

Exploring the role of belonging in intergroup discrimination.

Julia A. L. Crisp

A thesis submitted for the degree of Master of Science at the University of Otago,
Dunedin, New Zealand

26 November 2012

ABSTRACT

Three studies were conducted to investigate the relationship between belonging and intergroup discrimination. In this instance, discrimination refers to negatively biased behaviour, marginalisation, disenfranchisement, or, more specifically a lack of favouritism where the latter might be applied to one's ingroup. Studies one and two assessed belonging as an outcome of intergroup discrimination. Study three assessed belonging as an outcome of discrimination and as a predictor of discrimination. Study one revealed that New Zealanders who evaluated ingroup members more positively than outgroup members (i.e., Americans) experienced increased levels of belonging. Study two revealed that New Zealanders who gave more white noise to outgroup members (i.e., Asians) than ingroup members experienced increased levels of belonging. Study three, like study one and two, found that New Zealanders who gave more white noise to the outgroup (i.e., Americans) experienced elevated levels of belonging. Study three also explored the role of ostracism and revealed that participants who were ostracised displayed approximately three times more intergroup discrimination than included participants. Together these findings provide evidence to suggest that various forms of intergroup discrimination can facilitate increased levels of belonging and that threats to belonging can facilitate increased levels of intergroup discrimination.

ACKNOWLEDGEMENTS

First and foremost I would like to extend my heartfelt gratitude to my supervisor, Jackie Hunter. Not only did he provide the inspiration for this thesis but he also steered me through the process of testing, analysis, and writing. So thank you Jackie for your kind words and your constructively critical words: the combination of both enhanced the experience and the outcome of this project.

Secondly I would like to thank two very good friends of mine, Bridget and Lesley, who gave their patience and good judgment to editing my work when I could no longer stand to.

Thirdly, thanks to my loving support network who never read this document but did something just as important, they encouraged me to keep working on it. Thank you to Anne, John, Abigail, Jo, and Tom for telling me what I needed to hear as often as I needed to hear it.

Thanks finally go out to the students of the psychology department who were involved in the running of experiments and without whose innocent willingness I would have no data.

TABLE OF CONTENTS

ABSTRACT	ii
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
LIST OF FIGURES AND TABLES	v
INTRODUCTION	1
STUDY 1	12
METHOD	12
RESULTS	14
DISCUSSION OF STUDY 1	18
STUDY 2	20
PILOT TEST	20
METHOD	21
RESULTS	23
DISCUSSION OF STUDY 2	27
STUDY 3	28
METHOD	28
RESULTS	31
DISCUSSION OF STUDY 3	39
GENERAL DISCUSSION	40
REFERENCES	52
APPENDICES	69

LIST OF FIGURES AND TABLES

<i>Figure 1. Sociometer theory of self-esteem and belonging.</i>	9
<i>Table 1. Mean belonging levels before and after evaluation.</i>	16
<i>Table 2. Correlations for Study 1 variables.</i>	17
<i>Table 3. Mean belonging levels before and after white noise allocation.</i>	25
<i>Table 4. Correlations for Study 2 variables.</i>	26
<i>Table 5. Experimental participants mean duration of white noise (in seconds) allocated to ingroup and outgroup targets by cyberball condition.</i>	33
<i>Table 6. Pre- and post-allocation belonging scores for experimental and control group participants who were either ostracised or included via cyberball.</i>	34
<i>Table 7. Correlations for Study 3 inclusion condition.</i>	37
<i>Table 8. Correlations for Study 3 ostracism condition.</i>	38

EXPLORING THE ROLE OF BELONGING IN INTERGROUP DISCRIMINATION

Intergroup hostility has carved an unrelenting path of havoc and destruction through time, spanning from historic warfare through to the current plethora of cultural, religious, and racial prejudices rampant throughout the world. Given the omnipresence of conflict between groups, many social and psychological theories have sought to account for this inhumane behaviour (Brown, 1995; Hewstone, Rubin, & Willis, 2002). Broadly speaking these accounts can be divided into two major types: theories which ascribe cause to individual factors, and those which ascribe cause to group level factors.

Explanations that suggest intergroup hostility stems from individual variables include the Frustration-Aggression hypothesis (Berkowitz, 1962), right wing authoritarianism (RWA¹, Altemeyer, 1998), social dominance orientation (SDO², Sidanius & Pratto, 1993), terror management theory, (TMT; Solomon, Greenberg & Pyszynski, 1991) and threatened egoism (Baumeister, Smart & Boden, 1996). Many of these theories can explain why certain individuals exhibit different levels of prejudice, aggression, and violence (Sibley & Duckitt, 2009). However, the theories are limited as they do not explain the reasons as to why there are rapid increases and decreases in prejudice, the colossal scale at which intergroup hostility occurs, or why there are periods of extreme group conflict in which all manner of individuals engage in hostile intergroup behaviours (Billig, 1976; Brewer & Brown, 1998; Brown, 1988; Hogg & Abrams, 1988; Platow & Hunter, 2001; Sherif, 1966; Tajfel, 1981; Turner & Reynolds, 2003). Consequently, a number of theorists have argued that individual difference accounts of intergroup conflict are of limited relevance in explaining intergroup conflict, as much of this phenomenon occurs at a level beyond individual

^{1,2} Some theorists have argued that SDO & RWA should be thought of as ideological rather than individual difference variables. In referring to RWA and SDO as individual difference variables we are following the insights of the original authors.

differences (see Duckitt, Callaghan & Wagner, 2005; Tajfel, 1981; Turner & Reynolds, 2003).

Non-reductionist theories of hostile intergroup attitudes posit that large scale forms of prejudice stem not from individual factors but from group level phenomenon (Oakes, Haslam & Turner, 1994; Oakes, Haslam & Turner, 1999; Sherif, 1966; Tajfel & Turner, 1979, 1986). Since the 1970's, the social identity theory approach (SIT, Tajfel & Turner, 1986; Turner et al., 1987; Turner & Reynolds, 2003) has lead much of the research into intergroup relations. According to this perspective, people are motivated to achieve positive self-esteem, and an important part of the self is bound up in social group membership. A further assumption of the theory is that people evaluate their social identity through intergroup comparisons. Positive comparisons, in which the ingroup is seen as more favourable than the outgroup (whereby the ingroup achieves positive distinctiveness from the outgroup), leads to positive social identity, and thus increased self-esteem. Negative comparisons, in which the outgroup is seen as more favourable than the ingroup (whereby the ingroup achieves negative distinctiveness from the outgroup), leads to poor social identity and thus lowered self-esteem (Tajfel & Turner, 1986). Consequently a far reaching assumption of SIT is that individuals are motivated to evaluate their group in a positive way to achieve and maintain their positive social identity and will do this by showing intergroup discrimination (i.e., ingroup bias and outgroup derogation; Abrams & Hogg, 1988; Tajfel & Turner, 1986).

The nature of the link between self-evaluation and intergroup discrimination, which underlies SIT, although once seemingly accepted by many (Brown, 1988; Lemyre & Smith, 1985; Oakes & Turner, 1980), has become increasingly controversial (Abrams & Hogg, 2001; Rubin & Hewstone, 1998; Turner, 1999). In an

attempt to clarify the unclear relationship between self-esteem and discrimination in the SIT, Abrams and Hogg (1988, 1990), proposed the self-esteem hypothesis (SEH). The SEH has two corollaries. The first states that intergroup discrimination leads to an increase in self-esteem. The second states that low or threatened self-esteem exacerbates intergroup discrimination.

Early studies examining the efficacy of the SEH conducted by Oakes and Turner (1980) and Lemyre and Smith (1985) found that being categorised as a group member, and showing intergroup discrimination, lead to enhanced self-esteem. However, several reviews of this research on the SEH have since concluded that there is inconsistent support for the SEH (Aberson, Healy & Romero, 2001; Abrams & Hogg, 1988; Long & Spears, 1997; Rubin & Hewstone, 1998). Greater support has been found with respect to the first corollary, that discrimination leads to an increase in self-esteem, (Abrams & Hogg, 1988), than the second, that low or threatened self-esteem leads to increased discrimination. In a comprehensive review of the literature, Rubin and Hewstone (1998) reported that nine of 12 studies found support for the first corollary, but only three of 19 studies found support for the second corollary (Rubin & Hewstone, 1998). A subsequent review of more than 50 studies found that a majority of studies support the first corollary; that higher self-esteem led to higher levels of discrimination, and that personal self-esteem (but not collective self-esteem) predicted this relationship (Aberson et al. 2000). However, very few studies were found to support the second corollary (Aberson et al. 2000).

There are two views that have been offered to explain these contradictory findings. The first suggests that the ambiguous role of self-esteem could be explained through a raft of conceptual and methodological problems (for examples see Hunter, Platow, Howard & Stringer, 1996; Hunter et al., 2004; Hunter et al., 2005; Long &

Spears, 1997; Turner, 1999). The second (which is not incompatible with the first) suggests that it is possible that self-esteem has been over-implicated as a motive in intergroup prejudice (Hogg & Abrams, 1993; Hogg & Mullin, 1999). If the latter is the case, then it is possible that other motives might better account for intergroup discrimination (Abrams & Hogg, 1988; Hogg & Abrams, 1993). Studies assessing the contribution of motives to our understanding of intergroup discrimination have tended to emphasise uncertainty reduction (e.g., Grieve & Hogg, 1999; Reid & Hogg, 2005), fear of death (Greenberg, Solomon & Pyszczynski, 1997; Solomon, Greenberg & Pyszczynski, 2000), distinctiveness, and inclusion (Brewer, 1991).

Only the perspective of inclusion (encapsulated within Optimal Distinctiveness Theory) highlights a central role for belonging. In many respects this is somewhat surprising as (a) many theories invoke the concept of belonging (or acknowledge the importance of belonging) with respect to intergroup behaviour (Abrams, Hogg & Marques, 2005; Brewer, 1991; Ellemers, Spears & Doosje, 1999; Fiske, 2004; Hogg, 2000; Jetten, Branscombe & Spears, 2006; Tajfel & Turner, 1979; Williams, 2009), and (b) belonging is also held to be a fundamental motive with respect to many facets of human social behaviour (Baumeister & Leary 1995; Fiske, 2004; Williams, 2009).

Belonging Hypothesis

Baumeister and Leary (1995) have argued that the role of belonging in human emotion, cognition, and behaviour has been overlooked, despite its implicit importance of belonging in many existing psychological theories (see Blackhart, Nelson, Knowles & Baumeister, 2009). They therefore formulated the belonging hypothesis that posits that the need to belong is a core human social motive (Baumeister and Leary, 1995). This need to belong is thought to have been shaped

through the course of evolution (i.e., natural selection, survival of the fittest) and it continues to influence various aspects of human behaviour (Fiske, 2004; Leary, 2010; Leary & Baumeister, 2000; Williams, 2009).

Baumeister and Leary (1995) proposed that evidence for the belonging hypothesis found by looking at pervasive patterns of group behaviour. First, individuals who belong to groups are proposed to be more likely to survive to adulthood, reproduce, and pass on their genetics (Baumeister & Leary, 1995). Second, individuals rapidly and easily form social relationships, in even the most minimal of circumstances (Bowlby, 1969; Festinger, Schachter & Back, 1950; Kenrick & Johnson, 1979; Latane, Eckman & Joy, 1966; Sherif et al., 1961; Tajfel, Billig, Bundy & Flament, 1971). Third, individuals frequently resist the dissolution of social groups even when the relationships invoke harm (Baumeister & Leary, 1995; Hazan & Shaver, 1994; Leary, 2010). Finally, individuals experience a wide variety of negative outcomes when they are rejected or not included in groups, including lower self-esteem, feelings of loss of control, life becoming less meaningful, lower belonging, less self-regulation and a drop in intelligent thought (see Leary, 2010 for reviews; Williams, 2009).

Social Rejection

The negative effects of being rejected indicate the importance of inclusion within a social group and further substantiate the core of the belonging hypothesis (that the need to belong is a powerful motivation of psychological processes and social behaviours; Baumeister & Leary, 1995). Being ostracised or rejected from social groups or interpersonal settings can lead to a complex raft of behavioural reactions, with ostracised members displaying an increased amount of aggression, discrimination and prejudice compared to included group members (Gaertner, Iuzzini

& O'Mara, 2008; Jetten, Branscombe & Spears, 2002; Noel, Branscombe & Wann, 1995). Conversely, rejection has also been linked to greater cooperation in social groups, working harder in social settings, and conforming more to others' opinions (e.g. Ouwerkerk, Kerr, Gallucci, & Van Lange, 2005; Williams, Case & Govan, 2003; Williams & Sommer, 1997).

These contradictory behavioural reactions to ostracism (i.e., some prosocial and others antisocial) can be reconciled by considering the different motivations that might lie behind the behaviours (Leary, 2010). There are a number of desires that could be spurred by rejection, for example, to increase acceptance, protect oneself from further rejection, or gain revenge (Leary, 2010). Depending on which goal the individual might have, it is likely that their behavioural response will differ (Leary, 2010).

There is also evidence that belonging (or absence of belonging) influences the way that people think and feel (Baumeister & Leary, 1995; Forgas, Williams & Von Hippel, 2003). Strengthening or forming social bonds increases positive emotions (e.g. happiness; Myers, 2000; psychological fulfilment, Sternberg, 1986) whereas the absence of close bonds or threats to belonging can lead to negative emotions (e.g. sadness, hurt feelings, loneliness, and emotional numbness, Myers, 2000; Freedman, 1978; decreased self-control, anger and increased violence, Buckley, Winkle & Leary, 2004; Twenge, Baumeister, Tice & Stucke, 2001). What is more, people who lack social belonging or do not belong to social groups are at increased risk of illness, death (House, Landis & Umberson, 1988) and mental disorders (e.g. psychotic illness; Chapman, Chapman, Kwapil, Eckblad & Zinser, 1994).

Establishing and Maintaining Belonging

In order to belong to a group, individuals must first affiliate with members of the desired group (Kameda & Tindale, 2006). Affiliation is defined as the act of associating or interacting with one or more members of the group and is necessary for the development of many important social relationships (Leary, 2010). Leary (2005) suggests that when people wish to affiliate with others they alter their behaviour in ways that lead other people to want to affiliate with them, and promote their perceived relational value (how attractive a person is perceived to be as a group member; Leary, 2005).

Just as the empirical evidence shows that people tend to like and fall in love with people who are similar to themselves (see Brehm, Kassin & Fein, 2005), Leary (2005) proposes that people desire to be part of groups that they perceive as being similar to themselves (e.g. in terms of values, interests, and morals). Equally, groups are most likely to accept people who act in a manner that is consistent with the norms and values of their group. What is more, individuals who score high in the need to belong are more likely to behave cooperatively in group settings (DeCremer & Leonardelli, 2003). Particular kinds of behaviours are proposed to promote relational value including appearing responsible, loyal, cooperative, trustworthy, and dedicated to the goals and norms of the group. These behaviours are indicative of an individual who is motivated to be involved in the group, have an appreciation of group membership, and will defend the group's values. This type of individual is also likely to foster positive and harmonious intragroup relations. (Leary, 2005).

