

**HOW DOES ETHNIC IDENTIFICATION IMPACT THE RECALL OF AND
REACTIONS TO DISCRIMINATION?**

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Norann Richard
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APPROVAL

Name: Norann Richard

Degree: Master of Arts (Psychology)

Title of Thesis: How Does Ethnic Identification Impact the Recall of
and Reactions to Discrimination?

Chair: Dr. Thomas Spalek
Assistant Professor

Dr. Stephen Wright
Senior Supervisor
Professor

Dr. Michael Schmitt
Supervisor
Assistant Professor

External Examiner: Dr. Mark Schaller
Professor
Department of Psychology
University of British Columbia

Date Defended : December 8, 2006



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ABSTRACT

Although previous research has shown ingroup identification to be a reliable buffer against the negative effects of being the target of ethnic discrimination, little is known about the underlying psychological processes. This study examined whether memory construction processes play a role in these effects. After being pretested for ingroup identification, ethnic minority participants read about and imagined themselves having the experiences of a co-ethnic student. The experiences involved an obvious or a subtle episode of discrimination, a non-discrimination conflict, or a neutral interaction. Participants later wrote two first-person free recall narratives of the event, and completed measures of self-esteem, well-being, and reactions to the event. Analyses suggest that identification plays an important role in maintaining self-esteem and well-being in the face of discrimination, particularly when the discrimination is more subtle. Identification also has differential effects on different scales of well-being, and its effect is moderated by differences in recall.

Keywords: discrimination; ethnic identification; memory construction; self-esteem; well-being

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INTRODUCTION

Researchers have found that some people now believe discrimination has all but disappeared in North America (Brown, 1995; Sears, Van Laar, Carrillo, & Kosterman, 1997). However, evidence suggests that being a target of discrimination remains an unfortunately common experience for members of stigmatized ethnic groups. A large number of ethnic minorities report experiencing personal discrimination at some point in their lives. For instance, a Statistics Canada survey found that 20% of ethnic minorities reported being the target of discrimination "sometimes" or "often" over the previous five years (Statistics Canada, 2003). Furthermore, in a recent Ipsos-Reid poll, 18% of Canadians surveyed (across all ethnicities) reported being the target of discrimination (McLeod, 2005). A recent study of Korean immigrants residing in Canada found that 83.5% reported discriminatory experiences (Noh & Kaspar, 2003). One study of African-American college students found that a staggering 100% of respondents claimed to have experienced some form of racial discrimination in their lifetime (Landrine & Klonoff, 1996), whereas another found that 81% of African-Americans reported experiences of day-to-day discrimination and 49% had experienced a major racist event, such as being denied services or experiencing police harassment (Kessler, Mickelson & Williams, 1999).

Such high rates are especially discouraging given that numerous studies have related perceiving oneself as the target of discrimination to a wide range of negative psychological effects. For instance, perceptions of discrimination have been linked to

decreased personal self-esteem (Branscombe, Schmitt & Harvey, 1999; Gaudet, Clement, & Deuzeman, 2005; Lee, 2003; Romero & Roberts, 2003) and collective self-esteem (Branscombe et al., 1999; Leonardelli & Tormala, 2003). These perceptions are also associated with increased depressive symptoms (Gaudet et al., 2005; Lee, 2003; Mossakowski, 2003; Noh, Beiser, Kaspar, Hou, & Rummens, 1999; Noh & Kaspar, 2003), as well as to increased psychological distress and associated symptoms, including anxiety and somatization (Fischer & Shaw, 1999; Klonoff, Landrine, & Ullman, 1999; Landrine & Klonoff, 1996). Studies have also found relationships between perceived experiences of discrimination and decreased well-being (Ryff, Keyes, & Hughes, 2003), diminished satisfaction with life (Vohra & Adair, 2000), increased cigarette smoking (Landrine & Klonoff, 1996), and elevated risks of chronic health problems (Williams, Yu, Jackson & Anderson, 1997). In adolescents, perceiving oneself as the target of discrimination is associated with increased rates of violence (Caldwell, Kohn-Wood, Schmeelk-Cone, Chavous, & Zimmerman, 2004) and diminished academic performance (Wong, Eccles, & Sameroff, 2003). Furthermore, experimental paradigms have revealed that a single discriminatory comment by an outgroup member is sufficient to increase a stigmatized group member's negative feelings about future interactions not only with that particular individual, but also with the outgroup as a whole (Tropp, 2003).

Despite a wealth of evidence outlining the negative consequences of being the target of discrimination, research has uncovered flaws in the traditional view that discrimination necessarily equals negative psychological effects for its targets. For instance, despite the majority of African-Americans reporting being targets of discrimination (Landrine & Klonoff, 1996), studies have shown no differences in the

rates of psychiatric disorders between Caucasians and African-Americans (Ryff et al., 2003). Furthermore, there is evidence of equivalent levels of self-esteem and psychological distress across these two groups (Crocker & Blanton, 1999; Ryff et al., 2003). One study actually found a tendency for African- and Mexican-Americans to have higher levels of well-being than Caucasians (Ryff et al., 2003). Although being discriminated against is doubtlessly an unpleasant and stressful experience (Klonoff et al., 1999), these findings suggest that its targets may be more resilient and less susceptible to its negative effects than previously believed.

These findings have resulted in more attention being focused on the role of intervening factors in the relationship between discrimination and negative psychological effects. This approach was endorsed by the Basic Behavioral Science Task Force of the National Advisory Mental Health Council (1996), who stated in *American Psychologist* that:

Understanding the psychological processes that mediate and sustain... self-protective behaviors among people victimized by prejudice and discrimination in our society needs to be a high research priority (pp.725).

A number of studies have begun to investigate the self-protective effects of the coping strategies utilized by ethnic minorities in dealing with discrimination (Miller & Kaiser, 2001; Noh et al., 1999; Noh & Kaspar, 2003; Plummer & Slane, 1996; Shih, 2004). Findings suggest that, rather than one particular strategy being most advantageous across all situations, the most adaptive technique is likely situation and culture specific (Miller & Kaiser, 2001; Noh et al., 1999; Noh & Kaspar, 2003). Researchers have also examined the role of self-esteem contingencies, specifically the degree to which an individual bases their self-esteem on the approval and regard of others. It has been

proposed that the more conditional one's self-esteem is on the opinion of others, the more it decreases with experiences of discrimination (Crocker & Blanton, 1999). Research attention has also been focused on beneficial personality traits, such as hardiness and resiliency (Operatio & Fiske, 2001).

Ingroup Identification

One factor that has received particular attention for its buffering role in the effects of discrimination on well-being is identification with one's ingroup. Identification with one's ethnic group has been shown to have a generally positive effect on well-being. For instance, amongst Lebanese-Canadians, higher levels of ethnic identification were associated with decreased depressive symptoms (Gaudet et al., 2005). In minority students living in the United States, greater ethnic identification has been associated with increased self-esteem and job competence, and decreased depressive symptoms (St. Louis, 2005). Similarly, greater racial centrality (conceived as the cognitive component of ethnic identification; Cameron, 2004) was found to predict lower levels of psychological distress in African American young adults (Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003). Higher levels of ethnic identity have also been associated with higher self-esteem and self-confidence, as well as a greater sense of purpose in life (Martinez & Dukes, 1997).

More specifically, however, identification appears to play a particularly important role in buffering against the negative effects of being the target of discrimination. Strong ethnic identification is thought to provide a sense of belonging and to play an essential role in maintaining well-being in the face of stigmatization (Phinney, 1990). Branscombe and colleagues (1999) state that when a dominant outgroup demeans and stigmatizes an

individual based on their group membership, individuals tend to identify to a greater extent with that ingroup. They propose a model that elucidates the mediating role of this identification. The “rejection-identification model” states that although perceived discrimination has a direct negative effect on well-being, there is also an indirect positive effect mediated by ingroup identification. This is because experiences with discrimination heighten ethnic identification, which is then associated with increases in self-esteem. Thus, this indirect (mediated) effect of discrimination on self-esteem is positive. This model has been empirically supported across a variety of stigmatized populations, including African-Americans (Branscombe et al., 1999), Mexican-Americans (Schmitt & Branscombe, 2002), Latino/a high school students (Armenta, Hunt, Vaughn, & Roesch, 2006), women (Leonardelli & Tormala, 2003; Schmitt, Branscombe, Kobrynowicz & Owen, 2002), older adults (Gartska, Schmitt, Branscombe & Hummert, 2004), and international students (Schmitt, Spears, & Branscombe, 2003). Similar findings have been obtained in Turkish, Moroccan, Surinamese and Dutch children, for whom ethnic self-esteem (pride in their ethnic group membership) mediated the relationship between experiencing ethnic discrimination by their peers and diminished self-worth (Verkuyten & Thijs, 2006).

Although the rejection-identification model describes the mediating effects of ethnic identification, there is also evidence that identification moderates the relationship between discrimination and its psychological outcomes. For instance, Mossakowski (2003) showed that strong identification with one’s ethnic group prevented the typical increase in depressive symptoms associated with perceived discrimination (cf. Beiser & Hou, 2006; cf. McCoy & Major, 2003). Likewise, African-Americans with high levels of

racial identification did not display the positive relationship between daily racial hassles and depression, anxiety, and distress exhibited by those with lower levels of identification (Neblett, Shelton, & Sellers, 2004). Racial centrality has also been shown to moderate the relationship between racial discrimination and perceived stress in African-American young adults (Sellers et al., 2003). The intervening role of identification was also evidenced in a study of reactions to perception of group discrimination among Latinos (Spencer-Rodgers & Collins, 2005).

This buffering effect has also been found across a variety of age groups. For instance, higher levels of ethnic affirmation (a component of ethnic identity reflecting a sense of belonging and pride in one's ingroup) in Mexican-American youth has been related to higher self-esteem in the face of discrimination (Romero & Roberts, 2003). Studies have also shown racial identity in African-American youth to moderate the negative effects of discrimination on academic achievement and mental health (Wong et al., 2003). Similarly, higher levels of racial identity help to reduce the typical increase in violent behaviour associated with perceived discrimination in African-American youth (Caldwell et al., 2004).

Although the above studies showing significant moderation, rather than mediation, effects of ethnic identification, may initially appear to contradict the rejection-identification model, it is possible that these results represent a temporal extension of the model. After considerable experience with discrimination results in relatively high ingroup identification (as predicted in the rejection-identification hypothesis), this identification may then be used as a salient and stable psychological tool against the effects of discrimination, resulting in significant moderation effects.

The above findings suggest the negative psychological impact of being the target of discrimination may be at least partially assuaged by the positive effects of identification with one's ethnic group. Shih (2004) describes this kind of adaptive strategies as an "empowerment" model of dealing with stigma, in that the focus is on the positive aspects of minority group identification, as compared to the traditional "coping" model, which involves simply avoiding the negative consequences of such a membership.

The Role of Memory

A relatively new twist on research looking at the role of identification in maintaining well-being has been the investigation of memory construction and its potential benefits for targets of discrimination (e.g., Tropp, Wright, & Polstra, 2002). Although there is no published research on the malleability of memories of personal experiences with discrimination, it has been well established that memories for emotional events are frequently constructed and reconstructed to serve self-enhancement purposes (Smith, 1994). It is believed that, rather than accurately representing the actual occurrence, memories for emotional events are instead reconstructed based on their relevance to current goals (Conway & Pleydell-Pearce, 2000; Levine & Safer, 2002). These goals are sometimes to make the memories as consistent as possible with one's current viewpoint. For example, Levine and colleagues found that participants' memories of emotions surrounding the initial announcement of the O. J. Simpson verdict were often altered to fit their current opinions about the verdict (Levine, Prohaska, Burgess, Rice & Laulhere, 2001). Other times, the goal is to show a large change between the actual event and one's current state, such as in a study by Conway and Ross (1984), in which students

distorted recall of past academic performance to make for greater perceived gains from a study skills course.

The theory of socially guided scripts has also been evoked to explain such memory distortions. It states that rather than remembering all the nuances of a specific situation, it is often easier for individuals to construct memories based on generic scripts thought to represent typical instances of that kind of event (Holmberg & Veroff, 1996). These scripts may be especially likely to be used in order to clarify ambiguous situations (Holmberg & Veroff, 1996). Experiences with discrimination often fit this description, as they are frequently characterized by ambiguity (Major, Quinton, & Schmader, 2003). Guided scripts are often culture or subculture specific (Holmberg & Veroff, 1996), in that they are based on cultural expectations about normative interpersonal interactions. A special form of “reconstructed” memories (known as folk memories, which often differ from the dominant discourse of the powerful outgroup), hold an especially meaningful role in maintaining cultural identity amongst stigmatized ethnic groups (Conway, 2003).

It is plausible that highly identified members of stigmatized ethnic groups may have developed scripts for discrimination-related scenarios that allow them to maintain their well-being. For instance, it has been proposed that high identifiers may recall discrimination events in such a manner as to more easily demonize and attribute blame to the perpetrator. This should help to maintain self-esteem by minimizing feelings of personal responsibility (Major, Quinton, & McCoy, 2002; Tropp et al., 2002). The result should be the continued use of scripts that describe perpetrators as holding an especially high number of negative attributes and motivations.

The role of these structured sets of expectations was evidenced in a study by Stillwell and Baumeister (1997). Although this study examined identification with one individual, rather than with an entire group, this study demonstrated that identification with either the target or perpetrator while reading an ambiguous conflict vignette was sufficient to bias participants' subsequent recall of details in a manner favouring the character with whom they identified. This suggests that different role-related expectancies can modify the meaning given to the same event.

It is also worth noting that group identification has been shown to have an impact on cognitive processes such as reaction time when judging trait similarity between one's self and one's ingroup (Coats, Smith, Claypool & Banner, 2000; Tropp & Wright, 2001). As such, it is plausible that other cognitive processes, such as memory construction, may also be influenced by one's level of ingroup identification. Furthermore, although studies have rarely looked directly at the role of memory in intergroup interactions, a memory construction based interpretation can be applied to certain findings. For instance, it has been found that when both negative and positive aspects of one's ingroup's history are presented, highly identified group members are less likely to acknowledge the negative aspects than are less-identified group members, instead placing greater attention on positive factors (Doosje, Branscombe, Spears & Manstead, 1998). This is thought to be a strategy to minimize feelings of collective guilt. By extension, it is possible that as a defensive strategy, high identifiers may be recalling the initial information provided in a different manner than low identifiers, in order to minimize the more threatening information and better maintain well-being.

