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**Changing Children's Intergroup Attitudes towards
Stigmatised Groups: Testing Theoretically derived
Prejudice- reduction Interventions.**

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Thesis submitted in partial fulfilment of the requirements for the degree of Doctor of
Philosophy at the University of Kent, September 2005.



F203818

Memorandum

The research for this thesis was conducted at the Department of Psychology, University of Kent, whilst the author was a part-time postgraduate student.

The theoretical and empirical work presented within the thesis is the independent work of the author. Intellectual debts are acknowledged within the text and referenced. The studies reported in the thesis were conducted with limited practical and technical assistance from others.

The author has not been awarded a degree by this, or any other, university for the work included in this thesis.

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Abstract

The aim of this thesis was to design and evaluate theoretically derived prejudice-reduction interventions for children (5 to 11 years) as a means of obtaining more effective prejudice-reduction interventions and advancing psychological theories of prejudice. In the thesis, the potential contribution of psychology to the intervention literature in terms of theoretical models and methodological issues is discussed and its contribution to the intervention literature to date is analysed.

The interventions tested are multiple classification skills training and a number of versions of extended contact, which were derived from different models of inter-group contact. Interventions were evaluated using measures of out- and in-group attitude, intended behaviour, affect and implicit bias. Throughout the thesis it is hypothesised that, following the interventions, children will hold more favourable out-group attitudes. It is predicted that, of the extended contact models, the 'inter-group' and 'dual identity' versions will be the most effective. It is also hypothesised that the extended contact effect will be mediated by 'inclusion of other in the self' and perceived norms, and will be moderated by age and identity. It is expected that implicit bias will be reduced following interventions, but only in the older age group.

The results of four experimental studies are presented and the hypotheses are considered in each chapter. In summary, the findings show strong support for the use of extended contact, especially 'dual identity' and 'inter-group' extended contact, as a prejudice reduction tool in children aged 5 to 11 years. There is little support for the multiple-classification skills training intervention. Results indicate that extended contact is mediated by 'inclusion of other in the self' and is moderated by in-group identity. Perceived in-group norm does not appear to be a mediator of extended contact. The theoretical and practical implications of these findings are discussed. It is concluded that by incorporating psychological theories into prejudice-reduction interventions, and by considering psychological issues in the implementation and evaluation of these interventions, this can lead to effective prejudice-reduction tools and also advance psychological theories of prejudice.

Introductory Chapter: Designing Effective Interventions to Reduce Childhood

Prejudice

Summary

This chapter outlines a weakness of previous prejudice-reduction interventions that may have prevented the design of effective intervention programmes for children, namely a lack of collaboration between the two branches of research in this area: the education sector and psychological research. The mutual benefits of collaboration between these two lines of research are summarised and discussed. Firstly, the possible contributions psychology could make to the content, design and evaluation of interventions is outlined. Secondly, the benefits of incorporating psychological concepts into interventions in terms of advancing psychological theory are also described. The general aim of the thesis, to address this weakness in the literature and bridge the gap between these two fields of research, is then explained.

The Need for Closer Collaboration between the Education Sector and Social and Developmental Psychology

Intergroup bias towards stigmatised groups is relatively common amongst children in early and middle childhood (e.g. Aboud, 1988; Brown, 1995; Nesdale, 2001). Children have shown bias in several domains including ethnicity, gender, nationality and disability (see Abrams, Rutland & Cameron, 2003; Brown, 1995; Krajewski & Hyde, 2000; Powlishta, Serbin, Doyle & White, 1994; See Chapter 1 under subheading 'The development of inter-group bias / prejudice in children'). There is some limited evidence that children's attitudes towards stigmatised out-groups can be improved through school

based interventions (e.g. Aboud & Levy, 2000; Aboud & Fenwick, 1999; Bigler 1999; Brown, 1995; Katz & Zalk, 1978; Jones & Foley, 2003; Levy & Bigler, 2004; See Chapter 3). However, reviews of prejudice-reduction interventions conclude that while it is possible to reduce inter-group bias in children and adults, not all interventions are effective (see Aboud & Levy, 2000, Aboud & Fenwick, 1999 for reviews; Bigler 1999; Paluck & Green, 2003).