However, the belonging hypothesis also posits that group membership is associated with discriminatory intergroup behaviours. Therefore the belonging hypothesis (Baumeister & Leary, 1995) is consistent with a number of other existing

social psychology theories that also implicate belonging in intergroup discrimination. These theories include the social monitoring system (Gardner, Pickett & Brewer, 2000), the sociometer hypothesis (Leary, 2006) self-categorisation theory (SCT; Turner, Hogg, Oakes, Reicher & Wetherell, 1997), and optimal distinctiveness theory (ODT; Brewer, 1991).

Monitoring Inclusion and Belonging

Belonging is proposed to be an underlying motivation for many important emotions (i.e., happiness, joy), cognitions (i.e., how people store and process social information, evaluations of group members, and self-serving bias) and behaviours (i.e., rapid formation of social bonds, ingroup favouritism, and outgroup derogation; Baumeister & Leary, 1995). Therefore people are proposed to monitor their belonging so if belonging is low restorative actions can be made. Existing perspectives on how people monitor their relational value include the sociometer theory (Leary & Downs, 1995) and the social monitoring system (Gardner et al., 2000). Both theories suggest that people possess a psychological system that monitors their belonging, and if necessary (i.e. if belonging is threatened) motivates the individual to engage in discrimination in order to protect, or restore, a lowered belonging.

The sociometer theory specifically proposes that people have a psychological system that monitors group acceptance or rejection, and relays their relational value to the individual via self-esteem. According to this theory, decreased group acceptance leads to lowered self-esteem. Then lowered self-esteem supposedly alerts the person of possible group rejection and motivates them to engage in behaviours (i.e. outgroup discrimination) to increase or maintain relational value (Leary, 2006; Leary & Baumeister, 2000; Leary & Downs, 1995). Acceptance then increases belonging and

this is relayed back via high self-esteem. The following figure shows the relationship between self-esteem and belonging as proposed by the sociometer theory.

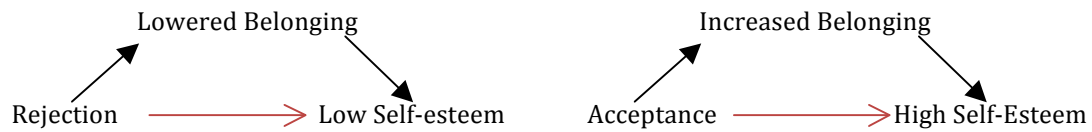


Figure 1. Sociometer theory of self-esteem and belonging

The social monitoring system builds upon the sociometer theory (Gardner, et al., 2000). The social monitoring is very similar to the sociometer theory, but differs in what is perceived as a threat. In the sociometer theory self-esteem is lowered when belonging is lowered, whereas according to the social monitoring system, thoughts or cognitions about group acceptance can stimulate changes in self-esteem. The social monitoring system can be activated when people are concerned with their status of belonging or perceive their belonging as being threatened (Gardner, et al., 2000). The social monitoring system accounts for how social cognitions (i.e., thoughts about belonging), can heighten awareness, influence perceptions of ingroup belonging, and activate ingroup biased action. Social cognitions are further explored in the SCT.

The Self Categorisation Theory

The SCT (Turner, et al., 1997), is an extension of the previously mentioned SIT (see Tajfel & Turner, 1986), that outlines the cognitive processes that occur when people take on group memberships. According to the SCT, being categorised as a group member spurs a number of cognitive processes such as, (a) depersonalisation of the self, (b) psychological merging of the self with the ingroup and (c) taking on the norms and values of the group (Oakes et al., 1994). Following these processes, the SCT proposes that individuals adopt the idiosyncratic behaviours and expectations of

their group as if they were their own. Additionally, the SCT (Turner, et al., 1997) proposes that the display of intergroup discrimination may be a form of social identity management. Therefore, if it is perceived to be normal and acceptable to show ingroup favouritism and outgroup derogation, then that is what all the group members will do (Branscombe, Ellemers, Spears & Doosje, 1999).

The SCT further suggests that intergroup discrimination is a strategy used by group members to secure greater acceptance within the group and therefore promoting ingroup belonging (Branscombe et al., 1999; Leonardelli, Pickett & Brewer, 2010). Evidence for this view is found in research conducted by Noel, Branscombe and Wann (1995), which assessed the behaviours of peripheral group members, who therefore had a lower sensation of belonging. In this study, peripheral group members exhibited greater outgroup derogation compared to group members who thought of themselves as being included group members. Notably, this behaviour only occurred in condition when other group members were present, presumably because there is a greater chance of re-inclusion if existing members observe ingroup biased behaviour (Noel, et al. 1995). The idea that intergroup behaviours can serve a function and be willfully utilised is similar to Leary's belonging hypothesis (Baumeister & Leary, 1995; Leary, 2006) and echoed again in the ODT.

Optimal Distinctiveness Theory

The ODT is the theory that most clearly implicates belonging as a motive associated with intergroup discrimination (Brewer, 1991). The ODT proposes that people have two fundamental needs: the need for inclusion and the need for differentiation. The ODT endeavors to account for the motivational basis of the SIT, and posits that an individual's requirements of inclusion and differentiation are fundamental to judgments of themselves, others and their group relations (Brewer,

1991). An optimal identity satisfies the need for inclusion in the ingroup and simultaneously serves the need for differentiation from outgroups (Baumeister & Leary, 1995; Brewer, 1991; Fiske, 2004; Vignoles et al., 2006). The ODT proposes that a homeostatic balance between the two needs is maintained by correcting for any deviations from optimality. In situations where a person feels overly individuated it is proposed that their need for inclusion will be activated, motivating the person to seek a more inclusive social identity (Brewer, 1991).

Leonardelli et al (2010) further proposed that members of optimally distinct groups (in which both needs for differentiation and inclusion are met) show ingroup favouritism to maintain their sense of belonging or inclusion. If a group membership is satisfying both the needs of inclusion and differentiation, then the group member would be motivated to maintain their status in this optimally distinct group. Acting in accordance with expected group norms, and showing allegiance with the group (i.e., by ingroup favouring social comparisons, or ingroup bias), may be utilised to maintain the status quo. Taken together, the ODT suggests that group members display ingroup favouritism according to the satiation of needs (Pickett & Leonardelli, 2006). Ingroup members may display ingroup bias to (1) distinguish their group from other outgroups, (2) maintain their membership in an optimally distinct group or (3) to restore or gain a sense of inclusion (Leonardelli et al., 2010).

The Present Studies

All the theories that have been reviewed are consistent in proposing that that belonging plays a role in intergroup discrimination – the so-called belonging hypothesis (Baumeister & Leary, 1995), ODT (Brewer, 1991), SCT (Turner et al., 1987), the sociometer hypothesis (Leary, 2006) and the social monitoring system (Gardner, et al., 2000)). Furthermore, they all predict that one way to increase ingroup

belonging is to engage in intergroup discrimination. However, despite the acceptance and apparent validity of these theories, there is to date no direct empirical evidence that supports the notion that intergroup discrimination leads to an enhanced ingroup belonging.

The present investigation therefore sought to fulfil this gap, and explore the link between belonging and intergroup discrimination. Three studies were conducted. Study 1 and Study 2 examined belonging as an outcome of two distinct forms of intergroup discrimination (trait evaluations and the allocation of a noxious stimulus). Study 3 examined the extent to which belonging functions as both an outcome and predictor of intergroup discrimination. In the first study one hypothesis was tested. This stated that New Zealand participants who engaged in intergroup discrimination (via trait evaluations of New Zealanders and Americans) would experience enhanced belonging.

Study 1

Method

Participants and design

One hundred and forty-five students (32 males and 113 females) attending the University of Otago took part in this study. Eighty-four participants were assigned to an experimental condition, and 61 participants were assigned to a control condition. Assignment to each condition was random. The design of the study was a 2 (condition: experimental vs. control) x 2 (time of belonging measurement: pre-evaluation to post-evaluation) mixed model factorial design. The first factor was between groups and the second was within groups. Participants in the experimental condition were given the opportunity to evaluate ingroup members (i.e., New Zealanders) and outgroup members (i.e., Americans). Participants in the control

condition were given the opportunity to evaluate two sets of outgroup members (i.e., Americans). Participants belonging to the New Zealand group were assessed prior to and following the evaluative tasks.

Materials and procedure

The study was introduced as being concerned with social perception, judgment and behaviour. Participants were informed that they would complete a short series of questionnaire tasks (via computer) that would be followed by a brief intergroup exercise. Participants were initially presented with a 3-item measure of belonging developed by Zadro, Williams and Richardson (2004, see Appendix A). The items were modified slightly for use in the current study (e.g., *'I feel that the other people in my group accept me'*, *Cronbach's alpha = .71, N = 145*). As a manipulation check, two additional scales were also present. This was conducted in an attempt to ensure that any potential increases in belonging (i.e., following intergroup discrimination) were not simply a reflection of increases in self-esteem (as might be argued from Sociometer theory, see Leary & Downs, 1995). The first scale was a 3-item measure of personal state self-esteem (*'I feel good about myself'*, *Cronbach's alpha = .65, N = 145*) as utilised by Zadro et al. (2004, see Appendix B). The second scale was a 4-item measure of group level self-esteem (*'I feel good about my group'* *Cronbach's alpha = .73, N = 145*) developed by Ellemers, Kortekaas, and Ouwerkerk (1999, see Appendix C). Responses to each measure were recorded on 7-point Likert scales (*1-disagree strongly, 7-agree strongly*) on the basis of how participants felt 'right now' even if they felt differently at other times. Participants were instructed to complete the belonging, personal level self-esteem, and group level self-esteem scales on the basis of their membership to the New Zealand group.

Following the completion of the belonging and personal and group self-esteem scales, participants were presented with 20 pairs of 9-point trait evaluation scales. These were included to assess intergroup discrimination (see Appendices D & E). Thirteen of these traits utilised the same terms as used in Platow, McClintock and Liebrand (1990; cooperative-competitive, helpful-unhelpful, selfish-unselfish, intelligent-unintelligent, strong-weak, warm-cold, flexible-rigid, manipulative-sincere, fair-unfair, honest-dishonest, friendly-unfriendly, trustworthy-untrustworthy, consistent-inconsistent). The remaining 7 pairs were based on the terms described in Oakes et al (1994) to depict (English, Australian and American) national stereotypes (i.e., *loud-soft-spoken, pushy-reticent, humble-arrogant, confident-shy, aggressive-non-aggressive, ignorant-well informed, straight forward-hypocritical*). Using these terms, participants in the experimental condition were given the opportunity to evaluate New Zealand ingroup and American outgroup members. Participants in the control condition completed the same tasks as those in the experimental condition with the only difference being that they were not given the opportunity to evaluate New Zealanders, but instead evaluated two sets of Americans (i.e., outgroup members).

Immediately following the completion of the evaluative tasks, participants completed the same measures of belonging, personal and group self-esteem as presented earlier. The final section of the study comprised of a series of manipulation check questions (see Appendix F). To assess potential differences in social identity salience across experimental and control conditions two questions were asked. The first was incorporated to assess identity salience (i.e., '*I identify with the other members of my group*'). The second was incorporated to assess depersonalisation (i.e., '*I am like the other members of my group*'). Responses were recorded on 7-

point Likert scales (*1-strongly disagree, 7-agree strongly*). Participants were also asked to respond on the basis of their membership in the New Zealand group.

A final set of questions asked participants whether they (a) took the experiment seriously, (b) whether they considered themselves to be New Zealanders, (c) had ever taken part in a study like this before, (d) thought there was anything unusual about the study, and (e) what they thought the study was really about.

Results

Gender effects. Preliminary analysis did not find any significant main or interaction effects with respect to gender. Subsequently this variable is not reported in the following analyses.

Manipulation checks. Between subjects analysis of variance (ANOVA's) revealed no differences in the extent to which participants in the experimental and control conditions identified (($M = 5.86, SD = .88$ vs. $M = 5.85, SD = 1.01$), $F(1, 144) = .01, p = .91$), and judged themselves (($M = 5.27, SD = 1.03$ vs. $M = 5.14, SD = 1.37$), $F(1, 144) = .41, p = .52$) as being more like other group members. Similar findings were found with respect to experimental and control participants pre-evaluation levels of personal (($M = 17.07, SD = 2.33$ vs. $M = 17.08, SD = 2.68$), $F(1, 144) = .00, p = .99$) and group self-esteem (($M = 25.17, SD = 2.68$ vs. $M = 24.37, SD = 3.76$), $F(1, 144) = 2.25, p = .14$). Additional analyses were conducted to assess potential changes in personal and group self-esteem before and after participants in the experimental and control conditions completed the evaluation tasks. Using repeated measures t-tests, we conducted a series of planned comparisons. No changes were found with respect to the personal ($M = 17.07, SD = 2.33$ to $M = 17.27, SD = 2.65$, $t(83) = -.89, p = .38$) and group self-esteem of experimental participants ($M =$

25.17, $SD = 2.68$ to $M = 25.24$, $SD = 2.84$, $t(83) = -.31$, $p = .75$). Highly similar results were found for the personal ($M = 17.08$, $SD = 2.62$ to $M = 16.72$, $SD = 2.75$, $t(60) = 1.35$, $p = .18$), and group self-esteem of control participants ($M = 24.37$, $SD = 3.76$ to $M = 24.80$, $SD = 2.59$, $t(83) = -.86$, $p = .18$).

Intergroup discrimination. To assess the experimental participants' trait evaluations of ingroup (New Zealand) and outgroup (American) members, a repeated measures analysis of variance (ANOVA) was conducted. Ingroup members were evaluated more highly ($M = 128.38$, $SD = 17.44$, vs. $M = 100.23$, $SD = 16.81$) than outgroup members, ($F(1, 83) = 120.11$, $p < .001$, $\eta^2 = .59$).

Belonging. To assess belonging before and after participants in the experimental and control conditions completed the evaluation tasks a 2 (condition: experimental vs. control) x 2 (time of belonging: pre-evaluation vs. post-evaluation task) mixed model analysis of variance (ANOVA) was conducted. Cell means are presented in Table 1. A main effect for time of belonging measurement was found, ($F(1, 143) = 6.39$, $p < .02$, $\eta^2 = .04$). Belonging increased from pre to post evaluation ($M = 16.27$, $SD = 2.63$ vs. $M = 16.67$, $SD = 2.52$). This effect was qualified by the interaction found between condition and time of belonging measurement, ($F(1, 143) = 4.24$, $p < .05$, $\eta^2 = .03$). To assess this effect further, two planned comparisons (using repeated measures t tests) were conducted. Participants in the experiment condition experienced an increase in belonging ($t(83) = 3.60$, $p < .002$, $\eta^2 = .14$). No effect was found those in the control condition ($t(60) = 0.30$, $p = .77$).

Table 1.

