ABSTRACT

The present investigation sought to extend recent research concerned with assessing the link between domain specific self-esteem and intergroup evaluation. It was hypothesized that, following the display of group favoring evaluations, category members would experience an increase in that domain of self-esteem judged to be more important to the ingroup. Support for this hypothesis was found. A pilot study was conducted to ascertain which domains of the self were judged by male category members to be important and unimportant to the ingroup. On the basis of this analysis, domains of self-esteem important (i.e. physical self-esteem) and unimportant (i.e. religious self-esteem) to the male ingroup were assessed prior to and following the display of group favoring evaluations. In the experimental condition, respondents evaluated ingroup targets (i.e. men) more highly than outgroup targets (i.e. women). Following the manifestation of these evaluations, respondents experienced a sharp increase in that domain of self-esteem judged to be more important to the ingroup (i.e. physical self-esteem). The domain of self-esteem judged to be less important to the ingroup (i.e. religious self-esteem) was unaffected by the display of group favoring evaluations.

INTRODUCTION

Social identity theory (SIT) with its emphasis on the disjunction between interpersonal and intergroup behavior has dominated much of the work carried on intergroup relations over the past two decades. An implicit assumption of the theory is that people, acting as social category members, engage in various forms of intergroup discrimination in order to achieve and maintain evaluatively positive self-esteem (see Abrams & Hogg, 1988; Tajfel & Turner, 1979). The research carried out to investigate this and a related premise, that low or threatened self-esteem
can enhance intergroup discrimination, has revealed a series of complex and often contradictory findings (see Abrams & Hogg, 1988; Rubin & Hewstone, 1998 for reviews). In light of this state of affairs (see also Hinkle & Brown, 1990), a growing number of researchers have now begun to challenge the pivotal motivational role assigned to self-esteem within the SIT framework (Brown, 1995; Hogg & Abrams, 1993). These challenges are of course important in their own right as they function to (a) draw attention to the relevance of the many other crucial variables which are undoubtedly involved in intergroup conflict (e.g. Staub, 1989) and (b) highlight the broader ramifications of SIT (e.g. Tajfel & Turner, 1979). It is important to note, however, that there are a number of important methodological and conceptual criticisms that have been leveled at the work in this area (see Abrams & Hogg, 1988; Rubin & Hewstone, 1998). These criticisms need to be addressed before the role of self-esteem in intergroup discrimination can be properly evaluated.

One criticism with particular relevance to the current study relates to the fact that many researchers, when attempting to assess how intergroup discrimination affects self-evaluation, have utilized global measures of self-esteem (see Rubin & Hewstone, 1998 for a related discussion). The use of such instruments to examine predictions derived from SIT is highly problematic. Essentially, this is because SIT emphasizes the multidimensional nature of the self (see Abrams, 1996; Turner, 1982). Within this framework the self has been defined as ‘the totality of self-descriptions and evaluations subjectively available to the individual’ (Hogg & Abrams, 1988, p. 24). Self-descriptions may be subsumed under either personal or social identities (Abrams, 1996; Turner, Oakes, Haslam & McGarty, 1994). Aspects of the self defined and evaluated at the level of the individual relate to personal identities. Aspects of the self defined and evaluated at the level of the group relate to social identities. Stressing the group-based aspects of identity, SIT posits that, in the relevant context, components of the self associated with social identities will become more salient than components of the self associated with personal identities. As a result, therefore, when any given social identity becomes salient (e.g. Australian) people will tend to define and evaluate themselves, not in terms of some individualistic attribute or overall personal identity (see Turner & Oakes, 1997) but, in terms of those components of the self (e.g. sportsmanlike, happy-go-lucky) related to their social identities. One obvious consequence, of this, is that global measures of self-esteem, which are designed to provide a generic measure of personal self-worth, cannot accurately assess those aspects of the self associated with social identity.

