

Control as an Outcome and Predictor of Intergroup Discrimination

John A Hunter^{1*}, Michael J Platow², Kerry S O'Brien³, Jill Hayhurst¹, Maurice Stringer⁴, Damian Scarf¹, Min Hooi Yong¹, Jayson Trent¹, Joanna Chan¹ and Ted Ruffman¹

¹University of Otago, New Zealand

²Australian National University, Australia

³Monash University, Australia

⁴University of Ulster, Northern Ireland

Received: 📅 October 26, 2018; Published: 📅 November 02, 2018

*Corresponding author: John A Hunter; University of Otago, New Zealand

Abstract

This study examines the relationship between control and intergroup discrimination. Two hypotheses are tested. The first states that the display of intergroup discrimination will lead to an increased sense of control. The second states that low levels of 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 levels of control. Compared to those in the baseline, participants with lower and higher levels of control both showed increased discrimination. Intergroup discrimination was positively associated with increased 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 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 Tajfel & Turner [1], the work in this area has produced an avalanche of empirical findings Aberson et al. [2], Hunter et al. [3], Hunter & Reid et al. [4], Rubin & Hewstone [5] and stimulated a great deal of theoretical debate Hogg & Abrams [6], Turner [7]. Whatever the eventual outcome of such debates Hunter et al. [8], Platow et al. [9], 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. Research assessing the contribution of motives other than self-esteem to our understanding of intergroup discrimination have tended to emphasize distinctiveness and inclusion Brewer [10], Hunter et al. [11], uncertainty reduction Hogg [12], terror management Solomon, Greenberg & Pyszczynski [13], together with group-based dominance and security Duckitt [14]. One motive conspicuously absent from this list is control - "a judgement that one has the ability, resources or opportunities to take action to increase the likelihood of obtaining positive outcomes and avoiding

negative ones" Thompson & Schlehofers [15]. The relative neglect of control as a motive for intergroup discrimination is surprising. The desire for control is a core human motive Fiske [16], Williams [17]. When attained, control provides a range of psychological benefits, when compromised it becomes aversive and predictive of negative outcomes Fiske [16]. Evidence for this premise has been demonstrated in a spate of recent experiments Baumeister & DeWall [18], Twenge et al. [19], Warburton et al. [20]. This research which uses powerful 'control-threatening exclusion paradigms' Williams [17] shows that when control is threatened this fosters

- a. Reductions in self-restraint, executive function, cognitive effort and empathy.
- b. Increased aggression.

There is a wealth of evidence consistent with the idea that people strive to achieve control Thompson & Schlehofers [15], Fiske [16]. This has been recognized by a growing body of researchers who have implicated this motive in a range of collective phenomena relating to group identification Hogg [12], power and stereotypes Fiske [21], (Ostracism) Williams [17], majority-minority group relations Guinote et al. [22], (enemysip) Sullivan et al. [23], social

attribution Hewstone, 1989, scapegoating Rothschild Landau et al. [24], intergroup violence Hunter et al. [25] and (genocide) Staub [26]. In comparison to the research on self-esteem, few studies have assessed the link between control and intergroup discrimination. What research there is generally points to the same broad conclusion. Low control (in the context of threat), and threats to control lead to increased patterns of ethnocentrism, prejudice and out-group derogation Agroskin & Jonas [27], Fritsche et al. [28], Greenaway et al. [29], Rankin & Hunter [52]. Such findings are consistent with the idea that control motivates intergroup discrimination. The major underlying (and so far, untested) assumption of this work is that, discrimination functions to re-establish control. Given, however, that people are motivated to achieve control, and that intergroup discrimination is a means by which control can be attained, we argue that intergroup discrimination may additionally function (via the demonstration of in-group superiority) to enhance one's sense of control. As such, control may function as both a cause and an effect in relation to intergroup discrimination.