Although experiences with discrimination are almost uniformly perceived as negative and stressful at the time of occurrence (Tropp, 2003), it is possible that the construction of memories after the fact may help individuals to better maintain their well-being by representing the event in a different, more positive, or, at the very least, less ambiguous light. Tropp, Wright, and Polstra (2002), in their study of the impact of recalling memories of discrimination on high and low identifiers, provide an initial examination of this possibility.

Tropp, Wright and Polstra, 2002

Influenced by Branscombe et al.'s (1999) seminal study, Tropp and colleagues (2002) sought to extend the rejection-identification model to consider the effects of recalling personal experiences with discrimination. Ethnic minority participants who were high and low on ingroup identification wrote either about an experience with discrimination or about an experience when they felt negatively about belonging to their ethnic group. Participants' self-esteem was measured both several weeks before the experiment and after writing about their personal experience. It was found that highly identified participants showed an increase in self-esteem after recalling an experience with discrimination, whereas the less identified participants' self-esteem remained stable.

These results appear to demonstrate the positive effect of ingroup identification on psychological well-being when discrimination is recalled. However, this research did not follow the exact structure of the rejection-identification model, in that experiences with discrimination were considered as a moderator rather than a mediator. Nonetheless, as mentioned previously, this moderation may be the long-term result of identification's initial mediating effect. At the time of the experiment, ingroup identification more

directly influences discrimination's effects on well-being, possibly by altering the manner in which these events are remembered (Tropp et al., 2002). It is also worth distinguishing between the types of discrimination referred to in these two models, in that the rejection-identification model is formulated to specifically address the individual's perceptions of the overall pervasiveness of discrimination in their lives, whereas Tropp and colleagues' study (2002) refers to an experience with a specific discrimination event.

The Current Study

Given that research has convincingly demonstrated that identification with one's ethnic group appears to decrease the negative impact of discrimination (e.g., Branscombe et al., 1999; Mossakowski, 2003; Schmitt & Branscombe, 2002), the logical next step appears to be the investigation of the underlying psychological processes. The proposed study was designed to replicate Tropp et al.'s (2002) finding that recalling events of discrimination results in increased self-esteem for highly identified participants as compared to less identified participants. However, instead of using Tropp et al.'s (2002) methodology of having participants actually recall personal experiences with discrimination, participants in the critical condition recalled a narrative vignette describing an ingroup member's experience of discrimination while imagining himself or herself as the narrator. Using participant's memories of a standardized episode of discrimination provided a unique opportunity to assess the impact of memory processes. Not only did the current study investigate whether different scripts might be activated by those with different levels of identification, it also assessed whether differences in memory construction based on levels of identification influenced well-being and self-esteem. Furthermore, this study attempted to generalize findings regarding the positive

effects of identification to a wider operationalization of well-being, and compared recall of obvious episodes of discrimination to memories of more subtle episodes.

Methodological Changes

Expanding the measurement of well-being

One purpose of the study was to address a substantial gap in the research literature on discrimination: the use of limited dependent variables in the assessment of the psychological effects of discrimination. Although a large number of studies purport to measure discrimination's effects on well-being, the actual measures tend to be limited to measures of life satisfaction (e.g., Vohra & Adair, 2000) and self-esteem (e.g., Branscombe et al., 1999; Lee, 2003; Mossakowski, 2003; cf. Sellers, Copeland-Linder, Martin & Lewis, 2006). Although the argument has been made that well-being is merely the combination of happiness and life satisfaction, a concept also referred to as hedonic well-being (Ryff, 1989), there is a growing research movement claiming that psychological well-being encompasses a wider range of constructs. Particular support has been found for the multi-construct concept of eudaimonic well-being, originally proposed by Ryff (1989). Eudaimonic well-being is thought to consist of six primary constructs: self-acceptance (having a positive attitude about oneself and one's past; corresponding to hedonic well-being), positive relations with others (having successful interactions with others and the capacity for empathy and affection), autonomy (exhibiting independence and the ability to withstand social pressures), environmental mastery (competency and control in managing one's environment), purpose in life (possessing ambition and a sense of meaning in life) and personal growth (seeing the self as expanding and improving over time). Ryff (1989) created a self-report questionnaire entitled the Psychological Scales of

Well-being designed to measure these six separate constructs. This scale has been shown to be psychometrically valid and has since been adopted for widespread use in psychological research (e.g., Fava, 1999; Kirby, Coleman, & Daly, 2004; Marks & Lambert, 1998; Ryff et al., 2003; Staudinger, Fleeson, & Baltes, 1999). Given that research on the impact of discrimination claims to generalize to a broader concept of well-being (e.g., Lee, 2003; Mossakowski, 2003), and the possibility that the combination of discrimination and ingroup identification may have differential impacts on various constructs of well-being, it was deemed worthwhile to examine the effects of perceiving discrimination using this broader measure¹. For instance, it appears likely that being the target of discrimination may have significant negative impacts on the positive relations with others scale, given the interpersonal nature of the situation in which discrimination would occur. It also appears likely that discrimination will have impacts on participants' sense of autonomy, given that the experience of discrimination necessarily suggests that an aspect of the self over which the individual has no control (their ethnicity) is resulting in their negative treatment. In contrast, one would not predict such large effects on purpose in life, as it deals more with life goals and ambition, which should be less likely to be affected by a single experience with discrimination.

Free recall of vignettes

Rather than having participants recall personal experiences with discrimination, as done by Tropp et al. (2002), the current study had participants recall narrative vignettes describing one of four possible events, including two describing a fellow ingroup

¹ Sellers et al. (2006) used the 3-item per domain Scales of Psychological Well-Being (Ryff, 1989) in their research on the psychological effects of discrimination, but analyzed the results solely as a unidimensional well-being measure, rather than examining effects on specific constructs.

member's experiences with discrimination, while being encouraged to imagine themselves as the narrator. Research has shown that this type of manipulation can result in significant identification with the character (Davis, Conklin, Smith, & Luce, 1996). Given that research suggests that most ethnic minorities have personal experiences with discrimination (e.g., Landrine & Klonoff, 1996; Noh & Kaspar, 2003), participants should be particularly likely to personalize these narratives, thus activating psychological strategies normally invoked when faced with discrimination events. If high and low identifiers truly differ in their uses of such strategies, as suggested by their differences in self-esteem after writing about experiences with discrimination (Tropp et al., 2002), these differences may be evidenced in the contents of their narrative recalls of the vignette describing an ingroup members' personal experience of discrimination.

This use of standardized discrimination-based vignette also addresses a potential criticism of Tropp et al. (2002). Although there were clear differences in high and low identifiers' levels of self-esteem after having written about a personal experience with discrimination, there was no experimental control exerted over the actual contents of these memories. As such, it is possible that systematic differences between the events recalled by high and low identifiers, rather than differences in the self-esteem enhancement strategies used, caused the contrasts in subsequent self-esteem. Although this criticism could be addressed through the manipulation of participants' actual experiences with discrimination in a laboratory setting (e.g., Tropp, 2003) and having them later recall these events, guaranteeing identical original scenarios, this methodology is risky for ethical reasons (Fischer & Shaw, 1999). It may also lack generalizability to real life instances of discrimination (Berkowitz, 1994), as such a study would likely

involve laboratory-created groups (e.g., minimal group paradigms; Tajfel, Billy & Bundy, 1971) or very mild acts of discrimination. Asking participants to recall a realistic vignette describing an ingroup member's experiences with discrimination with explicit instructions to imagine themselves vividly as the target allows both experimental control over the content of the original event, while keeping the scenario realistic and emotion eliciting. Furthermore, it allows the extra advantage of being able to examine participants' recall narratives for systematic differences across different levels of identification and to correlate these with measures of well-being and self-esteem.

Additionally, two methods of assessing participant free recall were used and content analyzed. Not only were participants instructed to recall the episodes in the first person while imagining it as if it were happening to them, but after another delay, they were again asked to "retell" the event as if it had happened to them, but to write a narrative as if they were describing the event to a co-ethnic friend. This inclusion of two complementary measures of free recall is particularly useful in that they will allow for both the assessment of how participants' construct the event when attempting to recount it objectively, as well as when they recount it to a friend. This is especially relevant given that social support is thought to play a major role in higher identifiers' better coping with discrimination (Schneider & Ward, 2003). Furthermore, it is possible that different goals may underlie participants' motivations when recounting the event objectively (e.g., memory accuracy) compared to a friend (e.g., gaining empathy, sharing group experiences). This is especially important given the previously discussed finding that constructions of memories for emotional events are often guided by relevant goals (Conway & Pleydell-Pierce, 2000; Levine & Safer, 2002).

Obvious versus subtle discrimination

Another addition to the study was the inclusion of two discrimination-based episodes, one describing an obvious discriminatory incident, the other describing a subtler incident. This distinction is important for several reasons. First, the nature of contemporary discrimination has changed. Overt discrimination has become less socially acceptable, which may contribute to the relatively commonly held view that discrimination has been rendered nearly non-existent (Sears et al., 1997). However, discrimination has evolved to more subtle forms of “modern racism,” whereby people superficially act in an unprejudiced manner while privately holding prejudiced attitudes, resulting in more subtle and indirect acts of discrimination (Brown, 1995). Gaertner and Dovidio (2000) have also described a form of contemporary racism they label “aversive racism”, whereby people hold egalitarian beliefs and values, but continue to harbour negative unconscious feelings towards members of the outgroup. Given this current reality, it would be very useful to include a condition consistent with the types of discrimination that emerge when the perpetrator holds these modern forms of prejudice.

Secondly, given the differences in the contents of obvious discriminatory episodes compared to more ambiguous ones, it is possible that memories of these events may be constructed in different ways, and thus have differential impacts on self-esteem and well-being. It had been suggested that socially constructed scripts are more likely to be utilized when situations are more ambiguous, as the situation requires a more defined structure to be better understood and recalled (Holmberg & Veroff, 1996). As such, if different scripts are used by high and low identifiers, as predicted, they would be especially likely to be triggered in more ambiguous situation. In turn, if the scripts used by those higher in identification result in more successful coping, any effects of identification on self-

esteem and well-being when discrimination is obvious should be maximized when discrimination is more subtle.

Conflict-control condition

A fourth change to this study was the inclusion of the conflict-control condition, in which participants imagined themselves in a situation where they were treated poorly by a perpetrator, but that treatment was not related to their group membership. Identification is not predicted to be related to self-esteem and well-being in this condition, given that the proposed well-being maintenance strategies utilized by high identifiers are expected to be specific to ethnicity-related events, such as discrimination. However, there remains the possibility that higher identifiers may simply have overall better coping strategies across all conflict situations. Alternatively, higher identifiers may be more likely than participants lower in identification to interpret conflict scenarios as related to discrimination, and thus to engage in the self-protective strategies associated with acts of discrimination and experience higher self-esteem and well-being compared to lower identifiers.

Of course, a neutral-control condition was included to provide a control for this possibility. There is expected to be no relationship between identification and self-esteem and well-being in this condition. It is also worth noting that participants will be reminded of their ethnic group membership in every condition, in that they are informed that the narrator is a member of their ethnic group, are asked to imagine the situation as if it is happening to them specifically and to recount the event to a co-ethnic friend. As such, any differences between the discrimination-based vignettes and the control vignettes

cannot be attributed to the simple effects of participant's experiencing greater salience of their ethnicity.

Attributions questionnaire

Finally, an additional questionnaire was added to the study asking about a number of concepts thought to be relevant to participants' reactions and interpretations of the episodes they read and recalled. This questionnaire measured participants' assessments of: a) the potential perpetrator and his motivations, b) negative emotional reactions to the event, c) prevalence of discrimination, e) the realism of the episode and f) how vividly they were able to imagine the episode. The addition of this questionnaire should allow for the more detailed assessment of factors leading to higher self-esteem and well-being in the face of discrimination. For instance, the extent to which participants attribute the perpetrator's motivations to discrimination is expected to influence the relationships between identification and self-esteem/well-being in the subtle-discrimination condition. This is because high identifiers are expected to have greater abilities to cope with the negative event when it is attributed to discrimination.

The degree to which participants view the episode as realistic and are able to picture it vividly should also increase the strength of any effects of ingroup identification. The degree to which participants' perceive prejudice as prevalent in the lives of themselves and members of their ethnic group should also result in larger effects of identification on self-esteem and well-being, as high identifiers with more experiences with discrimination should have more practice using strategies to cope with discrimination.

As previously mentioned, greater demonizing of the perpetrator should play a mediating role, such that high identifiers should be more likely rate the perpetrator more negatively, which should result in higher self-esteem and well-being (Tropp et al., 2002). Participants' negative emotional reactions should also serve as a mediator, such that greater identification results in more other-directed negative emotional reactions (such as anger), which then leads to higher self-esteem and well-being. Conversely, greater identification should also lead to fewer self-directed negative reactions (such as hurt). This decrease should also be associated with increases in self-esteem and well-being.

Summary of Hypotheses

Primary hypotheses

The primary prediction is an ethnic identification by condition interaction effect on measures of well-being and self-esteem. Specifically, in both discrimination conditions, it is predicted higher identification will be associated with higher self-esteem and well-being, and this relationship will be larger in the subtle-discrimination condition. However, it is predicted that there will be no significant relationship between identification and self-esteem/well-being in the conflict-control and neutral-control conditions. Rather than running one large analyses comparing all four conditions, which is unnecessarily complicated and will likely involve numerous follow-ups, these hypotheses will instead be tested by running comparisons between the conditions of interest (comparing each discrimination condition to each control condition, as well as comparing the obvious-discrimination condition to the subtle-discrimination condition).

The specific constructs of well-being have yet to be studied within the context of discrimination based studies, and thus analyses involving this dependent variable are

more exploratory in nature. However, it is predicted that positive relations with others and autonomy will operate similar to the other criterion variables and show interactions between identification and condition. In contrast, it is not expected that this interaction will emerge for environmental mastery, personal growth, purpose in life or self-acceptance.

Moderation

The degree to which the participants see the perpetrator's motivations as discriminatory, as well as strength of references to discrimination in the free recall narratives, are predicted to moderate the impact of identification in the subtle-discrimination condition, such that stronger attributions to discrimination will be associated with stronger relationships between identification and the criterion variables.

It is predicted that rating of realism and vividness should also moderate the relationship between identification and the criterion variables in the discrimination conditions. Similarly, the degree of emotional engagement and memory quality coded for in the free recall narratives should also moderate these relationships. Both these predictions expect that the more involved participants are in both imagining and recounting the event, the stronger the positive effects of identification.

Prevalence of discrimination should also have a moderating effect, such that the effects of identification on the criterion variable will be stronger when participants rate the prevalence of discrimination in their lives as higher.