Mean belonging levels before and after evaluation as a function of condition.

Condition	Pre-evaluation belonging	Post-evaluation belonging
Experimental (ingroup vs outgroup)	16.37 (2.47)	17.01 (2.27)**
Control (outgroup vs outgroup)	16.14 (2.85)	16.21 (2.78)

** $p < .002$, higher belonging after discrimination by t-test.

Experimental condition, $N = 84$; Control condition, $N = 61$.

A correlational analysis was calculated to assess the relationship between belonging, personal and group self-esteem, and ingroup and outgroup evaluation. As seen in Table 2 no significant correlations between pre evaluation belonging and post evaluation belonging, ingroup and outgroup evaluations were found.

Table 2.

Correlations between belonging at time 1, belonging at time 2, prejudice to the ingroup, prejudice to the outgroup, evaluation difference, collective self-esteem at time 1, collective self-esteem at time 2, personal self-esteem at time 1 personal self-esteem at time 2, identity salience and depersonalisation.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1.	-	.77**	.12	.02	.07	.49**	.41**	.56**	.55**	.49**	.37**
2.	-	-	.20	.08	.09	.52**	.57**	.64**	.62**	.47**	.41**
3.	-	-	-	.06	.70**	.26**	.27*	.11	.21	.30	.15
4.	-	-	-	-	-.67**	.07	.10	-.04	-.02	.06	.08
5.	-	-	-	-	-	.14	.13	.11	.17	-.02	.06
6.	-	-	-	-	-	-	.72**	.43**	.51**	.51**	.27*
7.	-	-	-	-	-	-	-	.35**	.40**	.35**	.31**
8.	-	-	-	-	-	-	-	-	.66**	.18	.15
9.	-	-	-	-	-	-	-	-	-	.20	.12
10.	-	-	-	-	-	-	-	-	-	-	.40**
11.	-	-	-	-	-	-	-	-	-	-	-

* Correlation is significant at the 0.05 level

** Correlation is significant at the 0.01 level

Note: 1. Belonging at time 1; 2. Belonging at time 2; 3. Evaluation of the ingroup, 4. Evaluation of the outgroup; 5. Evaluation difference; 6. Collective self-esteem at time 1; 7. Collective self-esteem at time 2; 8. Personal self-esteem at time 1; 9. Personal self-esteem at time 2; 10. Identity salience; 11. Depersonalisation.

Discussion of Study 1

One hypothesis was tested in this experiment, being that the display of intergroup discrimination would enhance belonging. The results supported this hypothesis. New Zealanders in the experimental condition (which evaluated ingroup members and outgroup members) evaluated ingroup members (i.e. New Zealanders) more positively than outgroup members (i.e. Americans) and experienced an increase in belonging. No changes in belonging were found for participants in the control condition who evaluated two sets of outgroup members.

This is the first study to present empirical evidence for the notion that intergroup discrimination enhances belonging. Whilst such findings are encouraging, the present investigation contains a number of shortcomings that may limit the generalisability of our findings.

First, despite the results of our manipulation checks which indicate equivalent levels of identity and depersonalisation, it remains possible that the participants in the experimental condition experienced increased salience of group membership compared to participants in the control condition. Participants in the experimental condition might have had increased group salience due to the discrimination task in the experimental condition. The task in the experimental condition drew participants' attention to both the ingroup and the outgroup. Whereas the task in the control condition only involved outgroups. This therefore could have increased salience of the ingroup-outgroup dichotomy for participants in the experimental condition and not the control condition and might have increased salience of group belonging. Increased salience of ingroup membership could have increased thoughts about the group or belonging to the group for participants in the experimental condition. It is

therefore possible that increased salience of group membership in the experimental condition might have caused belonging to increase following the discrimination task rather than intergroup discrimination causing belonging to increase, as was predicted (see Hogg, Turner, Nascimento-Schulze & Spriggs, 1986; Turner et al., 1987).

Second, Americans are (a) one of the world's most derogated national groups (see Sardar & Davies, 2004) and (b) a powerful nation with relatively high status compared to New Zealanders. Therefore, the same effects might not be found with a different, or lower status outgroup.

Third, although these findings are supportive with respect to evaluative ingroup bias, the discrimination task used in the present investigation involved what might be described as a relatively positive form of discrimination (i.e. participants evaluated their group members more positively on trait evaluation scales than outgroup members). Previous research by Struch and Schwartz (1988) has found that evaluation biases are uncorrelated to more negative forms of discrimination (see also Abrams & Hogg, 1998; Amiot & Bourhis, 2005; Brown, 1995; Hunter et al., 2011). Negative forms of discrimination (e.g. allocation of noxious stimuli) tend to be far more destructive and more prevalent in real life situations than relatively more positive forms of discrimination. Thus whilst the results of the present investigation may be taken to indicate that the display of evaluative ingroup bias leads to an increase in belonging (the aforementioned methodological confounds notwithstanding), it remains to be seen if these effects are likely to emerge when more realistic or noxious forms of discrimination are involved. To address this and to overcome the earlier stated shortcomings (i.e., group salience, American outgroup, limits of evaluative bias), a second study was therefore conducted.

Study 2 incorporated (a) a more appropriate control condition (i.e., one that drew attention to both the ingroup and outgroup), (b) a different outgroup (i.e., non-American), and (c) a more noxious and realistic form of discrimination (white noise allocation). In this study one hypothesis was again tested. This stated that the display of this negative form of intergroup discrimination towards outgroup members would enhance belonging.

Study 2

Pilot Test

An independent pilot test was conducted to examine whether the allocation of white noise would constitute a more negative form of intergroup discrimination than the trait-rating task used in Study 1 (e.g., trustworthy, aggressive, confident, straightforward). In this pilot, participants ($N = 37$) were presented with 2 separate tasks. The first required the allocation of white noise to two anonymous individuals. The second required the evaluation of two anonymous individuals using trait-rating scales (e.g., trustworthy, aggressive, confident, straightforward). To ensure familiarity with the sound in question, participants were presented with a ten second blast of white noise. This was administered using a Spitfire white noise generator. A series of questions were then asked about each task. These were answered on 9-point Likert scales (*1-very little to 9-very much*). Compared to the white noise allocation task, repeated measures analysis of variance (ANOVA's) revealed that, the rating task was judged to cause less personal distress ($M = 8.00$, $SD = 1.56$, vs. $M = 5.95$, $SD = 2.09$), $F(1, 36) = 34.29$, $p < .001$, $\eta^2 = .49$), be less unpleasant ($M = 8.61$, $SD = .72$, vs. $M = 6.63$, $SD = 1.87$), $F(1, 36) = 37.85$, $p < .001$, $\eta^2 = .51$), elicit lower levels of negative affect ($M = 8.43$, $SD = 1.01$, vs. $M = 6.95$, $SD = 1.77$), $F(1, 36) = 30.27$, $p <$

.001, $\eta^2 = .46$), and have less adverse effects on recipients ($M = 8.37$, $SD = .95$, vs. $M = 6.27$, $SD = 2.73$), $F(1, 36) = 27.46$, $p < .001$, $\eta^2 = .43$).

Method

Participants and design

One hundred and twenty-four students (32 males and 92 females) attending the University of Otago took part in this study. Sixty participants were assigned to an experimental condition and 64 participants were assigned to a control condition. Assignment to each condition was random. The design of the study was a 2 (condition: experimental vs. control) x 2 (time of belonging measurement: pre-allocation vs. post-allocation) mixed model factorial. The first factor was between groups. The second was within groups. Participants in the experimental condition were given the opportunity to allocate different amounts of white noise to ingroup (i.e. New Zealanders) and outgroup members (i.e., Asians). Participants in the control condition were given the opportunity to allocate similar amounts of white noise to ingroup (i.e., New Zealanders) and outgroup members (i.e., Asians). The belonging of all participants was assessed prior to and following the allocation tasks.

Materials and Procedure

This study used the same methodology as in Study 1 with the following exceptions. First, in this study the ingroup comprised New Zealanders and the outgroup comprised Asians. Second, belonging was assessed using the measure of group inclusion developed by Sheldon and Bettencourt (2002, see Appendix G). The 3 items comprising this scale were modified slightly for use in the current context (e.g., *'I feel a sense of belongingness with the New Zealand group'*, Cronbach's $\alpha = .72$, $N = 124$). Responses were scored on a 5-point Likert scale (1- *Not at all*, 5- *Very much*) on the basis of how they felt now, even if they had felt differently at other

times. Personal state self-esteem (e.g., *'I feel good about myself'*, Cronbach's alpha = .74, $N = 124$) was measured using the same self-esteem scale as utilised in Study 1. Group derived self-esteem was assessed using the 4-item private collective self-esteem subscale (*'I feel good about being a member of the New Zealand group'*, Cronbach's alpha = .80, $N = 124$), developed by Luhtanan and Crocker (1992, see Appendix H). Responses to each measure were recorded on 7-point Likert scales (1-*disagree strongly* - 7-*agree strongly*) and on the basis of how participants felt 'right now' even if they felt differently at other times.

Third, intergroup discrimination was assessed via 12, 13-choice, distribution matrices (see Tajfel, et al., 1971). 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, Sachdev and Gagnon (1994), these matrices assessed the pulls of MD on MJP + MIP (e.g., maximum difference on maximum joint profit and maximum ingroup profit), FAV on MJP (e.g., ingroup favoritism on maximum joint profit), F on FAV (e.g., fairness on favoritism) and their inverse. Two pairs of each type of matrix were presented. Following other researchers (e.g. Diehl, 1990; Hunter et al., 2005; Platow et al., 1997), we used the difference in the total amount of noise allocated to ingroup (i.e., New Zealanders) and outgroup members (i.e., Asians) to measure intergroup discrimination (see Appendices I & J).

The matrices for those assigned to the control condition were identical to those used in the experimental condition excepting that the values in these matrices ensured that participants could only allocate equal amounts of white noise to ingroup (i.e., New Zealanders) and outgroup (i.e., Asians) members. In this sense the matrices were of equal psychological significance in that they drew attention to both members of the

ingroup and members of the outgroup (Lemyre & Smith, 1985). To ensure familiarity of the stimulus sound in question, a 10 second sample blast was administered to all participants. This was produced using a Spitfire white noise generator.

Immediately following the presentation of the matrices participants again completed the same group inclusion, personal and group self-esteem scales as presented earlier. They then completed the same identity, depersonalisation and manipulation check questions outlined in Study 1.

Results

Gender effects. Preliminary analysis did not find any significant main or interaction effects with respect to gender. Subsequently this variable is not reported in the following analyses.

Manipulation checks. Between subjects analysis of variance (ANOVA's) found no differences in the extent to which participants in the experimental and control conditions identified ($M = 5.27, SD = 1.26$ vs. $M = 5.34, SD = 1.00$), $F(1, 122) = 1.01, p = .75$), and judged themselves as being more like other group members ($M = 5.12, SD = 1.15$ vs. $M = 4.92, SD = 1.13$), $F(1, 122) = .77, p = .38$). Similar findings were found with respect to experimental and control participants pre allocation levels of personal ($M = 16.21, SD = 2.85$ vs. $M = 16.64, SD = 2.14$), $F(1, 122) = .88, p = .35$), and group self-esteem ($M = 25.30, SD = 2.68$ vs. $M = 24.70, SD = 2.76$), $F(1, 122) = 1.56, p = .21$). Additional analyses were conducted to assess potential changes in personal and group self-esteem before and after participants in the experimental and control conditions completed the allocation tasks. As in Study 1, we conducted a series of planned comparisons (using repeated measures t-tests). In doing this no changes were found with respect to the personal ($M = 16.21, SD = 2.85$

to $M = 15.25$, $SD = 2.67$, $t(60) = .97$, $p = .34$) and group self-esteem of experimental participants ($M = 25.30$, $SD = 2.85$ to $M = 24.90$), $SD = 2.46$, $t(60) = -.31$, $p = 1.14$), from pre to post allocation. Identical results were found for the personal self-esteem of control participants ($M = 16.64$, $SD = 2.14$ to $M = 15.95$, $SD = 3.36$, $t(63) = 1.35$, $p = .18$). However, the group self-esteem of control participants decreased from pre to post allocation ($M = 24.70$, $SD = 2.14$ to $M = 23.20$), $SD = 3.25$, $t(63) = 2.66$, $p < .01$).

Intergroup discrimination. To assess the experimental participants white noise allocations to ingroup (New Zealand) and outgroup (Asians) members, a repeated measures analysis of variance (ANOVA) was conducted. Outgroup members were given more white noise ($M = 162.75$, $SD = 33.83$, vs. $M = 144.55$, $SD = 26.59$) than were ingroup members, $F(1, 59) = 9.81$, $p < .005$, $\eta^2 = .14$).

Belonging. To assess belonging before and after participants in the experimental and control conditions completed the discrimination tasks a 2 (condition: experimental vs. control) x 2 (time of belonging: pre allocation vs. post allocation task) mixed model analysis of variance (ANOVA) was conducted. Cell means are presented in Table 3. A main effect approaching significance for time of belonging was found, ($F(1, 122) = 6.97$, $p < 0.08$, $\eta^2 = .05$). There was a tendency for belonging to increase from pre to post white noise allocation ($M = 10.75$, $SD = 2.21$ vs. $M = 11.24$, $SD = 2.54$). As expected this effect was qualified by the interaction found between condition and time of belonging measurement, ($F(1, 122) = 7.43$, $p < 0.01$, $\eta^2 = .07$). To assess this effect further, two planned comparisons were conducted (using repeated measures t tests). Participants in the experiment condition experienced an increase in belonging ($t(59) = 4.31$, $p < 0.001$, $\eta^2 = .24$). No effect was found those in the control condition ($t(63) = .05$, $p = .96$).

Table 3.

Mean belonging levels before and after white noise allocation as a function of condition.

Condition	Pre-allocation belonging	Post-allocation belonging
Experimental	10.63 (2.05)	11.65 (1.81)***
Control	10.84 (2.37)	10.83 (2.55)

*** $p < .001$, higher belonging after discrimination by t-test.

Experimental condition, $N = 61$; Control condition, $N = 64$.

A correlational analysis was calculated to assess the relationship between belonging, personal and private self-esteem, ingroup and outgroup white noise allocation. As seen in Table 4 no significant correlations between pre and post allocation belonging, and ingroup and outgroup white noise allocation were found.

Table 4.