These ideas are apparent in three strands of work. The first comes from the ideas of Fritsche et al. [30]. This team has offered a group-level control restoration explanation for the mortality salience-world-view defense effects found in terror management studies e.g., Solomon et al. [13]. According to this view, social groups provide their members with a vicarious sense of control (e.g., they exist after the individual's death). Threats such as mortality salience undermine this sense of control and prompt attempts to regain it. This may be achieved by bolstering one's worldview by means of in-group identification and intergroup discrimination Fritsche, et al. [30]. As such, whilst threats to control lead to intergroup discrimination, intergroup discrimination functions to restore control. The second may be derived from the Fiske's discussion of core motives, stereotypes and interdependence Fiske [16,17]. Fiske argues that group members are motivated to achieve control. Out-groups challenge this sense of control by virtue of their existence. This occurs because, in part, out-groups represent an unknown quantity. Compared to the in-group they are 'novel, unfamiliar and unpredictable' Fiske [16]. Moreover, the out-group is assumed to threaten the in-group's goals (i.e., they might compete for resources, be physically dangerous or challenge the in-group's worldview). Control can be retained, however, by means of intergroup discrimination (i.e., distinguishing between the in-group and out-group and the differential application of descriptive and prescriptive stereotypes Fiske [21]). The third way in which control may be related to intergroup discrimination may be found in the social identity perspective Tajfel & Turner [1], Turner et al. [31]. Using this framework there are at least two ways in which the aforementioned variables may be associated (see also Fritsche et al. [30]). The first, as Abrams and Hogg [6], in their critique of the SEH imply, is that (since self-esteem and control are strongly linked, Judge et al. [32] the motive for control can be used to replace the motive for self-esteem. The second can be derived from Hogg's more

recent work on identity uncertainty Hogg [33]. The primary focus of this perspective is with people's strivings to reduce uncertainty and achieve clarity Hogg [33]. However, in light of both conceptual Hogg and Mullin [34] and empirical relationships Wu & Yao [35] between uncertainty and control, we argue that the processes described by Hogg are likely to be applicable to perceptions of control and prediction. Thus, on the basis of Hogg's explication of the processes involved in social categorization, we might predict that

a) when people differentiate between the in-group and out-group in terms of prototypes (or attributes) that prescribe what the members of each group 'should, think, feel and do' Hogg [33].

b) when these prototypes are endorsed or normalized in a group serving manner (i.e., facilitating intergroup discrimination) group members feelings of control are likely to be enhanced.

Further, given that threats to control might exacerbate these processes Hogg [12], we might additionally predict that lower levels of control will lead to increased discrimination.

Summary:

Research assessing the motivational basis of intergroup discrimination has tended to focus on the role of self-esteem to the neglect of other constructs. For this reason, researchers have begun to emphasize the importance of other motives. In keeping with this approach, the aim of the present investigation is to examine the role of one such motive - control - in intergroup discrimination. On the basis of recent empirical findings e.g., Agroskin & Jonas [27], together with research and theory derived from the social identity perspective Tajfel & Turner [1], Turner, et al. [31], Fiske's analysis of core motives Fiske [16], and the insights of Fritsche and colleagues Fritsche et al. [30], there is good reason to expect a link between intergroup discrimination and control. The current study, in addressing this question, sought to test two hypotheses. The first states that intergroup discrimination will lead to an increased sense of control. The second states that low levels of control will 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.