This may be due, in part, to a lack of collaboration between the two major branches of research in childhood prejudice: the education sector and educational, developmental and social psychology (Aboud & Levy, 2000; Bigler, 1999; Levy & Bigler, 2004; Oskamp, 2000; Stephan, 1999; Vrij & Smith, 1999). In the developmental social psychological literature, the emphasis of research has been on developing theoretical accounts of childhood prejudice (e.g. Aboud, 1988; Aboud & Amato, 2001; Brown, 1995; Hirschfeld, 1996; Katz, 1976; Schofield & Francis, 1982). According to Oskamp (2000, p.7), "few [researchers] have concentrated their research energies on the key questions of how to reduce prejudice and create a society where equality and social justice are the norm instead of exception." (Oskamp 2000).

In contrast, within the fields of education, educational psychology and counselling psychology the major thrust of research has been on interventions to reduce childhood prejudice. Unfortunately, the connection between theories of prejudice and educational interventions has been weak (Aboud & Levy, 2000; Levy & Bigler, 2004; Oskamp 2000). Indeed, some researchers have argued that the failure to design effective intervention programmes is due, in a large part, to the fact that theoretical frameworks are often sidelined in the development of intervention strategies (Bigler, 1999; Stephan, 1999; Vrij & Smith, 1999). There are a number of aspects of interventions to which psychological

theories and research could contribute. Closer collaboration between psychology and educators could improve prejudice-reduction interventions in a number of ways. Taking into account psychological theories and research when determining the content, design and method of assessment of interventions could lead to the development of more successful prejudice-reduction interventions (Bigler, 1999; Vrij & Smith, 1999). Furthermore, psychological research has highlighted a number of methodological limitations that must be addressed if effective prejudice-reduction interventions are to be generated.

Content of Prejudice-reduction Interventions

The content of prejudice-reduction interventions is often based on “common sense” and intuition rather than psychological evidence (Stephan, 1999). By ignoring psychological theories regarding the causes and underlying mechanisms of prejudice and prejudice reduction, this could lead to poor interventions (Vrij & van Schie, 1996) and in some cases may bring about an increase in prejudice and stereotyping (Vrij & Smith, 1999; Vrij & Van Schie, 1996).

Previous research has shown that when pre-existing interventions are altered to incorporate psychological theories and constructs, the result is more effective prejudice-reduction interventions and greater prejudice reduction (Vrij & Smith, 1999; Vrij & van Schie, 1996). Vrij & Smith (1999) investigated an intervention launched by the British Commission for Racial Equality. This consisted of several adverts highlighting the small-mindedness of racism and the discrimination encountered by ethnic minorities in the criminal justice system and in employment opportunities. They criticised the intervention for ignoring several well-established findings in the social psychological

literature. For instance, the intervention did not consider the importance of source credibility (Macrae, Shepherd & Milne, 1992). Vrij & Smith (1999) designed a new version of the intervention that incorporated these psychological findings. Vrij & Smith (1999) found that, compared to the original prejudice reduction campaign, their own version led to lower prejudice scores. This highlights the importance of considering psychological theories and findings when determining the content of prejudice-reduction interventions.

Furthermore, when designing interventions, evidence and theories from cognitive developmental psychology (e.g. Piaget, 1970) are rarely taken into consideration (Bigler, 1999). Indeed, a lack of understanding of children's cognitive ability may be one reason for the mixed results of prejudice-reduction interventions in children (Bigler, 1999). According to cognitive-developmental theorists such as Piaget, children move through a number of cognitive stages (Piaget, 1970) during which time they gain certain cognitive abilities that could be related to the forming and changing of stereotypes and out-group attitudes (Bigler, 1999). For instance, according to Piaget (1970) young children tend to focus on concrete (i.e. physical) features of objects and people, and tend to sort objects and people into rigid categories based on these physical characteristics e.g. race (See Chapter 1 under subheading 'Children's awareness of social categories'). Thus, interventions that present children with more complex, sophisticated representations of out-group members may fail as children's pre-occupation with physical appearance, i.e. race, means they will continue to categorise people according to this salient dimension (Bigler, 1999). Young children may also distort information provided in interventions to fit their pre-existing stereotypes of the out-group (Bigler & Liben, 1993). Therefore, in