Mediation

In the discrimination conditions, it is also expected that negative ratings of the perpetrator and negative portrayals of the perpetrator in the free recall narratives should mediate the relationship between identification and the criterion variables, such that higher identifiers should be more likely to portray the perpetrator negatively, which in turn will be associated with increases in self-esteem and well-being.

Participant rated negative emotional reactions, as well as the negative emotions coded for in the free recall narratives (e.g., anger, hurt), are also expected to mediate any relationships between identification and self-esteem/well-being in the two discrimination conditions. It is believed that higher identification will be associated with increased levels of other-directed negative emotions which, in turn, will be associated with higher self-esteem and well-being. It is also expected that the decrease in self-directed negative emotions (e.g., hurt) in high identifiers will also be associated with higher self-esteem and well-being. The number of coping-based reactions evidenced in the free recall narratives are also predicted to show a mediating role. Given that participants who are higher in identification are expected to have better coping skills, these skills should be evidenced within their narratives, and have positive effects upon self-esteem and well-being.

METHOD

Overview

The study involved a mixed design with two independent variables: ethnic identification as a continuous measured variable and discrimination experience as a manipulated variable. Four vignettes were used to manipulate discrimination creating an obvious-discrimination, a subtle-discrimination, a conflict-control, and a neutral-control condition.

Participants

One hundred and thirty-nine ethnic minority undergraduate students at Simon Fraser University participated in this study for either monetary reimbursement or course credits. Sixty-seven percent of the sample ($n = 93$) were female and 33% ($n = 46$) were male. The mean age of participants was 20.03 years ($SD = 3.775$), with ages ranging from 17 to 43 years. The majority of the sample were Asian (82.7%, $n = 115$) and other ethnic group included Indo-Canadians (9.4%, $n = 13$), Middle Eastern (4.3%, $n = 6$), Hispanics (2.9%, $n = 4$), and First Nations (0.7%, $n = 1$). The majority of the sample (68.3%, $n = 95$) were born outside of Canada. Seventy-seven percent of the sample ($n = 108$) had a first language other than English. Participants had been speaking English for an average of 12.16 years ($SD = 5.503$).

Procedure

Overview

Participants were initially recruited to this study through a series of mass testing sessions and online surveys that measured participants' levels of ethnic identification. In the actual study, participants completed a series of tasks on a computer, including reading a first-person vignette describing the experiences of a co-ethnic university student. The content of these vignettes varied by condition, in that they described either an obvious episode of discrimination, a subtle episode of discrimination, a conflict unrelated to discrimination, or a neutral interaction. Afterwards, participants completed a number of tasks, including writing a free recall narrative of the event in an objective manner, writing a free recall narrative of the event as though they were recounting it to a co-ethnic friend, and completing measures of state and trait self-esteem, well-being, and reactions to the event.

Pretesting

Initial data about participants was collected via two pretesting methods: a mass testing session in which participants completed paper and pencil questionnaires, and an online survey.

Mass testing

Altogether, 466 students participated in mass testing sessions that were conducted either in a lecture hall or in a psychology laboratory. Participants were recruited through announcements made in undergraduate psychology classes. They were offered \$5 for completing several paper and pencil questionnaires, and were also

informed that they might be recruited for future studies, for which they would receive either research participation credits or monetary compensation.

Online survey

Two hundred and eighty participants completed an online survey. Participants were recruited through website postings, posters and flyers around campus, emails to student lists, advertisements in the campus newspaper, and word of mouth. Participants were offered a chance to win \$50 in a draw for their participation, and were also informed that they might be recruited for future studies. Potential participants emailed to express interest, and were then emailed the survey link and a unique ID number.

Pretesting contents

The pretest² included questions regarding gender and ethnicity and two measures of ingroup identification: the ethnic group modification of the Identity subscale of Luhtanen and Crocker's (1992) Collective Self-Esteem Scale (CSES) and Cameron's (2004) Social Identity Scale. Both are commonly used measures of ingroup identification.

The ethnic group version of the Identity subscale of the CSES (Luhtanen & Crocker, 1992) consists of four statements about one's relationship to one's ethnic group (e.g., "Being a member of my ethnic group is an important part of my self-image"). Participants respond on 7-point Likert scales from strongly disagree to strongly agree. Adequate levels of internal consistency have been reported on the original subscale ($\alpha = .73$ to $.86$) and on the modified version ($\alpha = .79$; Tropp et al., 2002).

² Both the mass testing and online survey procedures were collaborative efforts by a number of researchers, and thus consisted of several questionnaires on a variety of topics.

The Social Identity Scale has 12 items. Participants are instructed to think about their racial/ethnic group in considering the items and to respond on six-point Likert scales from strongly disagree to strongly agree. The scale items load on three factors (each with four items) thought to represent different dimensions of the general construct of ingroup identification (ingroup ties, ingroup affect, and centrality). Ingroup ties refers to perceptions of likeness to, attachment with, and fitting in with members of one's ingroup, and includes items such as "I feel strong ties to other (ingroup members)." Ingroup affect represents the degree of positive sentiments associated with group membership. Items include statements such as: "Generally, I feel good when I think about myself as a/an (ingroup member)." Centrality refers to the cognitive accessibility of one's ethnic identity, and includes items such as "I often think about the fact that I am a/an (ingroup member)." This dimension is thought to have the most overlap with the Identity subscale of the CSES ($r = .74, p < .01$; Cameron, 2004). The tripartite structure of this scale has been supported by factor analyses (Cameron, 2004). The full scale has demonstrated adequate levels of internal consistency ($\alpha = .74$ to $.85$ across several samples), as did the subscales ($\alpha = .76$ to $.84$ for ingroup ties, $\alpha = .77$ to $.82$ for ingroup affect, and $\alpha = .67$ to $.78$ for centrality). The subscales also demonstrated substantial one-week test-retest reliability (r 's from $.65$ to $.77$), as well as appropriate levels of convergent and divergent validity with other relevant variables.

Participants on these pretests who identified their ethnicity as other than Caucasian were contacted via email to ask them whether they were interested in participating in the study for money or course credits. Their scores on the two

identification measures and their demographics were linked to their experimental results through a randomly assigned participant number.

Experimental Procedures

The main study was conducted entirely on a computer, and instructions were presented both on the computer screen and verbally over headphones. Participants were initially told that the study was about student reactions to milestone experiences of university students. Before participants arrived, the experimenter entered a unique ID number into the computer that linked to the participant's pretesting data, their gender, and their ethnic group. They were then randomly provided with one of the four vignettes. However, based on the previously recorded information, the narrator of the vignette was matched to the participant in terms of ethnicity and gender. This matching of gender and ethnicity was designed to maximize the degree that participants would identify with the narrator and personalize the story. They were told that the vignette was a narrative based on the personal experiences of a fellow Simon Fraser University student obtained from a previous study on the milestone experiences associated with attending university. They were instructed to read the vignette while imagining that it was happening to them and making the event personally relevant.

Vignette Conditions

Four vignettes were developed, each describing an interaction between two people about the same age (21 years) as the majority of participants. The ethnicity and gender of the narrator were matched to each participant. The other character was always a man who was described as Caucasian in the two discrimination conditions, but whose

ethnicity was not mentioned in the two control conditions. All four vignettes were written in the second person singular (e.g., “You are walking to the store”) to maximize the extent to which the participant pictured the experience as happening to them. The content of all narratives describe a university student’s experiences in looking for a place to live. After finding a roommate wanted ad in a local newspaper, he or she calls and speaks to a pleasant-sounding man who arranges an appointment to see the place and essentially promises the room to the caller. The content of the four vignettes vary when the narrator knocks on the front door of the townhouse. In the obvious-discrimination condition, the potential roommate says that he does not want a roommate of the narrator’s ethnicity. In the subtle-discrimination condition, the potential roommate looks disturbed when he sees the narrator, and then says that he has rented the room to someone else. In the conflict-control condition, the potential roommate is very rude, forgetting who the narrator is, and then informing him/her that the room was rented to a friend (who is visible in the townhouse). Finally, in the neutral-control interaction, the potential roommate simply invites the narrator in and tells them that the other person living in the townhouse will be returning soon. The four vignettes are attached as Appendix A.

The vignettes were developed by consulting previous research using this procedure. For instance, research suggests that vignettes are most likely to be seen as discriminatory when the perpetrator is a prototypical power figure and the target is perceived as traditionally less powerful (Flournoy, Prentice-Dunn & Klinger, 2002; Inman, Huerta & Ho, 1998). As such, the vignettes were constructed to describe a Caucasian male in the position of power (i.e. holding control over housing). As well,

discrimination when seeking housing is a relatively common experience for ethnic minorities in Canada (e.g., Dion, 2001).

Pilot testing of vignettes

The vignettes were initially pilot tested on a sample of 64 undergraduates enrolled in a psychology course at Simon Fraser University. Participants were given one of the four vignettes, as well as a questionnaire with 17 questions (answered on 7-point Likert scales). From these questions, scales of realism, vividness, negative emotions, justice, impressions of the potential roommate, and the potential roommate's level of discrimination were calculated. Each scale included two or three items. Participants were also asked for their ethnicity and given space to note any comments about the vignette. A copy of the questionnaire is included as Appendix B.

Given that two of the vignettes (obvious-discrimination and subtle-discrimination), involved the protagonist being discriminated against by a Caucasian man, Caucasians were excluded from the analyses in these conditions. Thus, 49 participants were included in the pilot testing results.

All six scales showed good reliability (realism $\alpha = .88$, vividness $\alpha = .81$, negative emotions $\alpha = .90$, justice $\alpha = .92$, roommate impressions $\alpha = .90$, and discrimination $\alpha = .96$).

A series of one-way analyses of variance (ANOVAs), followed by Tukey post-hoc tests, were used to test the effects of condition on each of the scales. The results are presented in Table 1.

Table 1

Vignette condition differences on attribution scales

Scale	O-D Mean	S-D Mean	C-C Mean	N-C Mean	F-test	p
Realism	5.533 ^a	5.037 ^a	4.643 ^a	6.528 ^b	7.442	< .001
Vividness	5.400	5.778	5.929	6.084	0.648	.589
Negative Emotions	6.300 ^a	4.722 ^a	5.786 ^a	1.688 ^b	43.607	< .001
Justice	1.926 ^a	3.000 ^b	2.333 ^a	6.167 ^c	69.743	< .001
Roommate Impressions ¹	6.200 ^a	4.833 ^b	6.214 ^a	2.500 ^c	35.731	< .001
Discrimination	6.400 ^a	3.333 ^b	2.413 ^b	1.521 ^c	36.010	< .001

Note. O-D = obvious-discrimination condition,
S-D = subtle-discrimination condition,
C-C = conflict-control condition,
N-C = neutral-control condition.

Note. Degree of freedom for all reported ANOVAs are 3, 45

¹ Higher ratings equal more negative assessments

*Means with different superscript differ from each other on Tukey post-hoc tests with $p < .05$.

These findings generally indicate that the vignettes were perceived as hypothesized. It is not surprising that the neutral-control condition was perceived as more realistic than the other three conditions, given that this vignette necessarily describes a much more ordinary interaction than the more conflict-based vignettes. However, the other conditions were seen as equally realistic, and all four vignettes were rated as equally vivid. The three conflict based conditions did not differ from one another on ratings of negative emotional reactions, which were significantly higher than those found in the neutral-control condition. Participants also viewed the situation as more unjust and the roommate as more negative in the obvious-discrimination and conflict-control condition compared to the neutral control condition. Also, the subtle-discrimination condition was seen as between these two extremes and significantly different from both. Similarly, the obvious-discrimination vignettes received the highest ratings of

discrimination and the subtle-discrimination vignettes receiving the second highest ratings. Although the subtle-discrimination condition was seen as more discriminatory than the conflict-control, this difference was not statistically significant. These results suggested that these vignettes were appropriate for use in the current study.

Experimental Procedures, continued

After reading the vignette, participants were given a brief (5-10 minute) filler task designed to distract them from rehearsing or focusing on the vignette. This task involved several trials in which numerous items were briefly presented on the computer screen, and participants estimated how many items were shown.

Criterion Variables

Participants then wrote a narrative free recall of the event described in the vignette while imagining it as if it were happening to them. They were instructed to provide as much detail as possible and to write the narrative in the first person.

Participants were then asked to respond to the statement “Generally, how do you feel about yourself at this very moment?” on an 8-point Likert scale ranging from very negative to very positive. This question was designed as a basic, face-valid measure of participant’s current state self-esteem. Participants then completed Rosenberg’s (1979) 10-item Self-Esteem Scale. Items (e.g. “I feel that I have a number of good qualities”) are responded to on a scale of 1 (strongly disagree) to 7 (strongly agree), with negatively worded items reverse-scored. This scale is widely used in psychological research, with good reliability and internally consistency (e.g., $\alpha = .85$ reported in Tropp et al., 2002). It

is generally thought to serve as a more trait-based measure of self-esteem (Heatherton & Polivy, 1991).

Well-being was then assessed using the shortened version of Ryff's Scales of Psychological Well-Being (1989). As described in detail earlier, this measure consists of six 9-item subscales (autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance). Items are responded to on Likert scales from 1 (strongly disagree) to 6 (strongly agree). Although psychometric properties of the 9-items subscale version of this measure have yet to be fully determined, the 14-item subscale version shows high levels of internal consistency ($\alpha = .83-.91$, C. D. Ryff, personal communication, January 21, 2005), and previous research has successfully used a 3-item per scale version of the scale, though that scale admittedly had lower levels of internal validity (Ryff & Keyes, 1995). Furthermore, substantial longitudinal research is currently being conducted using the 9-item per scale version (C. D. Ryff, personal communication, January 21, 2005).

After completing the Scales of Well-Being, participants were instructed to again think about the event they read at the beginning of the experiment. While envisioning the event as if it had happened to them, they were asked to imagine they were telling the story to a co-ethnic friend, and to write a narrative as they would tell the story. Participants were again asked the state self-esteem question that followed the original memory test and again responded on an 8-point Likert scale. Finally, they responded to a 28-item scale consisting of items designed to measure a variety of relevant constructs. All responses were made on 7-point scales.

Attributions to discrimination

Four items assessed the degree to which the potential roommate's behaviours were attributed to discrimination. Participants rated the degree to which they agreed or disagreed with statements like "The potential roommate judged me based on my appearance".

Roommate characteristics

Four items asked participants to rate the potential roommate on the degree to which he was cold versus warm, unlikeable versus likeable, and kind versus unkind, as well as whether their overall impression was very positive versus very negative.

Negative emotional reactions

Five items assessed participants' negative emotional responses to the event (e.g., "How angry did this event make you feel?").