Method 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. [20] and appears to have less impact on other motives like belonging, self-esteem and meaning Bernstein & Claypool [36]. Williams 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 participant's 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. [20], Williams [17]. 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 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 et al. [37], 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 publically outline 'three things' that New Zealanders 'do often, do well and don't do well' Haslam [38]. 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', $\alpha = .78$, $N = 180$) taken from van Beest and Williams [20], Zadro et al. [39]. Also included were scales tapping self-esteem ('I feel good about myself', $\alpha = .80$, $N = 180$), belonging ('I feel that the other people here accept me', $\alpha = .69$, $N = 180$) and meaning ('I feel that my contribution is meaningful', $\alpha = .74$). These three constructs were assessed using 4-items each from van Beest and Williams [20] and Zadro et al. [39]. All have been shown to be effected by certain forms of social exclusion Williams [17] and were included as manipulation checks in order that their relative contribution to our control-threat exclusion paradigm be examined. Responses to all questions were answered using Likert scales (1-Not at all, 7-very much) and on the basis of how participants felt 'right now'. Greater scores reflected higher control, belonging, self-esteem and meaning. 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. After the A, B and C type matrices outlined by Bourhis et al. [40], 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. [8], Oldmeadow & Fiske [41]. Platow et al. [42], 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 & Galinsky [43], and that control may be enhanced via the application of structure and clear boundaries Cutright et al. [44]. 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'). As a manipulation check to examine the possibility that increases in control (i.e., following the display of intergroup discrimination) were a function of self-uncertainty Hogg [33], group-specific esteem or social identification Tajfel & Turner [1], scales assessing each of these constructs were presented. Self-uncertainty ('My beliefs about myself seem to change very frequently' $\alpha = .75$, $n = 180$) was measured using 6-items taken from the self-concept clarity scale Campbell et al. [45]. Responses were scored via Likert scale (1-strongly disagree to 8-strongly agree). Group specific esteem ('I feel good about the New Zealand group' $\alpha = .72$, $N = 180$) was measured using the group esteem sub-scale Ellemers et al. [46]. Social identification ('I identify with the New Zealand group' $\alpha = .77$, $N = 180$) was assessed by combining the identity importance and social categorization sub-scales Ellemers et al. [46], Luhtanen & Crocker [47]. 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.

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 belonging, self-esteem, meaning, self-uncertainty, group specific esteem, and social identity 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). Effects emerged for belonging, $F(2, 174) = 6.47$, $p < .003$, $\eta^2 = .07$, self-esteem, $F(2, 174) = 7.45$, $p < .05$, $\eta^2 = .08$ and social identity, $F(2, 174) = 3.32$, $p < .05$, $\eta^2 = .04$. A series of between group t-tests were then conducted. With respect to belonging, included participants ($M = 20.25$, $SD = 3.61$), $t(118) = 3.10$, $p < .002$, reported higher belonging than did excluded ($M = 17.88$, $SD = 4.68$), but not baseline participants ($M = 19.43$, $SD = 2.79$), $t(118) = 1.30$, $p = .20$. Excluded participants had lower belonging than did baseline participants, $t(118) = 2.27$, $p < .03$. With respect to self-esteem, included participants ($M = 22.86$, $SD = 3.52$), $t(118) = 3.80$, $p < .001$, had higher self-esteem than excluded ($M = 19.83$, $SD = 5.05$), but not baseline participants ($M = 21.56$, $SD = 2.47$), $t(118) = 1.81$, $p = .07$. Excluded participants had lower self-esteem than did baseline participants, $t(118) = 2.02$, $p < .05$. With respect to social identity,

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, $t(118) = .08$, $p = .93$. In each of the preceding analyses, only effects with a t value greater than 2.24 were significant when using Dunn's correction ($p < .05$). To examine how the feedback (inclusion, exclusion and baseline) in our control-threatening exclusion paradigm impacted on control (at time 1) as opposed to related constructs like belonging, self-esteem and meaning we conducted a series of standard multiple regressions. For each analysis two dummy variables were constructed. The first, 'inclusion vs. baseline' was coded so that everyone who received inclusion feedback received a 1 and everyone who received no-feedback was coded as 0. The second, 'exclusion vs. baseline' was coded so that everyone who received exclusion feedback received a 1 and everyone who received no-feedback was coded as 0. In the first analysis the two dummy variables together with belonging, self-esteem and meaning were entered as predictors. Control was entered as the dependent variable. Correlations between the variables are presented in Table 1.

Table 1: Correlations between Dummy variable one, Dummy variable two, Control, Belonging, Self-esteem and Meaning. 1. Dummy variable one, 2 Dummy variable two, 3. control.