As a result of such reasoning, a growing number of researchers have now begun to seek alternative methods by which to more accurately examine social identity based self-esteem (see also Branscombe & Wann, 1994; Platow, Harley, Hunter, Hanning, Shave & O’Connell, 1997). One approach with the potential to circumvent the shortcomings associated with much of the research previously conducted under this rubric has been outlined by Hunter and his colleagues
Combining Marsh’s work on the multidimensional self-concept (e.g. Marsh, 1992, 1993) with social identity and self-categorization theory (e.g. Hogg & Abrams, 1988; Turner et al., 1994) the aim of this approach is to examine the self descriptions (e.g. sportsmanlike, happy-go-lucky) which may be subsumed under particular social identities (i.e. Australian). Consistent with this perspective, recent research has illustrated that when the members of meaningful social categories display group favoring evaluations it is, not global but, domain specific self-esteem that is affected (e.g. Hunter et al., 1996, 1997). Thus, for example, in two experiments utilizing gender categories, Hunter et al. (1997) found that intergroup evaluations of ingroup and outgroup targets led to changes in verbal and physical self-esteem but not global self-esteem. Identical findings were reported in a sample comprising Northern Irish Catholics and Protestants. In this study, Hunter et al. (1996) assessed global and domain specific self-esteem prior to and following the manifestation of group favoring evaluations. No effects were found for global self-esteem. The esteem in which respondents held specific self-images (e.g. physical appearance, religiosity, honesty, verbal and academic ability) was, however, found to increase after they engaged in evaluative ingroup bias.

The research carried out by Hunter et al., demonstrates one way in which our understanding of the link between self-esteem and intergroup discrimination may be advanced. Such work does, however, raise a number of other issues. Specifically, since there are an infinite number of possible self-esteem domains (Hogg & Abrams, 1988; Marsh, 1993) which may plausibly be subsumed under any given social identity, it is important for both theoretical and practical reasons (see Abrams, 1996; Hewstone & Brown, 1986) that we are able to identify those particular components of the self which are likely to be related to intergroup discrimination. The particular self-esteem domains likely to increase following the display of group favoring evaluations was not apparent in the studies carried out by Hunter et al. (1996, 1997). One possible explanation for this state of affairs may, however, be derived from recent developments in social identity and self-categorization theory (Hogg & Abrams, 1988; Turner, Hogg, Oakes, Reicher & Wetherell, 1987). According to this framework the functioning of the self-concept is context dependent. Particular components of the self are activated as a logical function of the "interaction between the characteristics of the perceiver and the situation" (Turner et al., 1987 p. 44). As a consequence, there is both continuity and variability in the contents of self-perception. When there is variability in the intergroup situation the attributes associated with social category membership change. When there is stability in the intergroup situation the attributes associated with social category membership remain stable (see Oakes, Haslam & Turner, 1994; Turner et al., 1994 for reviews).

One of the factors which affect the contents of self-perception is as indicated by Turner et al. "the social groups ... that provide perceivers with stable norms, values and motives" (Turner et al., 1994, p. 460). Influence sources such as these do not, however, ascribe equal status to all those dimensions of the self, which may be associated with social category membership. Indeed, in many cultures the attributes associated with membership in certain social categories may be
highly visible and differentially valued (e.g. physical abilities, skin color, wealth, see Oyserman & Markus, 1993). Similarly, social institutions (e.g. educational establishments) often place a greater emphasis on some components of the self (e.g. intellectual ability, physical appearance and behavioral conduct) than others (e.g. athletic performance, see Harter, 1986, for a review). Likewise with social groups. Within restricted frames of reference, certain attributes or self-esteem domains may be judged as being more relevant to the ingroup (see Haslam et al., 1995). Thus, for example, whilst members of a religious group (e.g. Baptists) might deem 'spirituality' as being particularly important to the ingroup, members of a street gang might deem 'toughness' as being particularly important to the ingroup. Under certain circumstances, those attributes especially relevant to social category membership may be said to group defining (Haslam, Oakes, Turner & McGarty, 1995). We would posit that it is the esteem associated with these dimensions which might be expected to increase following the display of intergroup discrimination. Extending this line of reasoning to the approach taken by Hunter et al., it may be argued then that it is only those aspects of self-esteem relevant (or important) to social category membership, within specific contexts, that may increase following the display of group serving evaluations. The present investigation sought to develop the work of Hunter et al. in order to examine this suggestion. As such, it was hypothesized that, following the display of group favoring evaluations, category members (i.e. men) would experience an increase in that domain of self-esteem judged to be more important to the ingroup.