Prevalence of discrimination

Eight items assessed participants' general personal experiences (e.g., "I am often the target of ethnic discrimination") and their ethnic group's experiences with discrimination (e.g., "Members of my racial/ethnic group are often the targets of discrimination when seeking housing").

Realism

The realism of the vignette was measured through four items, such as "How plausible was the event?"

Vividness

Three items assessed the perceived vividness of the event described in the vignette (e.g., “How well were you able to imagine yourself in the situation?”).

Once the participant had completed these questions, the computer prompted them to get the experimenter, who then debriefed them fully.

Content Analyses

As described above, participants recounted the event by writing two separate narrative free recalls. The two narrative free recall narratives were analyzed by an independent coder who was blind to the participant’s condition. The narrative’s word count was noted. Extensive coding produced a large number of variables, the majority of which were coded on 7-point Likert scales. Critical to the current analysis³ were a) scores on attributions to discrimination, b) a two-item measure of emotional engagement (emotional involvement and personalization of the narrative; $\alpha = .800$), c) a two-item measure of memory quality ($\alpha = .700$), e) scores of negative portrayal of the roommate, f) expressions of anger, g) expressions of frustration, h) expressions of hurt, i) expressions of disappointment and j) number of coping-based reactions (e.g., “I would never want to live with such a jerk, anyways”). Eight participant’s narratives were excluded from objective free recall analyses and four were excluded from the communicative free recall analyses, mostly due to misunderstanding of the instructions.

³ The free recall coding system used included items asking the coder to rate the participant’s expression of shame, pride, happiness and awkwardness. Unfortunately, only one narrative exhibited any evidence of pride, and no narrative showed evidence of shame, so these constructs were not further investigated. Furthermore, only the neutral-control condition showed any variability on happiness and awkwardness, meaning that their effects could not be analyzed.

RESULTS

Following analyses of the manipulation checks, this section begins with a set of multiple regressions designed to test the primary hypotheses. Each regression examines the effects of ingroup identification, condition and their interaction on measures of self-esteem and well-being. Since all hypotheses involve comparisons between two specific condition, a pairwise approach that compares two of the four experimental conditions in each regression analysis is preferred over a more conventional single omnibus multiple regression including all four conditions. Following this, hypothesized moderators and mediators will be tested. These moderators and mediators were measured with self-report items in the questionnaire and/or the content analysis of the free recalls provided by the participants⁴. Please note that when graphs are used to depict significant interaction effects between two continuous predictor variables, the lines plotted illustrate the results at one standard deviation above (high) and below (low) the mean of these predictor variables.

⁴ Due to the number of analyses, only significant findings or those approaching significance are reported. However, in some cases, a number of other analyses showed patterns that were entirely consistent with the significant findings, but failed to reach traditional levels of significance. As such, these patterns may be commented on in the discussion. Furthermore, complete tables of results for all analyses can be provided on request by the author.

Manipulations Checks and Preliminary Analyses

Self-Report Measures

A series of one-way ANOVAs (followed by Tukey post-hoc tests) compared the four conditions on relevant self-report measures (see Table 2)⁵. Consistent with predictions, participants viewed the obvious-discrimination condition as most discriminatory, the subtle-discrimination condition significantly less so, and the neutral-control condition as the least discriminatory. However, the conflict-control conditions was seen as just as discriminatory as the subtle-discrimination condition.

Table 2

Comparison of the four conditions on self-report measures

Scale	O-D Mean	S-D Mean	C-C Mean	N-C Mean	F-test	p
Attributions To Discrimination	5.693 ^a	4.771 ^b	5.015 ^b	3.057 ^c	38.525	< .01
Realism	4.214	3.903	3.693	4.124	1.622	.19
Vividness	4.829	4.879	4.791	4.781	0.630	.98

Note: Degree of freedom for all reported ANOVAs are 3, 135

^aMeans with different superscript differ significantly on Tukey post-hoc tests with $p < .05$.

The four conditions did not differ on ratings of realism or vividness, with participants reporting scores around the midpoint for realism and just above the midpoint for vividness.

⁵ Please note that in tables and figures, the following abbreviations may be used: O-D for obvious-discrimination condition, S-D for subtle-discrimination condition, C-C for conflict-control condition, and N-C for neutral-control condition.

Free Recall Analyses

Participants completed two free recalls. In the first, they were simply instructed to remember the event, as if it happened to them (henceforth referred to as the objective free recall). In the second free recall, they were asked to tell the story of the event as if they were telling it to a co-ethnic friend (henceforth referred to as the communicative free recall).

One-way ANOVAs showed no differences across conditions in the number of words used in either the objective ($F(3, 124) = 1.138, p = .34$) or the communicative free recall ($F(3, 131) = .531, p = .66$). There were also no effects of condition on quality of the memory in the objective ($F(3, 126) = 1.599, p = .19$) or communicative free recalls ($F(3, 131) = .569, p = .64$), or of the degree of detail in the objective ($F(3, 126) = .637, p = .59$) and communicative free recalls ($F(3, 131) = 1.493, p = .22$).

In the objective free recall, participants tended not to deviate from the objective details described in the original story. Thus, their scores on variables such as attributions to discrimination ($M = 1.01, SD = .088$), the degree to which the roommate was portrayed negatively ($M = 1.08, SD = .630$), and the degree of anger conveyed ($M = 1.08, SD = .587$) were extremely low. Other measures, such as the degree of frustration ($M = 1.00, SD = .000$) and the number of coping-based responses ($M = 0.00, SD = .000$) showed no variability whatsoever. Furthermore, any effects that were found in the objective free recalls were mirrored in the communicative free recalls. Thus, subsequent analyses involve only the communicative free recall data.

The Conflict-Control Condition

As seen in Table 2, ratings of attributions to discrimination in the conflict-control condition were equivalent to those in the subtle-discrimination condition. This makes it appear as though many participants interpreted the conflict-control condition as another ambiguous discrimination condition. However, subsequent analyses⁶ offered less clarity as to how the conflict-control condition should be interpreted. Results were inconsistent, in that the conflict-control condition sometimes appeared to function similar to a control condition, whereas other times it operated similarly to an ambiguous discrimination condition, and occasionally displayed patterns of results that were inconsistent with either interpretation. Although it would be worthwhile for future research to investigate the reasons for these unpredicted results, it is apparent that the conflict-control condition did not function as intended, and its inconsistent relationships with other variables make interpretations tentative at best. As such, results involving the conflict-control condition will not be reported, and the neutral-control condition will be used as the sole control condition to which the effects of the discrimination conditions will be compared.

Primary Hypotheses: Identification by Condition Effects

To test the primary hypotheses, a series of multiple regression analyses were performed. Scores on the social identification scale ($\alpha = .844$) and the ethnic identification subscale ($\alpha = .739$) were combined to form a total identification scale ($\alpha = .864$). This total identification scale was used to predict state self-esteem ($\alpha = .769$), trait self-esteem ($\alpha = .714$), and well-being ($\alpha = .930$). In addition, because it was hypothesized that there could be differential effect across different aspects of well-being, regression

⁶ As with all other unreported analyses, a summary of the results found in the conflict-control condition, including moderation and mediation analyses, can be obtained upon request from the author.

analyses were conducted examining the effects of condition and total identification on each of the six well-being subscale (Autonomy, $\alpha = .827$; Environmental Mastery, $\alpha = .783$; Personal Growth, $\alpha = .706$; Positive Relations with Others, $\alpha = .800$; Purpose in life, $\alpha = .829$; Self-Acceptance, $\alpha = .847$)

In all analyses, total identification scores were first centred (see Aiken & West, 1991), that is, the mean was subtracted from each participant's score on the predictor variables of interest.

Only criterion variables that yielded significant effects will be reported. None of the regressions using *trait self-esteem* or *self-acceptance* as criterion variables yielded significant main or interaction effects. Thus, results of analyses for these two dependent variables are not presented.

Obvious-Discrimination Versus Neutral-Control Comparison

State self-esteem

The comparison between the obvious-discrimination and neutral-control conditions yielded a significant effect of identification ($\beta = -.302$, $t(66) = -2.398$, $p = .02$), and of condition ($\beta = -.603$, $t(66) = -6.521$, $p < .01$). These main effects were qualified by a significant interaction ($\beta = .302$, $t(66) = 2.397$, $p = .02$). As shown in Figure 1, for low identifiers, state self-esteem was much higher in the neutral-control condition than in the obvious-discrimination condition. For high identifiers, although those in the neutral-control condition still showed higher state self-esteem, the difference was much smaller.

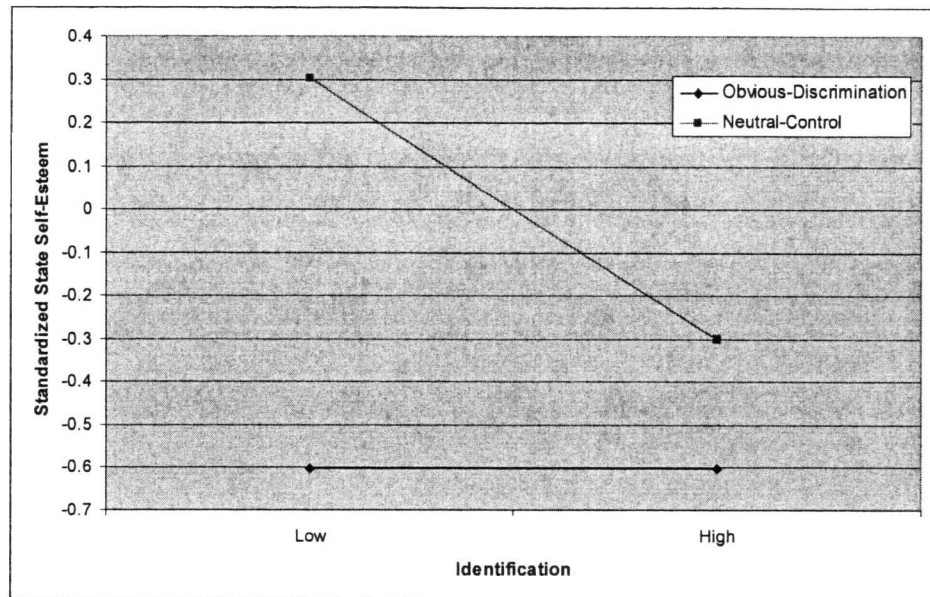


Figure 1.

The effects of identification and condition (O-D vs. N-C) on *state self-esteem*.

Given the multifaceted nature of the ingroup identification scale, the main and interaction effects involving identification were further investigated with multiple regression analyses conducted using each of the three subscales of identification (ingroup ties [$\alpha = .763$], ingroup affect [$\alpha = .763$], and centrality⁷ [$\alpha = .826$]) as predictor variables. These analyses showed that centrality was the subscale primarily responsible for these effects of identification.

Autonomy (well-being subscale)

The regression using the autonomy subscale as the criterion variable yielded a significant main effect of identification ($\beta = -.324$, $t(66) = -2.161$, $p = .03$), indicating that higher identification was associated with lower levels of autonomy, and a significant

⁷ The centrality scale was formed by combining scores on the centrality subscale of the Social Identification Scale ($\alpha = .792$) and the Ethnic Identification subscale ($\alpha = .739$), which were highly intercorrelated and conceptually similar (Cameron, 2004).

main effect of condition ($\beta = -.371, t(66) = -3.370, p < .01$), indicating that participants in the neutral-control condition reported higher autonomy than those in the obvious-discrimination condition. Analyses with the subscales of identification as predictor variables revealed that the main effect of identification was primarily due to centrality.

Purpose in life (well-being subscale)

The regression using the purpose in life subscale as the criterion variable yielded a significant main effect of identification ($\beta = .392, t(66) = 2.463, p = .02$), indicating that in these two conditions, high identification was associated with higher purpose in life. This effect was driven by the ingroup ties and ingroup affect subscales.

Subtle-Discrimination Versus Neutral-Control Comparison

State self-esteem

The comparison between the subtle-discrimination and neutral-control conditions yielded a significant effect of identification ($\beta = -.329, t(67) = -2.663, p = .01$), and condition ($\beta = -.586, t(67) = -6.524, p < .01$). These main effects were qualified by a significant interaction ($\beta = .463, t(67) = 3.750, p < .01$). As shown in Figure 2, for low identifiers, state self-esteem was much higher when they were in the neutral-control condition, but for high identifiers, there is little difference in state self-esteem whether participants were in the neutral-control or the subtle-discrimination condition. These effects appeared to be driven primarily by the centrality subscale.

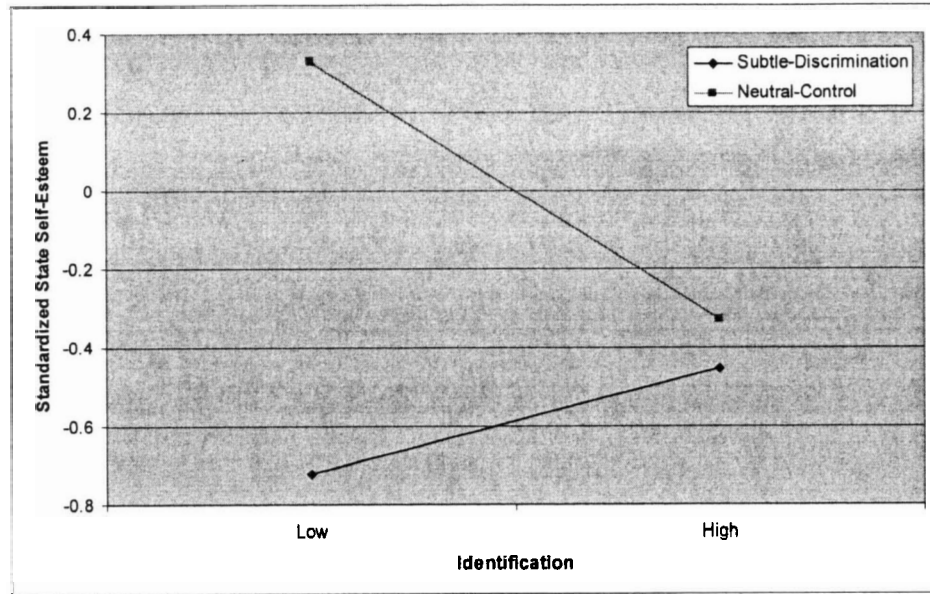


Figure 2.

The effect of identification and condition (S-D vs. N-C) on *state self-esteem*.

Overall well-being

The regression using *well-being* as the criterion variable yielded only a significant main effect of condition ($\beta = -.272, t(67) = -2.350, p = .02$) indicating higher well-being in the neutral-control condition.