	1.	2.	3.	4.	5.	6.
1.		-.50**	.29**	.19*	.23**	.09
2.			-.28**	-.24**	-.25**	-.13
3.				.17*	.13	.15*
4.					.58**	.40**
5.						.30**

- i. Dummy variable one
- ii. Dummy variable two
- iii. Control
- iv. Belonging
- v. Self-esteem
- vi. Meaning

Dummy variable one (inclusion vs. baseline), Dummy variable two (exclusion vs. baseline). The overall the results of this analysis were significant with respect to control, $R^2 = .12$, $F(5, 173) = 4.73$, $p < .001$. Inspection of beta weights revealed a significantly positive effect for 'inclusion vs. baseline' (dummy variable one), $\beta = .18$, $p < .05$, and a significantly negative effect for 'exclusion vs. baseline' (dummy variable two), $\beta = -.17$, $p < .05$. No significant effects were found for belonging, $\beta = .07$, $p = .47$, self-esteem, $\beta = -.03$, $p = .77$, or meaning $\beta = .09$, $p = .25$. These effects were confirmed via semi partial correlation. The correlation between 'inclusion vs. baseline'

and control remained significant, $sr = +.17$, $p < .05$, when each of the other variables were partialled out. A similarly significant negative effect was found between 'exclusion vs. baseline' and control, when each of the other variables were partialled out, $sr = -.15$, $p < .05$. In the remaining analyses all variables (excepting the two dummy variables) were in turn entered as the dependent variable whilst each of the remaining variables were entered as independent variables. Overall, significant effects were found for belonging, $R^2 = .40$, $F(5, 173) = 22.95$, $p < .001$, self-esteem, $R^2 = .12$, $F(5, 173) = 19.52$, $p < .001$, and meaning, $R^2 = .12$, $F(5, 173) = 7.17$, $p < .001$. Inspection of beta weights, with respect to belonging, $\beta = .07$, $p = .31$, $\beta = .01$, $p = .91$, self-esteem, $\beta = .08$, $p = .22$, $\beta = .09$, $p = .29$, and meaning, $\beta = .02$, $p = .83$, $\beta = -.03$, $p = .72$, found no evidence of a significant relationship with either the first or second dummy variable. These findings were confirmed through partial correlation. Neither belonging, $sr = .01$, $p = .92$, $sr = -.08$, $p = .34$, self-esteem, $sr = .10$, $p = .22$, $sr = -.09$, $p = .22$, or meaning, $sr = -.03$, $p = .72$, $sr = -.02$, $p = .83$, made a unique contribution to dummy variable one or two. These results suggest that our feedback manipulations were directly associated with control but not belonging, personal self-esteem or meaning.

Intergroup Discrimination: Four outliers were identified. 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 ($M = 217.33$ secs). Following Tabachnik & Fidell [48] 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) \times 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 2. Two main effects emerged. The first was for feedback, $F(2, 87) = 3.53$, $p < .05$, $\eta^2 = .08$. 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, $F(1, 87) = 12.06$, $p < .001$, $\eta^2 = .13$. 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 $F(2, 87) = 3.16$, $p = .05$, $\eta^2 = .07$. Planned comparisons revealed that participants who received inclusion, $t(29) = 2.63$, $p < .02$, $\eta^2 = .19$, and exclusion feedback, $t(29) = 3.69$, $p < .002$, $\eta^2 = .32$, 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 $t(29) = .09$, $p = .93$.

Table 2: 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.

Control: To establish the impact of feedback on control scores (at time 1), a one-way ANOVA was conducted. An effect was found, $F(2, 177) = 10.89$, $p < .001$, $\eta^2 = .11$. 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) \times 2 (condition: discrimination vs. non-discrimination) \times 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 3.

Table 3: 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)

An interaction between discrimination and time of control measurement was found, $F(1, 174) = 9.03$, $p < .004$, $h = .05$. 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. $M = 16.98$, $SD = 3.74$), $t(89) = 3.56$, $p < .002$, $\eta^2 = .12$ (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, $F(2, 174) = 3.39$, $p < .05$, $\eta^2 = .04$. Planned comparisons revealed that participants in the

discrimination condition who received inclusion, $t(29) = 2.70$, $p < .02$, $\eta^2 = .20$, and exclusion feedback, $t(29) = 2.65$, $p < .02$, $\eta^2 = .20$, reported increased levels of control at time 2 (Dunn's critical alpha = 2.57). No differences were found in the baseline condition, $t(59) = .41$, $p = .17$.