Correlations between belonging at time 1, belonging at time 2, white noise allocated to the ingroup, white noise allocated to the outgroup, prejudice difference, collective self-esteem at time 1, collective self-esteem at time 2, personal self-esteem at time 1, personal self-esteem at time 2, identity salience and depersonalisation.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1.	-	.56**	-.00	.07	.05	.10	.10	.39**	.33**	.27*	.45**
2.	-	-	.03	.06	.03	.23	.13	.19	.27*	.19	.34**
3.	-	-	-	-.09	-.66**	.03	-.18	-.02	-.14	.14	.17
4.	-	-	-	-	.81**	.00	.17	.12	.04	-.03	.21
5.	-	-	-	-	-	-.02	.23	.10	.11	-.10	.05
6.	-	-	-	-	-	-	.38**	.19	.25	.05	-.02
7.	-	-	-	-	-	-	-	.27**	.39**	.30*	.28*
8.	-	-	-	-	-	-	-	-	.76**	.36**	.21
9.	-	-	-	-	-	-	-	-	-	.34**	.21
10.	-	-	-	-	-	-	-	-	-	-	.54**
11.	-	-	-	-	-	-	-	-	-	-	-

* Correlation is significant at the 0.05 level

** Correlation is significant at the 0.01 level

Note: 1. Belonging at time 1; 2. Belonging at time 2; 3. White noise allocated to the ingroup; 4. White noise allocated to the outgroup; 5. Prejudice difference; 6. Collective self-esteem at time 1; 7. Collective self-esteem at time 2; 8. Personal self-

esteem at time 1; 9. Personal self-esteem at time 2; 10. Identity salience; 11. Depersonalisation.

Discussion of Study 2

One hypothesis was tested in this experiment. This hypothesis stated that the display of intergroup discrimination would enhance belonging. The results support this hypothesis. New Zealanders (in the experimental condition) who allocated more white noise to outgroup members (i.e. Asians) than ingroup members (i.e. New Zealanders) experienced an increase in belonging. No changes in belonging were found for participants in the control condition who were forced to allocate equal amounts of white noise to ingroup members (i.e. New Zealanders) and outgroup members (i.e. Asians).

The findings of Study 2 replicate and expand on those reported in Study 1, showing that discrimination enhances belonging with respect to (a) a non-American outgroup (i.e. Asians) and (b) following the display of a relatively negative form of discrimination (i.e. white noise allocation). Taken together the results from studies 1 and 2 indicate that belonging increases after both the display of ingroup-outgroup evaluations and a more negative form of discrimination (i.e. white noise), for two different outgroups (i.e. Americans and Asians). Further, the discrimination task (for control and experimental condition participants) involved both ingroup and outgroup allocations. This suggests that the increases in belonging shown in the experimental group of Study 2 are not a simple function of drawing the participants' attention to their group membership in comparison to another group.

These findings are supportive in so far as they indicate that belonging increases following two distinct forms of intergroup discrimination (i.e. trait evaluation and the allocation of white noise). Whilst such findings are encouraging

with respect to belonging as an outcome of intergroup discrimination, recent research has also indicated that level of belonging might affect the degree to which people discriminate. In the last decade, various research has revealed that there is increased discrimination and aggression following social rejection (e.g. Leary, 2006; Twenge, et al., 2001). Moreover, several studies have shown that threatened belonging (manipulated via ostracism, rejection, or peripheral group membership) leads to increased discrimination, and have hypothesised that low belonging might be the cause (e.g. Jetten et al., 2002; Noel et al., 1995; Williams, et al., 2003). The present studies have so far shown that participants experienced an increase in belonging following discrimination. However, the impact of lowered belonging on outgroup discrimination (and subsequent changes in belonging) has not yet been examined. To investigate this possible effect a further study (Study 3) was conducted. Study 3 sought to examine belonging as both an outcome and predictor of discrimination. In line with previous research and the results of Study 1 and Study 2, two hypotheses were tested. Hypothesis 1 states that intergroup discrimination would enhance belonging. Hypothesis 2 states that threatened or lowered belonging would increase intergroup discrimination.

Study 3

Method

Participants and design

One hundred and forty-two students (42 males and 100 females) attending the University of Otago took part in this study. Seventy-seven participants were assigned to an experimental condition and 65 participants were assigned to a control condition. Assignment to each condition was random. The design of the study was a 2

(experimental vs. control) x 2 (feedback: inclusion vs. ostracism) x 2 (time of belonging measurement: pre-allocation to post allocation) factorial. The first two factors were between groups. The last factor was within groups. Participants in the experimental condition were given the opportunity to differentially allocate resources to ingroup and outgroup members. Participants in the control condition also allocated resources to ingroup and outgroup members, but they were constrained to show parity in allocations (i.e., forced to allocate the same amount to ingroup and outgroup members). The belonging of all participants was assessed prior to the allocation task (time 1) and following the allocation task (time 2).

Materials and Procedure

On arrival into the laboratory, participants were told that the study was concerned with the effects of mental visualisation and decision making amongst people from New Zealand and the United States of America (USA). It was explained that during the investigation participants would complete a mental visualisation task, a series of response booklets and then a group based decision-making procedure. Broadly following the procedure outlined by Zadro et al. (2004) each person was seated in front of a computer. They were then informed that the first step in the study required them to engage in some ‘mental visualisation’ tasks. To do this, they were told that they would play a game of cyberball with two other participants on the computer through the internet. After ostensibly setting the game up and linking the participants with the two people with whom they would supposedly play, it was emphasised (both verbally and in writing) that the outcome of the game was completely irrelevant. This was explained to the participants using the wording from Zadro et al. (2004) study, being that the cyberball game was “merely one means by which they could practice their mental visualisation skills” (see Zadro et al. 2004, p.

561). To further underline this premise, as they played the game, the participants were instructed to “visualise the game, the situation, themselves and the other players” (Zadro et al., 2004, p. 561).

The cyberball game depicted three animated icons. One of these was identified as the participant (player B from the New Zealand group). The other two icons depicted two other ingroup members (player A and player C both of whom were also from the New Zealand group). Participants were informed that when the cyberball was passed to them, they could pass the cyberball to any of the other participants by clicking on that participant’s respective icon (after the click the cyberball moved to the participant in question). The programme was set to allow 40 throws in total (and lasted just over five minutes). Participants were randomly assigned to either an inclusion or an ostracism condition. Those in the inclusion condition were passed the ball twice at the start of the game and then again one in every three throws throughout the duration of the game. Those in the ostracism condition were passed the ball twice at the start of the game, but throughout the remainder of the game they never receive the ball again.

Immediately following the completion of the cyberball game all participants completed the modified version of Sheldon and Bettencourt’s (2002) 3-item measure of group inclusion as utilised in Study 2 (e.g., *‘I feel that other New Zealanders accept me’*, Cronbach’s $\alpha = .84$, $N = 142$). Answers were recorded on 5-point Likert scales (*1-strongly disagree to 5-strongly agree*). As in Study 1 and 2, participants were instructed to respond on the basis of how they now felt even if they felt differently at other times. Participants in the experimental conditions were then given the opportunity to engage in intergroup discrimination. Intergroup discrimination was assessed via a task that required the allocation of 100 seconds of

white noise. Here participants were instructed that it was their job to distribute 100 seconds of white noise (listening time) to New Zealanders and Americans. It was emphasised that as much or as little could be allocated to each group, as long as the total amount allocated was 100 seconds (see Appendix K). Participants in the control conditions were required to complete the same task as those in the experimental conditions, except that they had to give equal amounts of white noise to ingroup and outgroup members. To ensure that all participants were aware of the sound in question, all participants were given a sample blast of 10 seconds duration. Following the discrimination and allocation tasks, participants were required to complete the belonging scale, a measure of personal self-esteem, and a measure of group self-esteem. Personal self-esteem was assessed using the personal self-esteem sub-scale of the shortened form of the Self-Description Questionnaire III (SDQ III; Marsh, Barnes & Hovecar, 1985, see Appendix L). This sub-scale is comprised of a single item (i.e. *Overall, I don't have much respect for myself*). Group derived self-esteem was assessed using Luhtanan and Crocker's (1992) private CSE subscale as used in Study 2 (*I feel good about being a member of the New Zealand group* Cronbach's $\alpha = .74$, $N = 142$). Responses to each measure were recorded on 7-point Likert scales (*1-disagree strongly, 7-agree strongly*) and on the basis of how participants felt 'right now' even if they felt differently at other times. Finally participants completed the same identity, depersonalisation and manipulation check questions outlined in Study 1.

Results

Pilot testing. In order to assess potential differences in responses as a function of the cyberball manipulation an independent pilot study was conducted ($N = 59$).

Responses were scored on a 7-point Likert scale (*1-disagree strongly, 7-agree strongly*). Between subjects analysis of variance (ANOVA's) revealed that participants in the inclusion condition felt more accepted ($M = 5.39, SD = 1.25$ vs. $M = 3.45, SD = 1.58$), $F(1, 57) = 26.70, < .001, \eta^2 = .32$), included ($M = 4.97, SD = 1.55$ vs. $M = 2.50, SD = 1.26$), $F(1, 59) = 44.03, p < .001, \eta^2 = .44$), less rejected ($M = 5.50, SD = 1.55$ vs. $2.96, SD = 1.26$), $F(1, 59) = 46.36, = p < .001, \eta^2 = .45$), and thought that they received more throws ($M = 3.93, SD = 1.69$ vs. $M = 1.67, SD = 1.02$), $F(1, 59) = 37.47, p < .001, \eta^2 = .40$), than did those in the ostracism condition. These findings indicate that the cyberball manipulation was useful for the purpose intended.

Gender effects. Preliminary analysis conducted with respect to the pilot study and third study did not find any significant main or interaction effects with respect to gender. Subsequently this variable is not reported in the following analyses.

Manipulation checks. A series of 2 (condition: experimental vs. control) x 2 (cyberball feedback: included vs. ostracised) between subjects analysis of variance (ANOVA's) found no main or interaction effects with respect to levels of identity, depersonalisation, personal and group self-esteem ($p > .14$ for all variables).

Intergroup discrimination. Because the data obtained using the 100 second white noise allocation task violates the assumptions underlying analysis of variance (ANOVA; see Howell, 1987; Roberts & Russo, 1999) we transformed our data using the Arcsine transformation (Howell, 1987). Experimental participants' white noise allocations to ingroup (i.e., New Zealanders) and outgroup (i.e., Americans) members were then examined using a 2 (cyberball condition: inclusion vs. ostracism) x 2 (target group: ingroup vs. outgroup) mixed model measures analysis of variance

(ANOVA). The first factor was between subjects. The second factor was within subjects. Untransformed cell means are presented in Table 5.

Table 5.

Experimental participants mean duration of white noise (in seconds) allocated to ingroup and outgroup targets by cyberball condition.

Cyberball condition	Ingroup	Outgroup
Included	45.45 (10.84)	54.55 (10.84)*
Ostracised	35.33 (18.00)	64.67 (18.00)***
Overall	41.17 (29.44)	58.83 (28.76) **

(Included, $N = 44$; ostracised, $N = 33$).

* $p < .02$, more white noise to the outgroup than the ingroup by t-test.

** $p < .001$, more white noise to the outgroup than the ingroup by ANOVA.

*** $p < .005$, more white noise to the outgroup than the ingroup by t-test.

A main effect was found for target group ($F(1, 75) = 26.64, p < .001, \eta^2 = .26$). More white noise was allocated to outgroup than ingroup members ($M = 58.83, SD = 15.13$ vs. $M = 41.17, SD = 15.13$). The expected interaction between target group and condition also emerged, ($F(1, 75) = 8.17, p < .005, \eta^2 = .10$). Planned comparisons using repeated measures t-tests were conducted to assess this effect further. This analysis revealed that in both the inclusion condition ($M = 54.45, SD = 10.84$ vs. $M = 45.55, SD = 10.84$), $t(43) = 2.43, p < .02, \eta^2 = .12$, and ostracism condition, ($M = 64.67, SD = 18.01$ vs. $M = 35.33, SD = 18.01$), $t(33) = 4.14, p < .0005, \eta^2 = .35$), more white noise was allocated to the outgroup than the ingroup. Each effect remained significant when Dunn's correction was incorporated (*critical alpha* =

2.33). However, intergroup discrimination was clearly more pronounced in the ostracism condition. Participants who were ostracised displayed approximately three times as much differentiation as those who were included (e.g. $M\ diff = 30.14$ vs. $M\ diff = 9.10$).

Belonging. In order to assess differences in the pre- and post-allocation belonging scores of those assigned to the experimental and control conditions, a 2 (condition: experimental v control) x 2 (cyberball condition: inclusion vs. ostracism) x 2 (time of belonging measurement: pre-allocation vs. post-allocation) mixed model analysis of variance (ANOVA) was conducted. The first and second factors were between groups. The third factor was within groups. Cell means are presented in Table 6.

Table 6.

Pre- and post-allocation belonging scores for experimental and control group participants who were either ostracised or included via cyberball.

Condition	Pre-allocation belonging	Post-allocation belonging
Experimental inclusion	10.36 (2.11)	10.98 (2.77)*
Experimental ostracism	9.39 (2.47)	11.00 (2.30)**
Control inclusion	11.62 (2.85)	11.40 (2.94)
Control ostracism	9.93 (2.87)	10.59 (2.58)

* $p < .05$, ** $p < .01$, elevated belonging from pre- to post-allocation by Dunn's test

A main effect was found for the cyberball condition, ($F(1, 138) = 5.70, p < .02, \eta^2 = .04$). Participants who were ostracised had lower belonging scores than those who

were included ($M = 10.02, SD = 2.26$ vs. $M = 11.02, SD = 2.25$). An interaction between cyberball condition and time of belonging measurement also emerged ($F(1, 138) = 7.76, p < .007, \eta^2 = .06$). Post hoc comparisons revealed an effect for pre-allocation levels of belonging. Participants who received ostracism feedback had lower levels of belonging ($M = 9.71, SD = 2.58$ vs. $M = 10.89, SD = 2.51$), $t(140) = 2.76, p < .007$. Although a similar trend emerged, no significant differences were found in levels of belonging at the post allocation stage ($M = 10.63, SD = 2.49$ vs. $M = 11.15, SD = 2.33$), $t(140) = 1.28, p = .20$.

A main effect was also found for time of belonging measurement, ($F(1, 138) = 18.48, p < .001, \eta^2 = .12$). Participants experienced an increase in belonging from pre- to post-allocation ($M = 10.32, SD = 2.65$ vs. $M = 10.89, SD = 2.46$). This effect was, however, qualified by the expected interaction found between experimental condition and time of belonging measurement ($F(1, 138) = 17.72, p < .001, \eta^2 = .11$). Repeated measures t-tests conducted to assess this interaction further revealed one significant effect. Participants in the experimental conditions (i.e. those who were given and took the opportunity to show intergroup discrimination) experienced an increase in belonging following the completion of the discrimination task ($M = 9.95, SD = 2.31$ to $M = 10.98, SD = 2.00$), $t(76) = 5.23, p < .0005, \eta^2 = .27$). No effect was found for those in the control conditions who were constrained to show parity ($M = 10.77, SD = 2.97$ to $M = 10.78, SD = 2.93$), $t(64) = 0.09, p = .93$). There were no other main or interaction effects, however as a check on our findings we conducted a series of planned comparisons (conducted separately as a function of experimental condition and cyberball condition). These analyses revealed that experimental group participants who were included ($M = 10.36, SD = 2.11$ to $M = 10.98, SD = 1.77$), $t(43) = 2.56, p < .02, \eta^2 = .13$, and ostracised ($M = 9.39, SD = 2.47$ to $M = 11.00,$

$SD = 2.30$), $t(32) = 5.12$, $p < .0005$, $\eta^2 = .45$), both experienced increased belonging following the display of intergroup discrimination. Each of these effects was also significant when Dunn's correction was incorporated (the former at critical alpha value 2.36, $p < .05$, the latter at critical alpha value 3.02, $p < .01$). No significant effects were found amongst the included ($M = 11.62$, $SD = 2.85$ to $M = 11.40$, $SD = 2.00$), $t(43) = .87$, $p = .37$), and ostracised ($M = 9.93$, $SD = 2.87$ to $M = 10.18$, $SD = 2.82$), $t(32) = 1.07$, $p = .29$) control group participants.