Autonomy (well-being subscale)

The regression using the autonomy subscale as the criterion variable yielded a significant main effect of identification ($\beta = -.329, t(66) = -2.195, p = .03$), indicating that higher identification was associated with lower levels of autonomy, and a significant main effects of condition ($\beta = -.352, t(67) = -2.195, p < .01$) indicating higher autonomy in the neutral-control condition. The main effect of identification was driven by the effects on the centrality subscale.

Purpose in life (well-being subscale)

The regression using the purpose in life subscale as yielded a significant main effect of identification ($\beta = .389, t(67) = 2.506, p = .02$), indicating that in these conditions, higher identification was associated with higher purpose in life, and a main effect of condition ($\beta = -.246, t(67) = -2.186, p = .03$), indicating higher purpose in life scores in the neutral-control condition. The main effect of identification was driven primarily by centrality, with ingroup ties exerting some influence.

Obvious-Discrimination Versus Subtle-Discrimination Comparison

Regression analyses comparing these two conditions only yielded main effects of identification. This main effect was significant or approached significance for *state self-esteem* ($\beta = .396, t(67) = 2.446, p = .02$), *well-being* ($\beta = .282, t(64) = 1.719, p = .09$), *environmental mastery* ($\beta = .349, t(67) = 2.148, p = .04$), and *positive relations with others* ($\beta = .516, t(67) = 3.373, p < .01$). In all cases, higher identification was associated with higher self-esteem and well-being. All of these effects were driven by a main effect of the ingroup ties subscale, with the effect of identification on positive relations with others also being associated with ingroup affect.

Attributions to Discrimination as a Moderator

It was predicted that making attributions to discrimination would moderate the relationship between identification and state self-esteem, trait self-esteem, and well-being in the subtle-discrimination condition. Attributions to discrimination were assessed in two ways. One was a self-report measures included in the attribution questionnaire ($\alpha = .712$). The second was part of the content analysis of participants' communicative free

recalls. Multiple regression analyses were conducted investigating the effects of total identification and attributions to discrimination on each of the criterion variables in the subtle-discrimination condition. All attribution to discrimination scores were first centralized by subtracting the total mean from each individual's score.

As none of the multiple regression analyses with the questionnaire measure of attributions to discrimination yielded any significant effects, only analyses using the ratings from content analyses of the participants' communicative free recall are reported. Similarly, none of the multiple regression analyses with well-being or state self-esteem as criterion variables yielded any significant effects of attributions to discrimination or interactions. Thus, only results from the analyses involving measures of trait self-esteem, and those well-being subscales that showed main effects of attribution or interaction effects are reported.

Trait Self-Esteem

With trait self-esteem as the criterion variable, the multiple regression including total identification and attributions to discrimination made in the communicative free recall yielded a main effect of identification ($\beta = .467, t(30) = 1.981, p = .06$) and an interaction effect that both approached significance ($\beta = .456, t(30) = 1.917, p = .07$). As shown in Figure 3, when attributions to discrimination were low, high and low identifiers did not differ in trait self-esteem. However, when attributions to discrimination were high, high identifiers showed substantially higher trait self-esteem than did low identifiers.

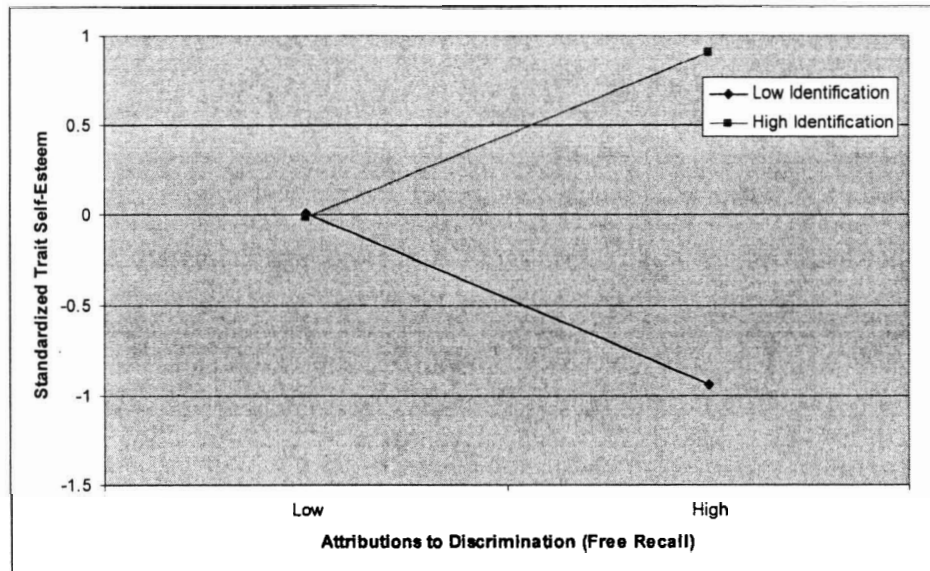


Figure 3.

The effects of identification and attributions to discrimination in the communicative free recall on trait self-esteem in the *subtle-discrimination condition*.

Autonomy (Well-Being Subscale)

In the multiple regression with autonomy as a criterion variable, there was a main effect of attribution ($\beta = -.359, t(30) = -2.108, p = .05$), such that increased attributions to discrimination resulted in decreases in autonomy.

Personal Growth (Well-Being Subscale)

In the multiple regression with personal growth as a criterion variable, the interaction between identification and attribution approached significance ($\beta = .470, t(30) = 1.910, p = .07$). As can be seen in Figure 4, a similar pattern to that found with trait self-esteem was shown, whereby there were little difference between low and high identifiers when attributions to discrimination were low, but high identifiers showed much higher levels of personal growth when attributions to discrimination are high.

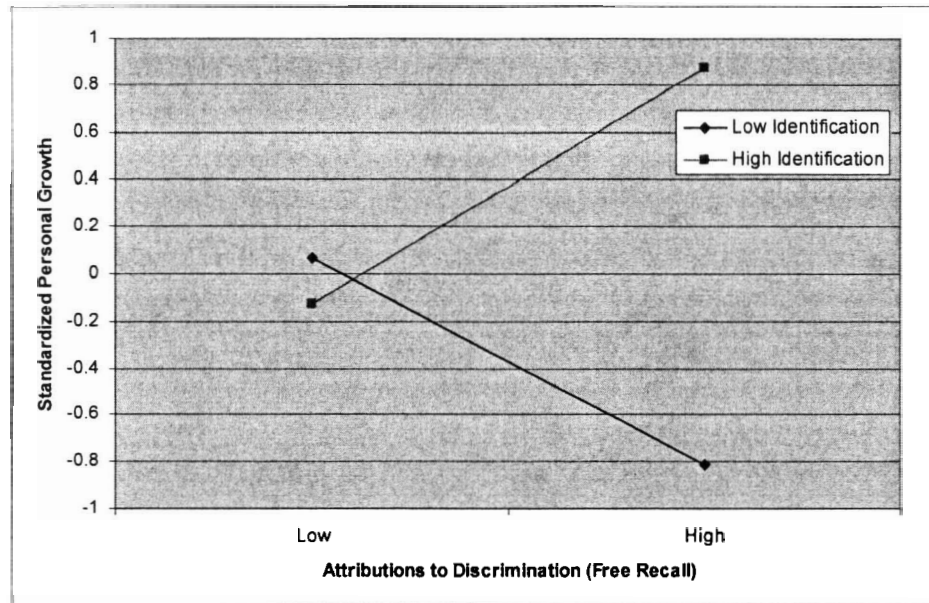


Figure 4.

The effects of identification and attributions to discrimination in the communicative free recall on personal growth in the *subtle-discrimination condition*.

Overall, there is evidence that attributing the perpetrator's behaviours to discrimination moderated the effects of identification on self-esteem and well-being in the subtle-discrimination conditions. Specifically, the predicted patterns of moderation occurred for communicative free recall attributions to discrimination with trait self-esteem and personal growth in the subtle-discrimination condition.

Other Moderators

Emotional Engagement

It was predicted that emotional engagement would moderate the relationship between identification and state self-esteem, trait self-esteem, and well-being in the obvious-discrimination and subtle-discrimination condition. Multiple regression analyses

were conducted investigating the effects of total identification and emotional engagement on state self-esteem, trait self-esteem, well-being and its subscales in the two discrimination conditions. All emotional engagement scores were first centralized by subtracting the total mean from each individual's score. Only those criterion variables that demonstrated a significant effect of emotional engagement or an interaction effect were reported.

Obvious-discrimination condition

Increased emotional engagement was associated with lower levels of state self-esteem ($\beta = -.295$, $t(30) = -1.715$, $p = .10$), though this effect only approached significance.

In contrast to the state self-esteem results, increased emotional engagement was actually associated with a trend towards significantly higher well-being ($\beta = .328$, $t(30) = 1.949$, $p = .06$). Increased emotional engagement was associated with higher levels of autonomy ($\beta = .386$, $t(30) = 2.394$, $p = .02$).

Increased emotional engagement was associated with higher levels of positive relations with others ($\beta = .419$, $t(30) = 2.650$, $p = .01$). The main effect of identification also approached significance ($\beta = .327$, $t(30) = 1.812$, $p = .08$), such that higher identification was associated with higher ratings on positive relations with others.

Subtle-discrimination condition

In the regression with state self-esteem, there was a significant main effect of identification ($\beta = .444$, $t(30) = 2.665$, $p = .01$), qualified by a significant interaction effect ($\beta = .356$, $t(30) = 2.119$, $p = .04$). As shown in Figure 5, when emotional

engagement was low, there was little difference between the state self-esteem of high and low identifiers, whereas when emotional engagement was high, high identifiers showed much higher levels of state self-esteem.

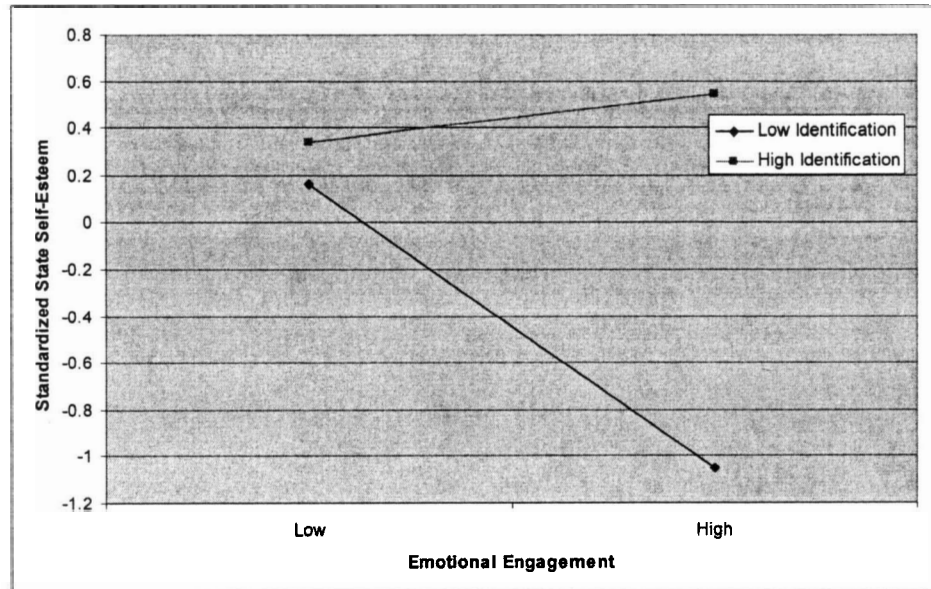


Figure 5.

The effects of identification and emotional engagement in the communicative free recall on state self-esteem in the *subtle discrimination condition*.

The multiple regression with positive relations with others as the criterion variable showed main effects of both identification ($\beta = .591, t(30) = 3.900, p < .01$) and emotional engagement ($\beta = -.316, t(30) = -2.134, p = .04$). These effects were qualified by a significant interaction ($\beta = .346, t(30) = 2.264, p = .03$). Similar to the effects shown in Figure 5, when emotional engagement was low, high identifiers showed a small advantage over low identifiers in terms of positive relations with others, whereas when emotional engagement was high, this difference was much larger.

Overall, in the subtle-discrimination condition, it appears as though that emotional engagement serves as a moderator in the relationship between identification and both state self-esteem and positive relations with others.

Memory Quality

It was predicted that memory quality would moderate the relationship between identification and state self-esteem, trait self-esteem, and well-being in the obvious-discrimination and subtle-discrimination conditions. All memory quality scores were first centralized by subtracting the total mean from each individual's score. Multiple regression analyses were performed investigating the effects of identification and memory quality on self-esteem, well-being, and its subscales in both of the discrimination conditions. In the obvious-discrimination condition, the only significant result obtained was a main effect of memory quality on personal growth ($\beta = .522, t(30) = 3.144, p < .01$), such that higher scores of memory quality were associated with increases in personal growth. Otherwise, no main effects of memory quality or interaction effects were found, suggesting that memory quality does not serve as a significant moderator.

Realism

It was also predicted that questionnaire measured realism of the event would moderate the relationship between identification and state self-esteem, trait self-esteem, and well-being in the obvious- and subtle-discrimination conditions. Multiple regression analyses with identification and realism as predictor variables and state self-esteem, trait self-esteem, well-being and its subscales as criterion variables were conducted, with only those regressions showing main effects of realism or interaction effects being reported.

The only effect that emerged as significant was a main effect of realism on autonomy in the subtle-discrimination condition ($\beta = .390, t(31) = 2.297, p = .029$), meaning that higher realism was associated with increases in autonomy.

Vividness

Similar analyses were also conducted on questionnaire measured vividness of the event, which was also predicted to serve a moderating role in the discrimination conditions. Multiple regression analyses with identification and vividness as predictor variables and state self-esteem, trait self-esteem, well-being and its scales as criterion variables were conducted in the obvious-discrimination and subtle-discrimination conditions. Only those multiple regressions that displayed significant main effects of vividness or interaction effects were reported.

Obvious-discrimination condition

A vividness by identification interaction approached significance ($\beta = .313, t(31) = 1.769, p = .09$). As shown in Figure 6, when vividness was rated as low, those low in identification showed higher levels of purpose in life, whereas when vividness was high, high identifiers showed higher purpose in life scores.

