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INGROUP FAVORING ALLOCATIONS AND DOMAIN SPECIFIC SELF ESTEEM IN THE MINIMAL GROUP SETTING

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ABSTRACT

The present investigation sought to extend recent research concerned with assessing the link between intergroup discrimination and domain specific self esteem. It was predicted that the members of minimal groups would experience an increase in that domain of self esteem judged to be more important to the ingroup (i.e. artistic ability), following the display of ingroup favoring allocations. No support was found for this prediction. Participants, assigned to the experimental condition showed significant levels of ingroup favoring allocation bias. Following the manifestation of these biases participants failed to experience an increase in that domain of self esteem judged to be more important to the ingroup (i.e. artistic ability). Contrary to predictions category members who showed group favoring allocation biases experienced lower levels of mathematical self esteem. The implications of these findings are discussed.

Currently there exist a variety of theories which may be used to explain the existence of intergroup discrimination (Hewstone, Rubin & Willis, 2002). The preeminent perspective over the past twenty five years has been social identity theory (SIT, Tajfel, 1981; Tajfel & Turner, 1979, 1986). An implicit assumption of the theory is that group members resort to different forms of intergroup discrimination in order to achieve and maintain evaluatively positive self esteem (Abrams & Hogg, 1988; Tajfel & Turner, 1979, 1986). The research carried out to investigate this and the related assumption, that low or threatened self esteem can enhance intergroup discrimination, reveals little unambiguous support for either premise (see Aberson, Healy & Romero, 2000; Abrams & Hogg, 1988; Long, Spears & Manstead 1994; Hunter, Platow, Bell, Kypri & Lewis, 1997, Rubin & Hewstone, 1998, for reviews). In light of the complex and often contradictory nature of the findings discerned in this field a growing number of influential researchers have now begun to question the pivotal motivational place given to self esteem in the SIT framework (Brown, 1995; Hogg & Abrams, 1993).

Others, however, argue that much of the work in this area is fraught with a variety of methodological and theoretical problems (Hunter et al., in press; Long & Spears, 1997; Rubin & Hewstone, 1998; Turner, 1999). As such before the role of self esteem in intergroup conflict is properly evaluated it is necessary that these problems be overcome. One problem 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 utilised global measures of self esteem. The use of such instruments to examine predictions derived from SIT is highly problematic. According to SIT the self concept is multidimensional. Depending on how the self is experienced, components of the self (or self descriptions) may be related to either personal or social identities (Turner, Oakes, Haslam & McGarty, 1994). Components of the self experienced at the level of the individual relate to personal identities (e.g. I am strong). Components of the self experienced at the level of the group relate to social identities (e.g. men are strong). Stressing the social aspects of identity, SIT posits that, in the intergroup context, those domains of the self associated with social identities will become more salient than those domains of the self associated with personal identities. As a result, therefore, when any given social identity becomes salient (e.g. man) people will tend to define and evaluate themselves, not in terms of their overall personal identity (or some attribute associated with this identity) but, in terms of those components of the self (e.g. strong, physically able) related to their social identities. One consequence of this is that measures of global self esteem, which are designed to provide a generic measure of personal self worth cannot hope to accurately assess those aspects of the self associated with social identity.

As a result of this reasoning, researchers have now begun to seek alternative methods by which to more accurately examine social identity based self esteem (e.g. Hunter, Reid, Stokell & Platow, 2000; Luhtanen & Crocker, 1992; Platow et al., 1997; Rubin & Hewstone, 1998). One attempt to do this has been developed by Hunter and his colleagues (Hunter, Platow, Howard & Stringer, 1996, Hunter et al., 1997; Hunter et al., in press) who adapt Marsh's work on domain specific self esteem (e.g. Marsh, 1992, 1993a) with social identity and self categorization theory (e.g. Hogg & Abrams, 1988; Turner et al., 1994). A primary assumption of this position is based on the idea that the distinction between personal and social identity is not a function of the particular attributes (e.g. strong /physically able) that may be used to define the self (Abrams, 1996, 1999; Turner et al., 1994). As such, so the argument goes, because any given attribute (e.g. strong/physically able) may be used to describe the self at either the personal (e.g. "I am strong/physically able") or group level (e.g. "as a man I am strong/physically able"), Hunter et al. posit, that when any given social identity becomes salient (e.g. man), those attributes (e.g. strong/physically able) associated with membership in this group (at the time in question) will be associated with social rather than personal identities.

