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PERCEIVED CONTROL AND INTERGROUP DISCRIMINATION

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ABSTRACT

This study examines the relationship between perceived control and intergroup discrimination. Two hypotheses are tested. The first states that the display of intergroup discrimination will lead to an increased sense of perceived control. The second states that low levels of perceived control (manipulated through a control-threatening exclusion paradigm) will lead to increased intergroup discrimination. Clear support was found for the first hypothesis. Some support was found for the second hypothesis. New Zealanders who allocated more white noise to out-group members (i.e., Asians) than in-group members (i.e., New Zealanders) reported increased perceptions of control. Compared to those in the baseline, participants with lower and higher perceptions of control both showed increased discrimination. Intergroup discrimination was positively associated with increased perceptions of control. Partial correlation revealed that this relationship was not a function of self-uncertainty, group-specific esteem or social identity.

INTRODUCTION

This investigation examined the link between perceptions of control and intergroup discrimination. To date, much of the research investigating the motivational ramifications of intergroup discrimination has focused on self-esteem. Inspired by social identity theory (SIT,

Tajfel and Turner 1979), the work in this area has produced an avalanche of empirical findings (Aberson, Healey, and Romero 2000; Hunter et al. 2011; Hunter, Reid, Stokell and Platow 2000; Rubin and Hewstone 1998) and stimulated a great deal of theoretical debate (Hogg and Abrams 1990; Turner, 1999). Whatever the eventual outcome of such debates (Hunter et al. 2005; Platow, Hunter, Haslam and Reicher 2015), one thing is clear: The preoccupation with the role of self-esteem in intergroup discrimination has led to the neglect of the potential contribution of other motives (Hunter et al. 2017).

One motive ignored in this regard relates to subjective control, a person's "perceived ability to alter events and achieve desired outcomes" (Greenaway et al. 2015, p. 53).
The relative neglect of perceived control as a motive for intergroup discrimination is perplexing. The desire to feel that one is in control (as opposed to actually being in control) is a core human motive (Fiske 2010; Williams, 2009). The feeling that one is in control provides a range of psychological benefits, and when compromised results in series of negative outcomes (Fiske 2010; Wu and Yao, 2007). Evidence for this premise has been demonstrated in a number of experiments (Baumeister and DeWall 2005; Twenge, Baumeister, Dewall, Ciarocco and Bartels 2007; Warburton, Williams and Cairns 2006). This research which uses powerful 'control-threatening exclusion paradigms' (Williams 2009) shows that when the perception of control is threatened this fosters (a) reductions in self-restraint, executive function, cognitive effort, empathy, and (b) increased aggression.

In comparison to the research on self-esteem, few studies have assessed the link between perceptions of control and intergroup discrimination. What research there is generally points to the same broad conclusion. Low levels of subjective control and threats to one's perceptions of control lead to increased patterns of in-group favouritism, ethnocentrism, prejudice and out-group derogation (Agroskin and Jonas 2013, Fritsche et al. 2013; Greenaway, Louis, Hornsey and Jones 2014; Rankin and Hunter 2017). Such findings are consistent with the idea that a perceived loss of control motivates intergroup discrimination. The major underlying (and so far, untested) assumption of this work is that, discrimination functions to re-establish perceptions of control.

Whilst it is possible that perceptions of control maybe especially salient amongst those whose sense of control has recently been undermined, we argue that intergroup discrimination may additionally function (via the demonstration of in-group superiority) to enhance one's sense of perceived control. As such, perceptions of control may function as both a cause and an effect in relation to intergroup discrimination. The current study sought to address this possibility. Two hypotheses were subsequently tested. The first was that intergroup discrimination would lead to an increased perception of control. The second was that low levels of perceived control would lead to increased intergroup discrimination.