order to create effective prejudice-reduction interventions for young children, the developmental constraints on their cognitive abilities should be taken into consideration.

Intervention Design and Implementation

Closer collaboration between psychology and the education sector could highlight some of the methodological issues related to the design and evaluation of prejudice-reduction interventions. Many interventions are being implemented or have been implemented without any evaluation at all (Paluck & Green, 2003). For example, in the United Kingdom there are several country-wide school prejudice-reduction programmes funded by the government at immense cost which are not subject to any formal, quantitative evaluation (e.g. the Community Cohesion Project in Leicester, Home Office, 2004). In cases where interventions have been assessed, the evaluation techniques used are often inadequate, which limits the conclusions that can be drawn regarding the benefits of the intervention (Bigler, 1999). Bigler (1999) in her review of interventions using multicultural materials stated that:

“many studies do not provide sound and convincing tests of the effectiveness of particular interventions. Too often intervention studies are characterized by very small experimental samples, the lack of control groups and the absence of appropriate statistical tests of whether attitude change has occurred. Furthermore, when well-documented evidence of attitude change is presented, intervention effects are weak at best.” (Bigler, 1999, p691).

Closer collaboration between psychologists and educators could improve intervention design and assessment so that more reliable conclusions can be drawn from intervention evaluations. Psychologists should be involved from the design stage of the

intervention in order to ensure that there is a large enough sample and adequate control groups.

In their review, Paluck & Green (2004) recommend the use of randomised controlled experimental designs when evaluating interventions. This requires random assignment of participants to either experimental or control conditions, with participants receiving no intervention training in the control condition. The use of this experimental design minimises the number of alternative explanations for results and allows researchers to look at the causal relationship between different aspects of interventions and bias-reduction (Paluck & Green, 2004). This allows for more reliable conclusions to be drawn from intervention evaluations using this experimental design. However, few intervention evaluations have adopted this design. In their extensive review including intervention projects from many different sectors including education, personnel, medical and military, Paluck & Green (2004) found only 51 interventions that employed this design.

These methodological problems could account for the mixed findings in previous studies: While some authors found interventions, such as multicultural interventions, successfully changed inter-group attitudes (Katz & Zalk, 1978; Litcher & Johnson, 1969) other authors found there was a non-significant effect of these interventions (see Banks, 1995 for review; Best, Smith, Graves & Williams, 1975; Pate, 1988; Williams & Moreland, 1976). Furthermore, many interventions are 'additive' in that they incorporate a number of different approaches to prejudice-reduction in the same intervention (Banks, 1995; Salzman & D'Andrea, 2001). The combination of different techniques may lead to effective interventions, but it is impossible to determine the underlying cause of any change in out-group attitude (Hill & Augustinos, 2001).

Generalisability of Findings

A central methodological issue highlighted in psychological research is generalisability (Murphy & Schofer, 2001). Generalisability is the assumption that research findings using a particular set of measures in a particular population will be replicated using different measures with a different population. The generalisability of prejudice-reduction interventions is often not tested and intervention effects are often limited to the setting and population under examination, for example a particular school and individual cases (e.g. Aboud & Fenwick, 1999; Salzman & D'Andrea, 2001). Furthermore, evaluations of interventions often focus on prejudice towards the target group, and ignore the possible effect of the intervention on prejudice towards other groups (Paluck & Green, 2004). While research suggests that adults and children hold different stereotypic beliefs about different social groups (Kleinpenning & Hagendoorn, 1991 for adults; Powlishta et al, 1994 for children), most experimenters and practitioners elect to focus on just one target group (e.g. Vrij & Smith, 1999). To summarise, generalisability of findings is an issue that has been addressed in the psychological arena, and is a further example of how psychological research could inform and improve future prejudice-reduction interventions.