In spite of its relatively complex assumptions (cf. Luhtanen & Crocker, 1992), recent research has provided some support for the perspective outlined by Hunter and his associates. Thus, a number of studies have shown that, when the members of meaningful social categories display group based bias, it is, not global but, domain specific self esteem that is affected. For example, in two studies utilising religious categories, Hunter et al. (in press) found that biased evaluations of ingroup and outgroup targets led to changes in domain specific (i.e. the esteem in which participants held their physical abilities) but not global self esteem. Identical findings were reported in a sample comprising Northern Irish participants. In this study, Hunter et al. (1996)

again assessed global and domain specific self esteem prior to and following the manifestation of evaluative ingroup bias. No effects were found for global self esteem. The esteem in which both Protestants and Catholics 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.

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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, 1993a) which may plausibly be subsumed under any specific social identity, it is important for both theoretical and practical reasons (e.g. Abrams, 1996; Brown, 1995) that we are able to identify those particular components of the self which are likely to be related to intergroup differentiation. The particular self esteem domains likely to increase following the display of ingroup bias 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 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. Different 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 give rise to stability in the contents of self perception is as noted by Turner et al. "the social groups, subcultures and social institutions 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 colour, wealth). The same is apparent with social institutions (e.g. educational establishments) often place a greater emphasis on some components of the self (e.g. intellectual ability, physical appearance and behavioural conduct) than others (e.g. athletic performance, see Harter, 1986, for a review). Similarly with social groups. Within particular frames of reference, certain attributes or self esteem domains may be judged as being more relevant to the ingroup. 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. Given that some, such as Haslam, Oakes, Turner and McGarty (1995), have noted that attributes especially relevant to social category membership may in fact become group defining we would argue that it is these relevant (or more important) dimensions that might be expected to increase following the display of evaluative ingroup bias. Extending this line of reasoning to the method developed by Hunter and his colleagues, we would posit then that it is those aspects of self esteem important (rather

than less important) to social category membership, within specific contexts, that are likely to increase following the display of ingroup bias. The present investigation sought to extend the work of Hunter et al. in order to examine this suggestion. In this respect, one hypothesis was subsequently tested. This stated that minimal group members, following the display of ingroup favoring allocations, would experience an increase in that domain of self esteem judged to be more important to the ingroup.

METHOD

Participants

Seventy people took part in this study. All were students attending an introductory psychology class at the University of Otago. Thirty-five were assigned to an experimental condition. Thirty-five were assigned to a control condition. Assignment to each condition was random. Conditions were run in groups of four or more. Each participant received course credit for taking part.

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Design

Participants in the experimental condition were given the opportunity to show ingroup bias (i.e. by allocating points) towards anonymous ingroup and outgroup targets. Participants assigned to the control condition were constrained to show fairness (i.e. by allocating equal numbers of points) to ingroup and outgroup members. The dependent variables were scales assessing global and two domains of (artistic and mathematical) self esteem. The inclusion of artistic and mathematical measures of self esteem were included on the basis of the assumption that the artistic domain would be rated as being more important to the ingroup than would the mathematical domain. Thus, if artistic rather than mathematical self esteem was found to be higher among those in the experimental condition, this would provide support for the hypothesis.