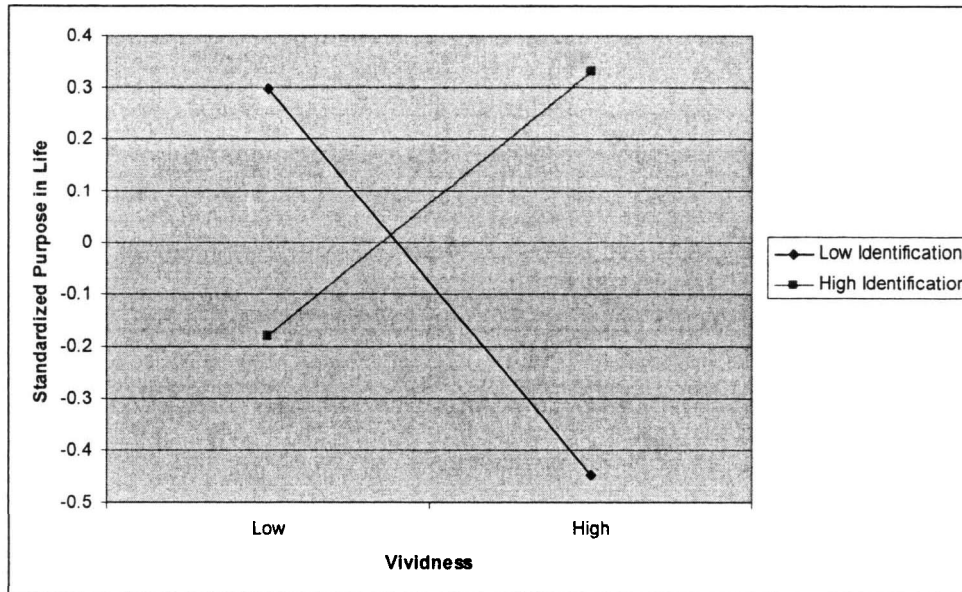


Figure 6.

The effects of identification and vividness on purpose in life in the *obvious-discrimination condition*.

Subtle-discrimination condition

The only statistical trend that emerged in this set of regressions was a trend towards a significant interaction effect in the subtle-discrimination condition when state self-esteem was entered as a criterion variable ($\beta = .302, t(32) = 1.934, p = .06$). As shown in Figure 7, when vividness was low, high identifiers showed a slight self-esteem advantage over low identifiers. However, when vividness was high, this difference was much more substantial. This effect was not found with trait self-esteem or well-being as criterion variables.

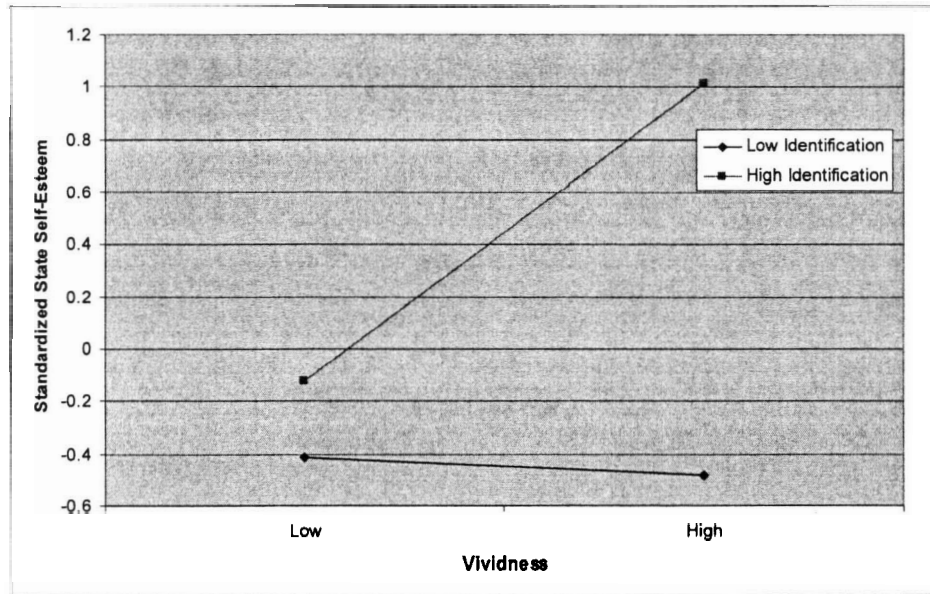


Figure 7.

The effects of identification and vividness on state self-esteem in the *subtle-discrimination condition*.

Prevalence of Discrimination

It was also predicted that prevalence of discrimination would moderate the effect of identification on self-esteem and well-being in the subtle-discrimination condition. The interaction effects in the subtle-discrimination condition were inconsistent and mixed, suggesting that prevalence of discrimination was not a consistent moderator of identification in this condition.

Mediators

Several analyses were conducted examining the potential roles of some of the self-report and communicative free recall coded variables as mediators of the relationship between identification (and its subscales) and state self-esteem or well-being (and its

subscales) in the obvious-discrimination and subtle-discrimination conditions. These analyses were performed by running a series of regression analyses examining the relationships between the predictor variable, criterion variable, and the proposed mediator variable, as consistent with the steps described by Baron and Kenny (1986). Specifically, questionnaire measures of the potential roommate's characteristics ($\alpha = .970$), questionnaire measures of negative emotional reactions to the event ($\alpha = .927$), negative perceptions in the communicative free recalls, the degree to which participants expressed anger, disappointment, frustration and hurt in the communicative free recalls, as well as the number of coping-based reactions in the communicative free recalls were examined as potential mediators of any relevant significant relationships. However, statistical analyses revealed most of these variables did not meet the requirements for mediation, and the one that met these requirements was not a significant mediator.

Interpreting the Neutral-Control Condition

The pattern of results that emerged in the neutral-control condition was unexpected and influenced the results in a number of ways. It was predicted that identification would be unrelated to self-esteem and well-being in the neutral-control condition. Unexpectedly, in the neutral-control condition, higher identification was associated with lower scores on some measures of self-esteem and well-being. For instance, total identification was negatively related to state self-esteem ($\beta = -.410$, $t(33) = -2.583$, $p = .01$). As such, additional analyses were conducted to help elucidate the reasons behind these unanticipated negative relationships.

In the neutral-control condition, questionnaire measures of attributions to discrimination were negatively related to state ($\beta = -.486$, $t(31) = -3.420$, $p < .01$) and

trait self-esteem ($\beta = -.564, t(31) = -3.706, p < .01$). In addition, although prevalence of discrimination did not yield consistent results in the other conditions, the interaction between prevalence of discrimination and identification on state self-esteem in the neutral-control condition approached significance ($\beta = -.330, t = -1.973, p = .06$). As can be seen in Figure 8, when prevalence of discrimination was low, low and high identifiers showed similar levels of state self-esteem, whereas when prevalence of discrimination was high, low identifiers showed much higher levels of state self-esteem.

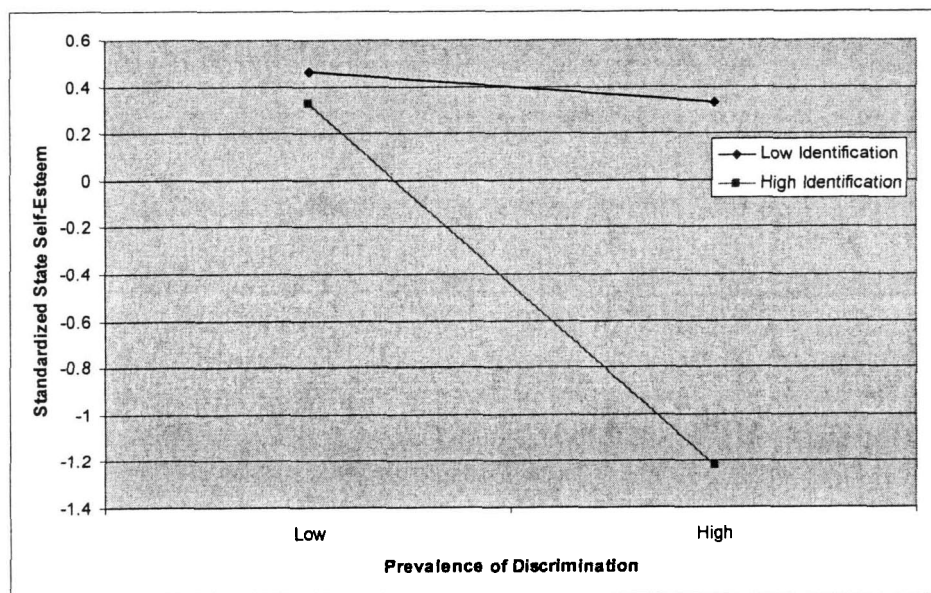


Figure 8.

The effects of identification and prevalence of discrimination on state self-esteem in the neutral-control condition.

When memory quality was considered, it appeared to play a moderating role in the relationship between identification and trait self-esteem ($\beta = -.450, t(31) = -2.331, p = .03$). As shown in Figure 9, high identifiers showed higher trait self-esteem when

memory quality was low, whereas low identifiers showed higher levels of trait self-esteem when memory quality was high.

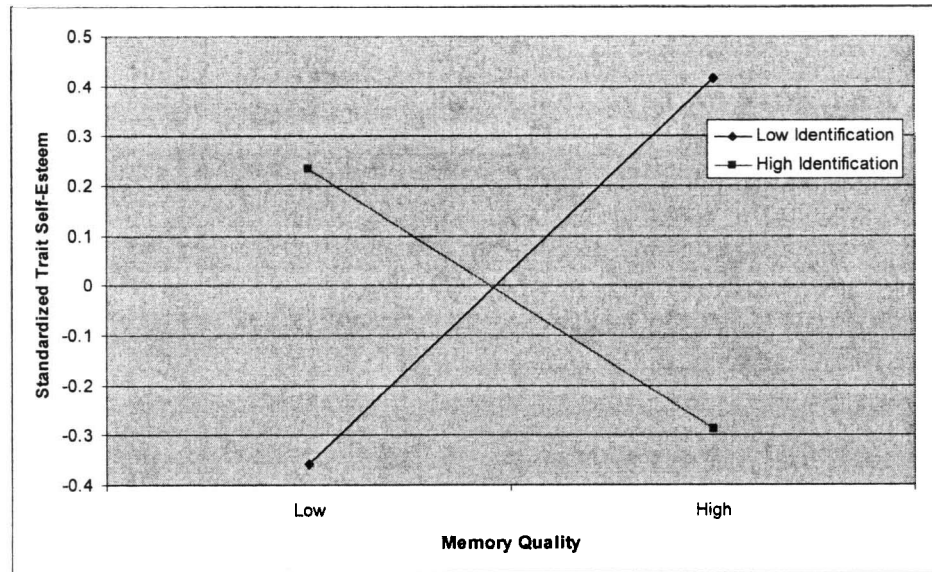


Figure 9.

The effects of identification and memory quality on trait self-esteem in the neutral-control condition.

It appears that the finding that identification is negatively associated with some measures of self-esteem and well-being may result from moderating effects of both questionnaire measured prevalence of discrimination and communicative free recall coded memory quality.

DISCUSSION

Positive Effects of Identification

A growing number of studies have found that ethnic identification moderates the relationship between discrimination and self-esteem (Romero & Roberts, 2003), self-worth (Verkuyten & Thijs, 2006), depression, anxiety, and distress (Mossakowski, 2003; Neblett et al., 2004; Sellers et al. 2003). The current research extends this line of research by offering what is, to my knowledge, the first study to experimentally manipulate discrimination and consider the effects of this manipulation and its interaction with ethnic identification on a wider array of measured well-being. In addition, the measure of ethnic identification was taken well before (sometimes as much as six weeks before) the experience with discrimination, in a different context (the pretest), in a survey containing numerous other personality and attitude measures. Thus, this represents a much more stringent test of these relationships than can be found in previous tests of these relationships. Additionally, this experiment is distinguished from virtually all the previous work in this area by its focus on the role of memory and recall for a specific experience with discrimination.

In general, the results of the current study provide support for the hypothesis that the positive impact of ethnic identification on the psychological outcomes of facing discrimination are found when ethnic minority group member *recall* specific experiences with discrimination. Several analyses are critical to testing this hypothesis: the interaction effects between identification and condition in the obvious-discrimination/neutral-control

comparison; the identification by condition interactions in the subtle-discrimination/ neutral-control condition comparisons; and the main effects of identification in the obvious-discrimination/ subtle-discrimination condition comparisons.

The results of these three analyses combine to support the claim that compared to a situation in which no discrimination occurs, recalling an event of obvious discrimination leads to a much larger drop in state self-esteem for low identifiers than for those high in ethnic identification. Similarly, after recalling an event of subtle discrimination, those with high ethnic identification indicated higher state self-esteem than did those lower in ethnic identification, and in fact, those with the highest levels of identification were no less positive in terms of state self-esteem when faced with subtle discrimination than high identifiers who had just recounted an event involving no discrimination. Similarly, strong feelings of ingroup ties (feelings of attachment to member's of one's ethnic group) was associated with more positive state self-esteem when participants' recalled themselves experiencing a subtle episode of discrimination.

Although these positive effects of identification were not found when participants' total well-being was measured, these positive effects were found on several of the well-being subscales in analyses examining the two discrimination conditions. When participants' recalled themselves experiencing an episode of discrimination, whether obvious or subtle, those higher in identification, in addition to showing higher state self-esteem, also indicated higher scores on positive relations with others and environmental mastery. Given that the discrimination recalled necessarily involves an interpersonal interaction, it is not surprising that the experience's influences are particularly strong on a variable presumed to measure the degree to which the participant

has successful interactions with others (i.e., positive relations with others). It also appears that when faced with discrimination, high identification helps to reinforce the individual's sense of control over their lives, as is measured by environmental mastery.

Unlike in previous work (Tropp et al., 2002), in this study, identification was not found to have a positive effect on trait self-esteem. In fact, trait self-esteem was not affected by any of the predictor variables. This is perhaps not surprising given that researchers have made the distinction between more trait based self-esteem (as measured by scales like the Rosenberg), which is thought to be more resistant to experimental manipulation, and state self-esteem, which is more amenable to such manipulations (Heatherton & Polivy, 1991). Perhaps recalling real personal experiences with discrimination, as done in the study by Tropp and her colleagues (2002), can influence even the more stable trait-based measures of self esteem, these trait measures may be too stable to be influenced by a manipulation involving imagining vignettes in a laboratory context.

Nonetheless, the general pattern of results support the notion that higher ethnic identification is associated with more positive outcomes when minority group members recall experiences with discrimination. However, this pattern is stronger and most clear for state, rather than trait, self-esteem and some specific elements of well-being.

However, showing that identification may be associated with increases in variables such as state self-esteem in the face of discrimination is not to dispute the general finding that perceiving oneself as the target of discrimination has a generally negative effect (Klonoff et al., 1999). Within this study, combining participants across all conditions, it was found that the more prevalent participants considered discrimination to

be in their lives, the lower their trait self-esteem, state self-esteem, total well-being, autonomy, purpose in life, and self-acceptance. This fits with Branscombe and colleagues' (1999) findings that making attributions to prejudice is directly associated with decreases in personal well-being, even when the positive indirect effect, mediated by increased identification, is accounted for.

