

**PERCEPTIONS OF INTERGROUP NORMS,
LEVELS OF INGROUP IDENTITY, AND
THE EXTENDED CONTACT EFFECT**

by

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Abstract

This survey study provides general support for the positive effect of extended contact on interethnic attitudes. However, the current research also expands our understanding of the effect in a number of ways. First, by including four dependent variables that address positive and negative affects, behavioural intentions, and beliefs and ideology regarding target outgroups it provides a broader test than is common in the literature. Second, it uses an ethnically diverse sample and multiple target outgroups. Extended contact was found to have positive effects across the DVs in majority/minority, minority/majority, and minority/minority relations. Third, the study tested and found significant but partial mediation of the extended contact/prejudice relationship by perceptions of ingroup norms. Finally, it was found that the level of identification with one's ethnic group moderates the mediational role of perceptions of ingroup norms. For those with low levels of ingroup identification, mediation by norms did not occur.

Keywords: intergroup relations; extended contact; intergroup attitudes; social norms; ethnic identification

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Introduction

Changing immigration patterns are leading to an increasingly ethnic and cultural diversity in major urban centres in Canada (Hou & Bourne, 2004) as well as elsewhere. This will inevitably result in increased contact between diverse groups of people. What this increased contact brings, with regard to attitudes towards new arrivals and minority populations is of particular interest. Research has found a relationship between increased immigration into Western nations and perceptions among host nationals of threat to the existing cultural norms and, increasing anxiety about interactions with immigrant populations (Esses, Jackson, & Armstrong, 1998; Esses, Dovidio, Jackson, & Armstrong, 2001; Stephan, Ybarra, Martínez, Schwarzwald, & Tur-Kaspa, 1998; Stephan & Stephan, 2000). These perceptions of threat and feelings of anxiety may give rise to increases in negative attitudes and prejudice towards new immigrants. However, not all contact between diverse groups leads to these kinds of negative outcomes, as contact across groups can also result in more positive attitudes and behaviours (Pettigrew, 1998; Pettigrew & Tropp, 2006). With the increase in intergroup contact and the potential for either positive or negative outcomes, an obvious question is: What are the best ways to facilitate positive outcomes when intergroup contact occurs?

The Intergroup Contact Effect

Allport's (1954) intergroup contact hypothesis is one of the most investigated and supported perspectives on how to improve intergroup relations. This contact hypothesis suggests that when people from different groups interact with the approval of those in authority, holding equal status positions within the situation, and working cooperatively towards a common goal, prejudice between groups can be reduced. The conditions of equal status, cooperation, common goals, and authority approval were originally proposed by Allport. However, in a review of contact literature, Pettigrew (1998) lists a set of additional conditions that other researchers have proposed as necessary for positive intergroup contact, including, for example: the use of a common language, a prosperous economy, views of outgroups that are not overly negative, voluntary contact, and disconfirmation of stereotypes. However, Pettigrew (1997) believes that this lengthy list of necessary conditions threatens to render the contact hypothesis unfalsifiable and, therefore, meaningless. Pettigrew's response is to suggest that there may be some confusion as to those conditions that are essential and those that only facilitate the improvement of attitudes during contact. Wright, Brody, and Aron (2005) take this argument a step further, asserting that all of the proposed conditions, including Allport's (1954), should be viewed as facilitating conditions. Further support of this idea arises from a meta-analysis of the research of the contact hypothesis (Pettigrew & Tropp, 2006), where significant support for the contact hypothesis was found, even when Allport's (1954) criteria were not met.

Two conditions among the list of many facilitating conditions are important to the current discussion. First, one of Allport's proposed conditions is that contact between group members be supported, or approved of, by those with authority. This implies that intergroup contact is seen as occurring within pre-existing, explicit social norms of the groups involved. Pettigrew (1998) concurs, stating that "social norms are crucial" (p.68) in intergroup contact and cites as examples the successful desegregation of the merchant marine, police forces, and public housing, where interaction was expected, necessary, and supported by those with the authority to define and enforce social norms. Therefore, social norms are seen to moderate the effect of intergroup contact.

The second condition is one that Pettigrew (Pettigrew & Meertens, 1995; Pettigrew, 1997; 1998), himself, adds to the list of contact criterion; friendship or friendship potential within the contact situation. Pettigrew proposes that friendship plays a central role in the process of reducing negative bias towards members of other groups. His claim for the particular importance of friendship arises from the results of an international survey conducted in Europe (Pettigrew & Meertens, 1995; Pettigrew, 1998). That survey found reduced levels of prejudice towards an ethnic outgroup among those who had friends who were members of that ethnic group. This effect was smaller and less consistent among those who merely worked with, or were neighbours of, members of that ethnic outgroup. Moreover, the effects of cross-group friendships also generalized to lower levels of prejudice towards other ethnic outgroups, even groups with whom the participant had no previous experience.

Mechanisms

Allport's (1954) hypothesis has generated hundreds of studies since it was published, with results generally supporting the value of contact (Pettigrew, 1998; Pettigrew & Tropp, 2006). However, the research is not without problems (Pettigrew, 1997; 1998; Wright, Aron, McLaughlin-Volpe, & Ropp, 1997). Pettigrew (1998) points out that several issues need to be addressed. In the original theorizing, the psychological mechanisms behind the attitude changes that follow contact are not fully addressed, nor is the method (or methods) by which these changes in attitude generalize from specific outgroup contact partner to other outgroup members, or, to general attitudes about the outgroup as a whole. Additionally, Allport's (1954) hypothesis fails to address how contact made by an individual ingroup member generalizes to positive intergroup attitudes from that individual to other ingroup members or to the ingroup as a whole.

From a social identity theory (SIT) perspective (Tajfel & Turner, 1986), generalization to other outgroup members from contact with a single member is problematic, especially when involving interpersonal friendship (Hewstone & Brown, 1986). SIT proposes that the psychological processes behind interpersonal interactions and intergroup interactions are separate and distinct. However, Brown (1995) argues that through the process of making group memberships salient to those involved, an interpersonal interaction can become an intergroup interaction. The salience of group membership would allow for generalization of positive attitudes to other outgroup members. For example, if an outgroup member, who is also a friend, is faced with discrimination, one might become very aware of the group-level distinction between self

and friend, and act in defence of friend. That defence could further increase the salience of differences in group membership and a reappraisal of personal and ingroup attitudes towards that outgroup.

This review of intergroup contact suggests that positive attitudes can arise from friendly intergroup contact, and that the generalization of individual positive attitudes from outgroup friend to outgroup as a whole can be explained through making that friend's group membership salient. However, an important issue is not addressed by Allport's (1954) hypothesis or by the research that has followed. There is no explanation of how improved attitudes might generalize to people not directly involved in friendly cross-group contact. The wide-spread reduction in negative attitudes towards racial minorities found in North America over the past decades, for example, suggests improvements in attitudes towards outgroup members has occurred at a pace that outstrips opportunities for cross-group friendships. Although some proportion of the population may have formed cross-group friendships, that those cross-group friendships can account for the widespread changes in social attitudes seems unlikely. Another explanation may lie in an extension of the contact effect proposed by Wright et al. (1997).

The Extended Contact Effect

Strengths and Support

According to the extended contact hypothesis (Wright et al., 1997), knowledge of an ingroup member's close friendship with an outgroup member can reduce negative intergroup attitudes, even in the absence of direct intergroup contact. Extended contact offers a potential explanation of how generalization of improved intergroup attitudes from those with direct contact to those without could occur. Using surveys and laboratory experiments, Wright and his colleagues (1997) found support for this hypothesis. Survey results found significantly lower levels of affective and overall prejudice among those with knowledge of cross-group friendships. Additionally, participants who reported knowing of more than one cross-group friendship recorded even lower levels of prejudice than those knowing of only one cross-group friendship. Laboratory results, using both constructed groups in a competitive setting and an experimental study using the minimal groups paradigm, provide further support for the hypothesis.

Several studies have followed the initial research of Wright et al. (1997), and have provided support for the extended contact effect in several diverse settings. Studies by Liebkind and McAlister (1999) found evidence for the extended contact effect among Finnish school students dealing with growing immigrant populations. Paolini, Hewstone, Cairns, and Voci (2004) found support for the effect of extended contact among Catholic and Protestant groups in Northern Ireland. Cameron and her colleagues (Cameron & Rutland, 2006; Cameron, Rutland, Brown, & Douch, 2006) found that using stories of

cross-group friendships was effective in improving the attitudes of young English school children towards disabled children and refugee children. Additionally, Shelton and Richeson (2005) found that when U.S. college students were asked to imagine that a friend knew one individual among a group of outgroup members in a dining hall, they were more likely to say they would join that group than if they were not told of such a friendship. Although studies, thus far, have found support for the extended contact hypothesis, only two of the possible mediating variables have been investigated. Paolini et al. (2004) have investigated the role of intergroup anxiety. Pettigrew, Christ, Wagner, and Stellmacher (2007) have investigated the role of ingroup norms. However, certain weaknesses in the Pettigrew et al. work are evident. For example, the norms measure in this study was a single item asking about the participant's friends' views on immigration. As norms are defined as the attitudes beliefs and behaviours shared broadly within the ethnic social group, this is not a measure of ethnic group norms, but rather a measure of norms for that particular circle of friends' norms.