Materials and procedure

The study was introduced as a joint investigation being conducted by the Department's of Psychology and Art, the main purpose of which was said to be concerned with judgements of abstract paintings. Following Tajfel et al. (1971) participants were then presented with the abstract painting preference stage of the Klee and Kandinsky variant of the minimal group procedure. After ostensibly scoring their preferences, the experimenter explained that roughly half of those present preferred the paintings by Klee, whilst the remainder preferred the paintings by Kandinsky. Participants were then privately informed as to their respective group membership (in reality all Klees) and told that during the course of the study they would complete a series of response booklets. To ensure anonymity of responding, participants chose a code number from a box that was passed round the laboratory. Participants were required to record this number and the group to which they belonged on each of three response booklets used during the course of the study. Communication amongst participants was discouraged whilst the study was in progress.

Booklet one: The first response booklet presented to participants contained the four item "membership" subscale from Luhtanen and Crocker's (1992) collective self esteem scale (CSE). This subscale was included in an attempt to demonstrate comparable social identity salience across experimental and control conditions. In keeping with the rationale of the current investigation, the questions comprising this scale were modified to refer to the particular social identity in question (e.g. "I am cooperative with other members of the Klee group"). Two of the questions were framed negatively. Answers were recorded on Likert scales (7=Agree Strongly, 1=Disagree Strongly). All negatively worded items were reverse coded. As such, the range of the scores on this subscale ran from four to 28 with positive scores reflecting higher levels of identification. The final items to be included in this booklet were a pair of seven-point rating scales (1=A Little, 7=A Lot). These asked participants to rate the importance of artistic and mathematical abilities to the Klee ingroup (i.e. in the context of a direct comparison with the Kandinsky outgroup). Also included were 12, 13 choice, distribution matrices. These were included to assess allocation biases, whereby points were allocated to anonymous ingroup and outgroup members. After Hogg and Sunderland (1991) and Platow et al. (1997) the matrices for those assigned to the experimental condition measured the pulls of MD on MJP + MIP (i.e., maximum difference on maximum joint profit and maximum in group profit), FAV on MJP (i.e. ingroup favouritism on maximum joint profit), F on FAV (i.e. fairness on favouritism) and their inverse. Following other researchers (e.g. Diehl 1989; Hunter, 2003; Platow et al. 1997) we used the difference in the total number of points (rather than pull scores) allocated to ingroup and outgroup members to assess levels of intergroup discrimination. The matrices for those assigned to the control condition were identical to those in the experimental condition with the exception that participants were required to allocate equal numbers of points to ingroup (i.e. Klee) and outgroup (i.e. Kandinsky) members. Thus, whilst participants in the experimental condition were presented with the opportunity to show ingroup favoring allocation biases, participants in the control condition were constrained to behave fairly.

Booklet two: Immediately following completion of the first response booklet, a 2nd response booklet was presented. This booklet contained the global and mathematical self esteem subscales of the Self Description Questionnaire III (SDQ III, Marsh, 1992) and the visual art skill subscale of the Arts Self Perception Inventory (ASPI, Vispoel, 1995). Given that there a large number of self esteem domains that could be potentially used as dependent variables in the current investigation (e.g. Marsh, 1992, 1993b, 1998; Vispoel, in press), artistic self esteem was incorporated on the basis of the experimental context. Thus, it was assumed that the nature of the study (described as being between the department's of Art and Psychology) and group formation in the minimal group paradigm (i.e. based on artistic preferences) would render the artistic domain of self esteem to be relatively more important. The mathematical measure of self esteem was included on the basis of previous research which has shown that the mathematical domain generally tends to be judged as being relatively unimportant to participants (e.g. Hunter, 1998, 2001; Hunter et al., in press). The SDQ III is designed to assess global and 12 separate domains of self esteem (i.e. that which pertains to verbal ability, physical appearance, physical ability, parental relations opposite sex relations, same sex relations, emotional stability, spirituality, mathematical ability, academic ability creative ability and honesty). The ASPI is designed to assess four distinct domains of artistic self esteem (i.e. music, visual art, dance and dramatic art).