Stronger Effects in the Subtle-Discrimination Condition

Given that the inherent ambiguity of subtle discrimination should allow for greater variation in memory construction, it was hypothesized that participants in the subtle-discrimination condition would show a stronger positive relationship between identification and self-esteem/well-being than those in the obvious-discrimination condition. Partial support was found for this hypothesis. The analyses used to test for this relationship were the interactions between condition and identification in the comparison between the obvious-discrimination and the subtle-discrimination conditions with all of the criterion variables. Also of relevance was the strength of the slopes of the relationships between identification and self-esteem/well-being for the obvious-discrimination and subtle-discrimination conditions.

Unfortunately, the positive association between identification and self-esteem/well-being when participants recalled subtle discrimination was not sufficiently stronger than the same relationship when participants recalled a more obvious episode of discrimination to produce a significant interaction. However, examination of the slopes for relationship between identification and the criterion variables showed that for state self-esteem, trait self-esteem, and positive relations with others, the pattern was in the predicted direction. In fact, separate analyses revealed a significant positive relationship

between total identification and state self-esteem after recalling a subtle discrimination event, while the same relationship was not significant when participants recalled an obvious episode of discrimination. Finally, ingroup ties, a more specific aspect of identification, when combined with condition, produced a significant interaction effect on positive relations with others. It appears as though the positive effect of ingroup ties on positive relations with others is greater when participants' remember experiences of more subtle discrimination, as compared to more blatant ones. Similar findings emerged when examining the positive association between ingroup ties and state self-esteem.

Overall, these patterns of results suggest that higher identifiers may show more of an advantage in terms of self-esteem and positive relations with others when the event of discrimination recalled is more subtle. As discussed in the introduction, this may be because these more ambiguous episodes allow more room for differential interpretation and reconstruction by high and low identifiers (Holmberg & Veroff, 1996). In contrast, the relatively straightforward nature of the blatant discrimination events allowed for less of these differential coping or constructions strategies to be engaged.

Attributions to Discrimination as a Moderator

It was also predicted that participants' attributions of the roommate's motivations to discrimination would moderate the relationships between identification and self-esteem/well-being in the subtle-discrimination condition. In ambiguous situations, it is only when an attribution to discrimination is made that the better coping and reconstruction strategies of high identifiers should be activated. That is, if the actions of the majority group member are not seen to represent ethnic discrimination, then there should be no particular benefit of high ethnic identification. Support for this hypothesis

was found in analyses of the moderating role of communicative free recall coded attributions to discrimination on the relationships between identification and trait self-esteem, and at least one of the well-being subscales in the subtle-discrimination condition.

While no interaction effect was found on state self-esteem, the degree to which participants' referenced discrimination in their recounting of a more subtle episode of discrimination affected the relationship between identification and trait self-esteem. When few references to discrimination were made, low and high identifiers showed equivalent levels of trait self-esteem, whereas when participants' made more attributions to discrimination in their communicative free recalls, high identifiers showed a clear self-esteem advantage.

Similarly, though no interaction effect was found for overall well-being, the extent to which participants made attributions to discrimination when telling a friend about a more subtle act of discrimination moderated the effects of identification on personal growth, a subscale of well-being measuring the extent to which participants view the self as expanding and improving over time. When participants made few attributions to discrimination, low and high identifiers did not differ on scores of personal growth, but when more attributions to discrimination were made, high identifiers displayed higher personal growth than did low identifiers.

It appears, then, as though attributions to discrimination serve a moderating role when more ambiguous episodes of discrimination are recalled. The fact that these effects were obtained from attributions made in the communicative free recall supports the notion put forth in the introduction that high and low identifiers may use different scripts

to structure their recall of these more ambiguous situations, and these different scripts have differential effects on self-esteem and certain aspects of well-being. Put another way, calling somewhat ambiguous negative treatment by a majority group member discrimination may have beneficial effects for minority group members with high ethnic identification, whereas labelling these same acts as discrimination may be maladaptive for low identifiers.

However, research has shown that it can also be dangerous for minority group members to see ambiguous contexts as discrimination. For instance, individuals who publicly attribute negative outcomes to discrimination can be perceived more negatively, even by members of their own group. This results in stigmatized individuals being less likely to make claims of discrimination for fear of negative consequences, despite the positive effects of making such claims (e.g., Kaiser, Dyrenforth, & Hagiwara, 2006; Kaiser & Miller, 2001). This makes reacting to discrimination even more difficult for targets of discrimination. Although it may be beneficial psychologically for high identifiers to identify ambiguous situations as discrimination, they may be hesitant to do so because of social costs.

Emotional Engagement as a Moderator

Given that the extent to which participants became involved in the communicative free recall should maximize any potential effects of ethnic identification on discrimination, it was predicted that emotional engagement would moderate the associations between identification and the relevant psychological outcomes when recalling events of discrimination. This hypothesis received support in the subtle-discrimination condition.

The association between identification and state self-esteem was affected by participants' degree of emotional involvement in the communicative free recall when they recalled a more subtle episode of discrimination. Among participants who were not very involved in recounting the story, low and high identifiers showed no differences in their state self-esteem; however, among participants who became more emotional involved in the process, the state self-esteem of low identifiers was dramatically lower, while state self-esteem was modestly higher for high identifiers. Similar results were found when positive relations with others, which measures participants' beliefs that they are successful in their interpersonal interactions, was included as a criterion variable.

When participants recall being the target of an obvious act of discrimination, the degree of involvement did not affect the relationship between ethnic identification and psychological outcome variables. This may be because the discrimination presented is so striking and blatant that emotional involvement is not required for high identifiers and low identifiers to engage their relevant coping strategies. However, the more emotionally involved a minority group member feels when recalling a more subtle event of discrimination to a friend, the more being highly identified with their ethnic ingroup will help to protect their current self-esteem.

Vividness as a Moderator

For similar reasons as described in the discussion of emotional engagement, the degree to which participants rate the vignettes as vivid was expected to augment the effects of identification on self-esteem and well-being when participants recalled events of discrimination. This hypothesis received partial support, both when participants recalled events of obvious and subtle discrimination.

When recalling obvious discrimination, low identifiers actually showed higher purpose in life scores when the events were not pictured vividly, whereas when the event was imagined vividly, high identifiers showed higher purpose in life scores. It appears as though low identifiers show an advantage in their levels of ambition and sense of meaning in life when they do not actively picture themselves experiencing an obvious discrimination event, whereas, when they vividly picture themselves having the same experience, high identifiers may engage in coping strategies to help better maintain their sense of purpose in life. This interaction is inconsistent with the lack of a moderating role of emotional engagement in the obvious-discrimination condition, and was not replicated with any other psychological outcome variables. However, the fact that more active involvement in the experimental manipulation results in higher purpose in life scores for those high in identification is actually consistent with hypothesized effects, though it is not clear why less involvement is beneficial for those lower in identification.

When recalling subtle discrimination, low and high identifiers showed little difference in state self-esteem if the events were not pictured vividly. However, high identifiers indicated much higher state self-esteem than low identifiers when the episode was pictured more vividly. These effects are consistent with those found when emotional engagement was considered. Again, the extent to which participants are actively picturing themselves in the event determines the degree to which those with high ethnic identification engage the strategies that provide them with a self-esteem advantage over those low in ethnic identification.

Other Moderators and Mediators

A number of other variables were proposed as potential moderators of the identification self-esteem/well-being relationship. However, support was not found for the predicted moderation effect of perceived *realism* of the episode, the rated *quality of the memory* provided in the communicative free recall, or participant's reported *prevalence of discrimination* in their daily lives. The data does not speak to any obvious explanation for the failure of these particular variables to moderate this relationship. However, in the case of prevalence of discrimination in their daily lives, because this measure explicitly "takes the participant out" of the imagined world of the vignette they are reading and asks them to think about their own actual lives, it may be this referencing a different reality that reduces this variables' impact on measures designed to be assessing experiences and feelings associated with the current experience in the lab.

In addition, none of the predicted mediators met the very strict requirements for significant mediation. There are a number of potential explanations for this failure. It is certainly possible that characterizing the perpetrator more negatively, stronger feelings of anger and frustration, less pronounced feelings of hurt, and disappointment, and the use of coping-based reactions all really do not mediate the effects of ethnic identification on self-esteem and well-being when discrimination is recalled. However, it is also important to note that tests for mediation have notoriously low power unless sample sizes are extremely large or the mediated effects are quite sizeable (MacKinnon, Lockwood, Hoffman, West & Sheets, 2002). Furthermore, many of the variables that were extracted from the communicative free recalls had low values or were simply not present at all. For instance, the majority of participants did not exhibit any coping-based reactions and

expressed little anger. This relative lack of variability makes it even more difficult to find significant results. Given that participants have been shown to express genuine emotional responses to actual experiences with discrimination (e.g., Tropp, 2003), the lack of these responses in the free recall may lead us to question whether vignette scenarios can elicit strong and genuine enough emotional or cognitive reactions to produce the effects necessary to demonstrate significant mediation. As such, claims that these mediators do not play substantial roles in the positive associations between identification and the psychological outcomes of discrimination may be premature. Instead, these variables may need to be investigated more closely in an experiment with a more externally valid discrimination manipulation or when participants are encouraged to expand and elaborate more on their reactions to the event.

Lack of Effects for Well-Being

Despite a general trend for higher ethnic identification to be associated with higher scores on a number of subscales of well-being in the face of discrimination, the predicted positive effects of identification on total well-being did not emerge. It appears, however, that the overall well-being effect was suppressed by an unexpected negative relationship between identification and autonomy. That is, higher identification was consistently associated with lower autonomy. This effect was primarily driven by the negative effects of the centrality subscale on autonomy, which was present no matter what vignette the participant recalled. Although unpredicted, this result makes intuitive sense, in that centrality is thought to represent the cognitive salience of one's group or collective identity, whereas autonomy could be represented as the personal importance of one's personal identity. As such, it makes sense that focusing strongly on one level of

identity (e.g., the collective level) would result in a decreased in the focus on other levels of identity (e.g., the individual level; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987).

The Neutral-Control Condition

Although the neutral-control condition was intended to serve as a control condition that would be unaffected by ingroup identification, there actually was an unexpected negative effect of identification in this condition, particularly on state self-esteem, which contributed to a number of the significant identification by condition interactions found in comparisons between this condition and the two discrimination conditions. Though speculative, given the patterns of mediators and moderators that play a role in the negative relationship between identification and state self-esteem, it is possible to present an explanation of these apparently counterintuitive results. First, ethnicity is made salient in all conditions in this experiment, that is, the protagonist in all vignettes is described as the same ethnicity as the participant, so that even in the neutral control condition participants are reminded of their ethnic group membership. It is possible that under these circumstances high identifiers were more likely to be expecting the experiment to have something to do with discrimination or other sensitive ethnicity-related topics, as is consistent with findings that high identifiers may be especially vigilant to discrimination (Major et al., 2003). This interpretation is supported by the reaction of a participant in the pilot testing procedures that read the neutral-control vignette and then commented that, despite the fact that the actual interaction was relatively unbiased, she felt apprehensive that she might be discriminated against. Consistent with this interpretation, previous studies have shown that ethnic minorities show greater mistrust of White characters in vignettes describing a neutral interaction

when there was a reference made to their ethnic group membership, than when no reference to their group membership was made (Tropp, Stout, Boatswain, Wright & Pettigrew, 2006). In addition, these authors showed that this effect was in part the result of greater “anticipation of prejudice” when ethnic group memberships were mentioned, even though no actual evidence of prejudice was present.

The results found in the current experiment indicate that this tendency to respond more negatively to salience of group membership in neutral cross-group interactions may be more pronounced for those who are high in ethnic identifiers. That is, high identifiers, because of the salience of their group identity and their predispositions to think of themselves in group terms, were expecting the potential roommate to exhibit discriminatory behaviours. However, when no evidence of discrimination was provided, these participants had no opportunity to use their skills to mitigate the effects of expected discrimination, and thus were left dissatisfied or still vigilant for future negative interactions, and thus experienced lower state self-esteem.

This conclusion also was supported by the finding that, in the neutral-control condition, when participants rate the prevalence of discrimination in real life as low, high and low identifiers do not differ on levels of state self-esteem, whereas when perceived prevalence of discrimination is high, high identifiers show a substantial decrease in their levels of state self-esteem (see Figure 8). It appears as though these high identifiers who see discrimination as more prevalent may have had especially high expectations of being the targets of discrimination in the context of the described episode, and thus showed substantial decrements in state self-esteem.

It is also notable that when high identifiers were less focused on remembering the event, they showed no decreases in trait self-esteem (as shown in Figure 9). However, when they took the task more seriously, and focused on recalling the events in more detail, their self-esteem and well-being decreased. It may have been that those who were more cognitively involved and were more likely to apply the expectations and cognitive biases associated with being a high identifier onto the event were prepared to cope with discrimination that never ended up taking place, which negatively affected their self-esteem.

Limitations

Involvement in Recall

Given that this was a new experimental paradigm, it is not surprising that several limitations emerged. For one, participants did not get as involved in the process of recounting the events as intended. There was very little evidence of any construction processes within the objective free recalls. Although analyses on the results of the communicative free recall did yield some promising results, there was still evidence of floor effects on some variables and very low scores on others. For example, mean scores on a number of the emotional variables were below two on a seven-point scale. As such, the effects of the construction process that was discussed at length in the introduction were not easily detected in these free recall narratives.

Similarly, participant ratings of realism and vividness were lower than ideal, which may explain their lack of involvement in the construction process. Although not differing by condition, mean scores on realism tended to hover around the midpoint of the seven-point scale, with scores on vividness only being slightly higher. Notably, the

scores on realism and vividness in the main experiment were markedly lower than those obtained in pilot testing.

Conflict-Control Condition

Another limitation of this research is the lack of clarity as to the interpretation of the conflict-control condition. Originally, this condition was intended to provide a control that included interpersonal conflict and a level of emotional arousal consistent with the obvious- and subtle-discrimination conditions, while not being seen as discrimination. However, the results seem to suggest that participants' perceptions were more complex than that. Not only did participants' rate this conflict situation more discriminatory than the subtle discrimination situations, they also viewed the roommate most negatively in this condition- significantly more so than in either of the discrimination conditions. The results for this condition appear to indicate that it has many of the characteristics of an ambiguous discrimination condition, while still behaving like a control condition in certain analyses. This suggests that when experiences with discrimination are experimentally manipulated, rather than measured in survey items, interpersonal conflicts may be interpreted in ways that reflect the participants' ambiguity about how this negative interaction should be interpreted. The current perplexing pattern of results for this condition might be interpreted as evidence that a more systematic investigation of the manner in which high and low identifiers interpret these kinds of complex social interactions would be an interesting and worthwhile endeavour.