Lack of Investigation of Long-term Effects

Few prejudice-reduction interventions have been tested for long-term effects (Bigler, 1999). Evidence suggests that the effect of interventions on inter-group attitudes and behaviours may be short-lived (Hill & Augustinos, 2001). Hill & Augustinos (2001) evaluated an anti-racist education intervention that was administered to adults within a

large organisation. The intervention aimed to increase knowledge of the history and culture of the indigenous population and so reduce discriminatory behaviour towards Aboriginal Australians. Participants examined Australian history and were asked to think about and explore stereotypes and attitudes. The intervention used role-play to encourage participants to think about how they would react if they witnessed racist or discriminatory acts. The intervention was evaluated by measuring participants' knowledge of the indigenous culture and prejudice and stereotyping immediately after the intervention and again 3 months later. Although results were encouraging in the short-term, with a significant increase in knowledge about Aboriginal Australians and an increase in positive stereotyping, as well as a decrease in modern and blatant prejudice, long-term findings were less positive. After 3 months the increased levels of knowledge and lower scores on modern racism and negative stereotyping were maintained but modern racism scores and negative stereotyping returned to a level comparable with that before the intervention took place (Hill & Augustinos, 2001).

The short-lived effect of prejudice-reduction interventions has also been shown in children (Katz & Zalk, 1978). Katz & Zalk (1978) initially found an effect of prejudice-reduction interventions on out-group attitude and behaviour, but in a delayed post-test that was administered 4-6 months after the intervention, the effect of the intervention on attitude measures was reduced, and the effect on behavioural measures disappeared.

Hill & Augustinos' (2001) and Katz & Zalk's (1978) findings highlight the importance of examining the long-term effect of interventions on inter-group attitudes and behaviours. This is problematic as for the majority of intervention evaluations, post-intervention outcome measures are administered immediately after the intervention took

place (Bigler, 1999). Thus, the long-term effect of prejudice-reduction interventions is an area that warrants further study.

Variation in Duration and Frequency of Interventions

There is a wide variation in the duration and frequency of interventions. Interventions can range from one-off sessions lasting 15 minutes (Katz & Zalk, 1978) or several hours (Byrnes & Kiger, 1990) to several sessions lasting 15 to 20 minutes that take place over a number of days (Bigler & Liben, 1992), weeks (Maras & Brown, 1996; 2000) or months (Aboud & Fenwick, 1999). In order to compare and contrast prejudice-reduction interventions, it is necessary that the frequency and duration of interventions be kept constant. There has been little research, however, that systematically examines the effect of duration and frequency of sessions on the success of interventions. However, a number of authors have suggested that long-term interventions are required to produce any real, long-lasting change in out-group attitudes and behaviours (e.g. Hill & Augustinos, 2001; Duckitt, 1992). Cotton (1993) argues that in order to be successful, interventions must be incorporated into the school curriculum rather than being one-off projects.

To summarise, psychological research has identified a number of limitations of prejudice-reduction intervention evaluations, including a lack of investigation of generalisability and long-term effects, as well as lack of consistency in frequency and duration of interventions.

The Mutual Benefits of Collaboration between the Fields of Psychology and Education

Greater collaboration between psychology and the education sector may be mutually beneficial. Not only will it lead to improved interventions and more reliable evaluations of interventions, but the inclusion of psychological concepts in interventions gives academics the opportunity to test their psychological theories in the field with real groups. The implementation and evaluation of prejudice-reduction interventions in the 'real world' provides psychologists with an opportunity to inform and refine psychological theories which are often based on more experimental, laboratory-based research. However, in order to draw reliable conclusions from intervention studies, it is necessary to incorporate strict, experimental controls in the design and evaluation of interventions.