Intergroup Discrimination and Perceived Control: 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 4. As may be seen from Table 4, 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, $r = .32$, $p < .02$, when controlling for self-uncertainty, group specific esteem and group identification. 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 4: Correlations between New Zealanders, intergroup discrimination, time 1 control and time 2 control scores, self-uncertainty, group specific esteem and social identification. 1. Intergroup discrimination. 2. Time 1 control. 3. Time 2 control. 4. Self-uncertainty. 5. Group-specific esteem. 6. Social identification.

	1.	2.	3.	4.	5.	6.
1.		.07	.28*	-.04	.13	.12
2.			+.75**	.07	.33*	.17
3.				-.06	.46**	.37**
4.					.12	.08
5.						.75**

Discussion

In this study two hypotheses were tested. The first stated that the display of intergroup discrimination would lead to an increased sense of control. The second stated that lower levels of 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 control. Intergroup discrimination was associated with increased control at time 2. 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 control (and who thus received inclusion and exclusion feedback) showed increased discrimination. Although, the pattern of discrimination found amongst those with higher control was contrary to expectations, in overall terms, our findings nevertheless reveal that control functions as both a predictor and outcome in relation to intergroup discrimination. In this respect, our findings are, therefore, broadly consistent with theoretical insights derived from the social identity perspective Tajfel & Turner [1], Fiske's [16] discussion of core motives, and the insights of Fritzsche et al. [30]. To a certain extent, our data are also in keeping with those reported by other researchers who have examined the link between control and intergroup behaviour Agroskin & Jonas [27], Fritzsche, et al. [30].

Each of these researchers reported evidence indicating that threats to 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. [2], Branscombe et al. [49], Hirsch et al. [50]. 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. [29]. Further research is of course required in order that we better understand the circumstances in which 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
- b. Participants with both high and low levels of control show increased discrimination.

The extent of this relationship is relatively modest ($r = -.32$). 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. [11], Platow & Hunter [51], Staub [26], Tajfel & Turner [1]. That said, our findings do, nevertheless, indicate that motives other than self-esteem do contribute to our understanding of intergroup discrimination.

References

1. Tajfel H, Turner JC (1979) An integrative theory of intergroup conflict. In S Worchel, WG Austin (Eds.), The social psychology of intergroup relations, pp. 33-47.