Belonging and intergroup discrimination. A correlational analysis was calculated to assess the relationship between belonging, self-esteem, ingroup and outgroup white noise allocation for the participants in the inclusion and ostracism condition. Correlations for the inclusion condition are presented in Table 7, and for the ostracism condition are shown in Table 8. As may be seen from Table 7, there are no significant correlations between pre- and post-allocation belonging, and ingroup and outgroup white noise allocation.

Table 7.

Correlations between belonging at time 1, belonging at time 2, white noise allocated to the ingroup, white noise allocated to the outgroup, prejudice difference, collective self-esteem following white noise allocation, personal self-esteem, identity salience, and depersonalisation.

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1.	-	.68**	.04	-.04	.04	.17	.18	-.22	-.34
2.	-	-	.10	-.10	.10	.15	.17	-.10	-.27
3.	-	-	-	-1.0**	1.0**	.11	.37*	-.16	-.01
4.	-	-	-	-	-1.0**	-.11	-.37	.16	.01
5.	-	-	-	-	-	+.10	+.10	+.39**	+.33**
6.	-	-	-	-	-	-	+.38	+.19	+.25
7.	-	-	-	-	-	-	-	+.27*	+.39**
8.	-	-	-	-	-	-	-	-	.58**
9.	-	-	-	-	-	-	-	-	-

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

Note: 1. Belonging at time 1; 2. Belonging at time 2; 3. White noise allocated to the ingroup; 4. White noise allocated to the outgroup; 5. Prejudice difference; 6. Collective self-esteem; 7. Personal self-esteem; 8. Identity salience; 9. Depersonalisation.

As seen in Table 8 no significant correlations between pre- and post-allocation belonging, and ingroup and outgroup white noise allocation were found.

Table 8.

Correlations between belonging at time 1, belonging at time 2, white noise allocated to the ingroup, white noise allocated to the outgroup, prejudice difference, collective self-esteem following white noise allocation, personal self-esteem, identity salience, and depersonalisation.

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1.	-	.72**	.02	-.02	.02	-.07	.11	.07	.10
2.	-	-	-.04	.04	-.04	-.25	.03	.14	.18
3.	-	-	-	-1.0**	1.0**	.26	.08	-.16	.13
4.	-	-	-	-	-1.0**	-.26	-.08	.16	-.13
5.	-	-	-	-	-	.26	.08	-.16	.13
6.	-	-	-	-	-	-	-.01	-.26	-.41*
7.	-	-	-	-	-	-	-	-.03	.18
8.	-	-	-	-	-	-	-	-	.69**
9.	-	-	-	-	-	-	-	-	-

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

Note: 1. Belonging at time 1; 2. Belonging at time 2; 3. White noise allocated to the ingroup; 4. White noise allocated to the outgroup; 5. Prejudice difference; 6.

Collective self-esteem; 7. Personal self-esteem; 8. Identity salience; 9. Depersonalisation.

Discussion of Study 3

Two hypotheses were tested in this study. The first hypothesis stated that the display of intergroup discrimination (against Americans) would enhance belonging. The second stated that low or threatened belonging would enhance intergroup discrimination. The results supported both hypotheses. The New Zealanders (in the experimental condition) who allocated more white noise to outgroup members (i.e. Americans) compared to ingroup members (i.e. New Zealanders), experienced an increase in belonging. Participants that were ostracised displayed approximately three times more differentiation between ingroup and outgroup members, with more white noise being assigned to the outgroup. No changes in belonging, from pre- to post-allocation were found for participants in the control condition.

General Discussion

Much of the recent research into the motivational cause of intergroup discrimination has focused on the role of self-esteem (see Aberson et al., 2000 for a review) and delivered ambivalent results. This investigation sought to address the pervading issue of the motivations of intergroup discrimination. Guided by existing theories that emphasise the importance of the need to belong (Baumeister & Leary, 1995; Brewer, 1991; Turner et al., 1987; Leary, 2006; Gardner, et al., 2000), the present studies aimed to explore the role that belonging might play in intergroup discrimination. In the present investigation, three studies were conducted to investigate the role of belonging in intergroup discrimination. Study 1 and Study 2 assessed belonging as an outcome of discrimination. Study 3 assessed belonging as both an outcome and a predictor of discrimination.

Main Findings

In Study 1, New Zealanders evaluated ingroup members more positively than outgroup members (i.e., Americans) on the trait evaluation task. In Study 2, New Zealanders gave more white noise to outgroup members (i.e., Asians) than ingroup members. In each instance, the participants experienced increased belonging following the display of either a relatively positive form of intergroup discrimination (i.e., Study 1) or following the display of a relatively negative form of intergroup discrimination (i.e., Study 2). These findings provide the initial evidence to support the theories (The belonging hypothesis, Baumeister & Leary, 1995; SCT, Turner, 1985; ODT, Brewer, 1991; Social monitoring theory, Gardner et al., 2000; social

rejection theories, e.g., Gaertner et al., 2008) that suggest belonging increases following discrimination.

The findings from Study 3 replicate and extend the findings from Studies 1 and 2. New Zealanders who allocated more white noise to members of the outgroup (i.e., Americans) than to members of the ingroup, experienced elevated levels of belonging. New Zealanders who were ostracised experienced decreased belonging and showed enhanced levels (approximately three times more) of intergroup differentiation (i.e., the allocation of more white noise to outgroup than ingroup members) compared to participants who were included. Moreover, this study found that threatened belonging (i.e., lowered levels of belonging following discrimination) can lead to increased levels of discrimination, and that such discrimination can then lead to a restoration of previously lowered belonging³.

Summary of findings. The present studies sought to elucidate the role that belonging might play as both a motivator and a result of intergroup discrimination. These three studies collectively found that belonging was enhanced after intergroup discrimination. Additionally, threatened belonging was associated with increased discrimination, which was then associated with increased belonging. In doing so the findings provide evidence that supports existing theories of belonging and intergroup discrimination, including the belonging hypothesis (e.g. Baumeister & Leary, 1995; Twenge, et al., 2001), SCT (Leary & Downs, 1995; Turner, et al., 1987) ODT (Brewer, 1991), social monitoring theory (Gardner et al., 2000) and theories of social rejection (Gaertner et al., 2008; Jetten et al., 2002; Noel et al., 1995; Williams et al., 2003).

Current Findings Related to Past Theory and Research

³ It is acknowledged that we did not find any direct statistical associations or correlations between belonging and discrimination.

While the current results are consistent with the aforementioned theories, it is not yet possible to disentangle which theory or theories might best explain the results. For example, the SCT states that being categorised as a group member is sufficient impetus in itself for ingroup bias to occur (Turner, 1985). If this is the case, participants' discrimination could be considered as being normative group behaviour. Alternatively, according to the ODT, participants' discrimination in evaluation and allocation tasks could be viewed as maintaining ingroup inclusion (i.e., the New Zealand national group) while simultaneously defining this membership as distinct from the American or Asian groups (i.e. the outgroups). At this stage, the findings could be interpreted in support of multiple theories. However, in order to know definitively which theory the findings support, more research must be undertaken that distinguishes or tests between a 'need fulfillment' motive (i.e., ODT) and a normative account (i.e., SCT).

The findings from Study 3 are consistent with past research, which has found that those who are on the periphery or ostracised from their group show increased forms of prejudice (Gaertner et al., 2008; Jetten et al., 2002; Noel et al., 1995; Williams, et al. 2003). The present findings extend the existing research by suggesting that it is lowered belonging per se that was associated with intergroup discrimination. In Study 3, participants who were ostracised prior to the discrimination task experienced a decrease in belonging. Past researchers who have investigated the impact of ostracism propose that when belonging is threatened individuals act to restore their need to belong (Williams, 2007). In Study 3, we found that the participants who were ostracised before the discrimination task, displayed approximately 3 times more differentiation (i.e., more white noise allocated to outgroup than ingroup members) than non-ostracised participants. This is consistent

with Williams' (2007) prediction that individuals who are ostracised from their own social group might restore lost belonging by displaying discrimination.

Self-esteem and intergroup discrimination. Despite a number of potential psychological motivations of intergroup discrimination (e.g., uncertainty reduction, fear of death, control, self-esteem, and belonging), and many varied theories of prejudice, much of the previous research investigating motivational processes and intergroup discrimination has focused primarily on self-esteem and the SEH (e.g. Abrams & Hogg, 1988; Noel et al., 1995; Rubin & Hewstone, 1998). Of the two corollaries of the SEH, greater empirical support has been found for the first corollary, that discrimination leads to increased self-esteem, compared to the second corollary, that lowered self-esteem would lead to increased belonging (e.g., Aberson et al., 2000, Abrams & Hogg, 1988, Rubin & Hewstone, 1998). More consistent support for the first corollary has been found in studies that were measuring collective self-esteem rather than personal self-esteem (Rubin & Hewstone, 1998).

In light of past debates regarding which type measure, either personal level or group level, best reflects self-esteem, the present studies measured both personal and collective self-esteem. In Study 1 and Study 2 self-esteem was measured both pre and post the discrimination tasks. In Study 3, self-esteem was measured only following the discrimination task. Throughout Studies 1 and 2, personal and collective self-esteem ratings showed no consistent changes (i.e., following discrimination) in the pattern predicted by the SEH (Abrams & Hogg, 1988). However, in Study 2 participants in the control condition did experience a decrease in self-esteem following the discrimination task, which is consistent with Branscombe and Wann's (1994) finding. Branscombe and Wann (1994) found that discriminating against a group that is not considered a threat to the ingroup can lead to lowered self-esteem.

Similar to this finding, when the control participants in Study 2 were constrained to show parity in their white noise allocation, they also demonstrated a decrease in self-esteem. There are two possible reasons which may explain the observed decrease in self-esteem following the white noise allocation task. First, the participants were not able to show ingroup bias or establish positive distinctiveness for their group. Second, the participants were unable to engage in what might have been normative New Zealand group behaviour (this however raises the question of why their belonging was not also affected). Overall, the self-esteem measures in Study 1, 2, and 3 did not change in the manner predicted by the SEH (Abrams & Hogg, 1988) or the sociometer theory (Leary & Downs, 1995). Self-esteem was not increased following discrimination in Study 1, 2, or 3, and self-esteem did not decrease following ostracism in Study 3.

Belonging and intergroup discrimination. In contrast to the self-esteem measures, which did not show a consistent pattern of change, the measures of belonging elicited a similar effect in all three studies. In Study 3, belonging was lowered by the ostracism manipulation, and in all three studies, belonging was repeatedly enhanced following the discrimination tasks. This finding suggests that social ostracism leads to a decrease in group belonging and that intergroup discrimination can lead to an increase in group belonging. The marked difference between the patterns of belonging and self-esteem raises a number of possible, and not necessarily mutually-exclusive, explanations. First, that belonging is more sensitive than self-esteem. Second, that belonging accounts for self-esteem (i.e. once belonging was increased self-esteem became irrelevant). Third, that by measuring belonging before self-esteem meant that the participants' "motivational needs" were already satisfied so self-esteem became somewhat irrelevant. Fourth, as we propose,

that self-esteem has thus far been over-implicated as a motivation of prejudice, and that past ambivalent findings for the role of self-esteem are not best explained by erroneous measurement (e.g. Hunter et al; 1996; Hunter et al., 2004; Hunter et al., 2005). Instead, in light of the current findings, we posit that belonging better explains the underlying motivations of intergroup discrimination than self-esteem.

The interaction between self-esteem and belonging. Additionally, the current findings challenge theories of how self-esteem and belonging are related. According to the sociometer theory (Leary, 1995) self-esteem acts as a psychological monitor of social inclusion and belonging. However, in the current studies, self-esteem did not decrease following the ostracism manipulation, and self-esteem did not increase following the discrimination tasks. Moreover, no statistically significant correlations between belonging and self-esteem were found. Considering these findings, it suggests that self-esteem and belonging are not that closely related. If self-esteem were a reflection or close relation of belonging, as has been alleged (Leary & Downs, 1995), then self-esteem would have been expected to either increase with belonging, or be highly associated with belonging, neither of which was found. Rather the present studies only found significant effects for belonging and not for self-esteem. This implies that future research into the motivations of intergroup discrimination should be directed towards understanding the phenomenon of belonging, rather than self-esteem.

Explanations for the Present Findings

Despite significant increases in belonging following the various kinds of discrimination utilised in this research project, no significant correlations were found between discrimination and belonging. The reason for this absence of correlation between discrimination and belonging is currently unclear. However, there are a

number of possible extraneous or associated variables, such as identity or salience, that might be obscuring a significant correlation between discrimination and belonging, or better account for the relationship between belonging and discrimination. Moreover, it is also possible that discrimination *per se* does not lead to enhanced belonging.

Group salience. If discrimination is not solely, or even primarily, responsible for increases in belonging, an alternative explanation of what caused an increase in belonging needs to be explored. One possible explanation is the salience of group membership. Oakes and Turner (1980) were the first to consider the effect of salience as a cognitive-motivational construct. In their research investigating self-esteem and intergroup discrimination, Oakes and Turner (1980) theorised that it might be the salience of group membership, and not discrimination, that triggers increases in self-esteem. In line with this theory, the present discrimination tasks and belonging measures may have increased participants' awareness and salience of their group membership, thereby stimulating feelings of group belonging which emerged in the reported increased belonging following discrimination.

The magnitude of the impact of salience is unfortunately both difficult to ascertain and to control for experimentally. Consequently it is difficult to tease apart the impact of group membership salience on increased belonging. In these experiments, manipulation checks indicated that the control and experimental groups had similar levels of group salience. However, we cannot say with certainty that salience (i.e., the strength of identity and depersonalisation, two phenomenon critical for the emergence of group behaviour; see Turner et al., 1987) is not affecting the present results. Lalonde (2002) argues the absence of a correlation between belonging and discrimination might arise in circumstances where collective identity is salient, as

group level judgments (as regards ingroup and outgroup members) are activated. Perceptions of ingroup variability are proposed to be attenuated and any association between identity and intergroup discrimination is likely to be small or moderate (Lalonde, 2002). This is further exacerbated since collective identity is a multidimensional concept, with belonging, strength of identity and depersonalisation being only three aspects of this concept.. It is therefore possible that our measures might have missed some other important parts of collective identity.