METHOD

Sample
One-hundred and sixteen male undergraduate students attending the University of Otago participated in this study. Fifty-eight were assigned to the experimental condition and 58 were assigned to the control condition. Assignment to each condition was random. Experimental and control conditions were run separately. Respondents were tested in groups of fifteen or more.

Design
Respondents assigned to the experimental condition were given the opportunity to evaluate ingroup (male) and outgroup (female) targets who were depicted positively and negatively. This formed a 2 (target group of evaluation: ingroup/outgroup) x 2 (target profile: positive/negative) repeated measures design. Before and after intergroup evaluations, domains of self-esteem judged to be important and unimportant to the male ingroup were assessed. Respondents assigned to the control condition completed the same tasks as those in the experimental condition with the exception that they were given the opportunity to evaluate actors who could not be identified as ingroup and outgroup targets before and after the measurement of self-esteem.

Materials and Procedure
The study was introduced as being concerned with average group performances on the Social Cognitive Aptitude Test (SCAT), individual self-perceptions, social judgements and behaviors. Respondents were informed that participation would involve the completion of a questionnaire booklet on two separate occasions over a two week period. To make social identity salient (and thus rule out salience as a cause of self-esteem change, cf. Hogg & Turner, 1987), respondents
were informed that the study was specifically concerned with groups comprised of men and women. This was done immediately prior to each testing session. To ensure anonymity of responding, all respondents were assigned a code number. Code numbers and gender group membership were recorded on each response booklet. Communication amongst respondents during the course of the study was discouraged.

---

**Booklet one: Pre-test self-esteem measures**

The first booklet presented to respondents contained the physical appearance and spiritual/religious self-esteem sub-scales of the Self-Description Questionnaire III (SDQ III). For the sake of simplicity, we refer to these domains as physical and spiritual self-esteem. These domains of self-esteem were included on the basis of a pilot test carried out to determine which self-esteem domains of the SDQ III were important and unimportant to men in the current context. Of the domains assessed, the physical domain was perceived to be the most important whilst the spiritual domain was perceived to be the least important\(^1\). In its full form the SDQ III is designed to measure general self-esteem and 12 separate domains of self-esteem (Marsh, 1992). It possesses excellent psychometric properties (e.g. Byrne, 1988; Marsh, 1992) and is the most extensively validated self-esteem instrument currently available (Byrne, 1996). Each domain of self-esteem assessed by the SDQ III has high internal consistency (median alpha's of between .80 and .90) and test-retest reliability (median r's of .87). Correlations between domains are low (median r's of .10). This means that sub-scales measuring each self-esteem domain can be used separately or in combination (Marsh, 1992). Each self-esteem domain is measured by a single scale consisting of 10 or 12 items. All answers are recorded on an 8 point Likert-type scale (1-Definitely False, 8-Definitely True). Higher scores reflect more positive levels of self-esteem.

To guard against response bias half of the items in each sub-scale are scored in the reverse order. Respondents are required to respond to questions on the basis of how they "now feel" and "not as they usually feel" (see Rubin & Hewstone, 1998 for a discussion of the relevance of this issue). An example of the content of the two sub-scales used in the current investigation are as follows:

**Physical self-esteem:** ‘I have a good body build’, **Religious self-esteem:** ‘I am a better person as a result of my spiritual/religious beliefs’. In an attempt to ensure that respondents in the current investigation differentially evaluated the importance of physical and spiritual components of the self a pair of rating scales were also included. These scales required respondents to rate the importance of physical appearance and spirituality to the male ingroup. Ratings were assessed on 7 point Likert-type scales (1-Unimportant, 7-Important). The rating scales were presented after the measures tapping self-esteem. Twenty minutes were allowed in which to complete this booklet.

