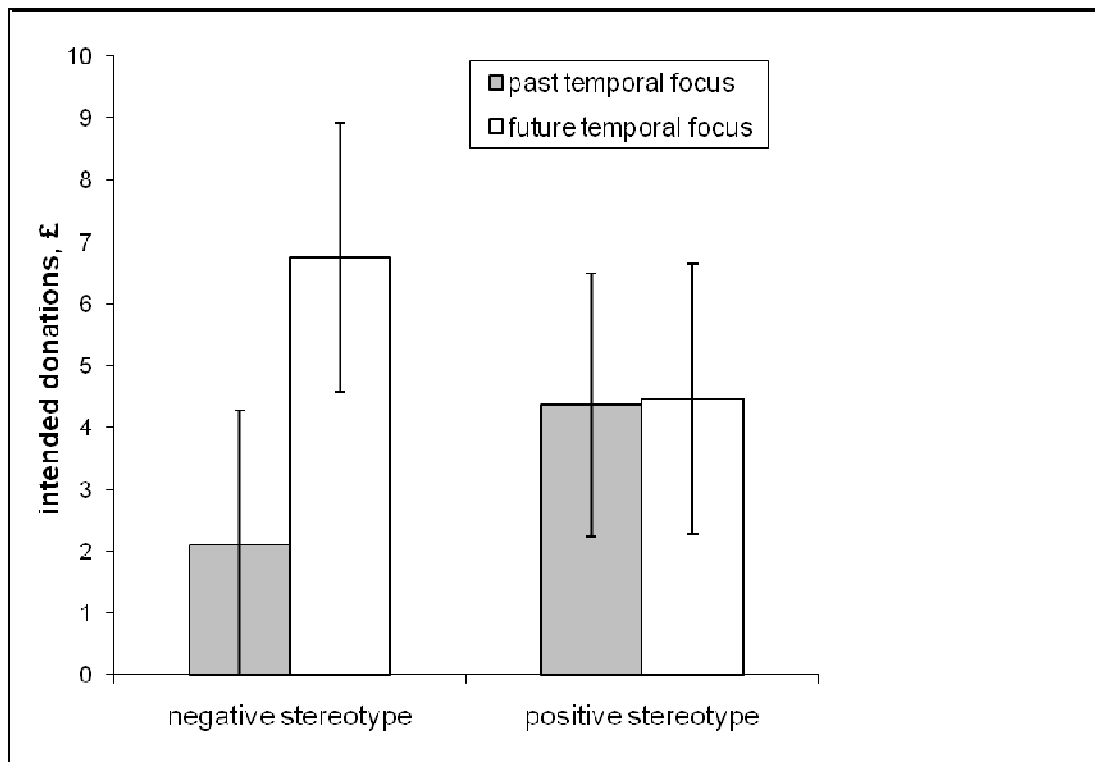
*Figure 1.* Intended amount of donation as a function of temporal focus and ingroup stereotype (Study 2).

*Figure 2.* Stereotype-relevant intentions as a function of temporal focus and group identification (Study 3).

*Figure 3.* Predicted mediated moderation model for responses to contextual ingroup devaluation (Study 4).

*Figure 4.* Stereotype-relevant intentions as a function of temporal focus and group identification (Study 4).

*Figure 5.* Self-esteem following contextual ingroup devaluation as a function of temporal focus and group identification (Study 4).



*Note.* Error bars represent 95% confidence interval for means.