Normative behaviour. Another possible explanation of, or a contributing factor to, the display of intergroup discrimination and the increase in belonging, is normative group behaviour. The participants' behaviour could be considered as being motivated by group norms. According to the SIT, a part of the self is defined by group membership. In addition, perceiving oneself as a group member is thought to activate normative behaviours (Turner, 1985). If participants (i.e., members of the New Zealand national group) considered intergroup discrimination to be a normative and acceptable response, they might discriminate to behave in the normative way. Furthermore, participants who perceive intergroup discrimination as being normative and acceptable could experience increases in their belonging as a result of behaving in the way they consider to be normatively appropriate.

The exact impacts of strength of identity, depersonalisation and group normative behaviour are difficult to estimate. The concepts of salience and norms overlap and intertwine with concepts of group membership and intergroup prejudice. What is more, the ingroup and outgroup manipulations that are commonly used in intergroup research necessarily draw attention to ingroup membership, which increases group salience and activates group norms. Despite the methodological difficulties of measuring and manipulating belonging, it can be concluded that

intergroup discrimination lead to increased belonging, and ostracism lead to greater amounts of intergroup discrimination.

Limitations

A number of limitations of the current study should be noted. The first is that only one ingroup, the New Zealand national group, was used in the three studies. Thus, the trend that belonging increased following discrimination cannot be extrapolated beyond the New Zealand national group to other social groups. It also remains unknown whether discrimination might lead to increased belonging in other sorts of meaningful groups, such as those based on religion, gender, or sports teams. Future studies could address this by conducting the same or similar experimental procedures with different national groups or with other sorts of meaningful or even artificial (e.g. minimal; see Diehl, 1990) groups.

An associated second limitation is the limited range of comparison outgroups used in this thesis. In Study 1 and Study 3, Americans were used as the comparison outgroup, and in Studies 2 Asians were used as the comparison outgroup. The results demonstrated that New Zealanders engaged in discrimination towards these two different national outgroups and experienced increased belonging as a result. However, future studies should address whether the phenomenon remains the same with other national groups of varied status, power or geographical distance relative to New Zealand.

A third limitation to be considered is the assessment of possible erroneous and connected variables. As previously mentioned, aspects of salience and norms might not have been adequately assessed in the present experiments. The role of salience, as previously mentioned, is difficult to manipulate in an experimental condition that necessarily draws attention to group membership and the ingroup outgroup

dichotomy. However, future studies could manipulate group norms to address the role of normative responding in intergroup discrimination tasks. For example, by providing participants with descriptions of a “typical group member’s behaviour” or directly informing participants of behaviour that is “normal” for their group, we would expect behaviour to change in response to the norms presented. One way in which this might be done could be by informing participants that their group tended to show ingroup favouritism, parity, or outgroup bias prior to a discrimination task (see Jetten, Spears & Manstead, 1996). Thus with a norm such as fairness we would expect that a display of fairness might lead to increased belonging. In order to examine this effect, participants could be exposed to confederates, written vignettes, or anecdotes of New Zealanders conveying a sense of parity towards other cultures and nations. Norms of ingroup favouritism, which might currently exist for New Zealanders, would be expected to generate intergroup discrimination. It is possible that current norms of intergroup discrimination are present under the guise of national solidarity or “kiwi pride”. What is more, if behaviour is mainly driven by following norms, then belonging should enhance via showing normative behaviour. This would also facilitate a comparison of predictions derived from SCT (Turner et al., 1997) which stress the role of normative behaviour, in contrast to other theories such as ODT (Brewer, 1991).

Concluding Remarks and Future Directions

Three studies were conducted to explore the role of belonging in intergroup discrimination. The current studies found that participants experienced enhanced belonging following the display of various forms of discrimination, and lowered belonging led to greater amounts of discrimination. Together these three experiments

have generated the first empirical evidence showing discrimination enhances belonging, and that threatened belonging leads to increased intergroup discrimination.

The findings from the first two studies indicated that the process of discriminating against another national group plays a role in elevating the sense of belonging to your national group. The findings from Study 3 further indicated that individuals who have threatened belonging engaged in greater amounts of negative intergroup discrimination, in order to restore their relatively diminished belonging. No consistent changes in self-esteem were observed in the three studies. The current findings reinforce the concerns of those who have questioned the relevance of self-esteem in intergroup prejudice (e.g. Brown, 1995; Hogg & Abrams, 1993; Messick & Mackie, 1989), and further emphasise the role of belonging as integral to understanding and reducing intergroup discrimination (e.g. Baumeister & Leary, 1995; Ellemers, et al., 1999; Hogg & Abrams, 1993).

While belonging was repeatedly found in this experiment to increase following intergroup discrimination, it is not yet possible to assert that belonging is the only motivational need involved in intergroup discrimination. There are also a number of other possible motives that may moderate or mediate the display of intergroup discrimination. These additional motives could include needs of efficacy (Williams et al., 2001), control (Twenge et al., 2001; Williams, 2007; Williams et al., 2001), uncertainty reduction (e.g., Grieve & Hogg, 1999; Reid & Hogg, 2005), fear of death (Greenberg, Solomon & Pyszczynski, 1997; Solomon, Greenberg & Pyszczynski, 2000), distinctiveness, and inclusion (Brewer, 1991).

Furthermore, the impact of wider societal factors of status, power and ideology must also be acknowledged and considered in respect to cultural hostility and prejudice (see Abrams et al., 2005; Hunter, Stringer & Watson, 1991; Platow &

Hunter, 2001; Smith & Postmes, 2009; Staub, 1993). Further research into these areas is needed if the motivational basis of intergroup discrimination is to be understood and the negative impacts of prejudice and discrimination are to be reduced.

REFERENCES

- Aberson, C. L., Healy, M., & Romero, V. (2000). Ingroup bias and self-esteem: A meta-analysis. *Personality and Social Psychology Review*, *4*, 157-173.
- Abrams, D., & Hogg, M. A. (1988). Comments on the motivational status of self-esteem in social identity and intergroup discrimination. *European Journal of Social Psychology*, *18*, 317-334.
- Abrams, D. & Hogg, M. A. (1990). Social identification, self categorization and social influence. *European Review of Social Psychology*, *1*, 195-228.
- Abrams, D., & Hogg, M. A. (1998). Prospects for research in group processes and intergroup relations. *Group Processes and Intergroup Relations*, *1*, 7-20.
- Abrams, D. & Hogg, M. A. (2001). Collective identity: Group membership and self-conception. In M. A. Hogg & S. Tindale (Eds), *Blackwell Handbook of Social Psychology: Group Processes*. Oxford: Blackwell.
- Abrams, D., Hogg, M., & Marques, J. M. (2005). *The social psychology of inclusion and exclusion*. New York: Psychology Press.
- Altemeyer, B. (1998). *Enemy of Freedom: Understanding Right Wing Authoritarianism*. San Francisco: Jossey Bass.
- Amiot, C. E., & Bourhis, R. Y. (2005). Discrimination between dominant and subordinate groups: The positive–negative asymmetry effect and normative processes. *British Journal of Social Psychology*, *44*, 289–308.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*, 497-529.
- Baumeister, R. F., Smart, L., & Boden, J. M. (1996). Relation of threatened egoism to violence and aggression: The dark side of self-esteem. *Psychological Review*, *103*, 5-33.

- Berkowitz, L. (1962). *Aggression: A Social Psychological Analysis*. New York: McGraw-Hill.
- Billig, M. (1976). *Social Psychology and Intergroup Relations*. London: Academic Press.
- Blackhart, G. C., Nelson, B. C., Knowles, M. L., & Baumeister, R. F. (2009). Rejection elicits emotional reactions but neither causes immediate distress nor lowers self-esteem: A meta-analytic review of 192 studies on social exclusion. *Personality and Social Psychology Review* 13(4), 269-409.
- Bourhis, R.Y., Sachdev, I., & Gagnon, A. (1994). Intergroup research with the Tajfel matrices: Methodological notes. In M.P. Zanna & J.M. Olsen (Eds), *The psychology of Prejudice: The Ontario Symposium (vol 7)* (pp. 209-232) New Jersey: Erlbaum.
- Bowlby, J. (1969). *Attachment and Loss: Vol. 1 Attachment*. New York: Basic Books.
- Branscombe, N. R., Ellemers, N., Spears, R., & Doosje, B. (1999). The context and content of social identity threat. In N. Ellemers, R. Spears, & B. Doosje (Eds.), *Social Identity: Context, commitment, Content*. Oxford: Blackwell.
- Branscombe, N. R., & Wann, D. L. (1994). Collective self esteem consequences of outgroup derogation when a valued social identity is on trial. *European Journal of Social Psychology*, 24, 641-657.
- Brehm, S.S., Kassin, S., & Fein, S. (2005) *Social Psychology* (6th ed.). New York: Houghton Mifflin Company.
- Brewer, M. B. (1991). The social self: on being the same and different at the same time. *Personality and Social Psychology Bulletin*, 17, 641-657.
- Brewer, M. B. (2000). Research design and issues of validity. In H. T. Reis & C. M. Judd (Eds). *Handbook of research methods in social and personality psychology*. Cambridge: Cambridge University Press.

- Brewer, M. B. & Brown, R. J. (1998). Intergroup relations. In D. T. Gilbert, S. T. Fiske & G. Lindzey (Eds.), *The Handbook of Social Psychology*. New York: Oxford University Press.
- Brown, R. (1988). *Group Processes: Dynamics Within and Between Groups*. Oxford: Blackwell.
- Brown, R. (1995). *Prejudice: It's Social Psychology*. Oxford: Blackwell.
- Buckley, K. E., Winkel, R. E., & Leary M. R. (2004). Reactions to acceptance and rejection: Effects of level and sequence of relational evaluation. *Journal of Experimental Social Psychology*, *40*, 14-28.
- Chapman, L. J., Chapman, J. P., Kwapil, T. R., Eckblad, M., & Zinser, M. C. (1994). Putatively psychosis-prone subjects 10 years later. *Journal of Abnormal Psychology*, *103*, 171–183.
- DeCremer, D., & Leonardelli, G. J. (2003). Cooperation in social dilemmas and the need to belong: The moderating effect of group size. *Group Dynamics: Theory, Research and Practice*, *7*, 168-174.
- Diehl, M. (1990). The minimal group paradigm. In W. Stroebe & M. Hewstone (Eds.), *European Review of Social Psychology*. Chichester, UK: Wiley.
- Duckitt, J., Callaghan, J., & Wagner, C. (2005). Group identity and intergroup attitudes in South Africa: A multidimensional approach. *Personality and Social Psychology Bulletin*, *31*, 633-646.
- Ellemers, N., Kortekaas, P., & Ouwerkerk, J. W. (1999). Self-categorization, commitment to aspects of social identity. *European Journal of Social Psychology*, *29*, 371–389.
- Ellemers, N., Spears R., & Doosje, S. (Eds.) (1999). *Social Identity*. Oxford: Basil Blackwell.
- Festinger, L. Schachter, S. & Back, K. W. (1950) *Social Pressures in Informal Groups: A Study of Human Factors in Housing*. New York: Harper.

- Fiske, S. T. (2004). *Social beings: A core motives approach to social psychology*. United States: Wiley.
- Forgas, J.P. Williams, K.D. & von Hippel, W. (Eds.) (2003). *Social judgments: Explicit and implicit processes*. New York: Cambridge University Press.
- Freedman, J. (1978). *Happy people: what happiness is, who has it, and why*. New York: Harcourt Brace Jovanovich.
- Gaertner, L., Iuzzini, J., & O'Mara, E. M. (2008). When rejection by one fosters aggression against many: Multiple-victim aggression as a consequence of social rejection and perceived groupness. *Journal of Experimental Social Psychology*, 44, 958-970.
- Gardner, W. L., Pickett, C. L., & Brewer, M. B. (2000). Social exclusion and selective memory: How the need to belong influences memory for social events. *Personality and Social Psychology Bulletin*, 26, 486-496.
- Greenberg, J., Solomon, S., & Pyszczynski, T. (1997). Terror management theory of self-esteem and cultural worldviews: Empirical assessments and conceptual refinements. *Advances in experimental social psychology*, 29, 61-139.
- Grieve, P.G., & Hogg, M.A. (1999). Subjective uncertainty and intergroup discrimination in the minimal group situation. *Personality and Social Psychology Bulletin*, 25, 926-940.
- Hazan, C., & Shaver, P. R. (1994). Attachment as an organisational framework for research on close relationships. *Psychological Inquiry*, 5, 1-22.
- Hewstone, M., Rubin, M. & Willis, H. (2002). Intergroup bias. *Annual Review of Psychology*, 53, 575-604.
- Hogg, M. A. (2000). Subjective uncertainty reduction through self-categorization: A motivational theory of social identity processes. *European Review of Social Psychology*, 11, 223-255.
- Hogg, M. A., & Abrams, D. (1988). *Social Identifications*. London: Harvester / Wheatsheaf.

- Hogg, M. A., & Abrams, D. (1993). Towards a single-process uncertainty reduction model of social motivation in groups. In M. A. Hogg & D. Abrams (Eds), *Group Motivation: Social Psychological Perspectives*. London: Harvester / Wheatsheaf.
- Hogg, M. A., & Mullin, B. A. (1999). Joining groups to reduce uncertainty: Subjective uncertainty reduction and group identification. In D. Abrams & M. A. Hogg (Eds), *Social Identity and Social Cognition*. Oxford: Blackwell.
- Hogg, M. A., Turner, J. C., Nascimento-Schulze, C., & Spriggs, D. (1986). Social categorization, intergroup behaviour and self-esteem: Two experiments. *Revista de Psicologia Social, 1*, 23-37.
- Howell, D. C. (1987). *Statistical methods for psychology*. Duxbury Press: Boston.
- Hunter, J. A., Banks, M., O'Brien, K., Kafka, S., Hayhurst, G., Jephson, D., Jorgenson, B. and Stringer, M. (2011), Intergroup Discrimination Involving Negative Outcomes and Self-Esteem. *Journal of Applied Social Psychology, 41*, 1145–1174.
- Hunter, J. A., Cox, S. L., O'Brien, K. S., Stringer, M., Boyes, M., Banks, 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, 43*, 59-81.
- Hunter, J. A., Kypri, K., Stokell, N. M., Boyes, M., O'Brien, K. S., & McMenamin, K. E. (2004). Social identity, self-evaluation and ingroup bias: The relative importance of particular domains of self-esteem to the ingroup. *British Journal of Social Psychology, 43*, 59-81.
- Hunter, J. A., Platow, M. J., Howard, M. L. & Stringer, M. (1996). Social Identity and intergroup evaluative bias: Realistic categories and domain specific self-esteem in a conflict setting. *European Journal of Social Psychology, 26*, 631-647.