Intergroup Norms

Wright et al. (1997) proposed that extended contact effects may require that those involved in the cross-group friendship be seen to be exemplars, or good representatives, of their respective groups. Wright et al. suggest that the role exemplars play in extended contact is that the actions of such individuals are seen to describe the normative behaviours for their groups, and thus, direct the attitudes and behaviours of other group members. Of particular interest in the current case, are a subset of group norms regarding

actions towards members of an outgroup. For example, Jetten, Spears, and Manstead (1996) found that ingroup norms significantly determined whether fair or discriminatory strategies were used in an allocation task. Other research has found very high correlations between the perceived social norms regarding behaviour and attitude towards selected outgroups and reported actual behaviour towards those same outgroups (Crandall, Eshleman & O'Brien, 2002).

As with the direct contact effect, social norms should play a central role in extended contact. However, the way in which norms are described by Allport (1954) and Pettigrew (1998) suggest that social norms (authority support) for direct intergroup contact must pre-exist contact. That is, positive social norms set the stage for effective cross-group contact. The current model of extended contact, on the other hand, suggests that as individuals become aware of cross-group friendships, these positive interactions will lead observers to see positive intergroup relations as within the norms of the groups. Additionally, Wright et al.'s (1997) findings that knowledge of more cross-group friendships increases the effect of extended contact provide some support this normative argument. That is, the more cross-group friendships the individual is aware of, the more normative such cross-group interactions will appear.

It should be noted here that Wright et al. (1997) suggested that establishing perceptions of positive intergroup norms through extended contact would be most effective when norms regarding specific outgroups are not well established or when the existing intergroup norms are "ambiguous or in a state of change" (p. 75). Wright and his

colleagues proposed that such conditions would make the exemplar mechanism particularly influential. The changing immigration patterns mentioned above, and the resulting changes to population demographics may be creating just these conditions; where the social norms for intergroup actions are not certain. Uncertainty about how one should behave, what one should think, or about what one should feel can be an aversive condition (Mullin & Hogg, 1999). Individuals confronting such uncertainty are likely to turn to others to provide information that can reduce the aversive condition. Mullin and Hogg (1999) proposed that the reduction of subjective uncertainty “is a fundamental human motivation” (p. 92), and it is at times of uncertainty that individuals can be most influenced by others who appear like themselves – that is, those who share relevant group memberships (Haslam, 1997).

Social identity and self categorization theorists propose that when a category membership is salient, behaviour and attitudes are influenced by others who are seen to share our social category. When observing a cross-group friendship, the category differences and one’s own group membership will become salient. Through the observation of such friendships, extended contact proposes that the actions of those involved in the cross-group friendship should model behaviours and attitudes that influence the observer’s perception of group norms through a process referred to as *referent informational influence* (Wright, 1997). More specifically, through the observation of a cross-group friendship, one’s group membership becomes salient. Because the ingroup member is of the same category and, therefore, interchangeable with the self, he or she influences the observer’s beliefs about the ingroup’s intergroup norms.

Ultimately, this influences intergroup attitudes. Under these circumstances, perceptions of intergroup norms become the mediator that explains the impact of extended contact on intergroup attitudes. Additionally, as the number of known cross-group friendships increase so should the perceptions that group norms include positive intergroup attitudes. This proposed mediating role of norms is in clear contrast to the moderating role described for intergroup norms by Allport's (1954) contact hypothesis. That is, in the case of direct contact, existing norms promoting positive intergroup interactions are described as a criterion for successful contact (Pettigrew, 1997, 1998). In the case of extended contact, changes in perceived norms are seen as an outcome of extended contact that mediates its influence on intergroup attitudes.

Ingroup Identification

Focusing on the role of intergroup norms and referent informational influence makes apparent another variable that may play a critical role in the extended contact effect. Group norms regarding intergroup attitudes will only be important to those who depend on the group as a reference for attitudes and behaviours. That is, the mediating effect of group norms should be dependant on the degree to which the observer of the cross-group friendship is identified with the relevant ingroup. Wright et al. (1997) proposed that extended contact, in part, depends on the inclusion of the ingroup in the self. In support of this, Cameron et al. (2006) found that only among young children (ages 5 – 8) who identified highly with their group (being English) were the attitudes towards interactions with refugee children improved by stories about friendships between

English and refugee children. However, to date this is the only published finding to address the impact that ingroup identification has on the extended contact/intergroup attitudes relationship.

There is evidence that different levels of identification result in differing amounts of cognitive overlap between self and ingroup (Tropp & Wright, 2001). Those who do not identify with their ingroup do not include the group, and thus other ingroup members, in the self. As a result, the ingroup and perceived ingroup norms should have little or no influence on the intergroup attitudes held by those with low ingroup identification (Christensen, Rothgerber, Wood, & Matz, 2004). Thus, for low-identifiers, observing other ingroup members should not influence the beliefs they themselves hold. This means that beliefs about ingroup norms should not act as a mediator of the extended contact/intergroup attitudes relationship for these individuals. However, Wright et al. (1997) propose other potential mediators as well. Therefore, there are other ways in which known cross-group friendships might influence attitudes, even for low identifiers. For example, the mechanism of inclusion of other in the self might operate in a fashion that does not require strong ingroup identification.

For those who are highly identified with their ingroup, extended contact effects should be stronger. That is, we might predict that high-identifiers would show a stronger relationship between the knowledge of cross-group friendships and positive intergroup attitudes because the observation of ingroup members with cross-group friendships informs the observer about the ingroup's intergroup norms and these norms should be

relevant to those whose group membership is important. Care must be taken in reaching conclusions about very high-identifiers, however. Research has found that those who identify most strongly with the ingroup can also be more exclusive in defining their ingroup (Castano, Yzerbyt, Bourguignon, & Seron, 2002; Leyens & Yzerbyt, 1992). Those with the highest levels of identification tend to see the boundaries between ingroup and outgroup as more rigid and less permeable. Castano et al. (2002) manipulated a series of faces by integrating varying amounts of features from ingroup and outgroup faces. They found that individuals with high ingroup identification categorized more of these ambiguous faces as being of the outgroup and categorized them as such faster than did low identifiers. Thus, it may be that high identifiers are more rigid regarding ingroup boundaries and, therefore, more likely to see individuals who enter into close personal friendships with outgroup members as unrepresentative or even not “true” members of the ingroup. Thus, their actions should not be a source of information about ingroup norms. However, as the number of cross-group friendships gets larger, even high identifiers may be convinced that the ingroup norms are indeed positive towards such friendships.

So it may be moderate-identifiers who should show the strongest effects of extended contact as the actions of other ingroup members who have cross-group friendships will provide them with important information regarding the social norms of their ingroup. This information should be more relevant for moderate-identifiers than it is for low-identifiers and should influence attitudes and actions without triggering the defensive reaction expected among high-identifiers.

The Current Study

Vancouver is one of Canada's largest and most cosmopolitan cities. As a major entry point for immigrants from the East, it is also one of the cities in North America whose population is predicted to be less than 50% White in makeup within the next decade (Hou & Bourne, 2004). Nonetheless, as is often the case in cities such as Vancouver, ethnic groups form enclaves and the extent of their presence may not be noted by the general population and contact may be limited. However, this is not the case among university populations and the extent of demographic change is very evident in the classrooms, lecture halls and concourses. Among the student populations at many Vancouver colleges and universities there is no longer a clear majority for any one ethnic or racial group and cross-group contact is almost unavoidable. This provides a valuable setting for research into intergroup attitudes and the extended contact effect. The current study takes advantage of Vancouver's ethnic diversity and the outcome of that diversity in two of the local universities.

The diversity of the university populations also allows for the study of cross-group contact across a number of ethnic groups and its impact on intergroup attitudes. For the current study, the South-Asian community has been chosen as the main target population. This is, in part, because recent gang violence, attributed to the youth of this group, has led to an increase in negative media representations of the group in the Vancouver area. The study investigates attitudes toward South-Asians among both the dominant ethnic group (Whites) and a minority group (Chinese). A review of the literature did not produce any previous research on the extended contact effect for

minority-to-minority relations. Although it is assumed that the general extended contact effect will be found with these minority groups as well, intergroup attitudes between minority groups has been understudied (see Pettigrew & Tropp, 2006) and should add to our understanding of the extended contact effect. Additionally, as the South-Asian community is well represented in the university population, the study also included an investigation of the attitudes of South-Asians towards the dominant population (Whites). Not only does including multiple groups with different perspectives increase the groups and situations included in the research, it should improve our understanding of the generalizability of the effect.