---

**Booklet two: Evaluative tasks, distracter tasks and post-test self-esteem measures**

Approximately two weeks later, a second booklet was presented to respondents. To disguise the true nature of the study, all booklets contained an abridged version of the Social Cognitive Aptitude Test (SCAT) and a SCAT answer sheet (Crocker & Luhtanen, 1990). Following Crocker & Luhtanen, the SCAT was described as a measure of social and intellectual
competence. The test was comprised of 3 pairs of vignettes, each of which profiled a man and woman involved in a heterosexual relationship. Respondents were asked to read each profile and decide whether the couple would remain together for a year or more. Respondents assigned to the experimental condition were then asked to evaluate two ingroup (male) and two outgroup (female) targets. For both ingroup and outgroup targets one profile referred to positive characteristics (i.e. honest/intelligent) and one referred to negative characteristics (i.e. dishonest/unintelligent). Target actors were identified through sex typed names and specific reference to gender (i.e. Andy a male/Anne a female)\(^2\). In an attempt to provide a less obtrusive assessment of targets, evaluations were scored on 7-point Likert-type scales with anchor points ranging from 1-Positive to 7-Very Positive (see Dovidio & Fazio, 1992 for a review). Those assigned to the control condition completed the same evaluative tasks as those in the experimental condition with the exception that all reference to gender was omitted. Here the sex typed names of target actors (i.e. Andy/Anne) were substituted for gender neutral names (i.e. Chris/Robin, see Ng, 1990)\(^3\). Following administration of the evaluative and distracter tasks, all respondents were then presented with the same physical and spiritual self-esteem sub-scales of the SDQ III as contained in booklet one. In an attempt to demonstrate equivalent gender identity salience across experimental and control conditions, two items from Luhtanen and Crocker’s (1992) private collective self-esteem sub-scale were also incorporated. In keeping with the rationale of the current investigation (see also Long, Spears & Manstead, 1994) questions were modified to refer to gender identity (e.g. ‘I feel good about being a man). Answers were recorded on 7-point Likert-type scales (1-Agree Strongly, 7-Disagree Strongly). Also included were three manipulation check items. These asked respondents what they thought the study was really about, whether their was anything odd or unusual about the study and lastly, if there was any aspect of the study on which they wished to comment. Twenty-five minutes were allowed to complete this booklet. Respondents were then debriefed and thanked for taking part in the study.

RESULTS

Manipulation Check
To test for possible differences in gender identity salience across experimental and control conditions (M=6.19, s.d.=.77 v M=6.11, s.d.=.78) a one-way analysis of variance (ANOVA) was carried out. No significant differences emerged (F(1, 114)=.29, p>.59). To assess the relative importance male category members attached to the self-esteem domains of physical appearance and spirituality a 2 (condition: experimental/control) x 2 (self-esteem domain: physical/spiritual) analysis of variance (ANOVA) was implemented. The last factor was repeated. A main effect was found for self-esteem domain (F(1, 114)=141.99, p<.001). Physical appearance was judged to be more important to male ingroup members than was spirituality (M=5.34, s.d.= 1.59 v M=3.11, s.d.=1.66). There were no other main or interaction effects.