- Hunter, J. A., Stringer, M., & Watson, R. P. (1991). Intergroup violence and intergroup attributions. *British Journal of Social Psychology*, *30*, 261–266.
- Jetten, J., Branscombe, N. R., & Spears, R. (2002). On being peripheral: Effects of identity insecurity on personal and collective self esteem. *European Journal of Social Psychology*, *32*, 105-123.
- Jetten, J., Branscombe, N. R., & Spears, R. (2006). Living on the edge: dynamics of intragroup and intergroup rejection experiences. In R. Brown & D. Capozza (Eds). *Social Identities: Motivational, emotional and cultural influences*. London: Sage Publishers.
- Jetten, J., Spears, R., & Manstead, A. S. R. (1996). Intergroup norms and intergroup discrimination: Distinctive self-categorization and social identity effects. *Journal of Personality and Social Psychology*, *71*, 1222-1233.
- Kameda, T., & Tindale, R. S. (2006). Groups as adaptive devices: Human docility and group aggregation mechanisms in evolutionary context. In M. Schaller, J. A. Simpson, & D. T. Kenrick (Eds.), *Evolution and social psychology* (pp. 317-341). New York: Psychology Press.
- Kenrick, D.T., & Johnson, G.A. (1979). Interpersonal attraction in aversive environments: A problem for the classical conditioning paradigm? *Journal of Personality and Social Psychology*, *37*, 572-579.
- Lalonde, R. N. (2002). Testing the social identity differentiation hypothesis: ‘We are not American eh!’ *British Journal of Social Psychology*, *41*, 611-630.
- Latané, B., Eckman, J., & Joy, V. (1966). Shared stress and interpersonal attraction. *Journal of Experimental Social Psychology*, *2*, 80-94.
- Leary, M. R. (2005). Varieties of interpersonal rejection. In K. D. Williams, J. P. Forgas, W. von Hippel (Eds.), *The social outcast* (pp. 35-51). New York: Psychology Press.

- Leary, M. R. (2006). Sociometer theory and the pursuit of relational value: Getting to the root of self-esteem. *European Review of Social Psychology, 16*, 75-111.
- Leary, M. R. (2010). Affiliation, acceptance, and belonging: The pursuit of interpersonal connection. In S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology: Volume two*. New York: Oxford University Press.
- Leary, M. R., & Baumeister, R. F. (2000). The nature and function of self esteem: Sociometer theory. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 32, pp. 1-62). San Diego: Academic Press.
- Leary, M. R., & Downs, D. L. (1995). Interpersonal functions of the self-esteem motive: The self-esteem system as a sociometer. In M. Kernis (Ed.), *Efficacy, agency, and self-esteem* (pp. 123-144). New York: Plenum.
- Leary, M. R., Tambor, E. S., Terdal, S. K., & Downs, D. L. (1995). Self-esteem as an interpersonal monitor: the sociometer hypothesis. *Journal of Personality and Social Psychology, 68*, 518-530.
- Lemyre, L., & Smith, P. (1985). Intergroup discrimination and self esteem in the minimal group paradigm. *Journal of Personality and Social Psychology, 49*, 660-670.
- Leonardelli, G. J., Pickett, C. L., & Brewer, M. B. (2010). Optimal distinctiveness theory: A framework for social identity, social cognition and intergroup relations. In M. Zanna & J. Olson (Eds.) *Advances in experimental social psychology*, pp. 65-115. New York: Elsevier.
- Long K., & Spears R. (1997). The self-esteem hypothesis revisited: differentiation and the disaffected. In Spears R, Oakes PJ, Ellemers N, Haslam SA. (Eds.) *Introduction: the Social Psychology of Stereotyping and Group Life*. Oxford: Blackwell.
- Luhtanen, R., & Crocker, J. (1992). Collective self-esteem scale: self-evaluation of one's social identity. *Personality and Social Psychology Bulletin, 18*, 302-318.

- Marsh, H. W., Barnes, J., & Hovecar, D. (1985). Self other agreement on multidimensional self-concept ratings: Factor analysis and multi-trait-multi- method analysis. *Journal of Personality and Social Psychology*, *49*, 1360-1377.
- Messick, D. M., & Mackie, D. (1989). Intergroup relations. *Annual Review of Psychology* , *40*, 45–81.
- Myers, D. G. (2000). The funds, friends, and faith of happy people. *American Psychologist*, *55*, 56-67.
- Noel, J. G., Branscombe, N. R., & Wann, D. L. (1995). Peripheral ingroup membership status and public negativity toward outgroups. *Journal of Personality and Social Psychology*, *68*, 127-137.
- Oakes, P. J., Haslam, S. A., & Turner, J. C. (1994). *Stereotyping and Social Reality*. Oxford: Blackwell.
- Oakes, P. J., Haslam, S. A., & Turner, J. C. (1999). The role of prototypicality in group influence and cohesion: Contextual variation in the graded structure of social categories. In S. Worchel, J. F. Morales, D. Paez, & J.-C. Deschamps (Eds.), *Social identity: International perspectives*. London, UK & Newbury Park, USA: Sage.
- Oakes, P. J., & Turner, J. C. (1980). Social categorisation and intergroup bias: Does minimal group intergroup discrimination make social identity more positive. *European Journal of Social Psychology*, *10*, 295-301.
- Ouwerkerk, J. W., Kerr, N. L., Gallucci, M., & van Lange, P. A. M. (2005). Avoiding the social death penalty: Ostracism and cooperation in social dilemmas. In K. D. Williams, J. P. Forgas, & W. von Hippel (Eds.), *The Social Outcast: Ostracism, Social Exclusion, Rejection, and Bullying*, pp. 321–332. New York: Psychology Press.

- Pickett, C. L., & Leonardelli, G. J. (2006). Using collective identities for assimilation and differentiation. In T. Postmes & J. Jetten (Eds.), *Individuality and the Group: Advances in Social Identity*, pp. 56-73. . California: Sage Publications.
- Platow, M. J., Harley, K., Hunter, J. A., Hanning, P., Shave, R., & O'Connell, A. (1997). Interpreting in-group-favoring allocations in the minimal group paradigm. *British Journal of Social Psychology*, *36*, 107–117.
- Platow, M. J. & Hunter, J. A. (2001). Realistic intergroup conflict: Prejudice, power and protest. In M. Augoustinos & K. Reynolds (Eds), *Understanding the Psychology of Prejudice and Racism*. London: Sage.
- Platow, M. J., McClintock, C., & Liebrand, W. B, G. (1990). Predicting intergroup fairness and ingroup bias in the minimal group paradigm. *European Journal of Social Psychology*, *20*, 221-239.
- Reid, S.A., & Hogg, M.A., (2005) Uncertainty reduction, self-enhancement, and in-group Identification. *Personality and Social Psychology Bulletin*, *31*, 804-817.
- Roberts, M. J., & Russo, R. (1999). *A students guide to analysis of variance*. London: Routledge.
- 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*, 40-62.
- Sardar, Z., & Davies, M. L. (2004). *Why do people hate America?* Cambridge, UK: Faber.
- Sheldon, K. M., & Bettencourt, B. A. (2002). Psychological need-satisfaction and subjective well-being within social groups. *British Journal of Social Psychology*, *41*, 25-38.
- Sherif, M. (1966). *Group Conflict and Cooperation-operation*. London: Routledge & Kegan Paul.

- Sherif, M., Harvey, O. J., White, B. J., Hood, W. R., & Sherif, C. W. (1961). *Intergroup cooperation and competition: The Robbers Cave experiment*. Norman: University Book Exchange.
- Sibley, C. G., & Duckitt, J. (2009). A Dual-Process Model of Ideology, Politics, and Prejudice: Commentary and Response to Questions. *Psychological Inquiry*, 20, 168-171.
- Sidanius, J. & Pratto, F. (1993). The inevitability of oppression and the dynamics of social dominance. P. Sniderman, P. Tetlock & E. G. Carmines (Eds), *Prejudice, Politics and the American Dilemma*. Stanford: Stanford University Press.
- Smith, L. G., & Postmes, T. (2009). Intragroup interaction and the development of norms, which produce intergroup hostility. *European Journal of Social Psychology*, 39, 130–144.
- Solomon, S., Greenberg, J. & Pyszczynski, T. (1991). A terror management theory of social behaviour: The psychological functions of self esteem and cultural worldviews. In M. P. Zanna (Ed), *Advances in Experimental Social Psychology (vol 24)*. San Diego: Academic Press.
- Solomon, S., Greenberg, J., & Pyszczynski, T. (2000). Pride and prejudice: Fear of death and social behavior. *Current Directions in Psychological Science*, 9, 200-204.
- Staub, E. (1993). *The roots of evil*. Cambridge: Cambridge University Press.
- Sternberg, R. J. (1986). A triangular theory of love. *Psychological Review*, 93, 119-135.
- Struch, N., & Schwartz, S. H. (1988). Intergroup aggression: its predictiveness from ingroup bias. *Journal of Personality and Social Psychology*, 56, 364-373.
- Tajfel, H. (1981). *Human Groups and Social Categories*. Cambridge: Cambridge University Press.

- Tajfel, H., Billig, M. G., Bundy, R. P., & Flament, C. (1971). Social categorization and intergroup behaviour. *European Journal of Psychology, 1*, 149-177.
- Tajfel, H. & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds), *The Social Psychology of Intergroup Relations*. Monterey: Brooks / Cole.
- Tajfel, H. & Turner, J. C. (1986), The social identity theory of intergroup behaviour. In S Worchel & W. G. Austin (Eds), *The Social Psychology of Intergroup Relations*. Chicago: Nelson / Hall.
- Turner, J. C. (1985). Social categorization and the self-concept: A social cognitive theory of group behavior. In E. J. Lawler (Ed.), *Advances in group processes: Theory and research, vol. 2* (pp. 77-122). Greenwich: JAI Press.
- Turner, J. C. (1999). Some current issues in research on social identity and self-categorisation theories. In N. Ellemers, R. Spears & B. Doosje (Eds), *Social Groups and Identities: Developing the Legacy of Henri Tajfel*. Oxford: Butterworth / Heinemann.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford: Blackwell.
- Turner, J. C., & Reynolds, K. J. (2003^a). The social identity perspective in intergroup relations: Theories, themes, and controversies. In R. Brown & S. L. Gaertner (Eds.), *Blackwell handbook of social psychology: Intergroup processes*, pp. 133–152. Oxford, UK: Blackwell.
- Turner, J. C., & Reynolds, K. J. (2003^b). Why social dominance theory has been falsified. *British Journal of Social Psychology, 42*, 199-206.
- Twenge, J. M., Baumeister, R. F., Tice, D. M., & Stucke, T. S. (2001). If you can't join them beat them: effects of social exclusion on aggressive behaviour. *Journal of Personality and Social Psychology, 81*, 1058-1069.

- Vignoles, V. L., Regalia, C., Manzi, C., Golledge, J., & Scabini, E. (2006). Beyond self-esteem: Influence of multiple motives on identity construction. *Journal of Personality and Social Psychology, 90*, 308-333.
- Williams, K. D. (2007). Ostracism. *Annual Review of Psychology, 58*, 425– 452.
- Williams, K. D. (2009). Ostracism: A temporal need-threat model. In M. Zanna (Ed.), *Advances in experimental social psychology*, pp. 279-314. New York: Academic Press.
- Williams, K. D., Case, T. I., & Govan, C. L. (2003). Impact of ostracism on social judgments and decisions: Explicit and Implicit Responses. In J. P. Forgas, K. D. Williams, & W. von Hippel (Eds.). *Responding to the Social World: Implicit and Explicit Processes in Social Judgments and Decisions*. New York: Cambridge University Press.
- Williams, K. D., Cheung, C. K. T., & Choi, W. (2001). Cyberostracism: effects of being ignored over the internet. *Journal of Personality and Social Psychology, 79*, 748-762.
- Williams, K. D., & Sommer, K. L. (1997). Social ostracism by coworkers: Does rejection lead to loafing or compensation? *Personality and Social Psychology Bulletin, 23*, 693-706.
- Zadro, L., Williams, K. D., & 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*, 560-567.
- Zadro, L., Williams, K. D., & Richardson, R. (2005). 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*, 560-567.

APPENDICES

Appendix A

Study 1: Measure of Belonging (Zadro, Williams & Richardson 2004)

Please answer the questions below. Use the scale outlined below to denote how you feel right now at this moment (even if you have felt differently at other times).

- 1 = strongly disagree
- 2 = disagree
- 3 = disagree somewhat
- 4 = neutral
- 5 = agree somewhat
- 6 = agree
- 7 = strongly agree

1. I feel included? _____
2. I feel well integrated? _____
3. I feel a sense of belongingness? _____

Appendix B

Study 1: Measure of Personal Self-Esteem (Zadro, et al., 2004)

Please answer the questions below. Use the scale outlined below to denote how you feel right now at this moment (even if you have felt differently at other times).

- 1 = strongly disagree
- 2 = disagree
- 3 = disagree somewhat
- 4 = neutral
- 5 = agree somewhat
- 6 = agree
- 7 = strongly agree

1. I feel good about myself__
2. I feel inadequate _
3. I feel that the other participants in this experiment failed to perceive me as worthy and likeable_____

Appendix C

Study 1: Measure of Group Self-Esteem (Ellemers, Kortekaas & Ouwerkerk 1999)

Please answer the questions below with respect to your national identity (i.e. as a New Zealander). Use the scale outlined below to denote how you feel right now at this moment (even if you have felt differently at other times).