2. Aberson CL, Healy M, Romero V (2000) In-group bias and self-esteem: A meta-analysis. *Personality and Social Psychology Review* 4(2): 157-173.
3. Hunter JA, Banks M, O'Brien K, Kafka S, Hayhurst JG, et al. (2011) Intergroup discrimination involving negative outcomes and self-esteem. *Journal of Applied Social Psychology* 41(5): 1145-1174.
4. Hunter JA, Reid JM, Stokell NM, Platow MJ (2000) Social attribution, self-esteem and social identity. *Current Research in Social Psychology* 5: 97-125.
5. Rubin M, Hewstone M (1998) Social identity theory's self-esteem hypothesis: A review and some suggestions for clarification. *Personality and Social Psychology Review* 2(1): 40-62.
6. Hogg MA, Abrams D (1990) Social motivation, self-esteem and social identity. In: D Abrams, MA Hogg (Eds.), *Social identity theory: Constructive and critical advances*. Harvester/Wheatsheaf, New York, USA.
7. Turner JC (1999) Some current issues in research on social identity and self-categorization theories. In N Ellemers, R Spears, B Doosje (Eds.), *Social identity: Context, commitment*, pp. 6-34.
8. Hunter JA, Cox SL, O'Brien KS, Stringer M, Boyes M, et al. (2005) Threats to group value, domain specific self-esteem and intergroup discrimination amongst minimal and national groups. *British Journal of Social Psychology* 44: 329-353.
9. Platow MJ, Hunter JA, Haslam SA, Reicher SD (2015) Reflections on Muzafer Sherif's Legacy in Social Identity and Self-Categorization Theories. In: A Dost Gözkan, D Sönmez Keith (Eds.), *Between and beyond: Life and works of Muzafer Sherif*, Transaction Publications, London pp. 275-305.
10. Brewer MB (1991) The social self: On being the same and different at the same time. *Personality and Social Psychology Bulletin* 17(5): 475-482.
11. Hunter JA, Platow MJ, Moradi, S, Banks, M, Hayhurst J, et al. (2017) Subjective belonging and in-group favoritism. *Journal of Experimental Social Psychology* 73: 136-146.
12. Hogg MA (2000) Subjective uncertainty reduction through self-categorization: A motivational theory of social identity processes. *European Review of Social Psychology* 11(1): 223-255.
13. Solomon S, Greenberg J, Pyszczynski T (2001) Pride and prejudice: Fear of death and social behaviour. *Psychological Science* 9(6): 200-205.
14. Duckitt J (2001) A dual process cognitive-motivational theory of ideology and prejudice. In MP Zanna (Edn.), *Advances in experimental social psychology* 33: 41-113.
15. Thompson SC, Schlehofer MM (2008) Control, denial, and heightened sensitivity reactions to personal threat: Testing the generalizability of the threat orientation approach. *Personality and Social Psychology Bulletin* 34(8): 1070-1083.
16. Fiske ST (2010) *Social beings: Core social motives in social psychology*. Wiley, New Jersey, USA.
17. Williams KD (2009) Ostracism: Effects of being excluded and ignored. *Advances in Experimental Social Psychology* 41: 279-314.
18. Baumeister RF, DeWall N (2005) In: KD Williams, JP Forgas W von Hippel (Eds.), *The Social outcast: Ostracism social exclusion rejection, and bullying*. Psychology Press, New York, USA.
19. Twenge JM, Baumeister RF, DeWall NC, Ciarocco NJ, Bartels JM (2007) Social exclusion decreases prosocial behaviour. *Journal of Personality and Social Psychology* 92(1): 52-62.
20. Warburton WA, Williams KD, Cairns DR (2006) When ostracism leads to aggression: The moderating effects of control deprivation. *Journal of Experimental Social Psychology* 42(2): 213-220.
21. Fiske ST (1993) Controlling other people: The impact of power on stereotyping. *American Psychologist* 48(6): 621-628.
22. Guinote A, Brown M, Fiske ST (2006) Minority status decreases sense of control and increases interpretive processing. *Social Cognition* 24(2): 169-186.
23. Sullivan D, Landau M, Rothschild ZK (2010) An existential function of enemy ship: Evidence that people attribute influence on personal and political enemies to compensate for threats to control. *Journal of Personality and Social Psychology* 98(3): 434-449.
24. Rothschild ZK, Landau MJ, Sullivan D, Keefer LA (2012) A dual-motive model of scapegoating: Displacing blame to reduce guilt or increase control. *Journal of Personality and Social Psychology* 102(6): 1148-1163.
25. Hunter JA, Stringer M, Watson RP (1991) Intergroup violence and intergroup attributions. *British Journal of Social Psychology* 30: 261-266.
26. Staub E (1989) *The roots of evil: The origins of genocide and other group violence*. Cambridge University Press, Cambridge, London.
27. Agroskin D, Jonas E (2013) Controlling death by defending ingroups- Mediation insights into terror management and control restoration. *Journal of Experimental Social Psychology* 49(6): 1144-1158.
28. Fritsche I, Jonas E, Ablasser C, Beyer M, Kuban J, et al. (2013) The power of we: Evidence of group-based control. *Journal of Experimental Social Psychology* 49(1): 19-32.
29. Greenaway KH, Louis WR, Hornsey MJ, Jones JM (2014) Perceived control qualifies the effects of threat on prejudice. *British Journal of Social Psychology* 53(3): 422-442.
30. Fritsche I, Jonas E, Fankhänel T (2008) The role of control motivation in mortality salience effects on ingroup support and defense. *Journal of Personality and Social Psychology* 95(3): 524-541.
31. Turner JC, Hogg MA, Oakes PJ, Reicher SD, Wetherell MS (1987) *Rediscovering the social group: a self-categorization theory*. Blackwell, Oxford, USA.
32. Judge TA, Erez A, Bono JE, Thoresen CJ (2002) Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common construct. *Journal of Personality and Social Psychology* 83(3): 693-710.
33. Hogg MA (2007) Uncertainty-identity theory. In: MP Zanna (Eds.), *Advances in experimental social psychology*. Academic Press, San Diego, USA 39: 69-126.
34. Hogg MA, Mullin BA (1999) Joining groups to reduce uncertainty: Subjective uncertainty reduction and group identification. In D Abrams, MA Hogg (Eds.), *Social identity and social cognition*, Blackwell, Oxford, UK, pp. 249-279.
35. Wu C, Yao G (2007) Relations between self-certainty, sense of control and quality of life. *International Journal of Psychology* 42: 342-352.
36. Bernstein MJ, Claypool HM (2012) Not all social exclusions are created equal: Emotional distress following exclusion is moderated by exclusion paradigm. *Social Influence* 7: 113-130.
37. Leary MR, Tambo ES, Terdal S, Downs DL (1995) Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology* 68(3): 518-530.
38. Haslam SA (2004) *Psychology in Organizations: A social identity approach*. Sage, London, UK.
39. Zadro L, Williams KD, Richardson R (2004) How low can you go? Ostracism by a computer is sufficient to lower self-reported levels of belonging, control, self-esteem and meaningful existence. *Journal of Experimental Social Psychology* 40(4): 560-567.
40. Bourhis RY, Sachdev I, Gagnon A (1994) Intergroup research with the Tajfel matrices: Methodological notes. In MP Zanna, JM Olsen (Eds.), *The psychology of prejudice: The Ontario Symposium* 7: 209-232.