Both measures have been extensively validated (see Byrne, 1996; Vispoel, in press). The subscale measuring global self evaluation contains many of the same items as the Rosenberg (1965) global self esteem scale. It is therefore practically identical to other scales that have been used in experiments that have sought to assess the association between ingroup bias and global self esteem in the MGP (e.g. Lemyre & Smith, 1985; Oakes & Turner, 1980). The three self esteem scales used in the present study (i.e. global, mathematical and visual art) have high levels of internal (median alpha .96) and test retest reliability (median correlation of .87). Correlations between domains were low (median r's of .14). This means that subscales measuring each self esteem domain may be used either separately or in combination (Marsh, 1992; Vispoel, 1995). Global self esteem was assessed by a single scale consisting of 12 items. Mathematical and artistic self esteem were each assessed by scales comprising 10 items. An example of the content of each of the three sub scales is as follows: "Overall, I have a lot of respect for myself" (global self evaluation), "I am quite good at mathematics" (mathematical ability), "I am talented at art" (visual art skill). Participants are required to respond to all questions on the basis of how they "now feel" and "not as [they] usually feel." Half of the items in each scale were framed negatively. All answers are recorded on an eight point Likert scale (1-Definitely False, 8-Definitely True). All negatively worded items were reverse coded. This meant that the range of the scores on the global self esteem scale ran from 12 to 96. Scores on the mathematical and artistic scales ranged from 10 to 80. In each instance higher scores reflect increasingly positive levels of self esteem. Three further questions were also included. These asked participants to explain what they thought the study was really about, if they thought there was anything odd or unusual about the study and whether they wished to comment on any aspect of the study. Participants were then debriefed and thanked.

RESULTS

Manipulation checks

All negatively worded items were reversed so that high scores always represented positive esteem. In order to assess potential differences in social identity salience prior to the presentation of the intergroup allocation tasks and the measures self esteem amongst experimental (M=6.39, s.d.=.45) and control conditions (M=6.09, s.d.=.48) a one way analysis of variance (ANOVA) was conducted on participants membership CSE scores. No significant differences were found ($F(1, 69)=.00$, $p>.96$). These findings indicate that identity was similarly salient amongst experimental and control participants. Any differences in self esteem which emerge in the present investigation can not therefore be attributed to differential identity salience between experimental and control conditions.

To examine differences in how important artistic and mathematical abilities were to the Klee ingroup a 2 (condition: experimental/control) x 2 (domain: artistic/mathematical) mixed model ANOVA was conducted. The last factor was repeated. As expected a main effect was found for domain ($F(1, 69)=11.22$, $p<.002$). Artistic abilities (M=5.25, sd=1.56) were judged to be more important to the ingroup than were mathematical abilities (M=4.44, sd=1.85). No other main or interaction effects were found.

Intergroup allocations

In order to assess whether participants in the experimental condition showed ingroup favoring allocations (i.e., allocated more points to the ingroup than the outgroup) a repeated measures analysis of variance (ANOVA) was conducted. More points were given to members of the ingroup (M=231.57, sd=35.70) than members of the outgroup (M=188.62, sd=24.10, F(1, 34)=18.95, p<.001).

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Self esteem

In order to assess differences in the pre and post allocation self esteem scores of those assigned to the experimental and control conditions a 2 (condition: experimental v control) x 3 (self esteem domain: global, artistic and mathematical) mixed model analysis of variance (ANOVA) was conducted. The first factor was between subjects. The second was within subjects. Cell means (as assessed by an 8 point Likert scale) are presented in Table 1.

Table 1. Experimental and control group participants global, artistic and mathematical self esteem

Self esteem domain	Experimental	Control
Global (a)	76.68 (16.68)	72.84 (13.80)
Artistic (b)	44.61 (14.50)	42.88 (20.29)
Mathematical (b)	45.42 (12.81)*	53.71 (14.67)

Notes, higher scores denote more positive self esteem,
(a) denotes 12 item scale, (b) denotes 10 item scale
* lower self esteem amongst participants who showed group favoring allocations by t-test (Experimental, N=35, Control, N=35).