Method

Participants and design

One-hundred and eighty undergraduates (52 men and 128 women) attending the University of Otago took part in this study. Using a control-threatening exclusion paradigm to manipulate

perceived levels of control, participants were randomly presented with inclusion, exclusion or no feedback. Participants were assigned to a discrimination (i.e., given the opportunity to show intergroup discrimination) or non-discrimination (i.e., precluded from showing intergroup discrimination) condition. Those in the discrimination condition (n = 90) were given the opportunity allocate different amounts of white noise to in-group (New Zealanders) members and (Asians) out-group members. Those in the non-discrimination condition (n = 90) were given the opportunity to either allocate equal amounts of white noise to in-group and out-group members (n = 18), to in-group members only (n = 18), out-group members only (n = 18), individuals not identified as group members (n = 18) and two competing out-groups (n = 18). Perceptions of control were assessed prior to and following the allocation tasks.

Materials and procedure

To manipulate control, we used a 'control-threatening exclusion paradigm' (Williams 2009, p. 301). Unlike other methods of exclusion this kind of technique provides 'a substantial threat to control beyond simple exclusion' (Warburton et al 2006, p. 2.15) and appears to have less impact on other motives like belonging, self-esteem and meaning (Bernstein and Claypool 2012). Warburton and colleagues outline three main reasons for this. First, because the exclusion is based on the choices of others, the participant's control is effectively removed. Second, in so far as participants' perceptions of their interactive experiences during the group discussion are unrelated to their eventual feedback their sense of being able to predict the actions of others is undermined. Third, when exclusion comes from the members of a group threats to control are magnified (Warburton et al. 2006; Williams 2009).

Participants were tested in groups of 6 - 10. On arrival, participants were seated around a large table. The study was introduced as being concerned with the self-perceptions, social judgments and decisions of people from different national groups. Participants were informed that they would take part in a group discussion and then complete a short series of questionnaire tasks that would be followed by a 10-minute intergroup interaction exercise. This (bogus) exercise was described as one in as which there would be a 5-minute interaction period spent with New Zealanders (i.e., in-group members) and a 5-minute interaction spent with Asians (out-group members). Asians were said to be involved in an identical experiment being carried out concurrently in an adjacent laboratory.

Following Leary, Tambor, Terdal, and Downs (1995), all participants were given name tags on which they wrote their first name. After this, they were then instructed to learn each other's names and then engage in a group discussion. This was facilitated by having each participant publicly outline 'three things' that New Zealanders 'do often, do well and don't do well' (Haslam 2004). Participants were then asked to write down the names of two people from the group that they would like to work with. The experimenter collected and ostensibly marked the responses. Those in the exclusion condition were taken outside and informed that no-one wanted to work with them (i.e., "I'm sorry to tell you this, but no-one choose to work with you"). Those in the inclusion condition were taken outside and informed that everyone wanted to work with them (i.e., "I have good news for you, everyone chose to work with you"). Participants in the no feedback (baseline) condition followed the same procedure as those in the preceding conditions excepting that they were not given feedback.

On arrival back in to the laboratory participants were taken to a separate desk where they completed a measure of perceived control. Control was assessed using 4-items ('I feel that I am in control, I feel that I have an effect, I feel that I have influence, I feel that I can talk to other people*',* alpha= *.78*) taken from van Beest and Williams (2006) and Zadro, Williams and Richardson (2004). Responses to all questions were answered using a Likert scale (1-Not at all, 7-very much) and on the basis of how participants felt 'right now'. Greater scores reflected higher control.

All participants then completed 12, 13-choice distribution matrices. The numerical values normally used to denote 'points' in each set of matrices were substituted to represent times (in seconds) that were to be spent listening to white noise.[2] After the A, B and C type matrices outlined by Bourhis, Sachdev, and Gagnon (1994, p. 212), these allowed participants to show intergroup discrimination (i.e., allocate more white noise to the out-group than the in-group), intergroup fairness or parity (i.e., equal amounts of white noise to in-group and out-group members) or reverse discrimination (i.e., allocate more white noise to the in-group than the out-group). Following other researchers (Hunter et al. 2005; Oldmeadow and Fiske 2010; Platow et al. 1997), we used the difference in the total amount of white noise allocated to in-group and out-group members, rather than pull scores (which are designed to provide insight into the use of different allocation strategies), to assess levels of discrimination.