The primary contribution of the current study, however, is to expand our understanding of the proposed psychological mechanisms believed to underlie the extended contact effect (Wright et al., 1997). Specifically, this research provides a test of how the quantity of extended contact (number of known cross-group friendships) influences perceived ingroup norms and how those perceptions mediate the extended contact/intergroup attitudes relationship. While the importance of ingroup norms was described by Wright and his colleagues in their introduction of extended contact, there has been very little investigation of this idea (see Pettigrew et al., 2007). However, the current research also adds to this line of reasoning by considering the importance of ingroup identification as a potential moderator of the mediating effect of ingroup norms.

Finally, the current study provides for a multifaceted test for the hypotheses by including measures of a number of aspects of intergroup attitudes. The assessment of

intergroup attitudes includes four measures: the feeling thermometer (Esses, Haddock, & Zanna, 1993), a single-item measure of emotional warmth; the neo-racism scale (Tougas, Desruisseaux, Desrochers, St-Pierre, Perrino, & De La Sablonniere, 2004), 13-items that address intergroup beliefs and ideology; the intergroup anxiety scale (Stephan, 1999) a 6-item measure of affect; and a willingness to interact scale (Stephan), a seven-item scale of intergroup behavioural intentions. Each of these scales was adapted for the particular target groups involved in the current study.

Hypotheses: Quantity of Extended Contact

The analyses for the current study will focus on the relationships that exist between the *quantity* of extended contact (i.e., the number of known cross-group friendships) and the four measures of intergroup attitudes. These analyses will also investigate: 1) the mediating role of perceptions of ingroup norms regarding intergroup attitudes and behaviours and 2) the moderating role of strength of ingroup identification.

The hypotheses to be tested are:

Hypothesis 1

Greater quantities of extended contact (i.e., larger numbers of known cross-group friendships) will be associated with more positive intergroup attitudes.

Hypothesis 1a

Furthermore, this effect of extended contact on intergroup attitudes will be, at least partially, mediated by perceptions of ingroup norms.

Hypothesis 2

The strength of this mediating effect by perceptions of intergroup norms will be moderated by ingroup identification such that:

For low-identifiers, for whom ingroup norms hold little meaning, there will be no mediation by ingroup norms. That is, though low identifiers perceptions of intergroup norms may be influenced by the actions of other members of their ethnic ingroup these actions will not be seen as relevant and are unlikely to influence their own attitudes and behaviours.

For moderate-identifiers, for whom ingroup norms hold greater meaning in determining attitudes and behaviours, the mediation model will hold. It is hypothesised that for moderate identifiers there will be a strong relationship between extended contact and perceived ingroup norms and a moderate relationship between those norms and intergroup attitudes and ingroup norms will mediate the effect of extended contact on intergroup attitudes.

For high-identifiers, ingroup norms will partially mediate the effect of extended contact on intergroup norms. Their perceptions of intergroup norms should have a very strong influence on their own action and attitudes, and actions of other ingroup members

should have some influence on their perceptions of ingroup norms. However, the mediational effect may be limited by whom they see as true members of the ingroup and this may be determined by the number of known cross-group friendships. Only when the numbers are quite high will those with outgroup friends be seen as relevant to ingroup norms. Therefore, it is predicted that there will be a moderate and curvilinear relationship between extended contact and perceived intergroup norms.

Method

Participants

Participants were 412 (282 female and 130 male) students from Simon Fraser University (SFU) and Kwantlen University College (KUC). Participant ages ranged from 17 to 48 years of age ($M = 21.5$, $SD = 4.40$) and were drawn from the psychology research pools at the two institutions or recruited through advertisements directed at the general student populations. They participated in exchange for course credits, five dollars, or a 'set for life' scratch lottery ticket. South-Asian participants responded to items concerning their experiences with, and attitudes towards, Whites as the target outgroup. Participants from all other racial/ethnic groups responded to items with South-Asians as the target outgroup.

The ethnic makeup of the sample was 138 participants who self-identified as White, 137 who self-identified as Chinese, 78 who self-identified as South-Asian, and 59 self-identified in one of a number of other categories (e.g., Korean, Middle Eastern, biracial, etc.). The participants who fell into the final group were excluded from this analysis as it was difficult to create balanced subgroups from each of these small ethnic groups when dividing them into high, moderate, and low identifiers. Therefore, the final sample for the current study included 353 participants of who self-identified as White, Chinese, or South-Asian.

Procedures

Participants were told that the study was an investigation of “friendships, attitudes, and experiences.” A computer-based survey built with MediaLab software (Jarvis, 2001), guided them with periodic written and auditory instructions. Participants at SFU worked at one of seven computer stations dedicated to this type of research. Participants at KUC completed the survey on a laptop computer in a small individual room.

Participants began the survey by providing demographic information including gender, age, first language, citizenship, and ethnic/racial background. Next, participants were presented with head-and-shoulder images¹ of four members (2 male, 2 female) of the target outgroups – Whites or South-Asians – and were given the opportunity to choose from a list of four the label they commonly apply to each of those groups. The label the participants selected was automatically incorporated into the remainder of the survey to refer to the target outgroup.

South-Asian participants selected from the labels “European,” “European-Canadian,” “White,” or “Caucasian.” Other participants chose from the labels “East-Indian,” “Indian,” “Indo-Canadian,” or “South-Asian.”

¹ Images were drawn from ‘A lifespan database of adult facial stimuli’ (Minear & Park, 2004).

Measures²

Quantity of Extended Contact Friendships

A single item was used to assess the number of known cross-group friendships between members of the participants' ethnic ingroup and members of the target outgroup - "How many members of your own ethnic/racial group do you know who have South-Asian (White) friends?" Responses were made on a 6 point scale including 0 (*zero*), 1 (*one*), 2 (*two*), 3 (*three to five*), 4 (*six to ten*), 5 (*more than ten*).

Ingroup Identification

The strength of a participant's identification with his/her ethnic group was measured using two scales. The first was the 7-point inclusion of ingroup in self scale (IIS) developed by Tropp and Wright (2001). This measure is an adaptation of Aron, Aron, and Smollan's (1992) inclusion of others in self scale (IOS). The IOS scale was originally used to measure interpersonal closeness. The IIS and IOS scales present images of seven pairs of circles with differing amounts of overlap ranging from no overlap to near complete overlap. In the case of the IIS, one circle in each pair represents the participant's self and the other his/her ethnic ingroup. The greater the overlap, the more an individual sees their identity as tied to their ingroup.

² The variables used to test the present hypotheses are a subset of measures within a larger survey of student experiences and attitudes related to intergroup relations.

The second ingroup identification measure was a 3-item scale developed for this study but consistent with previous measures of this construct (“Being a member of my ethnic/racial group is a very important part of who I am.”; “I am proud to be a member of my ethnic/racial group.”; “I am just like most members of my ethnic/racial group.”). Responses to these items were scored on a 7-point scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). Higher scores indicate greater levels of ingroup identification. This scale had reasonable reliability ($\alpha = .83$). However, when combined with the IIS reliability improved ($\alpha = .86$). Therefore, these four items were combined as a single indicator of identification with the ingroup. For the analyses of the moderating role of ingroup identification each of the three ethnic groups (White, Chinese, and South-Asian) were split into low, moderate, and high identifiers. This tertiary split of each ethnic group insured that members of each ethnic group were equally distributed across the three ingroup identification categories.

Ingroup Norms

The participant’s perception of ingroup norms regarding attitudes towards the target outgroup was measured using four items created for the current study (e.g., “In general, most members of my ethnic/racial group believe it is important to treat South-Asians (Whites) with respect.”). Responses for these items were scored on a 7 point scale ranging from -3 (*Strongly disagree*) to 3 (*Strongly agree*)³. Higher scores indicated

³ Score on all 7-point scales using -3 to +3 were reset to score from 1 to 7 to be consistent across scales in the survey.

perceptions of social norms that are more accepting of the target outgroup. This scale had acceptable reliability ($\alpha = .73$).

Outcome Variables

Feeling Thermometer

The first measure of intergroup attitudes was a measure of affect (Esses et al., 1993). The feeling thermometer is a single-item scale. Participants are presented with an image of a thermometer with a 0° to 100° scale. The 0° point is labelled “extreme coldness,” 50° point is labelled “neither coldness nor warmth”, and the 100° point is labelled “extreme warmth.” Participants were asked to “Please consider your feelings towards members of the South-Asian (White) community in general,” and to enter a number between 0 and 100 to represent this feeling. Therefore, higher scores represent greater warmth of feelings towards members of the target outgroup.

Neo-racism Scale

The second measure of intergroup attitudes was Tougas et al.’s (2004) Neo-racism scale. This scale assesses Canadian beliefs about visible minorities and was adapted to the specific target outgroup of the current study. The scale has 13 items (e.g., “South-Asians coming to Canada should change their values and customs to conform with those of individuals of Canadian ancestry.”) that are responded to on 7-point scales ranging from 1 (Not at all true) to 7 (Absolutely true). Reliability of the scale was good ($\alpha = .80$). Higher scores on this scale indicate more racism (poorer attitudes) towards the

target outgroup. South-Asian participants did not respond to this item as it could not be easily adapted to fit attitudes towards a dominant ethnic/racial outgroup (re. Whites).

Intergroup Anxiety Scale

The intergroup anxiety scale used here was adapted from Stephan (1999). For this 6-item scale, the same stem (“When interacting with members of the South-Asian (White) community with whom I am unfamiliar I would feel ...”) is repeated for each of the six items, followed by a 10-point scale for each item (e.g., Not at all comfortable ... Extremely comfortable; Not at all confident ... Extremely confident). Participants are prompted to read and consider each scale carefully before responding. Reliability of this scale was good ($\alpha = .84$). Higher scores on this scale indicate higher levels of anxiety in interactions with the target outgroup.

Willingness to Interact Scale

The final measure of outgroup attitudes was an adapted version of Stephan’s (1999) intergroup interaction scale. As a measure of behavioural intentions, the items in this scale evaluated the participant’s willingness to interact with the target outgroup (e.g., “I would not hesitate to be in a work group with South-Asians (White)”) and a willingness to act on behalf of that group (e.g., “If a South-Asian (White) were being unfairly criticized in a work or school setting, I would not hesitate to intervene on their behalf”). Participants respond on 7 point scales from -3 (Strongly disagree) to 3 (Strongly

agree). Higher scores on this scale indicate a greater willingness to interact with and act on behalf of, the target outgroups. Reliability on this scale was good ($\alpha = .84$).

Results

Table 1 provides the means, standard deviations and intercorrelations for extended contact, perceived ingroup norms, ingroup identification, and the four outcome variables. Extended contact was significantly related to perceived ingroup norms and to the four measures of intergroup attitudes. Additionally, ingroup norms were significantly related to each of the intergroup attitudes. These relationships are important for meeting the criteria proposed for mediational analyses by Baron and Kenny (1986).

Table 1. Descriptive Statistics and Intercorrelations for Sample

	N	Mean	SD	1.	2.	3.	4.	5.	6.
1. Extended contact	353	3.59	1.57						
2. Ingroup identification	353	5.11	1.40	-.025					
3. Ingroup norms	353	3.34	1.15	.186**	.053				
4. Feeling thermometer	352 ^a	64.00	20.63	.336**	-.172**	.371**			
5. Neo Racism	275 ^b	3.59	0.87	-.150*	.213**	-.281**	-.492**		
6. Intergroup anxiety	353	4.966	1.58	-.165*	.066	-.240**	-.416**	.231**	
7. Willing to interact	353	5.581	1.15	.296**	-.248**	.264**	.531**	-.362**	-.408**

^a One participant did not answer this item.

^b South-Asian participants did not respond to this measure.

* indicates a correlation of $p < .05$

** indicates $p < .01$.

Preliminary Analyses

Prior to the mediational analyses, several analyses were conducted to determine if the decision to include all three ethnic groups in these analyses was supportable. Table 2 displays means and standard deviations for extended contact and each outcome variable

by ethnic group. An ANOVA followed by Bonferroni post hoc tests indicated that the means for Chinese participants were significantly lower than White and South-Asian participants on extended contact, $F(2, 350) = 16.43, p < .001$. Chinese participants were

Table 2. Means by Ethnic Group with Extended Contact and Outcome Variable

	N	Mean	SD	Beta (EC→DV)
Extended Contact				
Chinese	137	3.01 _a	1.61	
White	138	3.88 _b	1.48	
South-Asian	78	4.06 _b	1.39	
Feeling Thermometer				
Chinese	137	55.21 _a	19.81	.355**
White	138	67.57 _b	19.28	.154
South-Asian	77	73.39 _b	18.50	.260*
Neo-racism				
Chinese	137	3.62 _a	0.68	-.255**
White	138	3.56 _a	1.02	-.075
South-Asian	78	N/A	N/A	N/A
Intergroup Anxiety				
Chinese	137	5.38 _a	1.45	-.282**
White	138	4.66 _b	1.55	.056
South-Asian	77	4.77 _b	1.72	-.110
Willing to Interact				
Chinese	137	5.04 _a	1.25	.348**
White	138	6.00 _b	0.84	.113
South-Asian	78	5.78 _b	1.06	.066

Note. Means in the same section that do not share subscripts differ significantly $p < .05$ using Bonferonni post hoc tests.

* indicates a significant relationship at $p < .05$

** indicates a significant relationship at $p < .01$.

also lower than the other two ethnic groups on the feeling thermometer, $F(2, 349) = 25.62, p < .001$, and the willingness to interact scale $F(2, 350) = 29.71, p < .001$, and

Chinese participants were significantly higher than the other two ethnic groups on levels of intergroup anxiety, $F(2, 350) = 19.85, p < .001$. There were no significant differences between Chinese and Whites on the Neo-racism scale. White and South-Asian participants did not differ on any of the intergroup attitude variables. Thus, there were some mean differences between ethnic groups. In addition, the relationships between quantity of extended contact and the outcome variables were consistently stronger for Chinese participants. However, all but one of the relationships was in the predicted direction (see Table 2). Considering the common pattern, it was determined that the three ethnic groups would be combined into a single sample for the test of the first set of hypotheses, that extended contact would improve outgroup attitudes and that this effect would be mediated by perceived ingroup norms.

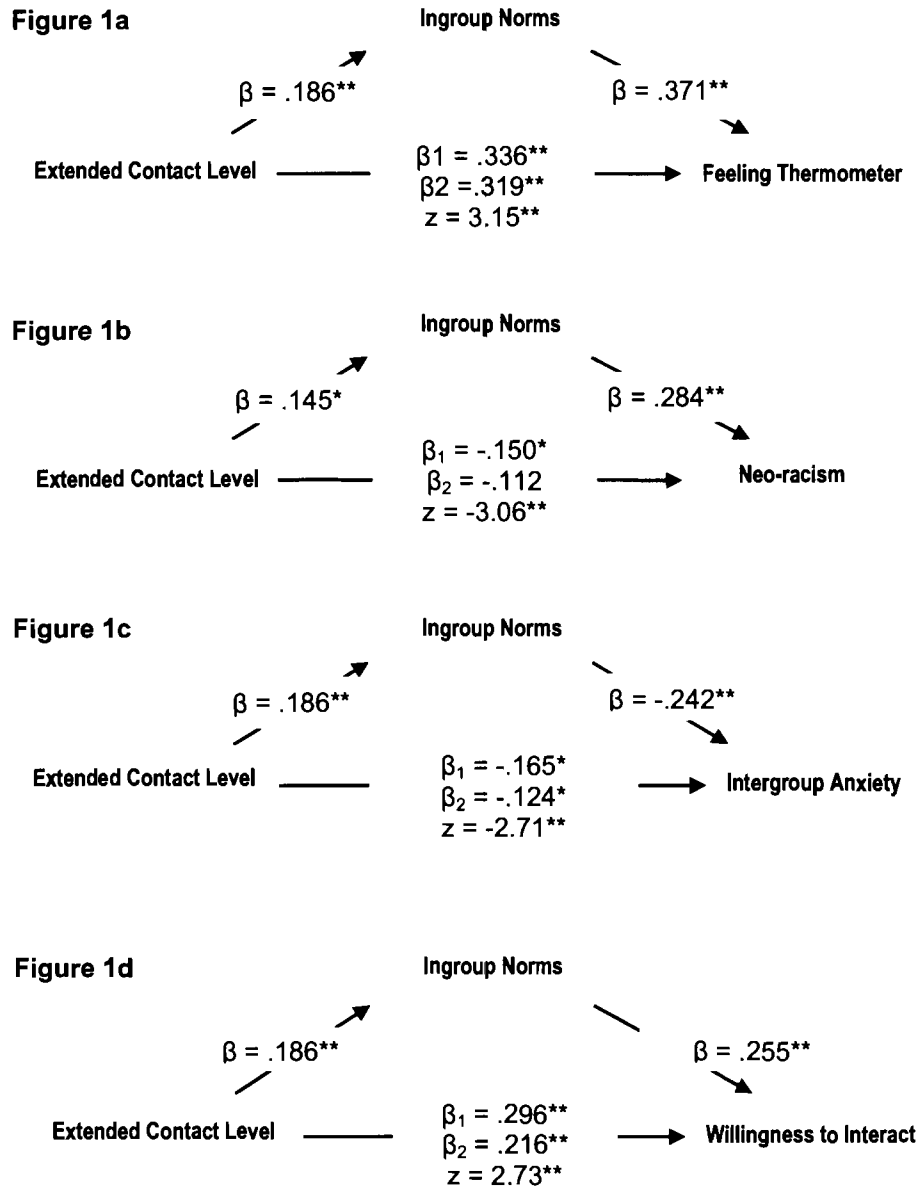
A curvilinear relationship between extended contact and intergroup attitudes was predicted for high identifiers. Thus, both linear and quadratic regression analyses were run on all relationships for extended contact, the measures of intergroup attitudes, and the mediating variable (perceived ingroup norms). No significant improvements in any of the models were found with the addition of the quadratic. Therefore, all reported results are based on linear regressions only.

Hypotheses 1 and 1a:***Effects of Extended Contact on Intergroup Attitudes with Perceived Ingroup Norms as a Mediator***

The first hypothesis stated that greater quantities of extended contact will be associated with more positive intergroup attitudes. Additionally, this effect will be, at least partially, mediated by perceptions of ingroup norms regarding intergroup attitudes. Following the procedures described by Baron and Kenny (1986), regressions were conducted for the relationships between extended contact and the four outcome variables and the relationship between extended contact and perceptions of ingroup norms. Finally, regressions predicting each of the four outcome variables including both extended contact and perceived ingroup norms as predictors were performed.

Figure 1 shows each of the four resulting mediational models as well as the beta weights for each relationship. All four models show a pattern consistent with the hypothesis. Supporting hypothesis 1, there were significant relationships between extended contact and each of the four measures of intergroup attitudes. In addition, there was a significant positive relationship between extended contact and perceived ingroup norms. Finally, there were significant relationships between perceived ingroup norms and each of the four measures of intergroup attitudes. Consistent with hypothesis 1a, Sobel tests for each of the four mediation model (reported as z-scores) indicated significant, but partial, mediation of the extended contact/intergroup attitude relationship by perception of ingroup norms.

Figure 1. Mediation Model for Entire Sample (N = 353)



β_1 is the unmediated beta while β_2 is the beta after mediation by perceived ingroup norms

* indicates a significant relationship at $p < .05$

** indicates a significant relationship at $p < .01$.

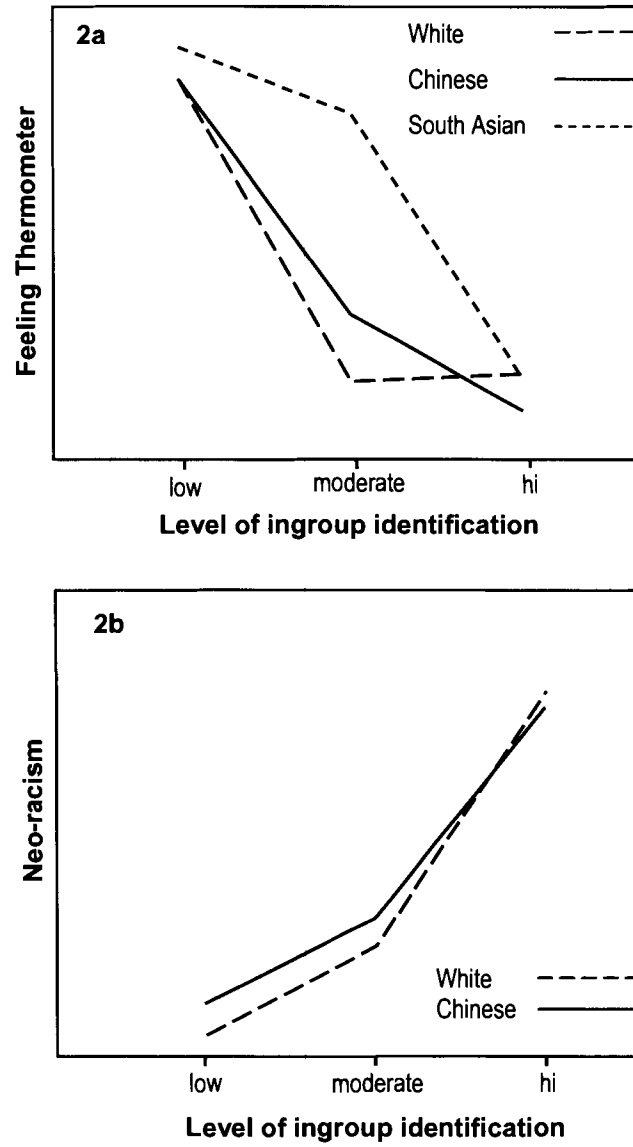
Hypothesis 2:***Moderation by Level of Ingroup Identification***

Chinese, White, and South-Asian participants were split into high, moderate, and low identifier subgroups based on each ethnic group's distribution of scores on the measures of ingroup identification. This generated relatively equal representation by ethnic group in each level of ingroup identification. Identification scores were then dummy coded into 0 = low identifiers, 1 = moderate identifiers, and 2 = high identifiers.

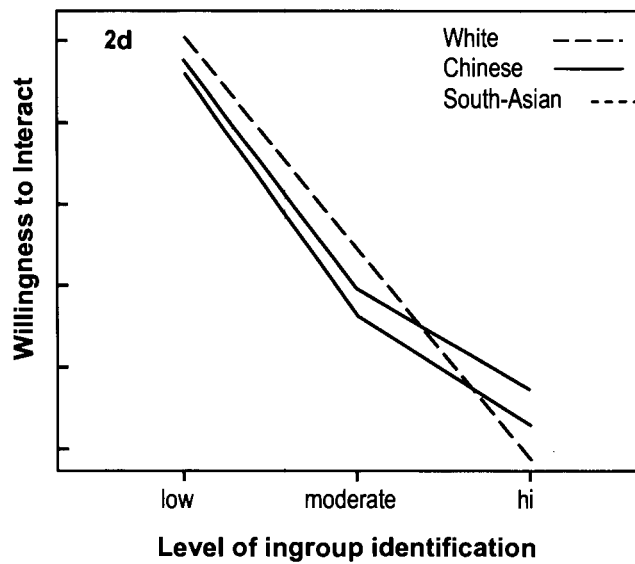
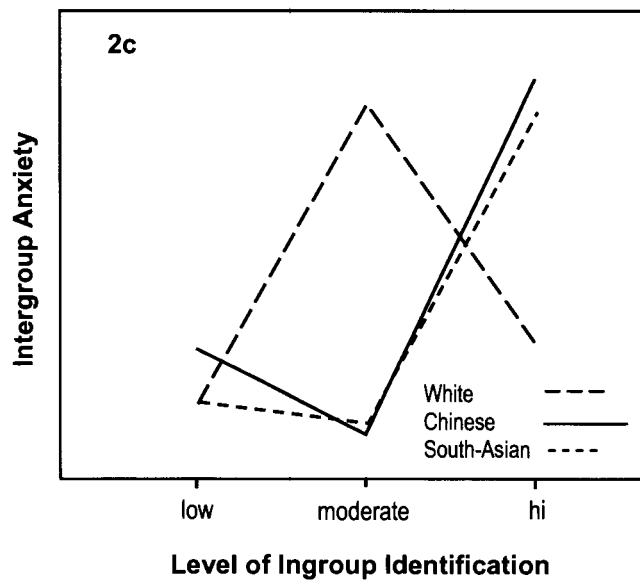
The patterns of scores for each outcome measure across levels of identification for each ethnic group are plotted in Figure 2.⁴ The patterns seen here provide support for the decision to combine these three groups, as the pattern of changes in means by level of identification are consistent across the ethnic groups on three of the four measures of intergroup attitudes. The only exception to this pattern is the intergroup anxiety scale, which has White participants at moderate levels of ingroup identification showing the highest levels of anxiety in comparison to the other two ethnic groups where those at the highest levels of ingroup identification show the most anxiety.

⁴ The figure shows only patterns of change, ignoring the starting points on the scales.

Figure 2. Changes in Means Across Levels of Ingroup Identification for Intergroup Attitudes



Note. These figures show only patterns of change, ignoring the starting points on the scales.



Note. These figure shows only patterns of change, ignoring the starting points on the scales.

The means for each of the outcome variables at each level of ingroup identification are presented in Table 3. Results of an ANOVA comparing these identification subgroups for the feeling thermometer indicated significant differences, $F(1, 349) = 3.51, p < .011$. Post hoc Bonferroni Tests indicated that low identifiers were significantly warmer towards the outgroup than high identifiers ($p < .034$). Moderate identifiers fell between

Table 3. Means by Level of Identification on Outcome Variable

	N	Mean	SD
Feeling Thermometer			
Low ID	118	68.00 _a	19.90
Moderate ID	115	62.90 _{ab}	20.80
High ID	119	61.20 _b	20.70
Neo-racism			
Low ID	95	3.39 _b	0.86
Moderate ID	89	3.53 _b	0.81
High ID	91	3.86 _a	0.86
Intergroup Anxiety			
Low ID	118	4.80 _a	1.62
Moderate ID	115	4.93 _a	1.49
High ID	120	5.16 _a	1.62
Willingness to Interact			
Low ID	118	5.89 _a	1.09
Moderate ID	115	5.53 _b	1.14
High ID	120	5.32 _b	1.15

Note. Means in the same section that do not share subscripts differ at least at $p < .05$ using Bonferroni post hoc tests.

and did not differ significantly from either of the other group. Results of an ANOVA comparing these identification subgroups for the Neo-racism scale indicated significant differences, $F(1, 272) = 7.55, p < .001$. Post hoc Bonferroni tests indicated that high

identifiers scored significantly higher than both low and moderate identifiers at $p < .001$ and $p < .026$, respectively. The difference between low and moderate identifiers was not significant. Results of an ANOVA comparing these identification subgroups for intergroup anxiety yielded no significant effects. Results of an ANOVA comparing these identification subgroups for willingness to interact indicate significant differences, $F(1, 352) = 7.69, p < .001$. Post hoc Bonferroni tests indicated that low identifiers differed significantly from both moderate and high identifiers at $p < .047$ and $p < .001$, respectively. The difference between moderate and high identifiers was not significant.

Hypothesis 2 predicted that level of ingroup identification would moderate the mediational effects of perceived ingroup norms on the extended contact/intergroup attitudes relationship. Specifically, it was predicted that for the low identification subgroup there would be little or no perceived ingroup norms/intergroup attitudes relationship and, thus, the extended contact/intergroup attitudes relationship would not be mediated by perceived ingroup norms. For the moderate identification subgroup it was predicted that the extended contact/intergroup attitudes relationship would be strongly mediated by perceived ingroup norms. For the high identification subgroup it was predicted that the extended contact/perceived ingroup norms relationship would be weaker than for the moderate identification subgroup as this group would be less swayed by the actions of ingroup members they may not see as representative of the ingroup. Thus, there would be a weaker mediational effect on the extended contact/intergroup attitudes relationship for high identifiers than for the moderate identification subgroup. It was also predicted that the influence perceived norms had on measures of intergroup

attitudes would be minimal for low identifiers, significant for moderate identifiers and stronger yet for high identifiers.

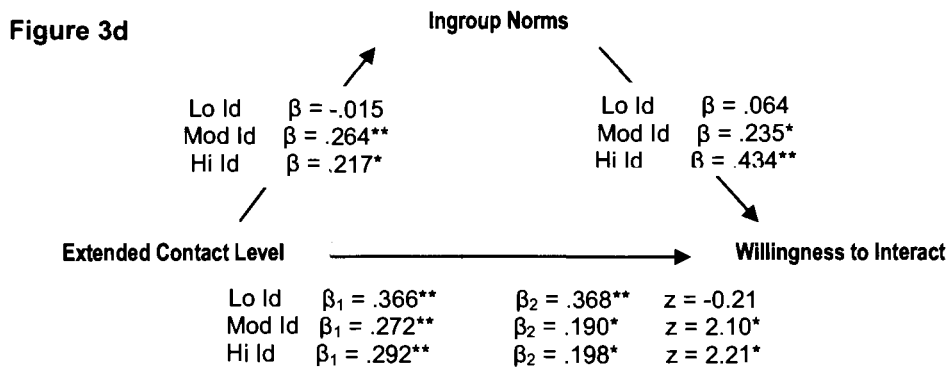
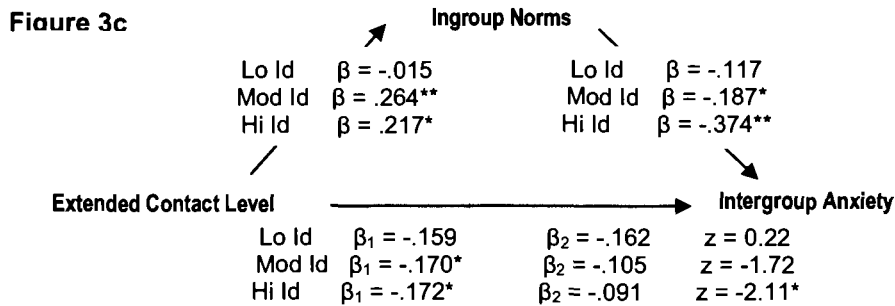
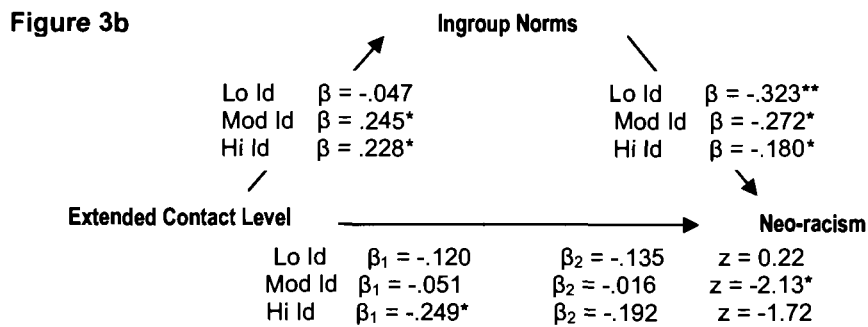
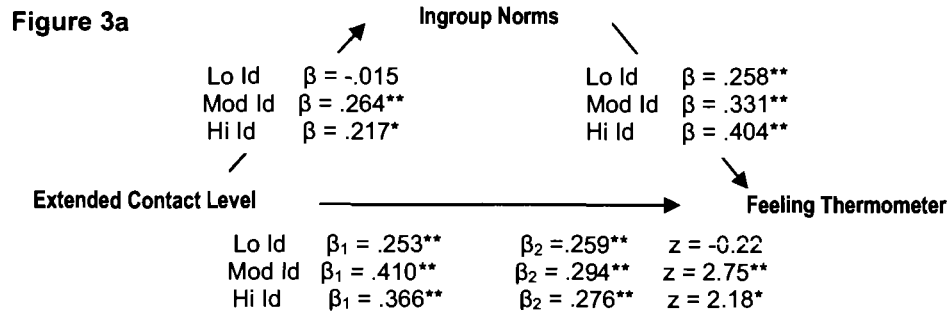
The first consideration for moderation is that the moderator not be correlated with the predictor variable. The correlation between ingroup identification and extended contact was non-significant (see Table 1).

The moderation hypothesis was partially supported by the findings of the current study. Figure 3 shows the mediational models for each of the 4 outcome variables. Beta weights and z-scores for each level of the moderator variable are shown with β_1 being the unmediated weight of the extended contact/intergroup attitude relationships.

Feeling Thermometer

The relationship between extended contact and the feeling thermometer (Figure 3a) was statistically significant at all levels of identification. The betas for the extended contact/perceived ingroup norms relationship followed the predicted pattern, in that the beta for the moderate identification subgroup was the strongest. It was, in fact, significantly greater than for the low identification subgroup, $F(2, 229) = 8.76, p < .01$. This relationship for the high identification subgroup, was not significantly less than that of moderate identifiers and marginally stronger than that for low identifiers ($p < .075$). The relationship between perceived ingroup norms and the feeling thermometer were highly significant ($p < .01$) at all levels of identification and they showed the predicted pattern, with a steady increase in betas as levels of identification with ingroup increased. However, these differences between the three betas were not statistically significant.

Figure 3. Mediation Models for Each Intergroup Attitude Measure Across Levels of Ingroup Identification



β_1 is the unmediated beta while β_2 is the beta after mediation by perceived ingroup norms

* indicates a significant relationship at $p < .05$

** indicates a significant relationship at $p < .01$.

Nonetheless, the predicted mediation pattern did emerge with Sobel tests indicating no mediation by perceived ingroup norms for those of the low identification subgroup, and significant, but partial, mediation for both the moderate identification ($p < .01$) and high identification subgroups ($p < .05$).

Neo-racism Scale

The relationship between extended contact and Neo-racism (Figure 3b) was negative and statistically significant for only those in the high identification subgroup. Although South-Asian participants did not respond to this scale, the betas for the extended contact/perceived ingroup norms relationship followed the same pattern as the previous analysis but without the significant differences in betas by level of identification. The perceived ingroup norms/Neo-racism relationship was significant at all levels of identification and no statistically significant differences were found between the betas for the three identification subgroups. The predicted mediation did not occur for this measure with mediation only occurring for the moderate identifier subgroup, but this group did not meet other criteria for mediation (non-significant IV – DV relationship).

Intergroup Anxiety

The relationship between extended contact and intergroup anxiety (Figure 3c) was negative and significant for both the moderate identification and high identification subgroups. The extended contact/perceived ingroup norms relationships were the same as those for the feeling thermometer. The perceived ingroup norms/intergroup anxiety relationship showed the predicted pattern with this relationship being stronger as

identification increases, and resulted in statistically significant relationships for moderate and high identification subgroups. Significant differences between these betas were found. The strength of the relationship for low identification subgroup and the high identification subgroup differed significantly, $F(2, 234) = 4.56, p < .02$. The strength of the relationship found for moderate identifiers fell between these two but did not differ significantly from either. The results of the Sobel tests indicated significant mediation for the high identification subgroup ($p < .05$).

Willingness to Interact

The relationship between extended contact and willingness to interact (Figure 3d) was positive and statistically significant at all levels of ingroup identification. The extended contact/perceived ingroup norms relationships were the same as those for the feeling thermometer and the intergroup anxiety scale. The perceived ingroup norms/willingness to interact relationship showed the predicted pattern with this relationship being stronger as identification increases, and resulted in significant relationships for moderate and high identification subgroups. The beta of those the low identifier subgroup was significantly different from the moderate identifier subgroup, $F(2, 229) = 5.65, p < .005$, and from the high identifier subgroup, $F(2, 234) = 15.97, p < .001$. The differences for this relationship between the moderate identifier subgroup and the high identifier subgroup were not statistically significant. The results of the Sobel tests indicated significant, but partial, mediation by perceived ingroup norms for both the moderate identifier subgroup ($p < .05$) and high identifier subgroup ($p < .05$).

Discussion

The results of the current study found strong support for the extended contact effect across a variety of intergroup relationships, including attitudes of one minority group (Chinese) towards a second minority group (South-Asian), and across a set of four dependent variables. Additionally, a goal of the current study was to expand our understanding of the mechanisms that drive the extended contact effect. Specific to that task was the investigation of the mediating role of perceptions of ingroup norms regarding behaviours and attitudes towards outgroup members. The results confirmed that perceptions of intergroup norms did, as predicted by Wright and his colleagues (1997), partially mediate the extended contact effect. The fact that the mediation was only partial is not surprising as Wright et al. proposed other mechanisms that should also play a mediational role, including the inclusion of others and the outgroup in the self. Future research might consider the combined impact of these two mechanisms.

However, the current research went beyond simply testing the mediational role of ingroup norms. It also tested a more complex model including the moderating effects of level of ingroup identification. Considerable research has focused on the importance of identification with the ingroup as a determinant of cognitions and actions related to intergroup relations (e.g., Christenson et al., 2004; Tropp & Wright, 2001). It was hypothesised that ingroup norms would have much less influence over those whose identity was not tied to their ethnic group membership while moderate and high identifier's attitudes should be more strongly influenced by their perceptions of ingroup

norms. Thus, if extended contact exerts influence on intergroup attitudes in part because of its influence on ingroup norms regarding the outgroup, then extended contact should have more influence on intergroup attitudes for those who identify with their ingroup.

The work of Castano et al. (2002), however, suggests that those whose identities are very strongly tied to their ethnic/racial group may be more likely to see ingroup members who do not fit the prototype of the group as unrepresentative. This leads to the prediction of a curvilinear relationship between extended contact and ingroup norms for high identifiers. Thus, when relatively few ingroup members engage in cross-group friendships, high identifiers may dismiss them as deviant and their actions as irrelevant to ingroup norms. Therefore, it would take knowledge of more cross-group friendships to convince high identifiers that their ingroup's norms were positive towards the outgroup. Thus, it was predicted that those who fell in the middle ground between the two extremes in terms of ingroup identification would show the greatest effect of extended contact on intergroup attitudes and the strongest mediation of that effect by perceived ingroup norms.

The mediational models that emerged were consistent, for the most part, with these predictions. Across all four measures of intergroup attitudes, there was no mediational effect by perceived ingroup norms for those with low ingroup identification. However, this was not always due to the predicted lack of a relationship between norms and intergroup attitudes. Although no specific predictions were made regarding the relationship between extended contact and perceptions of ingroup norms for low

identifiers, there was no reason to assume observing cross-group friendships would not influence perception of ingroup norms. This, however, is what was found. The extended contact/ingroup norms relationship for low identifiers was essentially zero.

As predicted, ingroup norms played a greater role in mediating the extended contact/intergroup attitudes relationship for moderate and high identifiers. Partial mediation by ingroup norms was found for moderate identifiers on three of the measures of intergroup attitudes. Only on intergroup anxiety was there no mediation found. This may have been the result of the distinctively different pattern found for moderately identified White participants. Additionally, mediation by ingroup norms on Neo-racism for moderate identifiers was found despite the lack of a significant relationship between extended contact and Neo-racism. This reduced effect of extended contact may have occurred due to the nature of the questions on this measure as they are more reactive than the other intergroup attitude measures used in the current study and participants may be particularly aware of the socially desirable responses on this type of measures. Partial mediation by perceived ingroup norms was also found, as predicted, for high identifiers. Again, this mediation was found on three of the four measures of intergroup attitudes with mediation not found for Neo-racism. However, the predicted curvilinear relationships for high identifiers were not found. The failure to show the predicted curvilinear relationship may result from the rather high levels for extended contact found for the sample in this study and to high identifiers reporting known cross-group friendships for only those they saw as representative of the ingroup. The average number of known friendships in the sample was greater than 2 and did not differ across levels of

identification. This is much higher than the levels reported in previous research (Wright et al., 1997; Paolini et al., 2004).

Specific predictions were also made for the extended contact/ ingroup norms and ingroup norms/ intergroup attitude relationships across the levels of identification. The predicted pattern for the extended contact/perceived ingroup norms relationship was that moderate identifiers would have a stronger relationship than high identifiers. This is the pattern that was found. As mentioned above, no specific prediction was made for this relationship among low identifiers. However, as mentioned above this relationship was essentially zero and significantly weaker than for moderate identifiers.

The predicted pattern for the relationship between perceived ingroup norms and intergroup attitudes was that this relationship would be steadily stronger as identification with one's ethnic group increased. This pattern emerged for three of the four intergroup attitudes measures. As predicted, perceptions of ingroup norms had no influence on intergroup anxiety or willingness to interact for those with low identification with their ethnic group. Low identifiers did show significant influence of ingroup norms on feelings of warmth but this relationship was weaker for low identifiers than the other two identification subgroups although these differences failed to reach significance. For those moderately or highly identified with their ethnic group, perceptions of ingroup norms exerted strong influence on intergroup anxiety, the willingness to interact and the feeling thermometer. Although the differences among levels of identification were not significant, the pattern that arose for the relationship between perceptions of ingroup

norms and Neo-racism across the three level of ingroup identification was inconsistent with predictions.

Although no specific predictions were made regarding differences between ethnic groups on their experiences of extended contact, perceptions of ingroup norms, and measures of intergroup attitudes, these were analysed to determine if the decision to include the three ethnic groups in the analysis was supportable. While the patterns of influence were similar, there were differences in some of these effects across ethnic groups, with Chinese participants showing stronger relationships between extended contact and intergroup attitudes. This is in contrast to the findings of Tropp and Pettigrew (2005), which show that intergroup contact tends to have greater effect for members of the majority group than for minority group members. However, it should be noted that in the current study the minority group (Chinese) were describing their experiences with another ethnic minority group. Thus, what is being compared in the current study is the impact of extended contact for the dominant group (Whites) with a minority group (South Asians) and the impact of extended contact for a minority group (Chinese) with another minority group (South Asian). It is possible in this case that the lower levels of reported extended contact and significantly less positive intergroup attitudes of among the Chinese group compared to the Whites can account for the stronger relations between these two variables. That is there may be more “room” for extended contact to influence attitudes for Chinese participants. As little research has been conducted in the area of minority to minority interactions this comparison is an unusual one and not necessarily comparable to the comparison made between minority and majority groups in previous research.

Nonetheless, this data shows that greater extended contact can be strongly associated with more positive attitudes in this case of a minority/minority relationship.

The impact of ingroup identification on intergroup anxiety was quite different for Whites than for the other groups. In both the Chinese and South Asian groups the highest intergroup anxiety was felt by the most identified and no difference in anxiety for low and moderate identifiers. However, it was moderately identified Whites who reported the highest levels of intergroup anxiety. High identifying Whites had levels of anxiety almost as low as low identifiers. These findings suggest that intergroup anxiety may involve different processes for Whites than for minority group (see Shelton, Richeson, & Vorauer, 2006) even when minority groups are interacting with other minority groups.

Possible Limitations

A general limitation in this type of research is the nature of the resulting data. This is cross-sectional data and correlational and mediational analyses cannot firmly establish causal relations. Although past experimental data has demonstrated the causal impact of extended contact (Cameron et al., 2006; Wright et al., 1997) on intergroup attitudes, the current data must be interpreted with caution in terms of causal inferences. In addition, Preacher and Hayes (2004) have pointed out a number of reasons that caution should be used in interpreting mediation models, and, Spencer, Zanna, and Fong (2005) point out a number of weaknesses in the Baron and Kenny measurement-of-mediation procedures. With these things in mind, it is hoped that future experimental work manipulating perceptions of ingroup norms will reinforce the current findings.

Direct contact was not controlled for in the current study, as it has been in some other research on extended contact (e.g., Wright et al., 1997). However, this was done intentionally due to the mediational role proposed for perceived ingroup norms. Ingroup norms are thought to play a very different role in direct contact effects. Allport (1954) proposed that positive norms are a necessary precursor of successful direct contact. Thus, positive norms are described as a moderator of direct contact effects, in contrast to the mediating role of norms described in the case of extended contact. This distinction raises an interesting theoretical possibility. Direct and extended contact may have a cyclical relationship with ingroup norms playing a critical role. If a few individuals break with existing norms and form cross-group friendships (direct contact), this may set up a cycle whereby observation of the cross-group friendships of others (extended contact) leads to perceptions of more positive outgroup norms. These perceptions of new norms lead directly to more positive attitudes through the extended contact effect, but in line with Allport's (1954) prediction, these more positive norms also set in place the conditions for more effective positive direct contact, and thus to further improvement in attitudes when direct contact occurs, and then to more extended contact as others observe more cross-group friendships, etc.

Conclusions

The current study provides evidence consistent with previous research on the extended contact effect. This study also extends previous work by indicating that extended contact works across a variety of interethnic relationships, including two

understudied relationships, minority attitudes towards a dominant group and minority attitudes towards another minority group. Additionally, the current study included a variety of intergroup attitude measures that addressed warmth of feelings, anxiety, beliefs about an outgroup, and behavioural intentions towards outgroup members.

The current study also provides evidence for the important role of ingroup norms as a mediator of the effect of extended contact on a variety of intergroup attitude measures. Additionally, the current study shows that the level of identification with one's ingroup moderates the mediational role that perception of ingroup norms plays. An even more complete investigation that includes other proposed psychological mediators of the extended contact effect is required to identify the reasons why extended contact's effect on intergroup attitudes was only partially mediated by perceived ingroup norms and why in some cases (e.g., among low identifiers) more extended contact is associated with more positive attitudes despite a lack of mediation by perceived ingroup norms.

With changing population demographics and the inevitable increase in intergroup contact, the current study paint a rather optimistic picture. It appears simply observing others engaged in cross-group friendships and the recognition that these friendships are accepted by one's ingroup may facilitate positive intergroup attitudes in multiethnic populations.

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Appendix.

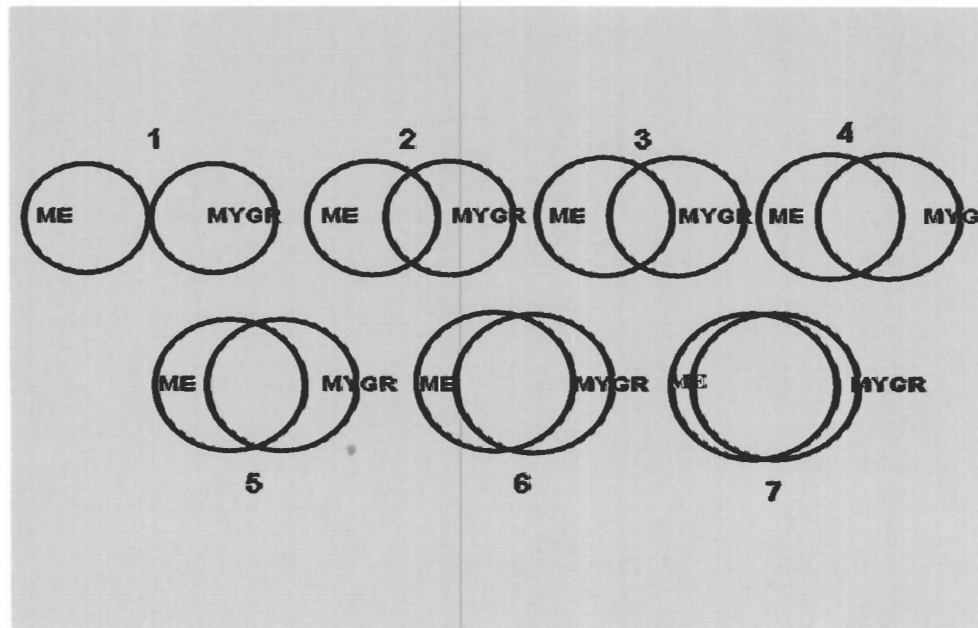
Measures of Intergroup Attitudes

Quantity of Extended Contact

1. How many members of your own ethnic/racial group do you know who have South Asian (White) friends?
(By friend, we mean someone they have regular conversations with.)

Inclusion of Ingroup in Self Scale

1. Please think about your relationship with your own ethnic/racial group. Choose the two circles that best describe your connection to your own group.
 - a. ME= self MYGR = your own ethnic/racial group



Ingroup Identification Items

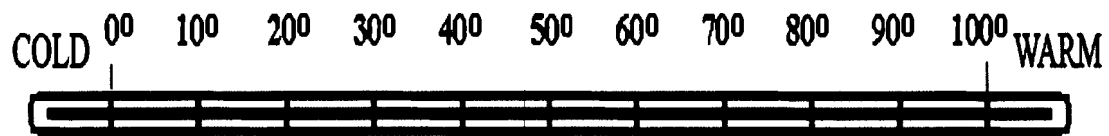
1. Being a member of my ethnic/racial group is a very important part of who I am.
2. I am proud to be a member of my ethnic/racial group.
3. I am just like most members of my ethnic/racial group.

Ingroup Norms Items

1. In general, most members of my ethnic/racial group hold a positive attitude towards South Asian (White)S.
2. In general, most members of my ethnic/racial group believe it is okay to dislike South Asian (White)S.
3. In general, most members of my ethnic/racial group believe it is important to treat South Asian (White)S with respect.
4. In general, most members of my ethnic/racial group believe it is okay for members of our group to have friends who are South Asian (White).

Feeling Thermometer

1. Please consider your feelings towards members of the South Asian (White) community in general. Enter ANY number between 0 and 100 to represent the degree of warm feelings you have towards this group.
 - a. 0° = extreme coldness,
 - b. 50° = neither coldness nor warmth,
 - c. 100° = extreme warmth



Neo-racism

1. South Asians (Whites) will make progress in Canadian society by being patient and not pushing too hard.
2. Over the past few years, South Asians (Whites) have obtained more from the Government than they deserve.
3. Due to social pressures, managers frequently must hire under qualified South Asians (Whites).
4. It is difficult to comment on South Asians (Whites) without being referred to as a racist.
5. Culturally speaking, Canada has been enriched by the arrival of South Asians (Whites).
6. South Asians (Whites) have values that do not conform with Canada's culture.
7. South Asians (Whites) coming to Canada should change their values and customs to conform with those of individuals of Canadian ancestry.
8. The identity of people of Canadian ancestry has been enriched by the arrival of South Asians (Whites).
9. Upon arrival in Canada, South Asians (Whites) really try to integrate.
10. South Asians (Whites) try their best to adapt to the Canadian way of life.
11. If members of South Asian (White) COMMUNITY are unhappy with their situation, they should return to their own country.
12. Economically speaking, Canada has benefited from the arrival of South Asians (Whites).
13. High unemployment has nothing to do with the presence of South Asians (Whites).

Intergroup Anxiety

1. When interacting with South Asians (Whites) who I don't know, I would feel ...
 - a. Not at all comfortable → extremely comfortable (R)
 - b. Not at all uncertain → extremely uncertain
 - c. Not at all confident → extremely confident (R)
 - d. Not at all awkward → extremely awkward
 - e. Not at all anxious → extremely anxious
 - f. Not at all at ease → extremely at ease (R)

Willingness to Interact

1. I would not hesitate to invite South Asians (Whites) to my home.
2. I would not hesitate to accept an invitation to be a guest in the home of a(n) South Asian (White).
3. I would not hesitate to be in a work group with South Asians (Whites).
4. I would not hesitate to go out to a restaurant with members of the South Asian (White) community.
5. If a(n) South Asian (White) were being unfairly criticized in a work or school setting, I would not hesitate to intervene on their behalf.
6. I would not hesitate to stand up to a member of my own ethnic/racial group if they told an offensive "joke" about the South Asian (White) community.
7. I would be willing to play an active role in an organization dedicated to improving relations between my own ethnic/racial group and the South Asian (White) community.