A main effect was found for self esteem domain (F(2, 132)=82.05, p<.001). This effect was, however, qualified by the interaction found between condition and self esteem domain (F(2, 132)=3.16, p<.05). Planned comparisons, conducted to assess this interaction further, revealed one significant effect. Contrary to expectations participants in the experimental condition (i.e. all those who were given the opportunity to show ingroup favoring allocations) experienced lower levels of mathematical self esteem (t(1, 68)=6.04, p<.02). Correlations between all the variables for experimental and control participants are presented in Appendix A.

DISCUSSION

It was predicted that the members of minimal groups, following the display of ingroup favoring allocations, would experience an increase in that domain of self esteem judged to be more important to the ingroup (i.e. artistic ability). No support was found for this prediction. In the experimental condition, minimal group members showed significant levels of ingroup favoring allocations. Following the manifestation of these biases participants failed to experience an increase in that domain of self esteem judged to be more important to the ingroup (i.e. artistic).

Contrary to expectations minimal group members who showed ingroup favoring allocations showed lower levels of mathematical self esteem.

These findings are at odds with those reported by Hunter and his colleagues (e.g. Hunter et al., 1996, 1997 experiment 2, in press). This group found that the display of evaluative ingroup bias lead to increases in domain specific self esteem. A variety of explanations may be offered to explain the failure of the current investigation to replicate the work of Hunter et al. One possibility relates to magnitude of the domain specific self esteem scores. As is apparent from Table1, the scores on the artistic and mathematical self esteem measures (in contrast to the global score) tended to fall just above the mid-point of their respective scales. Because the self esteem scores of people living in Western society typically tend to fall above this level (see Crocker & Blysma, 1996), it might be argued then that the domain specific self esteem levels among the current sample are low. This is relevant in so far as there is some evidence to suggest that people with lower levels of self esteem may be (a) very cautious in grasping opportunities to enhance their already existing sense of self worth (see Swann, 1996) and (b) motivated to protect rather than enhance an already meagre reserve of self esteem (see Baumeister, 1993). Thus, one possible explanation for our inability to replicate the work of Hunter et al. is that participants artistic and mathematical self esteem scores were so low that they were unlikely be enhanced through intergroup discrimination. Undermining this view, however, are three facts. The first is that both the domain specific and global self esteem scores found in the present study are similar to those reported in Hunter et al (1996, 1997, in press). The second is that mathematical self esteem (i.e. the less important domain) was found to be lower following intergroup differentiation. This means that low domain specific self esteem (at least as assessed by the SDQ III) is malleable. Presumably therefore if low domain specific self esteem can be subsequently decreased then it can also be increased (i.e. in the appropriate circumstances). The third relates to a study by Hunter et al. (1996). The data outlined in this paper demonstrates that intergroup discrimination can function to significantly elevate low domain specific self esteem (i.e. from 47.72 to 49.54, $p<.005$) of the magnitude discerned in the present study.

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Another possibility relates to the joint influence of a) the relatively low worth of mathematical self esteem to participants and b) that some domains of the self such as the artistic domain of self esteem (as assessed by the ASPI) may be chronically accessible at the personal rather than the social level of identity (see also Hunter, 1998; Ng & Wilson, 1989). Similarly, it should also be acknowledged that we cannot, of course, discount the possibility that participants may have experienced elevated feelings of self worth on some other domain of self esteem (e.g. verbal or academic ability) which was not included in the present study. A related explanation for our findings (i.e. pertaining to the lack of increased artistic self esteem among the discriminating Klee group) lies the fact that all those who took part in the study were psychology students. This is relevant in so far as this state of affairs may have functioned (especially if participants recognized one another from class) to a render the "psychology student" identity, rather than the intended minimal group (artistic related) identity, salient. Thus, the argument follows, because artistic attributes are largely irrelevant to the psychology student identity, it is unlikely that this (artistic) domain of self esteem would elevate following the manifestation of ingroup favoring allocations. That all our participants were introductory psychology students is undoubtedly a

weakness inherent in the current study (see also Sears, 1986). However, the idea that we failed to support our hypothesis because a psychology student identity was inadvertently made salient is undermined by several interrelated strands of evidence.

The first relates to those results which showed that artistic abilities were judged to be more important to the ingroup than were mathematical abilities. In the current context psychology students are required to (a) conduct statistical analyses as part of their introductory psychology papers and (b) pass a separate statistics/math paper in order to continue their psychology studies. Consequently, if some kind of psychology student identity was made salient we would expect the reverse. That is, mathematical skills would have been judged as being much more important to this group than artistic skills (i.e. those which are irrelevant to a psychology identity in this context). A second set of evidence, which militates against the idea that a psychology (rather than an artistic) identity was made if salient, is apparent from those findings which demonstrate the display of ingroup favoring allocations. The point here is that if those taking part in the study (i.e. all those who were all categorized as Klees) had categorized all others (i.e. both Klees and Kandinskys) as ingroup members (i.e. as other psychology students) then intergroup differentiation is unlikely to become manifest (see Gaertner, Rust, Dovidio, Bachman & Anastasio, 1997; Oakes, Turner & Haslam, 1994). The third and undoubtedly strongest indicator of the direction of identity salience among the present sample is to be found in our identity salience manipulation check. Analysis here revealed that participants (averaged across both conditions) tended to have a reasonably strong identification with the Klee group (i.e. 5.18 on a seven-point scale). Such findings are incompatible with the idea that a psychology student identity (rather than a minimal group identity) was salient.

An additional explanation for the findings discerned in the current study relates to social norms of fairness. The society of which the participants are a part (i.e. New Zealand), typically tends to emphasize an ethos of egalitarianism (James & Saville-Smith, 1994). Thus, by showing ingroup favoring allocations and thereby violating social mores, category members may have experienced negative emotions such guilt or shame and as such subsequently recorded lowered levels of (domain specific) self esteem. Certainly identical results have been reported amongst other social groups in the present context (e.g. Hunter, 1998). In a broader theoretical sense, it is nevertheless important to remember that results of the present investigation are not limited to the New Zealand context. Indeed several other studies comprising both artificial (e.g. Hogg, Turner, Nascimento-Schulze & Spriggs, 1986, experiment 2) and realistic groups (e.g. Branscombe & Wann, 1994; Vickers, Hogg & Abrams, 1988) have also found decreases in self esteem following the emergence of intergroup discrimination. Whatever the cause in each separate case, lowered levels of self esteem following the clear expression of ingroup biases are, nevertheless, particularly difficult to reconcile with the SIT assumption that group members resort to various forms of intergroup discrimination in order to enhance their self esteem.

The implication of the aforementioned findings, in conjunction with those discerned in the present investigation, is that the need to achieve and maintain evaluatively positive self esteem may not always be a primary function of intergroup discrimination. Moreover, given that self esteem may in fact suffer (a transitory decrease) after the display of intergroup differentiation this, of course, begs the question as to why participants would engage in such behaviour if they are likely to then experience such a negative outcome. One intriguing possibility is that

intergroup discrimination works to a more fundamental motive than that based on self esteem. In this regard several recently proposed motives may plausibly account for the expression of intergroup discrimination (e.g. Abrams & Hogg, 2001; Branscombe, Ellemers, Spears & Doojse, 1999; Hogg & Abrams, 1993; Leary & Downs, 1995). It is essential that future research begin to investigate such possibilities.

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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. (1996). Social identity, self as structure and self as process. In W. P. Robinson (Ed*), Social Groups and Identities: Developing the Legacy of Henri Tajfel.* Oxford: Butterworth/Heinemann.

Abrams, D. (1999). Social identity, social cognition and the self: The flexibility and stability of self-categorization. In D. Abrams & M. A. Hogg (Eds), *Social Identity and Social Cognition.* Oxford: Blackwell.

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. (2001). Collective identity: Group membership and self conception. In M. A. Hogg & R. S. Tindale (Eds), *The Blackwell Handbook of Social Psychology.* Oxford: Blackwell.