Participants in the non-discrimination condition completed one of five variants of the matrices used in the discrimination condition. In the first, values were modified so that only equal amounts of white noise could be allocated to in-group and out-group members. Each of the remaining variants used the same matrix values as the discrimination condition. In the second, white noise was allocated to two sets of in-group members (i.e., New Zealanders). In the third, white noise was allocated to two sets of out-group members (i.e., Asians). In the fourth, white noise was allocated to individuals not identified as group members (e.g., person A and person B). In the fifth, white noise was allocated to two sets of competing out-group members (i.e., Australians and South Africans). This set of matrices was included on the basis of research indicating that threats to control impact on pattern recognition (Whitson and Galinsky, 2008), and that control may be enhanced via the application of structure and clear boundaries (Cutright, Bettman, and Fitzsimons 2013). Thus, this task was incorporated to guard against the possibility that enhanced control was a function of differentiating between two competing groups or categorizing such groups into meaningful categories.

To ensure familiarity of the stimulus sound in question, a 10-second sample blast of white noise was administered to all participants. Immediately following the completion of their respective allocation tasks, participants again completed the measure of control (e.g., 'I feel that I am in control'). To examine the possibility that increases in control (i.e., following the display of intergroup discrimination) were a function of self-uncertainty (Hogg 2007), personal esteem, group-specific esteem or social identification (Tajfel and Turner 1979), scales assessing each of these constructs were presented. Self-uncertainty ('My beliefs about myself seem to change very frequently' alpha .75) was measured using 6-items taken from the self-concept clarity scale (Campbell et al. 1996). Responses were scored via Likert scale (1-strongly disagree to 8-strongly agree). Group specific esteem ('I feel good about the New Zealand group' alpha = .72) was

measured using the group esteem sub-scale (Ellemers, Kortekaas, and Ouwerkerk 1999). Social identification ('I identify with the New Zealand group' alpha = .77) was assessed by combining the 4-item identity importance and 3-item social categorization sub-scales (Luhtanen and Crocker 1992; Ellemers et al. 1999). Personal self-esteem was measured using the 3-item state self-esteem sub-scale ('I good about myself' alpha = .77), taken from Zadro et al. (2004). Responses were recorded on Likert scales (7-agree strongly, 1-disagree strongly) and all were coded so that high scores reflected greater levels of the construct under consideration.[3]

Results

A priori analyses indicated no gender differences across any of the variables included (all *p*'s > .36), so these are not reported below. Additional analyses revealed no differences in the pre- and post-allocation task (hereafter referred to as time 1 and time 2) control scores of those who completed the five types of allocation matrices in the non-discrimination condition (all *p*'s > .11). For this reason, all responses were combined to form a single non-discrimination condition.

Manipulation checks

To examine whether participants differed across, self-uncertainty, group specific esteem, social identity and personal self-esteem as a function of feedback (inclusion, exclusion and baseline) and condition (discrimination vs. non-discrimination) we conducted a series of 2 x 3 between variable ANOVA's. Significant main effects were for feedback only (all other *p*'s > .18). One effect emerged for social identity, F (2, 174) = 3.32, $p < .05$, Eta squared = .04. Between group t-tests revealed that included (M = 38.33, SD = 6.95), t (118) = 3.51, $p < .001$, participants reported higher identity than excluded (M = 35.83, SD = 6.53), t (118) = 2.02, $p < .05$, and baseline participants (M = 35.92, SD = 4.19), t (118) = 2.31, $p < .02$. No differences were found between excluded and baseline participants, t (118) = .08, p = 93. A second effect was found for self-esteem F (2, 174) = 5.69, $p < .005$, Eta squared = .06. Between groups t-tests revealed that included (M = 17.35, SD = 2.56), participants reported higher self-esteem than excluded (M = 15.26, SD = 4.03), t (118) = 3.37, $p < .005$, but not baseline participants (M = 16.41, SD = 2.86), t (118) = 1.69, $p < .10$. No differences were found between excluded and baseline participants, t (118) = 1.68, p = .10. In each of the preceding analyses, only effects with a t value greater than 2.24 were significant when using Dunn's correction ($p < .05$).

Main Analysis

Four outliers were identified amongst white noise allocations. These participants gave extremely low levels of white noise to the in-group (M = 85.67 secs) and extremely high levels of white noise to the out-group (M = 223.33 secs). Following Tabachnik and Fidell (2007) these values were transformed so that each value outside the mean value ±3 SD was equal the next closest value (i.e., a value within 3 SD) + 1. To assess how participants in the discrimination condition allocated white noise to in-group and out-group members, a 3 (feedback: inclusion, exclusion, baseline) x 2 (target group: ingroup vs. outgroup) mixed model measures analysis of variance (ANOVA) was conducted. The first factor was between subjects. The second factor was within subjects. Cell means are presented in Table 1. Two main effects emerged. The first was for feedback, F (2, 87) = 3.53, $p < .05$, Eta squared = .08. Between groups t-tests, revealed a

tendency for excluded participants (M = 308.23, SD = 33.79) to allocate less white noise overall than did those in the included (M = 322.10, SD = 25.16), t (58) = 1.80, p < .08, and baseline (M = 327.63, SD = 27.60), t (58) = 2.43, p < .02, conditions. The second was for target group, F (1, 87) = 12.06, p < .001, Eta squared = .13. Overall, more white noise was allocated to out-group members, (M = 162.67, SD = 13.46) than in-group members (M = 156.65, SD = 20.18). This effect was qualified by a marginal interaction between feedback and target group F (2, 87) = 3.16, p = .05, Eta squared = .07.

Table 1. ***Seconds of white noise allocated to in-group and out-group members by inclusion, exclusion and baseline condition.***

Condition	In-group	Out-group
Inclusion	155.87 (20.56)	166.23 (11.28)*
Exclusion	150.40 (19.15)	157.83 (16.27)*
Baseline	163.70 (19.16)	163.93 (11.17)

* p <. 05 more white noise to the out-group than the in-group by Dunn's test

Planned comparisons revealed that participants who received inclusion, t (29) = 2.63, p < .02, Eta squared = .19, and exclusion feedback, t (29) = 3.69, p < .002, Eta squared = .32, both allocated more white noise to out-group than in-group members (Dunn's critical alpha = 2.57). No differences were found in the baseline condition t (29) = .09, p =.93).

To establish the impact of feedback on control scores (at time 1), a one-way ANOVA was conducted. An effect was found, F (2, 177) = 10.89, p <. 001, Eta squared = .11. Planned comparisons revealed that included participants (M = 17.76, SD = 4.12), reported higher levels of control than did baseline participants (M = 16.08, SD = 3.46), t (118) = 2.37, p < .02. Excluded participants reported lower levels of control than did baseline participants, (M = 14.41, SD = 4.17), t (118) = 2.43, p < .02 (Dunn's critical alpha = 2.24). These findings indicate that inclusion increases control whilst exclusion decreases control.

To examine the control scores over the course of the study a 3 (feedback: inclusion, exclusion, baseline) x 2 (condition: discrimination vs. non-discrimination) x 2 (time of control measurement; time 1 vs. time 2) mixed model ANOVA was conducted. The first and second variables were between subjects. The third variable was within subjects. Cell means are presented in Table 2. An interaction between discrimination and time of control measurement was found, F (1, 174) = 9.03, p < .004, Eta squared = .05. Post hoc comparisons contrasted the time 1 and time 2 control scores of participants in each condition. Participants in the discrimination condition experienced increased control following the display of discrimination (M = 15.91, SD = 4.19 vs. M = 16.98, SD = 3.74), t (89) = 3.56, p < .002, Eta squared = .12 (Dunn's critical alpha = 2.89). No differences were found in the non-discrimination condition (M = 16.26, SD = 4.12 vs. M = 15.22, SD = 3.98), t (119) = 1.40, p = .17. An interaction was found between feedback, discrimination, and time of control measurement, F (2, 174) = 3.39, p < .05, Eta squared = .04. Planned comparisons revealed that participants in the discrimination condition who received inclusion, t (29) = 2.70, p < .02, Eta squared = .20, and exclusion feedback, t (29) = 2.65, p < .02, Eta squared = .20, reported increased levels of control at time 2

(Dunn's critical alpha = 2.57). No differences were found in the baseline condition, t (29) = .41, p = .17.

Table 2. ***Perceptions of control at time 1 and time 2 as a function of opportunity to show intergroup discrimination and feedback.***

Condition	Feedback	Time 1 control	Time 2 control
Discrimination	Inclusion	17.13 (4.78)	18.56 (4.03)*
Non-discrimination	Inclusion	18.40 (3.43)	15.90 (4.29)
Discrimination	Exclusion	14.70 (4.09)	16.26 (3.77)*
Non-discrimination	Exclusion	14.13 (4.31)	14.30 (4.62)
Discrimination	Baseline	15.90 (3.47)	16.10 (2.83)
Non-discrimination	Baseline	16.26 (3.49)	16.33 (3.49)

Note high scores equal greater levels of control.
Time 1 (Pre-allocation) Time 2 (Post-allocation)
* p <. 05, by Dunn's test, increased control from time 1 to time 2.

To assess the relationship between the allocation of white noise and control amongst those in the discrimination condition, we began by creating an index of intergroup discrimination. This was achieved by subtracting the amount of white noise allocated to the in-group from that allocated to the out-group. The index was then correlated with control at time 1 and 2. A significant positive correlation was found between intergroup discrimination and time 2 control, r = .27, p < .05, only (time 1 control, r = .11, p = .32). This suggests that, in overall terms, intergroup discrimination is associated with increasing levels of control. Given, however, that only those who received inclusion and exclusion feedback showed significant intergroup discrimination, we conducted additional correlations amongst these specific participants. Correlations between each of the relevant variables are presented in Table 3.

As may be seen from Table 3, several of the variables are interrelated. Of particular relevance is the positive association found between intergroup discrimination and control at time 2, r = .28, p < .05. This association was further assessed via partial correlation. This relationship remained significant, pr = .33, p < .02, when controlling for self-uncertainty, group specific esteem, group identification and personal esteem. Additional analyses comparing the association of each of the other variables to the index of discrimination whilst controlling for all other variables failed to reveal any significant effects (all p's > .12).

Table 3. Correlations between New Zealanders, intergroup discrimination, time 1 control and time 2 control scores, self-uncertainty, group specific esteem, social identification and personal self-esteem.

	1.	2.	3.	4.	5.	6.	7.
1.		.07	.28*	-.04	.13	.12	.07
2.			.75**	.07	.33*	.17	.31*
3.				-.06	.46**	.37**	.47**
4.					.12	.08	-.14
5.						.75**	.45**

6.	.28*
7.	

* p <. 05, ** p < .01

1. Intergroup discrimination. 2. Time 1 control. 3. Time 2 control. 4. Self-uncertainty. 5. Group-specific esteem. 6. Social identification. 7. Personal self-esteem.

GENERAL DISCUSSSION

In this study two hypotheses were tested. The first was that the display of intergroup discrimination would lead to an increased sense of perceived control. The second stated that lower levels of perceived control lead to increased intergroup discrimination. Clear support was found for the first hypotheses. New Zealanders who allocated more white noise to out-group members than in-group members reported increased perceptions of control. Partial correlation, revealed that these findings were not a function of self-uncertainty, group-specific esteem or social identity.

Only some support was found for the second hypothesis. In comparison to baseline participants, those with both lower and higher levels of perceived control (and who thus received inclusion and exclusion feedback) showed increased discrimination. Although, the pattern of discrimination found amongst those with higher perceptions of control was contrary to expectations, in overall terms, our findings nevertheless reveal that perceived control functions as both a predictor and outcome in relation to intergroup discrimination.

To a certain extent, our data are in keeping with those reported by other researchers who have examined the link between control and intergroup behaviour (Agroskin and Jonas, 2013; Fritsche et al. 2013; Rankin and Hunter, 2017). Each of these researchers reported evidence indicating that threats to perceived control led to heightened discrimination. However, although we replicated the basic pattern of results outlined by these authors, our findings additionally revealed that increased discrimination is likely amongst those whose sense of control has been heightened following inclusion feedback.

In this respect our results are in keeping with a growing body of evidence showing that those who gain access to power, privilege, and status do not necessarily respond with tolerance and equanimity (Aberson et al. 2000; Branscombe, Schmitt, and Schiffaur, 2007; Hirsch, Galinsky and Zong, 2011). Such findings provide a cautionary note to those who would argue that enhancing control might reduce prejudice. They also provide direct evidence for the concerns of Greenaway et al. These authors, in discussing a non-significant tendency found in their third study, cautioned that increasing the control of the already secure "can have unforeseen negative consequences" (Greenaway et al. 2014 p. 13).

Further research is of course required in order that we better understand the circumstances in which perceptions of high and low control promotes intergroup discrimination. In concluding we would, nevertheless, note that the results of the present investigation are the first to demonstrate that (a) intergroup discrimination functions to elevate perceived control and that (b) participants with both high and low levels of perceived control show increased discrimination. The extent of this relationship is relatively modest (pr = .33). As such, we would therefore not wish to

undermine the relevance of other motives, socio-structural factors, and wider contextual variables involved in intergroup hostility (Hunter et al. 2017; Platow and Hunter, 2001; Staub, 1989; Tajfel and Turner, 1979). That said, our findings do, nevertheless, indicate that motives other than self-esteem do contribute to our understanding of intergroup discrimination.

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Footnotes

1. The items from each of the three scales were included on the basis of a pilot test ($N = 55$). This analysis revealed that belonging ($r = -.06$, $p = .42$), self-esteem ($r = .09$, $p = .26$) and meaning ($r = -.06$, $p = .54$) were not associated with control. These findings suggest that control, as examined in the current investigation, is relatively independent of belonging, self-esteem and meaning.

2. Two independent pilot tests (n = 37, n = 24) using 9-point Likert scales (9-very much to 1-very little) revealed that the allocation of white noise to in-group and out-group members was judged to cause more personal distress, be more unpleasant, elicit higher levels of negative affect, and have more adverse effects on recipients than did (a) the allocation of points to in-group and out-group members and (b) trait ratings of in-group and out-group members (all p's $< .001$, each $\eta^2 > .42$).

3. A number of additional checks were included to assess the efficacy of our feedback manipulation. In comparison to those who received inclusion feedback, those who received exclusion feedback - felt more excluded ($M = 5.58$, $SD = 2.61$ *vs.* $M = 2.88$, $SD = 2.23$), less included ($M = 3.62$, $SD = 2.15$ *vs.* $M = 6.28$, $SD = 2.01$), and experienced more negative affect ($M = 3.38$, $SD = 1.46$ *vs.* $M = 2.80$, $SD = 1.22$, each $p < .001$, each $\eta^2 > .12$).

4. This finding was actually slightly stronger when belonging, meaning, self-esteem and negative affect were included in the analysis ($sr = .34$, $p < .02$).