Evaluations (of experimental participants)
To assess group favoring effects in respondents, evaluations of ingroup and outgroup members a 2 (target group of evaluation: ingroup/outgroup) x 2 (target profile: positive/negative) repeated measures analysis of variance (ANOVA) was carried out. All cell means can be seen in Table 1. A main effect was found for target profile (F(1, 57)=176.12, p<.001). Targets who were depicted
positively were evaluated more highly than those who were depicted negatively (M=6.55, s.d.=1.05 v M=2.82, s.d.=1.23). A further main effect was found for target group of evaluation (F(1, 57)=15.79, p<.001). Regardless of whether they were depicted positively or negatively the male ingroup targets were evaluated more positively than the female outgroup targets (M=5.39, s.d.=1.17 v M=3.98, s.d.=1.12). Planned comparisons revealed that (a) ingroup targets who were depicted positively were evaluated more highly than outgroup targets who were depicted positively (t(57)=3.06, p<.005, Dunn’s critical alpha value 2.94, p<.01) and (b) ingroup targets who were depicted negatively were evaluated more highly than outgroup targets who were depicted negatively (t(57)=2.49, p<.02, Dunn’s critical alpha value 2.31, p<.05).

Self-esteem
All negatively worded self-esteem items were reversed so that high scores represented positive self-esteem. To test for differences in the pre-evaluation and post-evaluation self-esteem scores of those assigned to control and experimental conditions a 2 (condition: experimental/control) x 2 (self-esteem domain: physical and spiritual) x 2 (time of measurement: pre-evaluation to post-evaluation) mixed model analysis of variance (ANOVA) was conducted. The last two factors were within subjects. Cell means can be seen in Table 2. A two way interaction was found between condition and self-esteem domain (F(1, 114)=20.23, p<.001). Post hoc analysis, using independent t-tests, revealed that respondents in the control condition (M=55.50, s.d.=18.58) were found to have higher levels of spiritual self-esteem than those in the experimental condition (M=40.83, s.d.=18.17, t(114)=4.30, p<.001). The only other significant effect to emerge was the expected three way interaction found between condition, self-esteem domain and time of measurement (F(1, 114)=7.62, p<.008). To assess this effect further a series of planned comparisons were conducted on the pre to post evaluation domain specific self-esteem scores of those in the experimental and control conditions. The only effect to emerge was found in the experimental condition. Male respondents (who displayed group favoring evaluations) manifested an increase in physical self-esteem (i.e. that domain of self-esteem judged to be relatively more important to the ingroup (t(57)=5.56 p<.001). This effect was also significant using Dunn’s test (critical alpha value, 3.18 p<.01). No other significant effects were found.

Table 1. Mean evaluative ratings for positively and negatively depicted ingroup and outgroup targets

<table>
<thead>
<tr>
<th>Target Profile</th>
<th>Ingroup</th>
<th>SD</th>
<th>Outgroup</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>7.80**</td>
<td>1.10</td>
<td>5.30</td>
<td>1.01</td>
</tr>
<tr>
<td>Negative</td>
<td>2.98*</td>
<td>1.24</td>
<td>2.66</td>
<td>1.22</td>
</tr>
<tr>
<td>Overall</td>
<td>5.39***</td>
<td>1.17</td>
<td>3.98</td>
<td>1.12</td>
</tr>
</tbody>
</table>

Note, higher scores indicate more positive evaluations (N=58).
*** p<.001, more positive evaluation of the ingroup than the outgroup by ANOVA.
* p<.05, more positive evaluation of the ingroup than the outgroup by Dunn’s test.
** p<.01, more positive evaluation of the ingroup than the outgroup by Dunn’s test

Table 2. Male experimental and control group respondents pre-evaluation and post-evaluation self-esteem scores by self-esteem domain

<table>
<thead>
<tr>
<th>Self-Esteem Domain</th>
<th>Condition</th>
<th>Pre-Bias Self-Esteem</th>
<th>SD</th>
<th>Post-Bias Self-Esteem</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>Control</td>
<td>50.60</td>
<td>11.52</td>
<td>49.79</td>
<td>11.52</td>
</tr>
<tr>
<td>Physical</td>
<td>Experimental</td>
<td>50.98</td>
<td>11.97</td>
<td>53.31**</td>
<td>11.18</td>
</tr>
<tr>
<td>Spiritual</td>
<td>Control</td>
<td>55.69</td>
<td>19.57</td>
<td>56.00</td>
<td>18.05</td>
</tr>
<tr>
<td>Spiritual</td>
<td>Experimental</td>
<td>40.86</td>
<td>18.24</td>
<td>40.79</td>
<td>18.88</td>
</tr>
</tbody>
</table>

Note, Higher scores denote more positive self-esteem.
Increase in self-esteem from pre-evaluation to post-evaluation
**p<.01 by Dunn’s test. (experimental, N=58, control, N=58).

DISCUSSION

One hypothesis was tested in this experiment. It was predicted that, following the display of group favoring evaluations, category members (men) would manifest an increase in that domain of self-esteem judged to be more important to the ingroup. The results supported this hypothesis.

Men displayed group favoring evaluations. Following this, they manifested an increase in physical but not spiritual self-esteem. Physical self-esteem was judged to be more important to the ingroup than was spiritual self-esteem. Overall these results indicate that when category members display group favoring evaluations it is only those domains of the self important to social category membership that are likely to be affected. The findings discerned in the current investigation are consistent with those reported by Hunter and his colleagues (Hunter et al., 1996, 1997). These researchers found that, when the members of meaningful social groups displayed group favoring evaluations it was, not global but, domain specific self-esteem that was likely to be affected. The results of the present study extend the work of Hunter et al., to the extent that they allow us to predict which particular self-esteem domains are likely to reflect increases following the display of various forms of intergroup discrimination. This is an important question, since there are an infinite number of possible self-esteem domains (Hogg & Abrams, 1988; Marsh, 1993) which may plausibly be subsumed under any specific social identity. As such, we would contend that it is important for both theoretical and practical reasons (see Abrams, 1996; Hewstone & Brown, 1986) that we are able to identify those particular components of the self which are likely to be related to intergroup discrimination.
It should be stressed, however, that the particular self-esteem domain (i.e. physical self-esteem) which was elevated following the display of group favoring evaluations in the present study would not necessarily be affected by the relative display of various forms of intergroup discrimination (amongst gender or other social categories) across different circumstances. In keeping with self-categorization theorists we would argue that changes in the nature of intergroup relations and the comparative context would bring other facets of the self associated with social category membership into play (see Haslam et al., 1995; Turner et al., 1994). Likewise it is important to acknowledge that, aside from the importance attached to certain self-esteem domains, other factors such as the extent to which any given self-esteem domain (a) serves to differentiate the ingroup from the outgroup or (b) is judged by society as being highly desirable are likely to impinge upon those particular self-esteem domains that are related to various forms of intergroup discrimination (e.g. Harter, 1992). Further research is of course needed to investigate the impact of these variables.

From a theoretical perspective, the results of the present study would tend to suggest that, contrary to the concerns of a number of theorists (e.g. Brown, 1995; Hogg & Abrams, 1993) self-esteem (i.e. domain specific self-esteem) remains a pertinent psychological variable associated with intergroup discrimination. In this sense therefore, these findings can be added to a growing body of literature linking evaluations of category members to particular aspects of the self (e.g. Branscombe & Wann, 1994; Hunter et al., 1997). As such, we would reiterate that the emergence of consistent relations between self-esteem and intergroup discrimination are likely to emerge only when researchers consider the multidimensional rather than global nature of the self-concept. This is because global (as opposed to domain specific) measures of self-esteem are designed to provide a generic measure of personal self-worth. Consequently, they cannot accurately assess those aspects of the self bound up in social category membership. In coming to this conclusion we are not, of course intending to imply that self-esteem is the only or most relevant motive in intergroup behavior (e.g. Hogg & Abrams, 1993; Leary & Downs, 1995), that intergroup discrimination and self-esteem will be associated under all circumstances (see Turner, et al., 1987) or indeed to question the relevance of the many other crucial variables which are undoubtedly involved in the development and maintenance of hostility between groups (e.g. Staub,

1989). Rather, what we are saying is, quite simply, that social identity and self-evaluation processes, assessed at the appropriate level of specificity, are relevant factors in any meaningful account of intergroup conflict. We would conclude, nevertheless, by pointing out that the relationship between intergroup discrimination and those components of the self associated with social category membership is more complex than that many researchers have often assumed. The research presented in the current paper helps further our understanding of this relationship in so far as it would tend to indicate that it is only those components of the self relevant (and meaningful) to social category membership that are likely to be affected by the manifestation of various forms of intergroup discrimination.

REFERENCES


FOOTNOTES

1. To determine which self-esteem domains were deemed to be important and unimportant to the male ingroup a separate pilot test was carried out. Male respondents (N=72) were asked to rate the importance of 12 SDQ III self-esteem domains to the male ingroup (physical appearance, physical ability, opposite sex relations, same sex relations, parental relations, emotional stability, spirituality verbal ability, mathematical ability, academic ability creative ability and honesty). Ratings were assessed on 7 point Likert-type scales (1-Unimportant, 7-Important). Opposite sex relations (M=5.40, s.d=1.47) and physical appearance (M=5.32, s.d.=1.62) received the highest evaluations. Spirituality received the lowest rating (M=3.01, s.d.=1.78). Because of the interpersonal nature of the opposite sex relations self-concept dimension (as assessed by the SDQ III, see Marsh & O'Neill, 1984), we decided to utilize the domains of physical appearance and spirituality. The differential importance of these two domains to the male ingroup was clearly apparent amongst the current sample (t(71)=8.72, p<.0005).

2. To guard against gender bias in the naming of target actors (see Kasof, 1993 for a review) a separate pilot test was carried out. Respondents (N=59) evaluated the pleasantness of the female (Anne) and male (Andy) sex typed names that were used in the present study. Responses were recorded on 7-point Likert-type scales (7=Pleasant, 1=Unpleasant). A repeated measures t-test did not reveal any differences in evaluations (M=4.42, s.d.=1.89 v M=4.05, s.d.=4.24, s.d.=2.15, t(58)=.85, p>.39).

3. To ensure respondents would be less sure of the gender identity of those with gender neutral names a separate pilot test was carried out (N=171). Respondents were asked how certain they were of the gender identity of those with gender stereotyped (i.e., Andy/Anne) and gender neutral names (i.e., Chris/Robin). Answers were recorded on 7 point Likert-type scales (1-uncertain, 7-certain). Respondents were less sure of the gender identity of those with gender neutral names (M=2.95, s.d.=1.54 v M=6.50, s.d.=1.11, t(170)=26.43, p<.0005).

4. Theoretically speaking, it is possible (using regression analysis) to delineate the proportion of the 'increase' in self-esteem scores that is directly attributable to the display evaluative intergroup bias. Unfortunately this procedure necessitates the use of two different sets of difference scores. That is (a) pre-evaluative self-esteem scores subtracted from post-evaluative self-esteem scores, and (b) outgroup evaluative ratings subtracted from ingroup evaluative ratings. There is, however, a great deal of controversy surrounding the use of difference scores. Some argue that they should not be used at all (Cronbach & Furby, 1970). Others argue that they can be used only in particular circumstances (Cattell, 1982; Nesslerode & Cable, 1974). When difference scores
are calculated from highly correlated scales, as in the present study, the dependability estimates of the scores are close to zero (Cattell, 1982). Difference scores in such circumstances are, thus, not only excessively restrictive in the proportion of variance they explain but also highly unreliable and fraught with error (Cattell, 1982; Tabachnik & Fidell, 1989). As such, they would be of little value in the current investigation. Nevertheless, we would acknowledge the necessity of developing methodologies that overcome such problems in future research.

AUTHORS BIOGRAPHY

John A. Hunter is a lecturer in social psychology at the University of Otago, Dunedin, New Zealand. John's email address is jhunter@psy.otago.ac.nz. Both Kerry O'Brien and Andrew Grocott are postgraduate students in the same department. Kerry is working on his Ph.D. His email address is kobrien@psy.otago.ac.nz. Andrew is just completing his M.A. Andrew's email address is agrocott@psy.otago.ac.nz.