Neutral-Control Condition

Although it is never directly stated whether the narrator decides to move in with the potential roommate, several participants, as evidenced by their communicative free recalls, appeared to make this assumption. If such an interpretation is made, the outcome of the neutral-control condition differs substantially from that of the other three conditions, in that it is positive. This could have led to unintended differences between the neutral-control conditions and the other conditions. As such, it would be helpful in the future to include a neutral-control condition where the outcome remained relatively negative.

Future Studies

Given the current difficulties in developing a clear control condition, another possibility for future studies is to incorporate a repeated measures design similar to that use in Tropp et al. (2002). In this case, participants' levels of self-esteem and well-being would be measured prior to and after recalling a discrimination event.

However, the most fruitful focus of future research appears to a continued effort to uncover memory construction effects. Specifically, as some of these memory processes seemed to be evident when participants' recounted the event to a friend, this method should be developed further. Perhaps by having participants clearly describe the friend they are supposedly recounting the event to, providing more information to make the interaction with the friend more realistic and imaginable, encouraging them specifically to go beyond simply describing the event and directly asking them to express their reactions before and after the event, the power of this communicative free recall procedure can be enhanced. If this was to produce communicative free recall results that

were longer and more detailed, it would be possible to assess more psychological complex variables, such as insight (see Pennebaker, 1989; Pennebaker & Francis, 1996) and to examine whether ingroup identification also influences these more complex processes as well.

Other possible follow-up studies could involve participants' actually experiencing discrimination in a laboratory setting (e.g., Wright & Taylor, 1998). Due to problems associated with the use of ethnic discrimination in these settings (Tropp, 2003), these studies would likely need to use less sensitive groups that are nonetheless meaningful to the participant, such as major, or perhaps university affiliation. These studies would complement the findings of the vignette based studies, but would involve participants recounting *actual* (albeit less meaningful) events of discrimination.

Finally, previous studies have also included measures of collective self-esteem in their investigations of the effects of discrimination (e.g., Branscombe et al., 1999). As such, it would be valuable to assess whether vignette manipulation like the ones used here can influence participants' feelings associated with their ingroup as well as their personal selves. High identifiers may feel a deeper collective experience and a sense of connectedness with their ingroup in recounting experiences with discrimination, and it may be these feelings that account for the positive effects on personal self-esteem and well-being.

Real Life Implications

Though these results were obtained in a laboratory context, not only were the discrimination events similar to those experienced by minorities in Canada (Dion, 2001), but the effects of identification were found on psychological variables (self-esteem and

well-being) with very real impacts on the psychological health of minorities (see Caldwell et al., 2004; Mossakowski, 2003; Neblett et al., 2004; Sellers et al., 2003; Wong et al., 2003). This suggests that the results of this study may have real implications for actual experiences of discrimination, and that higher identification represents an important protective tool for ethnic minorities who are the targets of discrimination.

This reiterates the importance of ethnic identification and community in a Canadian context. Within this contemporary multicultural society, increased pressure is being placed on immigrants and ethnic minorities to assimilate or “Canadianize” to adopt the dominant Canadian culture (Gaudet et al., 2005). This pressure in and of itself has negative effects on psychological well-being (Gaudet et al., 2005); but the current research suggests that minimizing connections with one’s ethnic group may also have indirect negative effects on the psychological health of ethnic minorities by robbing them of a valuable buffer when faced with discrimination. This buffer may be crucial, as discrimination remains a common experience for ethnic minorities in Canada (McLeod, 2005; Noh & Kaspar, 2003).

This research also emphasizes the importance of social scripts within subcultures of high identifiers. Shared perceptions about what can be expected in episodes of discrimination, which are likely developed through ingroup interactions, may be particularly common in those higher in identification. This suggests that discourse around experiences of discrimination may be particularly beneficial for ethnic minorities, so that a structured set of expectations for such experiences, particularly when the discrimination experienced is more ambiguous, can be developed.

Conclusions

This study demonstrated not only that, consistent with previous research, high identification is associated with better psychological outcomes in the face of discrimination (especially subtle discrimination), but that communicative recall of the events may be a particularly important context in which the positive effects of identification occurs. In addition, this experiment introduces a paradigm involving the recall of vignettes, which may provide a particularly useful way to assess the psychological processes underlying these effects. Not only do these vignettes provide a way to control for the contents of the discrimination events, but they also allow for the comprehensive assessment of communicative free recalls for relevant variables, such as attributions to discrimination and emotional reactions. This study also shows that the positive affects of identification are obtained when experiences with discrimination are experimentally manipulated, as compared to previous research, which has only shown these effects in participants' self-reported experiences with or perceptions of discrimination.

Furthermore, unlike most prior research on the effects of ethnic identification, in which measures of identification are completed nearly immediately prior to the criterion measures on a single survey, the current experiment's use of a pretesting procedure resulted in delays of up to six weeks occurring between the measurement of participants' identification and their actual completion of the experiment. Moreover, the context in which participants' completed the identification measures also varied dramatically from that in which the experiment took place. Not only did the majority of those who completed the mass testing session do so in a crowded lecture hall, but those who

completed the online survey may have done so in a variety of contexts, including in their home. Given the inherent malleability of ingroup identification across contexts (Turner et al., 1987), the fact that ethnic identification showed genuine effects on the psychological outcomes of discrimination speaks clearly to the importance of this variable. In addition, it is likely premature to conclude that identification has no impact on trait self-esteem or is not mediated by changes in negative emotions or perceptions of the perpetrator.

Certainly, the results of this study point to a number of methodological improvements and to several novel extensions for future research. However, overall, this paradigm provides an exciting new way to investigate the processes underlying the positive relationship between ingroup identification and self-esteem and well-being in the face of discrimination. Although the ultimate goal of this kind of research is to see the elimination of ethnic discrimination, this goal unfortunately appears far from our reach. Thus, research that focuses on ways of minimizing the negative impacts of discrimination is especially important. By investigating the psychological processes that influence the coping mechanisms used by ethnic minority group members, we discover ways to help targets of discrimination maintain or even enhance their self-esteem and well-being in the face of these stressful, unjust experiences.

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APPENDICES

Appendix A: Vignettes

Beginning of All Stories

You are looking to find a new place to live before you start the new semester at university. Since you are unable to afford your own apartment, you are searching for suitable roommates. While reading the Province newspaper on Sunday, you notice an ad posted by SFU students looking for a roommate in the classified section. The advertisement is for a three-bedroom townhouse that is already occupied by two students, and is located in a nice area of town reasonably close to campus and shopping. You call the number listed, and a man picks up. You ask him some questions about the house and nearby amenities, and he seems very pleasant. He tells you that they have not found a roommate yet, but you sound like a very good match for them, and he would be happy to have you move in once you have a look at the place. You arrange to drop by later that afternoon.

Obvious-Discrimination Condition

Later on, you arrive at the townhouse, which is located just off a main road. It is two stories high, and you are impressed to see that it looks relatively new and has a decent sized front yard. You walk up the front steps and knock on the door. A Caucasian man around your age answers, and you recognize his voice of being that of the person you spoke to on the phone. You take a step into the front door, and take a quick look around the house. The man then says to you, "Listen, it doesn't look like you would be the best choice for our roommate. I've lived with people of your race before, and it really didn't work out, so I've decided I don't want to live with them again if I can help it."

Subtle-Discrimination Condition

Later on, you arrive at the townhouse, which is located just off a main road. It is two stories high, and you are impressed to see that it looks relatively new and has a decent sized front yard. You walk up the front steps and knock on the door. A Caucasian man around your age answers the door, and looks somewhat distressed. You recognize his voice of being that of the person you spoke to on the phone. You take a step into the front door, and take a quick look around the house. After scanning the entrance, you look back at the man, who you notice appears troubled and is looking at you attentively. He says, "I'm sorry, but you actually don't need to come in. We've already found a roommate."

Conflict-Control Condition

Later on, you arrive at the townhouse, which is located just off a main road. It is two stories high, and you are impressed to see that it looks relatively new and has a decent sized front yard. You walk up the front steps and knock on the door. A man around your age opens the door, looking rather confused and annoyed. "Who are you?" he asks. You recognize his voice of being that of the person you spoke to on the phone to. When you remind him that you were coming to look at the house, he laughs, gestures at a figure standing at the kitchen entrance and says, "My friend is moving in, so you're out of luck!", before he shuts the door.

Neutral-Control Condition

Later on, you arrive at the townhouse, which is located just off a main road. It is two stories high, and you are impressed to see that it looks relatively new and has a decent sized front yard. You walk up the front steps and knock on the door. A man

around your age answers, and you recognize his voice of being that of the person you spoke to on the phone. You take a step into the front door, and take a quick look around the house. The man shakes your hand, and says, "I'll show you the place. Why don't you have a look at the kitchen first? By the way, my roommate will be home in 15 minutes so she can meet you."

Appendix B: Pilot Testing Questionnaire

(Obvious-Discrimination Condition)

INSTRUCTIONS: This survey requires participants to answer several demographic questions, read a short story, and then answer questions about their impressions of the story. Please answer as carefully and honestly as you can. Informed consent sheets will be stored separately from the surveys, so your responses will be completely anonymous. Please do not look at anyone's survey besides your own, as this could corrupt the data. Feel free to speak to the experimenter if you have any questions either during or after this survey. Thank you very much for your time!

What is your gender? _____

How old are you? _____

What is your racial/ethnic heritage?

(We realize that selecting a broad racial category/ethnic category can be difficult for some people. Please choose the one or more than one categories that best identify how you would describe yourself.)

Asian (Chinese, Japanese, Korean) _____

Black _____

First Nations _____

Indo-Canadian _____

Middle Eastern _____

Hispanic (Middle or South America) _____

White (Caucasian) _____

Other (please specify) _____

Which racial/ethnic group do you most closely identify with IN YOUR OWN WORDS?

INSTRUCTIONS: You are about to read a story designed to represent the experiences of an SFU student looking for living accommodations. Although the story itself is not based on an actual event, it is based on experiences described as common by university students, as well as those reported as common in empirical research. Please read and pay close attention to the story. While reading this story, please try to picture yourself as the narrator, who will therefore be of the same ethnicity and gender as you. Once you have finished reading the story, answer the questions on the next page in relation to your reactions to the story.

You are looking to find a new place to live before you start the new semester at university. Since you are unable to afford your own apartment, you are searching for suitable roommates. While reading the Province newspaper on Sunday, you notice an ad posted by SFU students looking for a roommate in the classified section. The advertisement is for a three-bedroom townhouse that is already occupied by two students, and is located in a nice area of town reasonably close to campus and shopping. You call the number listed, and a man picks up. You ask him some questions about the house and nearby amenities, and he seems very pleasant. He tells you that they have not found a roommate yet, but you sound like a very good match for them, and he would be happy to have you move in once you have a look at the place. You arrange to drop by later that afternoon.

Later on, you arrive at the townhouse, which is located just off a main road. It is two stories high, and you are impressed to see that it looks relatively new and has a decent sized front yard. You walk up the front steps and knock on the door. A Caucasian man around your age answers, and you recognize his voice of being that of the person you spoke to on the phone. You take a step into the front door, and take a quick look around the house. The man then says to you, "Listen, it doesn't look like you would be the best choice for our roommate. I've lived with people of your race before, and it really didn't work out, so I've decided I don't want to live with them again if I can help it."

INSTRUCTIONS: Please respond to the following statements on a 7-point scale by circling the number that best describes your opinions/feelings/reaction.

To what extent do you consider the story:

Believable	1	2	3	4	5	6	7	Unbelievable
------------	---	---	---	---	---	---	---	--------------

To what extent do you consider the story:

Plausible	1	2	3	4	5	6	7	Implausible
-----------	---	---	---	---	---	---	---	-------------

How well were you able to imagine the events occurring in the story?

Very well	1	2	3	4	5	6	7	Not at all well
-----------	---	---	---	---	---	---	---	-----------------

How vividly were you able to imagine the events in this story?

Very vividly	1	2	3	4	5	6	7	Not at all vividly
--------------	---	---	---	---	---	---	---	--------------------

This is an event that could realistically happen to a university student.

Strongly Agree	1	2	3	4	5	6	7	Strongly disagree
----------------	---	---	---	---	---	---	---	-------------------

How angry would you be if this happened to you?

Very angry	1	2	3	4	5	6	7	Not at all angry
------------	---	---	---	---	---	---	---	------------------

How upset would you be if you were the narrator?

Very upset	1	2	3	4	5	6	7	Not at all upset
------------	---	---	---	---	---	---	---	------------------

I would take the behaviour of the potential roommate as a personal insult.

Strongly agree	1	2	3	4	5	6	7	Strongly disagree
----------------	---	---	---	---	---	---	---	-------------------

How just was the treatment of the narrator?

Very just	1	2	3	4	5	6	7	Not at all just
-----------	---	---	---	---	---	---	---	-----------------

To what extent would you consider the potential roommate's behaviour to be:

Fair	1	2	3	4	5	6	7	Unfair
------	---	---	---	---	---	---	---	--------

To what extent would you consider the outcome of this event:

Very negative	1	2	3	4	5	6	7	Very positive
---------------	---	---	---	---	---	---	---	---------------

To what extent would you consider the potential roommate:

Likeable	1	2	3	4	5	6	7	Unlikeable
----------	---	---	---	---	---	---	---	------------

My overall impression of the potential roommate was:

Very negative	1	2	3	4	5	6	7	Very positive
---------------	---	---	---	---	---	---	---	---------------

To what extent would you say that the narrator was the target of ethnic discrimination:

Very much	1	2	3	4	5	6	7	Not at all
-----------	---	---	---	---	---	---	---	------------

The potential roommate in this story was motivated by racism.

Strongly agree	1	2	3	4	5	6	7	Strongly disagree
----------------	---	---	---	---	---	---	---	-------------------

The potential roommate judged the narrator based on appearance.

Strongly agree	1	2	3	4	5	6	7	Strongly disagree
----------------	---	---	---	---	---	---	---	-------------------

The potential roommate was prejudiced.

Strongly agree	1	2	3	4	5	6	7	Strongly disagree
----------------	---	---	---	---	---	---	---	-------------------

Please add any other comments, suggestions, or impressions of the story here:
