

**EAST ASIAN CHILDREN'S INTERGROUP CONTACT
EXPERIENCES: AN INVESTIGATION OF OUTGROUP
ATTITUDES, SHARING BEHAVIOUR AND ANXIETY AS A
MEDIATOR**

by

Lisa S. Giamo
B. A., Pennsylvania State University, 2006

THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

In the
Department of Psychology

© Lisa Giamo 2008

SIMON FRASER UNIVERSITY

Spring 2009

All rights reserved. This work may not be
reproduced in whole or in part, by photocopy
or other means, without permission of the author.

APPROVAL

Name: Lisa S. Giamo

Degree: Master of Arts (Psychology)

Title of Thesis: East Asian Children's Intergroup Contact Experiences: An Investigation of Outgroup Attitudes, Sharing Behaviour and Anxiety as a Mediator

Chair: Dr. Mark Blair
Assistant Professor

Dr. Stephen Wright
Senior Supervisor
Professor

Dr. Michael Schmitt
Supervisor
Assistant Professor

External Examiner: Dr. Lindsey Cameron
Lecturer
Department of Psychology
University of Kent

Date Defended : December 10, 2008



SIMON FRASER UNIVERSITY
LIBRARY

Declaration of Partial Copyright Licence

The author, whose copyright is declared on the title page of this work, has granted to Simon Fraser University the right to lend this thesis, project or extended essay to users of the Simon Fraser University Library, and to make partial or single copies only for such users or in response to a request from the library of any other university, or other educational institution, on its own behalf or for one of its users.

The author has further granted permission to Simon Fraser University to keep or make a digital copy for use in its circulating collection (currently available to the public at the "Institutional Repository" link of the SFU Library website <www.lib.sfu.ca> at: <<http://ir.lib.sfu.ca/handle/1892/112>>) and, without changing the content, to translate the thesis/project or extended essays, if technically possible, to any medium or format for the purpose of preservation of the digital work.

The author has further agreed that permission for multiple copying of this work for scholarly purposes may be granted by either the author or the Dean of Graduate Studies.

It is understood that copying or publication of this work for financial gain shall not be allowed without the author's written permission.

Permission for public performance, or limited permission for private scholarly use, of any multimedia materials forming part of this work, may have been granted by the author. This information may be found on the separately catalogued multimedia material and in the signed Partial Copyright Licence.

While licensing SFU to permit the above uses, the author retains copyright in the thesis, project or extended essays, including the right to change the work for subsequent purposes, including editing and publishing the work in whole or in part, and licensing other parties, as the author may desire.

The original Partial Copyright Licence attesting to these terms, and signed by this author, may be found in the original bound copy of this work, retained in the Simon Fraser University Archive.

Simon Fraser University Library
Burnaby, BC, Canada



SIMON FRASER UNIVERSITY
THINKING OF THE WORLD

STATEMENT OF ETHICS APPROVAL

The author, whose name appears on the title page of this work, has obtained, for the research described in this work, either:

(a) Human research ethics approval from the Simon Fraser University Office of Research Ethics,

or

(b) Advance approval of the animal care protocol from the University Animal Care Committee of Simon Fraser University;

or has conducted the research

(c) as a co-investigator, in a research project approved in advance,

or

(d) as a member of a course approved in advance for minimal risk human research, by the Office of Research Ethics.

A copy of the approval letter has been filed at the Theses Office of the University Library at the time of submission of this thesis or project.

The original application for approval and letter of approval are filed with the relevant offices. Inquiries may be directed to those authorities.

Bennett Library
Simon Fraser University
Burnaby, BC, Canada

ABSTRACT

Although there have been numerous theoretical advances in intergroup contact theory over the past decade, many of these have yet to be fully tested among minority group members and children. Early school years may be particularly important, as for many children this can be their first meaningful contact with members of other groups outside the home environment. This study examined whether intergroup contact impacts East Asian children's outgroup evaluations and sharing behaviour, as well as the mediating role of anxiety in this relationship. Contact was operationalized in terms of exposure determined by classroom ethnic composition and in terms of participants' cross-group friendships. A photo sorting task provided measures of outgroup evaluations and intergroup anxiety, and a sharing task assessed sharing behaviour with relevant outgroups. Overall, results demonstrated that both exposure and friendship had positive effects on East Asian children's outgroup attitudes. Intergroup anxiety was also shown to partially mediate these relationships.

Keywords: intergroup contact; minority children; anxiety; outgroup attitudes; sharing behaviour

Subject Terms: children – attitudes (Psychology); social interaction; minorities; race relations

To my family and partner

ACKNOWLEDGEMENTS

I would like to thank everyone who contributed to this thesis, both intellectually and personally.

First, I would like to thank my senior supervisor, Dr. Stephen C. Wright, for his guidance throughout this whole process. His insight and thoughtful comments contributed to both the writing and sound theoretical framework of this work.

I am also grateful to my co-supervisor, Dr. Michael T. Schmitt, for providing alternative perspectives during both the analytic and writing phases of this project.

Thanks also to the SFU Community Trust Endowment Fund and all of our collaborators on this project. In particular, I would like to thank Dr. Jane Friesen, Dr. Jasmina Arivofic and Andreas Ludwig for their time and intellectual contributions. Their hard work and dedication to this project contributed substantially to its success.

I would like to express my gratitude to the Psychology department for their exceptional administrative assistance. To my classmates for all their support.

Finally, I am indebted to my family and friends for being a constant source of support. I would especially like to thank my parents, my brother and my nana for always believing in me. A very special thanks to my partner, Ehren, for being there every step of the way.

TABLE OF CONTENTS

Approval	ii
Abstract	iii
Dedication	iv
Acknowledgements	v
Table of Contents	vi
List of Figures	viii
List of Tables	ix
Introduction	1
Intergroup Contact	1
Cross-group Friendship	4
Intergroup Behaviour	5
Intergroup Anxiety	6
Current Research	9
Minority Group Perspective	9
Cross-group Friendship	9
Intergroup Evaluations and Behaviour	11
The Role of Intergroup Anxiety	12
Hypotheses	13
Methods	15
Participants	15
Researchers	15
Procedures and Materials	16
Exposure to Whites	17
Cross-group Friendship	18
Dependent Measures	19
Evaluations of Outgroup Targets	19
Anxiety regarding White Targets	20
Intergroup Behaviour	21
Results	23
Exposure to Whites	24
Friendship with Whites	25
Friendship with South Asians	26
Intergroup Anxiety as a Mediator	27
Model 1	28

Model 2a	29
Discussion	31
Key Findings.....	32
Limitations	35
Conclusions.....	35
Reference List.....	38

LIST OF FIGURES

Figure 1. Proposed mediational model 1	13
Figure 2. Proposed mediational model 2a.	14
Figure 3. Proposed mediational model 2b	14
Figure 4. Scared as a mediator between exposure to Whites and negative evaluations of White targets	29
Figure 5. Safe as a mediator between friendship Whites and positive evaluations of White targets	30

LIST OF TABLES

Table 1. Means, standard deviations and t-tests for measures of intergroup attitudes and behaviours by East Asians with Exposure or No Exposure to Whites.....	25
Table 2. Means, standard deviations and contrasts for measures of intergroup attitudes and behaviours by East Asians with No Outgroup friends, non-White outgroup friends and White friends.....	26
Table 3. Means, standard deviations and contrasts for measures of intergroup attitudes and behaviours by East Asians with No outgroup friends, non South Asian outgroup friends and South Asian friends.....	27

INTRODUCTION

Intergroup Contact

Intergroup contact has been established as one of the most successful ways of changing intergroup attitudes (Pettigrew & Tropp, 2000). Allport's (1954) *On the Nature of Prejudice* provided the basis for much of the research on intergroup contact, which has demonstrated that intergroup contact plays an important role in the reduction of prejudice (e.g., Dovidio, Gaertner, & Kawakami, 2003; Pettigrew & Tropp, 2006; Turner, Hewstone, & Voci, 2007). Recent meta-analytic findings reveal that increased contact with an outgroup member is associated with increased liking for that outgroup target, as well as more positive attitudes towards the whole outgroup (see Pettigrew & Tropp, 2000, 2006).

Although early contact research has focused on children and explored how intergroup contact may reduce intergroup conflict in these populations (e.g., Aronson, 1978; Brewer & Miller, 1984), the majority of subsequent research has focused on college students and adult populations (Pettigrew & Tropp, 2006). However, a growing literature has begun to revisit how intergroup contact influences the development of children's intergroup attitudes, specifically within the context of the school environment (e.g., Aboud, 2003; Cameron & Rutland, 2008; McGlothlin & Killen, 2006; Tropp & Prenevost, 2008). Several studies show that social interactions can positively affect children's intergroup attitudes (Tropp & Prenevost, 2008). Contact in a school environment may be especially

important, as children spend a considerable amount of time in a classroom setting. Research findings indicate that contact in schools among children from various ethnic groups is related to more positive intergroup attitudes (e.g., Aronson, 1978, Cook, 1985, Tropp & Prenevost, 2008).

Early school years may be particularly important, given that for many children this may be their first meaningful contact with members of other groups. Research has shown that children become cognizant of racial and ethnic differences in early childhood (e.g., Aboud, 2003). Additionally, persons they encounter in contact situations may influence children's emergent knowledge of different groups (e.g., Aboud, 2003; Tropp & Prenevost, 2008). Since children's intergroup attitudes can become less malleable with age (e.g., Aboud & Levy, 2000; Killen et al., 2007), it is important to understand how these early encounters are related to their development of racial and ethnic attitudes.

The main focus of the work on children, as in the adult literature, has been on how intergroup contact affects majority children's attitudes towards minority children (e.g., Aboud, 2003; Rutland, Cameron, Bennett, & Ferrell, 2005; Wright & Tropp, 2005). According to Tropp and Pettigrew's (2006) meta-analysis examining the relationship between contact and prejudice in majority and minority status groups, only a small amount of the literature (20.3%) has examined the effects of contact on minority group members' attitudes. Despite a growth in recent empirical work on minority samples (e.g., Shelton & Richeson, 2006; Tropp, 2003) there remains a dearth of research assessing the impact of contact from a minority group perspective in both the adult and child literatures.

The little research on minority group members demonstrates that they face additional challenges in intergroup contact situations that inhibit the positive effects of contact, such as awareness of their disadvantaged social status and the possibility of being the target of discrimination (e.g., Plant & Devine, 2003; Hyers & Swim, 1998; Tropp, 2003). These studies provide evidence that intergroup contact may operate differently for minority group members, and emphasizes the need for further investigations.

The present study focuses on the impact of intergroup contact on children from an ethnic minority group (East Asians) and will look at contact outcomes in terms of attitudes towards both majority (White) and other minority (South Asian¹) targets. There is growing ethnic diversity in many North American cities, making it important to understand how intergroup contact may influence the attitudes of many groups towards both majority and other minority group members. Since East Asians comprise the largest visible minority and immigrant group in Vancouver (Statistics Canada, 2006), they are a particularly appropriate group to consider how a minority group might perceive both majority group members (Whites) as well as other visible minorities (e.g., South Asians). In addition, this research focuses on three areas of recent interest in the contact literature where there is relatively little research involving children: cross-group friendship, the role of intergroup anxiety, and discriminatory behaviour.

¹ The label 'South Asian' will be used to refer to individuals who may appear be of Indian, Bangladeshi, Bhutan, Nepalese, or Sri Lankan descent.

Cross-group Friendship

Research demonstrates that cross-group friendship is an especially potent form of contact (Brown & Hewstone, 2005; Paolini et al., 2007; Pettigrew, 1998; Wright, Aron, McLaughlin-Volpe, & Ropp, 1997) that has a significantly larger effect on prejudice reduction than other forms of contact (see Pettigrew & Tropp, 2006). Hewstone, Cairns, Voci, Hamberger and Niens (2006) demonstrated that cross-group friendships resulted in more positive outgroup attitudes among Catholics and Protestants, even among those who had personally experienced sectarian violence. Pettigrew (1997) demonstrated that majority group members with more minority group friends expressed less prejudice towards those groups. In addition, Levin, van Laar and Sidanius (2003) established that White, Asian, Black and Latino college students with more college outgroup friends were more likely to hold positive ethnic attitudes about ethnic outgroups at the end of college, controlling for other factors such as positive ethnic attitudes at the beginning of college.

These particularly strong effects may be due to the close affective ties established in friendships (Levin et al., 2003; Paolini et al., 2007; Pettigrew, 1998; Rubin, Bukowski, & Parker, 1998, Wright et al., 2005). Friendship may be the optimal form of direct intergroup contact, allowing opportunities for recurring contact across multiple contexts, self-disclosure (sharing personal information) and personal one-on-one interactions. The intimacy that results from this kind of contact results in the generalization of increased liking from the individuals in the

contact situation to the outgroup as a whole (e.g., Pettigrew, 1997; Paolini et al., 2007).

Cross-group friendship may also provide opportunities for a re-evaluation of the ingroup, resulting in a distancing from the ingroup and less time involved in ingroup interests (Pettigrew, 1997). This “deprovincialization” may occur from spending more time with the outgroup, which may change perceptions about the supremacy of the ingroup over the outgroup. This shift in ingroup appraisals may result in the generalization of contact effects to outgroups not included in the contact situation.

In children, classroom diversity and opportunity for intergroup contact increase positive attitudes towards cross-group friendships and the likelihood of such friendships occurring (e.g., Aboud, Mendelson, & Purdy, 2003; McGlothlin & Killen, 2005; Wright & Tropp, 2005). Research on cross-group friendship among children has focused on friendship as an outcome of contact rather than as a predictor of attitudes. The present research investigates how minority children’s existing classroom friendships are related to their intergroup attitudes.

Intergroup Behaviour

Prejudice and discrimination are related concepts but can also be distinct from one another. Prejudice is generally described as a negative attitude directed toward others based on their social group membership (Jones, 2002).

Discrimination is considered to be one potential behavioural outcome of prejudice, and is typically described as a negative action directed at members of

a social group based on their group membership (Allport, 1954). To my knowledge, research on children's intergroup contact experiences has not explicitly measured how contact may influence discriminatory behaviour.

The present study seeks to examine how contact influences both attitudinal and behavioural outcomes in children. Intergroup behaviour will be operationalized in terms of a sharing task that measures the number of stickers the participant shares with outgroup targets (one White, one South Asian). In the current study, we do not predict differential effects of intergroup contact on participants' intergroup attitudes and behaviour because previous research has shown that increased intergroup contact can have a positive effect on intergroup attitudes and behaviour in adult populations (e.g., Brewer & Gaertner, 2004; Brown & Hewstone, 2005).

Intergroup Anxiety

Stephan and Stephan (1985) claim that intergroup anxiety is an important aspect of intergroup contact experiences. Intergroup anxiety refers to the discomfort associated with cross-group interactions (Hyers & Swim, 1998; Stephan & Stephan, 1985), the reduction of which has been shown to be a key process in improving intergroup relations (e.g., Dovidio, Gaertner, & Kawakami, 2003; Hyers & Swim, 1998; Plant & Devine, 2003). Individuals are likely to feel anxious in intergroup contact situations due to the negative expectations associated with such interactions (Paolini et al., 2004; Plant & Devine, 2003; Stephan & Stephan, 1985). These negative expectations may stem from previous experiences with outgroup members, as well as thoughts and beliefs

associated with outgroup members (Stephan & Stephan, 1985; Plant & Devine, 2003). Intergroup contact can be an anxiety provoking experience for both majority and minority group members (Stephan & Stephan, 1985). For majority group members, this anxiety may be mostly due to a fear of appearing racist (e.g., Hyers & Swim, 1998; Vorauer, Main, & O'Connell, 1998). For minority group members, anxiety may be due to concerns that they may be the target of prejudice when interacting with majority group members. Currently, to my knowledge, there is no existing published research examining intergroup anxiety for minority group members when interacting with other minorities. Since anxiety in minority group members may primarily stem from awareness of status differences, it seems reasonable to predict that minority group members would not experience anxiety when interacting with other minorities since they are of the same societal status.

Intergroup anxiety can be reduced through repeated contact with outgroup members, which can lead to more positive attitudes towards the outgroup (Stephan, 1987). Voci and Hewstone (2003) found that both quality and quantity of contact between Italian college students and African immigrants was associated with a reduction in prejudice, and importantly, this relationship was mediated by a reduction in intergroup anxiety. In the United States, it has been found that, for Whites, more previous contact with Blacks resulted in less anxiety when anticipating an interaction with a Black person (Plant & Devine, 2003). However, for minority group members, previous contact with majority group members does not necessarily result in a reduction of intergroup anxiety when

imagining future interactions with Whites (e.g., Tropp, 2003). Perhaps the awareness of their devalued status in society may impede their ability to be at ease during intergroup interactions (e.g., Devine, Evett, & Vasquez-Suson, 1996; Hyers & Swim, 1998). These findings demonstrate potential differences of the experience of intergroup anxiety in majority and minority group members.

Children may experience intergroup anxiety for completely different reasons. For minority children, intergroup anxiety may be experienced in intergroup interactions due to a fear of the unknown, rather than resulting from recognition of a disadvantaged social status as in minority adults. Therefore, it may be reasonable to expect that children may experience anxiety when interacting with both majority and minority group members. Alternately, children may experience curiosity and interest in novel situations (see Chak, 2002), and intergroup anxiety may not be experienced.

Once again, the research on intergroup anxiety in children is scant. I am aware of one published paper on the impact of intergroup anxiety on children's intergroup attitudes. Turner, Hewstone and Voci (2007) examined the mediating role of intergroup anxiety on the relationship between White UK elementary school children's cross-group friendship and attitudes. They showed that intergroup anxiety mediated the relationship between White children's cross-group friendship with Asians and explicit attitudes towards Asians. These findings are consistent with those found in the adult literature, indicating children may experience intergroup anxiety in a similar fashion to adults. However, compared to the current research, Turner et al. (2007) used a different method of

measuring children's intergroup anxiety and included an ethnic majority sample who were older (mean age of 10 years).

Current Research

Existing research has addressed how intergroup contact and reduced intergroup anxiety may lead to more positive attitudes towards outgroup members. However, research has not fully investigated how intergroup exposure, cross-group friendship and intergroup anxiety may influence children's intergroup attitudes and behaviour. In this research, East Asian children will be asked to make evaluations and judgments of White and South Asian children they do not know using photographs, and they will be asked to share stickers with members of these two outgroups.

Minority Group Perspective

This research focuses on children of East Asian descent attending Kindergarten and Grade 1 in the Vancouver School District, and assessed their attitudes and actions towards two target outgroups: Whites and South Asians. Whites are the majority group in this context in terms of both population and status, whereas East Asians and South Asians are minorities. Thus, the current research investigates the contact-prejudice relationship for one minority group using both a majority group and another minority group as the targets.

Cross-group Friendship

Studies on children's cross-group friendship have mainly examined friendship preferences but they have overlooked the possible impact of forming

cross-group friendships on intergroup attitudes. In the current research, teachers in participating classrooms provided information about children's friendships within the classroom. This information was used to divide East Asian participants into three groups based on the pattern of friendships they have with each of the two outgroups. When considering friendships with Whites, the participants were categorized as: a) those with one or more White friends, b) those with no White friends but who have friends in another (non-White) ethnic outgroup (e.g., Black, First Nations, Vietnamese, Filipino), and c) those with no outgroup friends (all of their friends are East Asian). When considering friendships with South Asians, similar categories were used. Thus, the three categories were: a) those with one or more South Asian friends, b) those with no South Asian friends but who have friends from other (non South Asian) outgroups (e.g., Black, First Nations, Vietnamese, White, Filipino), and c) those with no outgroup friends (all of their friends are East Asian). The current research will test both direct effects of friendships, as well as Pettigrew's (1997) predictions regarding contact generalization to other outgroups which hypothesizes that friendship with a member of one outgroup should relate to more positive attitudes towards a range of outgroups. To test direct effects of friendship (how friendships with the target group influence attitudes and sharing towards that group), comparisons between participants who have White (or South Asian) friends and those with no outgroup friends and non-White (or non South Asian) friends will be conducted. To test contact generalization to other outgroups (how friendships with non-target outgroups influence attitudes and sharing towards target outgroups),

comparisons between participants with non-White (or non South Asian) outgroup friends and those with no outgroup friends will be performed.

The majority of intergroup contact studies examine how mere exposure may influence outgroup attitudes (see Pettigrew & Tropp, 2006). Outgroup exposure to Whites will be operationalized as a dichotomous variable.

Participants were divided into two groups: those with exposure to Whites and those with no exposure to Whites. Since there were not enough East Asian children with exposure to non-White outgroup children, a non-White outgroup exposure group could not be computed. Outgroup exposure to South Asians could not be computed because researchers added this ethnic group into a broader category of 'South East Asian', which included children who appeared to be of Vietnamese and Filipino descent. As the South Asian group could not be separated from the broader category of 'South East Asians' it was impossible to know the number of South Asian children in each classroom. Thus, this measure of exposure could not be computed.

Intergroup Evaluations and Behaviour

Previous research on intergroup contact has mainly focused on intergroup attitudes, and has often not made a clear distinction between attitudes and behaviour. The present research will examine how both intergroup attitudes and sharing behaviour may be influenced by intergroup contact. Intergroup attitudes will be measured in terms of participants' evaluations of White and South Asian targets (e.g., Wright & Taylor, 1995; Wright & Tropp, 1997). Intergroup

behaviour will be measured using a sharing task that assessed the number of stickers the participant shares with outgroup (White and South Asian) targets.

The Role of Intergroup Anxiety

Intergroup anxiety is expected to mediate the relationship between intergroup contact (exposure and friendship) and intergroup attitudes and behaviour. Previous work by Paolini and colleagues (2004) has demonstrated that intergroup anxiety mediates the positive relationship between intergroup contact and prejudice reduction, such that increased contact with outgroup reduced intergroup anxiety which also reduced outgroup prejudice. In the current study, intergroup anxiety will be measured using participants' assessments on a variety of questions about feelings associated with intergroup anxiety.

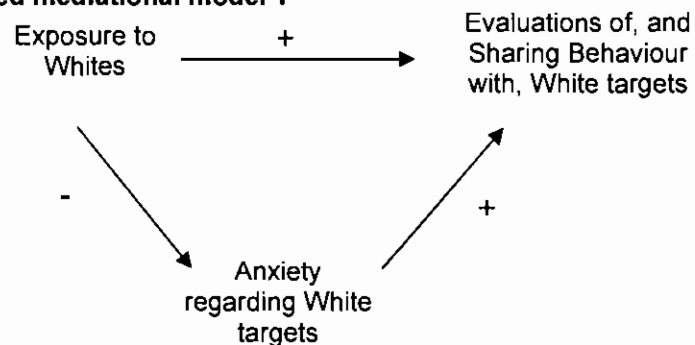
Hypotheses

Hypotheses will be stated in terms of two mediational models.

Model 1 (see Figure 1)

It is predicted that, among East Asian children, greater exposure to Whites will be associated with more positive evaluations of, and more sharing behaviour with, White targets, and that intergroup anxiety will mediate the positive relationship between exposure evaluations and sharing behaviour.

Figure 1. Proposed mediational model 1

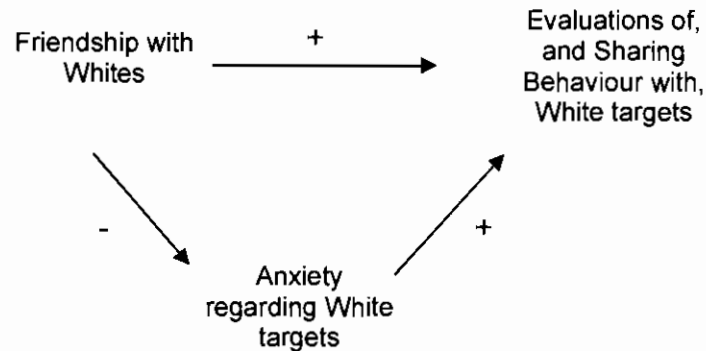


Model 2a (see Figure 2)

It is predicted that East Asian children with White friends will express more positive evaluations of, and sharing behaviour with, White targets than those who have no White friends (collapsing participants with non-White outgroup friends and no outgroup friends). Intergroup anxiety is expected to mediate the positive

relationship between friendship with Whites and evaluations of, and sharing behaviour with, White targets.

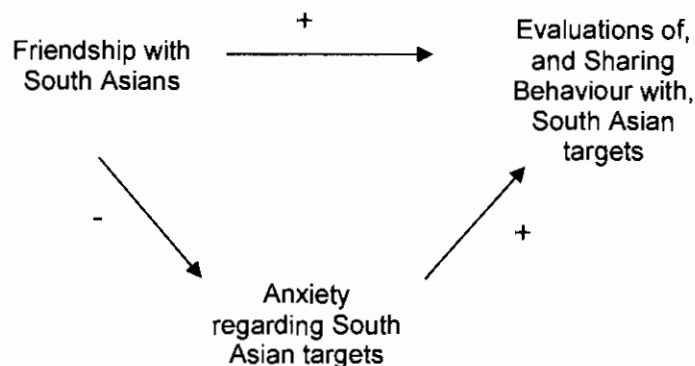
Figure 2. Proposed mediational model 2a.



Model 2b (see Figure 3)

It is predicted that participants with South Asian friends will express more positive evaluations of, and sharing behaviour with, South Asian targets than those who have no South Asian friends (collapsing participants with non South Asian outgroup friends and no outgroup friends). Intergroup anxiety is expected to mediate the positive relationship between friendship with South Asian and evaluations of, and sharing behaviour with, South Asian targets.

Figure 3. Proposed mediational model 2b



METHODS

Participants

Eighty-five teacher-identified East Asian children² (82 Chinese, 1 Japanese, and 2 Korean; 52 male, 33 female) took part in the study. Participants were drawn from 16 Kindergarten and Grade 1 classrooms in six elementary schools within the Vancouver School District. All children from participating classrooms were asked to take part in the study. The average response rate for participation across classes was approximately 61%.

Researchers

Researchers were graduate and undergraduate students from the Simon Fraser University Psychology and Economics departments. They took part in a training process to ensure that they were well-versed in the procedure and comfortable working with the age group of interest. Teams of three to four researchers were established for each school based on researcher availability.

² During teacher interviews, we asked teachers to indicate the most specific rating of participants' ethnicity to their knowledge. Additionally, to obtain ethnicity ratings based on phenotype alone, the researcher also recorded the perceived ethnicity of the participant based on phenotypic characteristics of the participant. Researchers used the following categories as a guideline for their ratings: White, East Asian, South Asian, Black, Hispanic, First Nations, mixed race and racially ambiguous (if the researcher was unable to clearly identify the ethnicity of the participant). Difference scores for both RA and teacher ratings of ethnicity were calculated for those participants with both ratings. There were no major discrepancies between these two ratings. Therefore, teacher ratings of ethnicity were used for all but six participants as it was the most specific. In the remaining six cases, researcher ratings of ethnicity were used.

Procedures and Materials

Each team of researchers was supplied with digital cameras and portable photo printers to take pictures of each participating child. In addition, each researcher was provided with a testing package that includes a set of 18 target photographs³ of White, South Asian and East Asian targets. Targets were approximately 5 to 7 years of age.

Participants were asked to complete two tasks, one sorting and one sharing⁴. The sorting task was designed to assess outgroup evaluations and intergroup anxiety, whereas the sharing task assessed intergroup sharing behaviour. The order of the tasks was counterbalanced to control for possible order effects. The tasks were introduced as a series of games.

The general procedures used in the sorting task were based upon those used in previous research (Wright & Taylor, 1995; Wright & Tropp, 2005). Before beginning the task, the researcher took a picture of the participant. The participant's photograph was added to the package of 12 target pictures

³ Two pilot tests were conducted to obtain the final 18 target photographs used in the procedure. Nine raters were asked to view approximately 350 different photographs of children selected from various stock photography websites. The raters indicated the gender, ethnicity and age of the child in the photograph. Additionally, they rated the photographs on 5-point Likert-type scales on the following criteria: a) attractiveness/cuteness (1=very unattractive, 5=very attractive) and b) facial expression (1=very unhappy, 5=very happy). Photographs where raters were not in full agreement on ethnicity and gender were excluded. Subsequently, photographs were matched on the criteria of age, attractiveness and facial expression to generate six same-gender sets of three children (White/South Asian/East Asian) that were compatible on all criteria. Two of these sets (one male and one female) were used in the sharing task. The remaining four sets were used in the sorting task.

⁴ Prior to beginning actual testing, four children (ages 5-7) were brought into the Social Psychology Lab at SFU and run through all of the measures. The children were asked: 1) if they understood each construct being asked, 2) if they were bored, and 3) if they enjoyed the tasks. Any items that were not understood or were rated as boring or not enjoyable by the children were dropped from the final measures.

(consisting of four photos from the following groups: White, South Asian, East Asian, as well as the single picture of the participant). Prior to each trial, the 13 photographs were shuffled and placed in a random order in front of the participant. Prior to the first trial, the researcher told the participant that,

“The kids in these photographs are from a different school and you will not know them, but they may look like some kids that you do know maybe from your class or neighbourhood”.

The participant was then asked a series of questions about the photographs. To ensure that the participant understood the nature of the task, s/he was first asked to sort the photographs by gender. If the participant was able to accurately sort the targets by gender, the task was continued. If the participant was unable to sort the targets by gender, s/he was thanked for helping out the researcher, given a package of stickers and sent back to class.

The procedure used in the sharing task was developed this study. Participants first given a package of 12 stickers and were then shown a set of three pictures of same-gender targets and asked if they would like to share any of their stickers with any of the targets. This procedure was repeated a total of three times. The number of stickers shared with each target on each trial was recorded.

Exposure to Whites

A researcher went into participating classrooms and recorded the gender and ethnic make-up of the classroom based on perceptions of the phenotypic features of the children. This information was used to determine the number of

White children in each classroom. For four of the 16 classrooms, the teacher also provided information on the ethnic composition of the classroom. The teacher information provided a more specific breakdown of the ethnic make-up of the classroom and thus for these four classrooms this information from the teacher was used to determine the number of White children in the class⁵.

Preliminary analyses revealed that the exposure variable had a non-normal distribution. Therefore, exposure was computed as a dichotomous variable, where East Asian children had either no exposure to Whites ($N = 46$) or they had exposure to Whites ($N = 37$).

Cross-group Friendship

After the children in each classroom were tested, the teacher was asked to complete a short survey. For each participant, the teacher indicated up to five students who were the child's closest friends/playmates in the classroom. This information about the participants' classroom friends was used to construct a measure of cross-group friendship.

Based on the information provided by teachers, participants were divided into three categories of friendship based on the pattern of friendship they had with both Whites and South Asians. For friendship with Whites, East Asian children were divided into the following categories: a) those with White friends (have one or more White friends, $N = 10$), b) those with non-White outgroup

⁵ We are missing classroom observation information for two Kindergarten classrooms because researchers were unable to obtain that information from either the teacher or the researcher observation.

friends (have no White friends but have friends in another non-White ethnic outgroup, $N = 37$), and c) those with no outgroup friends (only have East Asian friends, $N = 37$). Friendship with South Asians was categorized in the same manner: those with South Asian friends (have one or more South Asian friends, $N = 13$), those with non South Asian friends (have no South Asian friends but have friends in another non South Asian ethnic group, $N = 35$), those with no outgroup friends (only have East Asian friends) ($N = 37$).

Dependent Measures

Evaluations of Outgroup Targets

Participants were asked to sort the 13 photographs based on 12 positive and negative evaluations. The following wording was used:

“I want you to look at all these pictures and pick out all the kids that you think _____, and leave all the ones who you do not think _____ on the table.”

The evaluations were: 1) are nice to other kids, 2) are smart, 3) are happy, 4) are lazy, 5) like to go to school, 6) have lots of friends, 7) are bad, 8) always need help from other kids and the teacher, 9) work hard at school, 10) are mean to other kids, 11) are helpful and 12) can read well. For each trial, the mean number of White targets selected (out of a possible four targets) was calculated. This number was then converted to a proportion, with zero indicating that no targets from that ethnic group was selected and one indicating that all four targets from that ethnic group were selected for the relevant item. The same procedure was used in order to assess evaluations of South Asians.

Since almost one-third of the participants had trouble understanding of the item 'lazy', this item was dropped from all analyses⁶. Exploratory factor analyses using Varimax rotation were performed separately for White and South Asian target variables. These analyses both indicated that items loaded onto two factors. The three negatively-worded items loaded on one factor (factor loadings: a) White target variables: 'bad' = .91, 'mean' = .86, 'needs help' = .75, and b) South Asian target variables: 'bad' = .91, 'mean' = .86, 'needs help' = .78). The remaining eight positively-worded items loaded on a second factor (factor loadings: a) White target variables: .63 to .84, and b) South Asian target variables: .65 to .81). This analysis suggests two distinct measures of intergroup evaluations: one representing positive outgroup evaluations and the other negative outgroup evaluations.

Anxiety regarding White Targets

Next, participants were asked to sort the 12 target photographs (the child's own picture was not included) using the same procedure as above for three items designed to tap feelings of anxiety (safe, scared and worried). The participant was asked to:

⁶ Researchers were asked to evaluate participants' understanding of each item used in the sorting task. If the participant appeared to have trouble understanding an item, the researcher indicated this by placing an 'X' in a box next to that item on the results sheet, indicating that the participant did not comprehend what was being asked. This information was entered as a separate 'understanding' variable in the data file and analyzed to obtain the number of participants who did or did not understand each item that was presented.

"Pick up all the kids who would make you feel _____ and give them to me, far away from you⁷. Leave all the kids who do not make you feel _____ on the table."

A further analysis revealed that participants did not fully comprehend the meaning of 'worried' (see Footnote 6). This item was dropped from all analyses.

Given that correlations between 'safe' and 'scared' were low and non-significant (for White targets, $r = -.12$, $p = .32$; for South Asian targets $r = -.20$, $p = .10$), these items were analyzed separately as different aspects of anxiety.

Intergroup Behaviour

Participants were shown a set of three same-gender targets (one White, one South Asian and one East Asian). The researcher then took out a set of 12 stickers and told the participant:

"Child's name, here you get 12 stickers. They are yours to keep. OK? But, before you take them home, there are three other boys (girls) who don't have any stickers and would like to have some as well. Here are what the other boys/girls might look like (*places picture envelopes down in front of the child*). Please decide how many stickers you want to give to each of those three kids and how many you want to keep for yourself. It is completely up to you how you split up the stickers. You can keep them all if you like, or you can give stickers to one of these boys (girls). Or you can give some stickers to two of these boys. Or you can give some stickers to all of them. If you give stickers to any of these boys (girls), we will put them into an envelope with their picture and I will give each envelope to a kid like the one on the picture afterwards. What would you like to do?"

⁷ For "safe" the participants were asked to "Pick out all the kids who would make you feel "safe" and put them close to you. Leave all the kids who do not make you feel "safe" on the table, away from you".

This procedure was repeated a total of three times. The number of stickers shared with each target on each trial was recorded. The final measure of intergroup behavior was the mean number of stickers shared across all three targets for each outgroup (White or South Asian).

RESULTS

The current research is aimed at examining the impact of outgroup exposure and cross-group friendship on outgroup evaluations and sharing behaviour. It was predicted that both exposure to, and friendships with Whites will result in more positive evaluations of and sharing behaviour with White targets. The same pattern of results was expected for friendship with South Asians. In addition, intergroup anxiety was expected to mediate the relationships of both exposure and friendship on outgroup evaluations and sharing behaviour.

To examine the effects of exposure to Whites on evaluations of and sharing behaviour with White targets, East Asian children with exposure to Whites were compared to those with no exposure to Whites on all dependent variables (positive evaluations, negative evaluations, and sharing) and both potential mediators (safe and scared). To test the hypothesized effects of friendship, orthogonal contrasts were conducted. To test the direct effects of friendship with Whites, a contrast comparing participants with White friends to those with no White friends (those with no outgroup friends and those with only non-White outgroup friends) was conducted on each of the dependence variables. Additionally, contrasts comparing participants with non-White outgroup friends to those with no outgroup friends were performed to test the hypothesis that the positive effects of contact with non-target outgroup members might generalize to target outgroup members -- Pettigrew's (1997) "generalization to

other outgroups” hypothesis. The same set of contrasts was conducted for friendship with South Asians.

The predicted mediational models were tested following the procedures described by Baron and Kenny (1986). Regressions analyses were used to test for the relationships between contact and the outcome variables, as well as the relationship between contact and intergroup anxiety, and then the relationship between contact and the outcome variables accounting for intergroup anxiety. Sobel (1982) tests were conducted to determine if anxiety accounted for the proposed relationships between predictor and outcome variables.

Exposure to Whites

The means and t-tests describing the impact of exposure to Whites are presented in Table 1. Results of the t-tests demonstrated a significant effect of exposure on negative evaluations of White targets. East Asian participants with exposure to Whites had less negative evaluations of White targets than those without exposure to Whites. Additionally, there was a significant effect of exposure on feeling scared regarding White targets. Participants with exposure to Whites were less scared of White targets than those without exposure to Whites. East Asian children who were exposed to Whites and East Asian children who were not exposed to Whites did not differ significantly in terms of their positive evaluations of Whites, the extent to which White targets made them feel ‘safe’ or the number of stickers they shared with White targets.

Table 1. Means, standard deviations and t-tests for measures of intergroup attitudes and behaviours by East Asians with Exposure or No Exposure to Whites

<i>Dependent Variables</i>	<i>Exposure</i>		<i>t-tests for significance</i>
	<i>No Exposure to Whites</i>	<i>Exposure to Whites</i>	
Positive Evaluations	<i>M = .66, SD = .25</i>	<i>M = .69, SD = .21</i>	<i>t (73) = -.65</i>
Negative Evaluations	<i>M = .48, SD = .31</i>	<i>M = .30, SD = .20</i>	<i>t (71) = 2.87**</i>
Safe	<i>M = .53, SD = .35</i>	<i>M = .62, SD = .34</i>	<i>t (70) = -1.13</i>
Scared	<i>M = .37, SD = .38</i>	<i>M = .18, SD = .23</i>	<i>t (70) = 2.49*</i>
Sharing	<i>M = 4.16, SD = 3.14</i>	<i>M = 4.11, SD = 3.16</i>	<i>t (78) = .07</i>

p* < .05, *p* < .01, ****p* < .001

Friendship with Whites

Orthogonal contrasts were conducted to test for both the direct effects of friendship and Pettigrew's generalization to other outgroups effects of friendship (see Table 2). Contrasts comparing East Asian children with White friends to those with no White friends yielded a significant effect of friendship on evaluations of being safe with White targets. East Asian children with White friends felt safer with White targets than those without White friends. Additionally, a significant effect of friendship on positive evaluations was found. East Asian children with White friends evaluated White targets more positively than those without White friends. East Asians with White friends also felt less scared of White targets than those without White friends. East Asian children with White friends and East Asian children with no White friends did not differ significantly in terms of their negative evaluations of Whites or the number of stickers they shared with White targets.

Contrasts comparing East Asian children with non-White outgroup friends and those with no outgroup friends yielded no significant differences between these two groups on any of the dependent variables.

Table 2. Means, standard deviations and contrasts for measures of intergroup attitudes and behaviours by East Asians with No Outgroup friends, non-White outgroup friends and White friends

<i>Dependent Variables</i>	<i>Friendship</i>				
	No Outgroup Friends (G1)	Non-White Outgroup Friends (G2)	White Friends (G3)	Comparison 1 (G 3 v. G 1 & G2)	Comparison 2 (G 2 v. G 1)
Positive Evaluations	<i>M</i> = .64 <i>SD</i> = .24	<i>M</i> = .68 <i>SD</i> = .23	<i>M</i> = .82 <i>SD</i> = .19	<i>t</i> (73) = 2.08*	<i>t</i> (73) = .80
Negative Evaluations	<i>M</i> = .41 <i>SD</i> = .26	<i>M</i> = .40 <i>SD</i> = .31	<i>M</i> = .33 <i>SD</i> = .21	<i>t</i> (71) = -.76	<i>t</i> (71) = -.20
Safe	<i>M</i> = .53 <i>SD</i> = .35	<i>M</i> = .53 <i>SD</i> = .33	<i>M</i> = .84 <i>SD</i> = .30	<i>t</i> (69) = 2.48*	<i>t</i> (69) = .02
Scared	<i>M</i> = .27 <i>SD</i> = .34	<i>M</i> = .35 <i>SD</i> = .33	<i>M</i> = .06 <i>SD</i> = .18	<i>t</i> (69) = -2.07*	<i>t</i> (69) = 1.01
Sharing	<i>M</i> = 4.09 <i>SD</i> = 2.77	<i>M</i> = 4.11 <i>SD</i> = 3.39	<i>M</i> = 4.90 <i>SD</i> = 3.78	<i>t</i> (78) = .74	<i>t</i> (78) = .03

p* < .05, *p* < .01, ****p* < .001

Friendship with South Asians

The descriptive statistics and contrasts describing the effects of friendship with South Asians on all dependent variables are presented in Table 3. Contrasts between East Asian children with South Asian friends and those with no South Asian friends yielded no significant effects across all dependent variables. Contrasts between East Asian children with non South Asian outgroup friends and those with no outgroup friends revealed a significant effect on positive

evaluations. East Asian children with non South Asian outgroup friends had more positive evaluations of South Asian targets than those with no outgroup friends.

Table 3. Means, Standard Deviations and contrasts for measures of intergroup attitudes and behaviours by East Asians with No outgroup friends, non South Asian outgroup friends and South Asian friends

<i>Dependent Variables</i>	<i>Friendship</i>			Comparison 1 (G 3 v. G 1 and G2)	Comparison 2 (G 2 v. G 1)
	No Outgroup Friends (G1)	Non South Asian Outgroup Friends (G2)	South Asian Friends (G3)		
Positive Evaluations	<i>M</i> = .48 <i>SD</i> = .29	<i>M</i> = .67 <i>SD</i> = .23	<i>M</i> = .55 <i>SD</i> = .27	<i>t</i> (74) = -.32	<i>t</i> (62) = 2.86**
Negative Evaluations	<i>M</i> = .53 <i>SD</i> = .32	<i>M</i> = .48 <i>SD</i> = .22	<i>M</i> = .53 <i>SD</i> = .38	<i>t</i> (72) = .29	<i>t</i> (72) = -.67
Safe	<i>M</i> = .33 <i>SD</i> = .33	<i>M</i> = .43 <i>SD</i> = .36	<i>M</i> = .54 <i>SD</i> = .38	<i>t</i> (70) = 1.49	<i>t</i> (70) = 1.02
Scared	<i>M</i> = .48 <i>SD</i> = .35	<i>M</i> = .43 <i>SD</i> = .34	<i>M</i> = .54 <i>SD</i> = .37	<i>t</i> (70) = .77	<i>t</i> (70) = -.63
Sharing	<i>M</i> = 3.64 <i>SD</i> = 2.74	<i>M</i> = 4.59 <i>SD</i> = 3.39	<i>M</i> = 3.30 <i>SD</i> = 2.72	<i>t</i> (79) = -.88	<i>t</i> (79) = 1.31

p* < .05, *p* < .01, ****p* < .001

Intergroup Anxiety as a Mediator

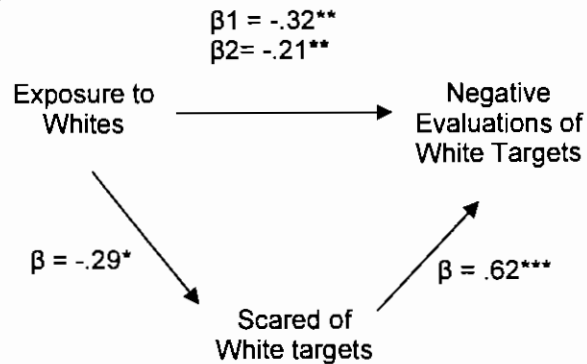
If there was no effect of the independent variable on the dependent variables, no further analyses were conducted. Although contrasts revealed a significant relationship between friendship with Whites and feeling scared, correlational analyses showed no significant relationship between feeling scared and positive evaluations of White targets ($r = .14, p = .26$). Thus, the mediating role of scared on the relationship between friendship with Whites and evaluations/sharing with Whites was not tested. Additionally, the relationship between friendship with South Asians and all dependent variables was non-significant. Therefore, the mediating role of anxiety on the relationship between

friendship with South Asians and evaluations/sharing with South Asians was not tested. The relationships between exposure to Whites, scared and negative evaluations, as well as the relationships between friendship with Whites, safe and positive were significant. Thus, the mediational effect of the anxiety measure on these two relationships was tested using regression analyses in accordance with Baron and Kenny's (1986) procedure.

Model 1

It was predicted that intergroup anxiety would mediate the relationship between exposure to Whites and evaluations of White targets. Inclusion of the mediator scared in the regression analysis resulted in a reduction in the strength of the relationship between exposure to Whites and negative evaluations of White targets. The Sobel test indicated that this effect was marginally significant (see Figure 4). Overall, this finding provides conditional support for the hypothesis that the relationship between exposure to Whites and negative evaluations of Whites is partly accounted for by reductions in feelings of anxiety (specifically being scared).

Figure 4. Scared as a mediator between exposure to Whites and negative evaluations of White targets



$z = 1.61, p = .10$

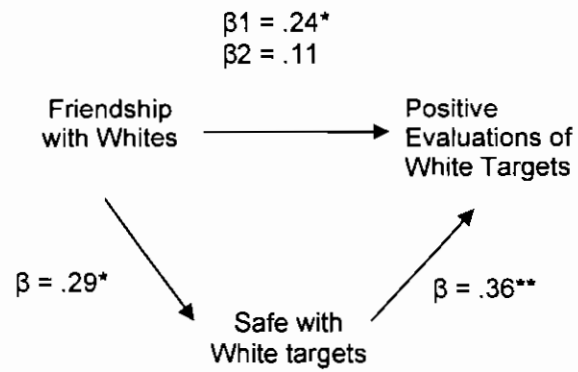
* $p < .05$, ** $p < .01$, *** $p < .001$

β_1 is the unmediated beta while β_2 is the beta after mediation by scared

Model 2a

It was predicted that intergroup anxiety would mediate the relationship between friendship with Whites and evaluations of White targets. A series of regression analyses using East Asian children with White friends and those with no White friends (participants with no outgroup friends and those with only non-White outgroup friends) were conducted. Inclusion of the mediator safe in the regression analysis resulted in a reduction in the strength of the relationship between exposure to Whites and negative evaluations of White targets. However, the Sobel test indicated that this effect was not significant (see Figure 5). This finding is not consistent with the hypothesis that the relationship between friendship with Whites and positive evaluations is at least partly accounted for by reductions in feelings of anxiety (specifically feeling safe).

Figure 5. Safe as a mediator between friendship with Whites and positive evaluations of White targets



$z = .83, n.s.$

* $p < .05$, ** $p < .01$, *** $p < .001$

β_1 is the unmediated beta while β_2 is the beta after mediation by safe

DISCUSSION

The focus of the current study was to investigate the roles of outgroup exposure and cross-group friendship on East Asian children's outgroup evaluations and sharing behaviour, as well as to examine the mediating role of intergroup anxiety in these relationships. Participants engaged in a series of photo sorting tasks to assess outgroup evaluations and intergroup anxiety, as well as a sharing task to assess behaviour. In addition, measures for outgroup exposure and cross-group friendship were obtained through classroom observations and teacher interviews.

This study adds to the growing body of literature addressing children's intergroup contact experiences (e.g. McGlothlin & Killen, 2005; Rutland et al., 2005; Wright & Tropp, 2005). The current research focuses on a minority group perspective (East Asians) and the relationships between cross-group contact and their evaluations of both majority (White) and other minority (South Asian) group targets. Although previous research has examined how White children's exposure to outgroup members positively influences their attitudes towards that outgroup, more research is needed to fully understand how exposure may influence minority children's attitudes towards outgroup members. Moreover, most previous work has examined friendship preferences or cross-group friendship quality as an outcome (e.g., Aboud & Mendelson, 2003; Wright & Tropp, 2005), rather than children's actual friendship as a predictor of positive

attitudes and actions towards that outgroup. This research is also, to my knowledge, one of two studies (see Turner et al., 2007) to examine the role of intergroup anxiety on intergroup evaluations in children.

Key Findings

Overall, the results showed that East Asian children with exposure to Whites had less negative evaluations and were scared of fewer White targets. In addition, East Asian children showed who had friends who were White evaluated White targets more positively and indicated that they felt safer around, and less scared by, White targets. However, the pattern of results for friendship with South Asians showed no consistent positive relationships between friendships and attitudes or behavior across comparison groups, therefore no conclusive claims can be made about the relationship between friendship and evaluations for the South Asian outgroup.

It was also predicted that safe and scared would mediate the relationships between both exposure and friendship and intergroup evaluations and sharing. Indeed, mediational analyses revealed some support for these hypotheses but that the pattern was somewhat more complex than initially predicted. East Asian children exposed to Whites selected fewer White targets as scary and this measure showed some evidence of mediation in the relationship between exposure and negative evaluations of White targets. In considering cross-group friendships, the mediational analyses showed the predicted pattern such that East Asian children with White friends tended to select more White targets as safe than those without outgroup friends, and the

inclusion of this measure of anxiety reduced the strength of relationship between friendship and positive evaluations of White targets. However, the pattern of mediation was not statistically significant. Thus, it appears from this data that, for minority children, intergroup anxiety may play a larger role in the exposure/negative attitude relationship, than it does in mediating the friendship/positive attitude relationship.

Given that intergroup anxiety only partially mediates the relationship between intergroup contact and outgroup attitudes it is possible that there are other factors accounting for these relationships. Outgroup exposure may result in observations of outgroup behaviours and norms. These observations may provide opportunities for extended contact and inclusion of the other in the self (Wright et al., 1997). Additionally, self-disclosure and perspective taking could account for the relationship between friendship and outgroup attitudes (e.g., Turner et al., 2007).

These results are consistent with existing literature on intergroup contact that demonstrates that increased intergroup contact has a positive impact on intergroup attitudes for both adults and children (e.g., Pettigrew & Tropp, 2006). This study expands upon prior work by demonstrating that intergroup exposure is related to minority group children's attitudes towards majority group members. In addition, the patterns of results involving the relationship between cross-group friendship and intergroup evaluations are consistent with previous work that demonstrates friendship with outgroup members is associated with more positive attitudes towards the outgroup as a whole (e.g., Wright, Brody, & Aron, 2005).

Interestingly, it appears that exposure is most effective at reducing negative evaluations and affect, whereas friendship tends to be related to positive evaluations and feeling safe. It seems that both of these types of contact are important in improving attitudes, but that friendship, a more direct form of contact, is needed to really promote more positive outgroup attitudes.

However, the current results do not support Pettigrew's (1997) findings about contact generalization to other outgroups as no significant differences were found between participants with non-target outgroup friends and those with no outgroup friends. Perhaps children at this age lack the cognitive development to consider the implications of contact with others for their perceptions of the ingroup, making reappraisal of the ingroup unlikely and thus reducing the likelihood this type of generalization.

With regards to East Asian children's sharing behaviour, exposure and friendship did not have an effect on the number of stickers shared with White or South Asian targets. This may be because children are taught the values of sharing and equality in early elementary years, and therefore they are less likely to be biased toward one target over the other on a measure that explicitly calls these values to mind (Wong & Nunes, 2003). Research on resource allocation shows that children's sense of fairness and justice predicts how they will distribute resources among their peers (Huntsman, 1984). Thus, rules of fairness that describe equal distribution as the best practice may overwhelm any impact of ethnic group preference found in the evaluation measures.

Limitations

The present research examined the importance of intergroup contact for minority group members and has explored the role of intergroup anxiety in the relationship between contact and outgroup evaluations and sharing behaviour. However, it is important to recognize a few limitations of this research. Exposure is a natural pre-requisite for the development of friendship, which makes it difficult to separate these two variables in a classroom context. In addition, children may share the same class with the same friends in it, making the observations non-independent of each other. Although there are tests for non-independence available, there is an inadequate number of observations with varying degrees of friendship with the outgroups to do so in this study.

Additionally, a lack of variability in friendship inhibited our ability to examine friendship as a continuous variable. Since we had categories of friendship, we were unable to test whether the number of White or South Asian friends affected East Asian children's evaluations of, and sharing with, target outgroups. An additional aspect of cross-group friendship which is worth considering is the question of whether the degree of closeness of friendship matters in intergroup evaluations (e.g., "My best friend is White versus I have a White friend"), as having a 'best friend' from an outgroup may produce the strongest effects on intergroup attitudes.

Conclusions

This research adds to the growing body of literature that examines how intergroup contact affects children's intergroup attitudes (e.g. Cameron &

Rutland, 2008). These findings provide further evidence that early intergroup contact experiences can change attitudes towards outgroup members. This argument is consistent with the findings of Pettigrew and Tropp's (2006) meta-analysis, as well as with research on the positive effects of intergroup contact on intergroup attitudes and behaviours (Cameron & Rutland, 2008; Wright & Taylor, 1995; Wright & Tropp, 2005; Turner, Hewstone, & Voci, 2007). In addition, it appears that exposure may lead to reductions in negative evaluations and affect, whereas friendship may influence positive dimensions. It seems that both of these forms of contact are important in improving attitudes, but that friendship and contact that is more direct is needed to really promote more positive attitudes.

Additionally, in contrast to the majority of studies on intergroup contact (see Tropp & Pettigrew, 2005), the current research focuses on the minority group perspective, and the findings demonstrate that outgroup exposure and cross-group friendship are related to less negative and more positive evaluations of majority group members. However, the patterns of results were different for White (majority) and South Asian (another minority) targets. Contact with South Asians did not result in any significant differences in attitudes towards South Asians. Results also indicate that young minority children may experience intergroup anxiety while thinking about majority group targets. This could be an important consideration for those involved in contexts where intergroup contact will occur (e.g., teachers, parents) as children may be apprehensive about these

experiences and these feelings of apprehension seem to be related to the attitudes they may develop as a result of the contact.

The present research helps to increase our understanding of the issues of intergroup relations for minority children regarding differences in types of intergroup contact. This study may provide insight that could be helpful in informing direct interventions to improve attitudes of children in our increasingly diverse society. However, as the current study demonstrates, more basic research is necessary to further develop our understanding of the relationship between contact and intergroup attitudes in both majority and minority children.

REFERENCE LIST

- Aboud, F.E. (2003). The formation of in-group favoritism and out-group prejudice in young children: Are they distinct attitudes? *Developmental Psychology*, 39, 48-60.
- Aboud, F.E., & Levy, S.R. (2000). Interventions to reduce prejudice and discrimination in children and adolescents. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 269-293). Mahwah, NJ: Erlbaum.
- Aboud, F.E., Mendelson, M.J., & Purdy, K.T. (2003). Cross-race peer relations and friendship quality. *International Journal of Behavioural Development*, 27, 165-173.
- Allport, G.W. (1954). *The Nature of Prejudice*. Cambridge, MA: Addison-Wesley.
- Aronson, E. (1978). *The Jigsaw Classroom*. Oxford, England: Sage.
- Baron, R. M. & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Brewer, M.B. & Miller, N. (1984). Beyond the contact hypothesis: Theoretical perspectives on desegregation. In N. Miller & M.B. Brewer (Eds.), *Groups in contact: The psychology of desegregation* (pp. 281-302). New York: Academic Press.
- Brewer, M.B. & Gaertner, S.L. (2004). Toward a reduction of prejudice: Intergroup contact and social categorization. In M.B. Brewer & M. Hewstone (Eds.), *Self and social identity* (pp. 298-318). Malden, MA: Blackwell Publishing.
- Brown, R. & Hewstone, M. (2005). An integrative theory of intergroup contact. In M.P. Zanna (Eds.), *Advances in experimental social psychology: Vol 37* (pp. 255-343). San Diego, CA: Elsevier Academic Press.
- Cameron, L. & Rutland, A. (2008). An integrative approach to changing children's intergroup attitudes. In S.R. Levy and M. Killen (Eds.), *Intergroup attitudes and relations in childhood through adulthood*. Oxford, NY: Oxford University Press.
- Chak, A. (2002). Understanding children's curiosity and exploration through the lenses of Lewin's field theory: on developing an appraisal framework. *Early Childhood Development and Care*, 172, 77-87.

- Cook, S.W. (1985). The case of school desegregation. *Experimenting on Social Issues*, 40, 452-460.
- Devine, P.G., Evett, S.R., & Vasquez-Suson, K.A. (1996). Exploring the interpersonal dynamics of intergroup contact. In R. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Vol. 3. The interpersonal context* (pp. 423-464). New York: Guilford.
- Dovidio, J.F., Gaertner, S.L., & Kawakami, K. (2003). Intergroup contact: The past, present and the future. *Group Processes and Intergroup Relations*, 6, 5-21.
- Huntsman, R.W. (1984). Children's concepts of fair sharing. *Journal of Moral Education*, 13, 31-39.
- Hewstone, M., Cairns, E., Voci, A., Hamberger, J., & Niens, U. (2006). Intergroup contact, forgiveness, and experience of "The Troubles" in Northern Ireland. *Journal of Social Issues*, 62, 99-120.
- Hyers, L.L. & Swim, J.K. (1998). A comparison of the experiences of dominant and minority group members during an intergroup encounter. *Group Processes and Intergroup Relations*, 1, 143-163.
- Islam, M.R. & Hewstone, M. (1993). Dimensions of contact as predictors of intergroup anxiety, perceived outgroup variability, and outgroup attitude: An integrative model. *Personality and Social Psychology Bulletin*, 19, 700-710.
- Jones, M. (2002). *Social Psychology of Prejudice*. Upper Saddle River: Prentice Hall.
- Killen, M., Crystal, D., & Ruck, M. (2007). The social developmental benefits of heterogeneous school environments. In E. Frankeberg & G. Orfield (Eds.), *Lessons in integration: Realizing the promise of racial diversity in American schools* (pp. 57-73). Charlottesville: University of Virginia Press.
- Levin, S, van Laar, C., & Sidanius, J. (2003). The effects of ingroup and outgroup friendships on ethnic attitudes in college: A longitudinal study. *Group Processes and Intergroup Relations*, 6, 76-92.
- McGlothlin, H. & Killen, M. (2005). Children's perceptions of intergroup and intragroup similarity and the role of social experience. *Journal of Applied Developmental Psychology*, 26, 680-698.
- McGlothlin, H. & Killen, M. (2006). Intergroup attitudes of European American children attending ethnically homogeneous schools. *Child Development*, 77, 1375-1386.

- Paolini, S., Hewstone, M., Cairns, E., & Voci, A. (2004). Effects of direct and indirect cross-group friendships on judgments of Catholics and Protestants in Northern Ireland: The mediating role of an anxiety-reduction mechanism. *Personality and Social Psychology Bulletin*, 30, 770-786.
- Paolini, S., Hewstone, M., & Cairns, E. (2007). Direct and indirect cross-group friendship effects: Testing the moderating role of the affective-cognitive bases of prejudice. *Personality and Social Psychology Bulletin*, 33, 1406-1420.
- Pettigrew, T.F. (1997). Generalized intergroup contact effects on prejudice. *Personality and Social Psychology Bulletin*, 23, 173-185.
- Pettigrew, T.F. (1998). Intergroup contact theory. *Annual Review in Psychology*, 49, 65-85.
- Pettigrew, T.F. & Tropp, L.R. (2000). Does intergroup contact reduce prejudice: Recent meta-analytic findings. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 93-114). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Pettigrew, T.F. & Tropp, L.R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, 90, 751-783.
- Plant, E.A. & Devine, P.G. (2003). The antecedents and implications of interracial anxiety. *Personality and Social Psychology Bulletin*, 29, 790-801.
- Rubin, K.H., Bukowski, W., & Parker, J.G. (1998). *Peer interactions, relationships and groups*. Hoboken: John Wiley and Sons Inc.
- Rutland, A., Cameron, L., Bennett, L., & Ferrell, J. (2005). Interracial contact and racial consistency: A multi-site study of racial intergroup bias in 3-5 year old Anglo-British children. *Applied Developmental Psychology*, 26, 699-713.
- Shelton, J.N. & Richeson, J.A. (2006). Ethnic minorities' racial attitudes and contact with White people. *Cultural Diversity and Ethnic Minority Psychology*, 12, 149-164.
- Statistics Canada (2006). Profile of ethnic origin and visible minorities for census metropolitan areas and census agglomerations. Retrieved October 9, 2008 from Statistics Canada
- <http://www12.statcan.ca/english/census06/data/profiles/release/RetrieveProductTable.cfm?Temporal=2006&APATH=3&PID=92631&THEME=80&P TYPE=89103&VID=0&GK=NA&GC=99&FL=0&RL=0&FREE=0&METH=0&S=1&GID=777244>

- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological Methodology 1982* (pp. 290-312). Washington DC: American Sociological Association.
- Stephan, W.G. & Stephan, C.W. (1985). Intergroup Anxiety. *Journal of Social Issues, 41*, 157-175.
- Stephan, W.G. (1987). The contact hypothesis on intergroup attitudes. In C. Hendrick (Eds.), *Group Processes and Intergroup Relations* (pp. 13-40). Thousand Oaks, CA: Sage Publications.
- Tropp, L.R. (2003). The psychological impact of prejudice: Implications for intergroup contact. *Group Processes and Intergroup Relations, 6*, 131-149.
- Tropp, L.R. & Pettigrew, T.F. (2005). Relationships between intergroup contact and prejudice among minority and majority status groups. *Psychological Science, 16*, 951-957.
- Tropp, L.R. & Prenevost, M.A. (2008). The role of intergroup contact in predicting children's interethnic attitudes: Evidence from meta-analytic and field studies. In S.R. Levy and M. Killen (Eds.), *Intergroup attitudes and relations in childhood through adulthood*. Oxford, NY: Oxford University Press.
- Turner, R.N., Hewstone, M., & Voci, A. (2007). Reducing explicit and implicit prejudice via direct and extended contact: The mediating role of self-disclosure and intergroup anxiety. *Journal of Personality and Social Psychology, 93*, 369-38.
- Voci, A. & Hewstone, M. (2003). Intergroup contact and prejudice toward immigrants in Italy: The mediational role of anxiety and the moderational role of group salience. *Group Processes and Intergroup Relations, 6*, 37-52.
- Vorauer, J.D., Main, K.J., & O'Connell, G.B. (1998). How do individuals expect to be viewed by members of lower status groups? Content and implications of meta-stereotypes. *Journal of Personality and Social Psychology, 75*, 917-937.
- Wong, M.M.A. & Nunes, T. (2003). Hong Kong children's concept of distributive justice. *Early Child Development and Care, 173*, 119-129.
- Wright, S.C., Aron, A., McLaughlin-Volpe, T., & Ropp, S.A. (1997). The extended contact effect: Knowledge of cross-group friendships and prejudice. *Journal of Personality and Social Psychology, 73*, 73-90.

- Wright, S.C., Brody, S.M., & Aron, A. (2005). Intergroup contact: Still our best hope for improving intergroup relations. In C.S. Crandall and M. Schaller (Eds.), *Social psychology of prejudice: Historical and contemporary issues* (pp.115-142). Lawrence, KS: Lewinian Press.
- Wright, S.C. & Taylor, D.M. (1995). Identity and language of the classroom: Investigating the impact of heritage versus second language instruction on personal and collective self-esteem. *Journal of Educational Psychology*, 87, 841-252.
- Wright, S.C. & Tropp, L.R. (2005). Language and intergroup contact: Investigating the impact of bilingual instruction on children's intergroup attitudes. *Group Processes and Intergroup Relations*, 8, 309-328.
- Yee, M.D. & Brown, R. (1992). Self-evaluation and intergroup attitudes in children aged three to nine. *Child Development*, 63, 619-62.