Baumeister, R. F. (1993). *Self esteem: The Puzzle of Low Self Regard*. New York: Plenum Press.

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.

Brown, R. (1995). *Prejudice: Its Social Psychology.* Oxford: Blackwell.

Byrne, B. M. (1996). *Measuring Self Concept Across the Life Span: Issues and Instrumentation. Washington DC*: American Psychological Association.

Crocker, J. & Blysma, W. H. (1996). Self esteem and the self concept. In A. S. R. Manstead, M. Hewstone, S. T. Fiske, M. A. Hogg, H. T. Reis and G. Semin (Eds). *The Blackwell Encyclopedia of Social Psychology*. Oxford: Blackwell.

Diehl, M. (1989). Justice and discrimination between minimal groups: The limits of equity. *British Journal of Social Psychology*, 28, 227-238.

Gaertner, S. L., Rust, M. C., Dovidio, J. F., Bachman, B. A. & Anastasio, P. A. (1997). The contact hypothesis: The role of a common ingroup identity on reducing intergroup bias among majority and minority group members. In J. L. Nye & A. M. Brower (Eds), *Whats Social About Social Cognition*. London: Sage.

Harter, S. (1986). Processes underlying the construction, maintenance and enhancement of the self concept in children. In J. Suls & A. G. Greenwald (Eds), *Psychological Perspectives on the Self (vol 3).* Hillsdale, NJ: Erlbaum.

Haslam, S. A., Oakes, P. J., Turner, J. C. & McGarty, C. (1995). Social categorization and group homogeneity: Changes in the perceived applicability of stereotype content as a function of comparative context and trait favourableness. *British Journal of Social Psychology*, 34, 139-160.

Hewstone, M., Rubin, M. & Willis, H. (2002). Intergroup Bias. *Annual Review of Psychology*, 53, 575-604.

Hogg, M. A. & Abrams, D. (1988). *Social Identifications: A Social Psychology of Intergroup Relations and Group Processes.* London: Routledge.

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.

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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.

Hunter, J. A. (1998). Intergroup evaluative bias and self esteem amongst Christians. *Current Research in Social Psychology*, 3, 74-87.

Hunter, J. A. (2001). Self esteem and ingroup bias among the members of a religious category. *Journal of Social Psychology*, 3, 401-411.

Hunter, J. A. (2003). State, Category Specific Self Esteem and Intergroup Discrimination. *Current Research in Social Psychology*, 8, 139-147.

Hunter, J. A., Kypri, K., Boyes, M., Stokell, N. M. & O'Brien, K. S & K. McMenamin. (in press). Social identity, self evaluation and ingroup bias: The relative importance of particular domains of self esteem to the ingroup. *British Journal of Social Psychology*.

Hunter, Platow, M. J., Bell, L. M., Kypri, K. & Lewis, C. A. (1997). Intergroup bias and self evaluation: Domain specific self esteem, threats to identity and dimensional importance. *British Journal of Social Psychology*, 36, 405-426.

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., Reid, J. M., Stokell, N. M. & Platow, M. J. (2000). Social attribution, self esteem and social identity. *Current Research in Social Psychology*, 5, 97-125.

James, B. & Saville-Smith, K. (1994). *Gender, Culture & Power: Challenging New Zealand's Gendered Culture.* Auckland: Oxford University Press.

Long, K. M., Spears, R. & Manstead, A. S. R. (1994). The influence of personal and collective self esteem on strategies of social differentiation. *British Journal of Social Psychology*, 33, 313-329.

Leary, M. R. & Downs, D. L. (1995). Interpersonal functions of the self esteem motive: The self esteem system as a sociometer. In M. J. Kernis (Ed), *Efficacy, Agency and Self esteem.* New York: Plenum Press.

Luhtanen, R. & Crocker, J. (1992). A collective self esteem scale: Self evaluation of one's social identity. *Personality and Social Psychology Bulletin*, 18, 302-318.