41. Oldmeadow JT, Fiske ST (2010) Social status and the pursuit of positive social identity: Systematic domains of intergroup differentiation and discrimination for high- and low-status groups. *Group Processes & Intergroup Relations* 13(4): 425-444.
42. Platow MJ, Harley K, Hunter JA, Hanning P, Shave R, et al. (1997) Interpreting ingroup-favouring allocations in the minimal group paradigm. *British Journal of Social Psychology* 36(1): 107-118.
43. Whitson JA, Galinsky AD (2008) Lacking control increases illusory pattern perception. *Science* 332(5898): 115-117.
44. Cutright KM, Bettman JR, Fitzsimons GJ (2013) Putting brands in their place: How a lack of control keeps brands contained. *Journal of Marketing Research* 50(3): 365-377.
45. Campbell JD, Trapnell PD, Heine SJ, Katz IM, Lavalley L, et al. (1996) Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology* 70(1): 141-156.
46. Ellemers N, Kortekaas P, Ouwerkerk JW (1999) Self-categorization, commitment to the group and group self-esteem as related but distinct aspects of social identity. *European Journal of Social Psychology* 29(2-3): 371-389.
47. Luhtanen R, Crocker J (1992) A collective self-esteem scale: Self-evaluation of one's social identity. *Personality and Social Psychology Bulletin* 18(3): 302-318.
48. Tabachnick BG, Fidell LS (2007) *Using Multivariate Statistics*. Pearson Education, Boston, USA.
49. Branscombe NR, Schmitt MT, Schiffer K (2007) Racial attitudes in response to thoughts of white privilege. *European Journal of Social Psychology* 37(2): 203-215.
50. Hirsch JB, Galinsky A, Zhong C (2011) Drunk, powerful, and in the dark: How general processes of disinhibition produce both prosocial and antisocial behaviour. *Psychological Science* 6(5): 415-427.
51. Platow MJ, Hunter JA (2001) Realistic intergroup conflict: Prejudice, power and protest. In M Augoustinos, K Reynolds (Edns.), *Understanding the psychology of prejudice and racism*, pp. 195-212.
52. Rankin V, Hunter JA (2017) You are either with us or against us: Threat and in-group favoritism. *Current Research in Social Psychology* 25: 10-19.



This work is licensed under Creative Commons Attribution 4.0 License

To Submit Your Article Click Here: [Submit Article](#)



Scholarly Journal of Psychology and Behavioral Sciences

Assets of Publishing with us

- Global archiving of articles
- Immediate, unrestricted online access
- Rigorous Peer Review Process
- Authors Retain Copyrights
- Unique DOI for all articles