- 1 = strongly disagree
- 2 = disagree
- 3 = disagree somewhat
- 4 = neutral
- 5 = agree somewhat
- 6 = agree
- 7 = strongly agree

1. I think my group has little to be proud of ____
2. I feel good about my group ____
3. I have little respect for my group ____
4. I would rather not tell others that I belong to this group ____

Appendix D

Study 1: Evaluations of New Zealanders (ingroup members)

On the whole, how would you rate New Zealanders on the following dimensions:

Competitive 1 2 3 4 5 6 7 8 9 Co-operative

Helpful 9 8 7 6 5 4 3 2 1 Unhelpful

Unintelligent 1 2 3 4 5 6 7 8 9 Intelligent

Weak 9 8 7 6 5 4 3 2 1 Strong

Warm 1 2 3 4 5 6 7 8 9 Cold

Rigid 9 8 7 6 5 4 3 2 1 Flexible

Unselfish 1 2 3 4 5 6 7 8 9 Selfish

Manipulative 9 8 7 6 5 4 3 2 1 Sincere

Fair 1 2 3 4 5 6 7 8 9 Unfair

Honest 1 2 3 4 5 6 7 8 9 Dishonest

Unfriendly 1 2 3 4 5 6 7 8 9 Friendly

Trustworthy 1 2 3 4 5 6 7 8 9 Untrustworthy

Consistent 9 8 7 6 5 4 3 2 1 Inconsistent

Loud 1 2 3 4 5 6 7 8 9 Soft-spoken

Pushy 9 8 7 6 5 4 3 1 Reticent

Humble 1 2 3 4 5 6 7 8 9 Arrogant

Confident 9 8 7 6 5 4 3 2 1 Shy

Aggressive 1 2 3 4 5 6 7 8 9 Non-aggressive

Ignorant 9 8 7 6 5 4 3 2 1 Well informed

Straight forward 1 2 3 4 5 6 7 8 9 Hypocritical

Appendix E

Study 1: Evaluations of Americans (outgroup members)

On the whole, how would you rate Americans (i.e. people from the United States of America) on the following dimensions:

Competitive 1 2 3 4 5 6 7 8 9 Co-operative

Helpful 9 8 7 6 5 4 3 2 1 Unhelpful

Unintelligent 1 2 3 4 5 6 7 8 9 Intelligent

Weak 9 8 7 6 5 4 3 2 1 Strong

Warm 1 2 3 4 5 6 7 8 9 Cold

Rigid 9 8 7 6 5 4 3 2 1 Flexible

Unselfish 1 2 3 4 5 6 7 8 9 Selfish

Manipulative 9 8 7 6 5 4 3 2 1 Sincere

Fair 1 2 3 4 5 6 7 8 9 Unfair

Honest 1 2 3 4 5 6 7 8 9 Dishonest

Unfriendly 1 2 3 4 5 6 7 8 9 Friendly

Trustworthy 1 2 3 4 5 6 7 8 9 Untrustworthy

Consistent 9 8 7 6 5 4 3 2 1 Inconsistent

Loud 1 2 3 4 5 6 7 8 9 Soft-spoken

Pushy 9 8 7 6 5 4 3 1 Reticent

Humble 1 2 3 4 5 6 7 8 9 Arrogant

Confident 9 8 7 6 5 4 3 2 1 Shy

Aggressive 1 2 3 4 5 6 7 8 9 Non-aggressive

Ignorant 9 8 7 6 5 4 3 2 1 Well informed

Straight forward 1 2 3 4 5 6 7 8 9 Hypocritical

Appendix F

Study 1, 2, & 3: Manipulation Checks for Identity and Depersonalisation

Please answer the questions below with respect to your national identity (i.e. as a New Zealander). Use the scale outlined below to denote how you feel right now at this moment (even if you have felt differently at other times).

- 1 = strongly disagree
- 2 = disagree
- 3 = disagree somewhat
- 4 = neutral
- 5 = agree somewhat
- 6 = agree
- 7 = strongly agree

- 5. I identify with other members of this group ____
- 6. I am like other members of my group ____

Appendix G

Study 2: Measure of Belonging (Sheldon & Bettencourt, 2002)

Please respond to the questions below with respect to the New Zealand national group

1. How included do you feel in this group?
Not at all 1 2 3 4 5 Very much

2. To what extent do you feel well integrated into this group?
Not at all 1 2 3 4 5 Very much

3. To what extent do you feel a sense of belongingness with this group?
Not at all 1 2 3 4 5 Very much

Appendix H

Study 2: Measure of Private Collective Self-Esteem (Luhtanan & Crocker, 1992)

Respond to the following statements on the basis of how you feel right now using the following scale:

- 1 = strongly disagree
- 2 = disagree
- 3 = disagree somewhat
- 4 = neutral
- 5 = agree somewhat
- 6 = agree
- 7 = strongly agree

1. I often regret that I am a New Zealander _____
2. In general, I am glad to be a New Zealander _____
3. Overall, I often feel that being a New Zealander is not worthwhile _____
4. I feel good about being a New Zealander _____

Appendix I

Study 2: Allocation of White Noise Control Condition

Decision Task

Instructions: On the following pages are a number of matrices. Each matrix consists of 13 columns. Each column contains 2 sets of numbers (one set is on top of the other). Imagine that the numbers represent time spent listening (in seconds) to the following noise. Your task is to allocate listening times to 2 different people. The times on the top row are given to one person. The times on bottom row are given to another person.

You can only choose from numbers in the same column.

For example: Imagine that you are presented with the following matrix

36	35	34	33	32	31	30	29	28	27	26	25	24
36	35	34	33	32	31	30	29	28	27	26	25	24

The individual to be allocated listening times on the top row is person C from the New Zealand group.

The individual to be allocated listening times on the bottom row is person D from the Asian group

Time allocated to person C (New Zealand group) _____
Time allocated to person D (Asian group) _____

Imagine that you are distributing listening times to the members of each group. There are a number of choices you can make. If for example you decide to choose the column on the extreme left of the matrix 36
36 This means that person C (in the New Zealand group) will spend 36 seconds listening, whilst person D (in the Asian group) will spend 36 seconds listening.

An alternative would be to choose the column on the extreme right of the matrix 24
24
This means that person C (in the New Zealand group) will listen for 24 seconds whilst person D (in the Asian group) will listen for 24 seconds.

Any of the columns may be used - there are no right and wrong answers.

19	18	17	16	15	14	13	12	11	10	9	8	7
19	18	17	16	15	14	13	12	11	10	9	8	7

The individual getting the listening time on the top row is person K from the New Zealand group.

The individual getting the listening time on the bottom row is person M from the Asian group.

Points to person K (NZ group) _____

Points to person M (Asian group) _____

23	22	21	20	19	18	17	16	15	14	13	12	11
23	22	21	20	19	18	17	16	15	14	13	12	11

The individual getting the listening time on the top row is person Z from the New Zealand group.

The individual getting the listening time on the bottom row is person B from the Asian group.

Points to person Z (NZ group) _____

Points to person B (Asian group) _____

7	8	9	10	11	12	13	14	15	16	17	18	19
7	8	9	10	11	12	13	14	15	16	17	18	19

The individual getting the listening time on the top row is person O from the New Zealand group.

The individual getting the listening time on the bottom row is person J from the Asian group.

Points to person O (NZ group) _____

Points to person J (Asian group) _____

11	12	13	14	15	16	17	18	19	20	21	22	23
11	12	13	14	15	16	17	18	19	20	21	22	23

The individual getting the listening time on the top row is person P from the New Zealand group.

The individual getting the listening time on the bottom row is person A from the Asian group.

Points to person P (NZ group) _____
 Points to person A (Asian group) _____

18	19	20	21	22	23	24	25	26	27	28	29	30
18	19	20	21	22	23	24	25	26	27	28	29	30

The individual getting the listening time on the top row is person H from the New Zealand group.

The individual getting the listening time on the bottom row is person Y from the Asian group.

Points to person H (NZ group) _____
 Points to person Y (Asian group) _____

14	15	16	17	18	19	20	21	22	23	24	25	26
14	15	16	17	18	19	20	21	22	23	24	25	26

The individual getting the listening time on the top row is person R from the New Zealand group.

The individual getting the listening time on the bottom row is person V from the Asian group.

Points to person R (NZ group) _____
 Points to person V (Asian group) _____

7	8	9	10	11	12	13	14	15	16	17	18	19
7	8	9	10	11	12	13	14	15	16	17	18	19

The individual getting the listening time on the top row is person N from the New Zealand group.

The individual getting the listening time on the bottom row is person E from the Asian group.

Points to person N (NZ group) _____

Points to person E (Asian group) _____

29	27	25	23	21	19	17	15	13	11	9	7	5
29	27	25	23	21	19	17	15	13	11	9	7	5

The individual getting the listening time on the top row is person I from the New Zealand group.

The individual getting the listening time on the bottom row is person Y from the Asian group.

Points to person I (NZ group) _____

Points to person Y (Asian group) _____

25	23	21	19	17	15	13	11	9	7	5	3	1
25	23	21	19	17	15	13	11	9	7	5	3	1

The individual getting the listening time on the top row is person D from the New Zealand group.

The individual getting the listening time on the bottom row is person C from the Asian group.

Points to person D (NZ group) _____

Points to person C (Asian group) _____

29	27	25	23	21	19	17	15	13	11	9	7	5
29	27	25	23	21	19	17	15	13	11	9	7	5

The individual getting the listening time on the top row is person L from the New Zealand group.

The individual getting the listening time on the bottom row is person X from the Asian group.

Points to person L (NZ group) _____
 Points to person X (Asian group) _____

18	19	20	21	22	23	24	25	26	27	28	29	30
18	19	20	21	22	23	24	25	26	27	28	29	30

The individual getting the listening time on the top row is person A from the New Zealand group.

The individual getting the listening time on the bottom row is person Q from the Asian group.

Points to person A (NZ group) _____
 Points to person Q (Asian group) _____

26	25	24	23	22	21	20	19	18	17	16	15	14
26	25	24	23	22	21	20	19	18	17	16	15	14

The individual getting the listening time on the top row is person G from the New Zealand group.

The individual getting the listening time on the bottom row is person Z from the Asian group.

Points to person G (NZ group) _____
 Points to person Z (Asian group) _____

Appendix J

Study 2: Allocation of White Noise Experimental Condition

Decision Task

Instructions: On the following pages are a number of matrices. Each matrix consists of 13 columns. Each column contains 2 sets of numbers (one set is on top of the other). Imagine that the numbers represent time spent listening (in seconds) to the following noise. Your task is to allocate listening times to 2 different people. The times on the top row are given to one person. The times on bottom row are given to another person.

You can only choose from numbers in the same column.

For example: Imagine that you are presented with the following matrix

36	35	34	33	32	31	30	29	28	27	26	25	24
11	13	15	17	19	21	23	25	27	29	31	33	35

The individual to be allocated listening times on the top row is person C from the New Zealand group.

The individual to be allocated listening times on the bottom row is person D from the Asian group

Time allocated to person C (New Zealand group) _____

Time allocated to person D (Asian group) _____

Imagine that you are distributing listening times to the members of each group. There are a number of choices you can make. If for example you decide to choose the column on the extreme left of the matrix

36
11

This means that person C (in the New Zealand group) will spend 36 seconds listening, whilst person D (in the Asian group) will spend 11 seconds listening.

An alternative would be to choose the column on the extreme right of the matrix

24
35

This means that person C (in the New Zealand group) will listen for 24 seconds whilst person D (in the Asian group) will listen for 35 seconds.

Any of the columns may be used - there are no right and wrong answers.

19	18	17	16	15	14	13	12	11	10	9	8	7
25	23	21	19	17	15	13	11	9	7	5	3	1

The individual getting the listening time on the top row is person K from the New Zealand group.

The individual getting the listening time on the bottom row is person M from the Asian group.

Time to person K (New Zealand group) _____
 Time to person M (Asian group) _____

25	23	21	19	17	15	13	11	9	7	5	3	1
7	8	9	10	11	12	13	14	15	16	17	18	19

The individual getting the listening time on the top row is person Z from the New Zealand group.

The individual getting the listening time on the bottom row is person B from the Asian group.

Time to person Z (New Zealand group) _____
 Time to person B (Asian group) _____

19	18	17	16	15	14	13	12	11	10	9	8	7
1	3	5	7	9	11	13	15	17	19	21	23	25

The individual getting the listening time on the top row is person O from the New Zealand group.

The individual getting the listening time on the bottom row is person J from the Asian group.

Time to person O (New Zealand group) _____
 Time to person J (Asian group) _____

16	17	18	19	20	21	22	23	24	25	26	27	28
16	15	14	13	12	11	10	9	8	7	6	5	4

The individual getting the listening time on the top row is person P from the New Zealand group.

The individual getting the listening time on the bottom row is person A from the Asian group.

Time to person P (New Zealand group) _____
 Time to person A (Asian group) _____

4	5	6	7	8	9	10	11	12	13	14	15	16
28	27	26	25	24	23	22	21	20	19	18	17	16

The individual getting the listening time on the top row is person H from the New Zealand group.

The individual getting the listening time on the bottom row is person Y from the Asian group.

Time to person H (New Zealand group) _____
 Time to person Y (Asian group) _____

1	3	5	7	9	11	13	15	17	19	21	23	25
7	8	9	10	11	12	13	14	15	16	17	18	19

The individual getting the listening time on the top row is person R from the New Zealand group.

The individual getting the listening time on the bottom row is person V from the Asian group.

Time to person R (New Zealand group) _____
 Time to person V (Asian group) _____

19	18	17	16	15	14	13	12	11	10	9	8	7
1	3	5	7	9	11	13	15	17	19	21	23	25

The individual getting the listening time on the top row is person N from the New Zealand group.

The individual getting the listening time on the bottom row is person E from the Asian group.

Time to person N (New Zealand group) _____
Time to person E (Asian group) _____

25	23	21	19	17	15	13	11	9	7	5	3	1
7	8	9	10	11	12	13	14	15	16	17	18	19

The individual getting the listening time on the top row is person I from the New Zealand group.

The individual getting the listening time on the bottom row is person Y from the Asian group.

Time to person I (New Zealand group) _____
Time to person Y (Asian group) _____

19	18	17	16	15	14	13	12	11	10	9	8	7
25	23	21	19	17	15	13	11	9	7	5	3	1

The individual getting the listening time on the top row is person D from the New Zealand group.

The individual getting the listening time on the bottom row is person C from the Asian group.

Time to person D (New Zealand group) _____
Time to person C (Asian group) _____

1	3	5	7	9	11	13	15	17	19	21	23	25
7	8	9	10	11	12	13	14	15	16	17	18	19

The individual getting the listening time on the top row is person L from the New Zealand group.

The individual getting the listening time on the bottom row is person X from the Asian group.

Time to person L (New Zealand group) _____
 Time to person X (Asian group) _____

16	17	18	19	20	21	22	23	24	25	26	27	28
16	15	14	13	12	11	10	9	8	7	6	5	4

The individual getting the listening time on the top row is person A from the New Zealand group.

The individual getting the listening time on the bottom row is person Q from the Asian group.

Time to person A (New Zealand group) _____
 Time to person Q (Asian group) _____

4	5	6	7	8	9	10	11	12	13	14	15	16
28	27	26	25	24	23	22	21	20	19	18	17	16

The individual getting the listening time on the top row is person G from the New Zealand group.

The individual getting the listening time on the bottom row is person Z from the Asian group.

Time to person G (New Zealand group) _____
 Time to person Z (Asian group) _____

Appendix K

Study 3: White Noise Allocation Task

Experimental Condition

Imagine that you had a total of 100 seconds of noise (i.e. the noise you heard earlier) to distribute between the New Zealand and American groups. You can give as much or as little as you want to each group, however you must divide the whole 100 seconds. How much would you give to each group?

The American group _____ The New Zealand group _____

Control Condition

Imagine that you had a total of 100 seconds of noise (i.e. the noise you heard earlier) to distribute between the New Zealand and American groups. You can give as much or as little as you want to each group, however you must give each group the same amount and you cannot exceed 100 seconds. How much would you give to each group?

The American group _____ The New Zealand group _____

Appendix L

Study 3: Self-Description Questionnaire (SDQ III; Marsh, Barnes & Hovecar, 1985).

Please use the seven-point response scale outlined below to indicate how true (or false) this item is as a description of you. Respond to the items as you now feel, even if you felt differently at other times in your life.

- 1 = strongly disagree
- 2 = disagree
- 3 = disagree somewhat
- 4 = neutral
- 5 = agree somewhat
- 6 = agree
- 7 = strongly agree

1. Overall, I don't have much respect for myself _____