Marsh, H. W. (1992). *Manual for the Self Description Questionnaire III.* University of Western Sydney: Australia.

Marsh, H. W. (1993a). Academic self concept: Theory measurement and research. In J. Suls (Ed.), *Psychological Perspectives on the Self (vol 4).* Hillsdale, NJ: Erlbaum.

Marsh, H. W. (1993b). The mulidimensional structure of academic self concept: Invariance over age and gender. *American Education Research Journal*, 30, 841-860.

Marsh, H. W. (1998). Age and gender effects in physical self concepts for adolescent elite and non elite athletes: A multicohort multioccasion design. *Journal of Sport and Exercise Psychology*, 20, 237-259.

Ng, S. H. & Wilson, S. (1989). Self categorization theory and belief polarization among Christian believers and atheists. *British Journal of Social Psychology*, 28, 47-56.

Oakes, P. J., Haslam, S. A. & Turner, J. C. (1994). *Stereotyping and Social Reality.* Oxford: Blackwell.

[184]
---
[185]

Platow, M. J., Harley, K., Hunter, J. A., Hanning, P., Shave, R. & O'Connell, A. (1997). Interpreting ingroup-favouring allocations in the minimal group paradigm. *British Journal of Social Psychology*, 36, 107-117.

Rosenberg, M. (1965). *Society and the Adolescent Self Image*. Princeton, NJ: Princeton University Press.

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.

Sears, D. O. (1986). College sophomores in the laboratory: Influence of a narrow database on social psychology's view of human nature. *Journal of Personality and Social Psychology*, 51. 515-530.

Swann, W. B. (1996). *Self Traps: The Elusive Quest for Higher Self Esteem.* Freeman: New York.

Tajfel, H. (1981). *Human Groups and Social Categories*. Cambridge: Cambridge University Press.

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 Psychology of Intergroup Relations.* Chicago: Nelson/Hall.

Turner, J. C. (1999). Some current issues in research on social identity and self categorization theories. In. N. Ellemers, R. Spears & B. Doosje (Eds), *Social Identity: Context, Commitment, Content*. Oxford: Blackwell.

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., Oakes, P., Haslam, S. A. & McGarty, C. (1994). Self and collective: Cognition and social context. *Personality and Social Psychology Bulletin*, 20, 454-463.

Vickers, E., Abrams, D. & Hogg, M. A. (1988). The influence of social norms on discrimination in the minimal group paradigm. Cited in D. Abrams & M. A. Hogg, Comments on the motivational status of self esteem in social identity and intergroup discrimination. *European Journal of Social Psychology*, 18, 317-334.

Vispoel, W. P. (in press). The development and validation of the Arts self Perception Inventory for Adults. *Educational and Psychological Measurement.*

Vispoel, W. P. (1995). Self concept in artistic domains: An extension of the Shavelson, Hubner, and Stanton (1976) model. *Journal of Educational Psychology*, 87, 134-153.

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APPENDIX A. CORRELATIONS BETWEEN ALL THE VARIABLES USED IN THE CURRENT STUDY SEPARATELY BY EXPERIMENTAL AND CONTROL CONDITIONS

Experimental condition

	Ingroup	Outgroup	Global	Artistic	Math
Ingroup		-.90	-.06	-.10	.24
Outgroup			.04	.12	-.20
Global				.17	-.02
Artistic					.22
Math					

Ingroup = points allocated to the ingroup
Outgroup = points allocated to the outgroup
Global = global self esteem
Artistic =artistic self esteem
Mathematical = mathematical self esteem

Control condition

	Ingroup	Outgroup	Global	Artistic	Math
Ingroup		1.0	-.24	.07	.06
Outgroup			-.24	.07	.06
Global				.15	-.13
artistic					-.13
Math					

Ingroup = points allocated to the ingroup
Outgroup = points allocated to the outgroup
Global = global self esteem
Artistic =artistic self esteem
Mathematical = mathematical self esteem

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