Conclusions

Closer collaboration between psychology and the education sector could improve prejudice-reduction interventions for children in terms of their design, content and evaluation. Furthermore, psychological research has highlighted a number of issues that must be addressed in order to give a more complete evaluation of prejudice-reduction interventions, such as generalisability, measures used to evaluate interventions and the importance of examining long-term effects. Furthermore, a closer partnership between psychology and the education sector could be mutually beneficial. If psychological theories and findings were considered in the design, implementation and evaluation of prejudice-reduction interventions, findings relating to these interventions could advance psychological theories.

Aims of Thesis

The above chapter outlines a weakness in previous research examining prejudice in children, namely the lack of collaboration between the two major branches of research in childhood prejudice: the education sector and educational, developmental and social psychology (Aboud & Levy, 2000; Bigler, 1999; Levy & Bigler, 2004; Oskamp, 2000; Stephan, 1999; Vrij & Smith, 1999). The aim of the current research was to address this weakness and test the supposition outlined above that closer collaboration between the education sector and psychology could lead to more effective prejudice-reduction interventions for children. To this end, a number of prejudice-reduction interventions, based in psychological theories of prejudice, were designed and implemented in classrooms in the UK. Closer collaboration between psychology and the education sector is believed to have benefits for both educators in terms of creating effective interventions, and also for psychologists in terms of providing evidence relating to psychological theories of prejudice. Given these mutual benefits the current research had two objectives: to inform practitioners on effective interventions, and also to advance psychological theories regarding prejudice.

Thesis Overview

Chapter 1 outlines a number of theoretical approaches to prejudice development that could be incorporated into prejudice-reduction interventions to make them more effective and also to advance psychological theories of prejudice. The implications of these theories for prejudice-reduction interventions are examined.

Chapter 2 describes the contribution psychology could make to the intervention literature in terms of the development of accurate evaluations of prejudice-reduction interventions. The importance of using multiple measures of out-group orientation, particularly implicit measures of bias, is outlined. It is concluded that psychology has a considerable contribution to make to the development of effective prejudice-reduction interventions in terms of improving evaluation techniques so as to obtain accurate and reliable appraisals of these interventions.

Chapter 3 outlines the contribution psychology has made to the intervention literature thus far. Psychologists have evaluated pre-existing interventions that have been implemented by practitioners. However, such evaluations have limited consequences in terms of both the advancement of psychological theories of prejudice and the development of more effective interventions. Psychologists have also tested prejudice-reduction interventions that are directly derived from two psychological theories of prejudice, namely inter-group contact theory and socio-cognitive developmental theory. The benefits of these interventions are discussed. It is concluded that psychology has much to offer in terms of intervention design and evaluation, and closer collaboration between educators and psychologists could lead to more effective prejudice-reduction interventions.

Chapter 4 presents the findings of Study 1, in which a theoretically-derived intervention is tested with children aged 5 to 10 years ($N = 69$). The intervention involved reading stories that featured in- and out-group members in friendship contexts. In this study children's out-group attitudes towards the disabled are examined, therefore stories featured non-disabled children who are friends with physically disabled children or children with learning difficulties. The intervention is based on a relatively new elaboration of the inter-group contact hypothesis, the 'extended contact' hypothesis. This study aimed to address the question of generalisation of positive attitudes from the contact situation to the whole out-group. Two versions of extended contact based on two models of intergroup contact that have differing predictions regarding generalisation were tested, namely 'inter-group' and de-categorisation extended contact. In the 'inter-group' condition, the sub-group category memberships of the children in the stories is emphasised, and the typicality of the out-group member for their group is emphasised. In the 'de-categorisation' extended contact condition, the individual qualities of the children in the stories were emphasised. A neutral extended contact intervention is also administered. Interventions are evaluated using measures of out- and in-group attitude and intended behaviour. Implicit bias was measured using the 'implicit misattribution bias'. These measures were administered prior to and subsequent to the intervention. Study 1 finds overall support for the use of extended contact interventions, and also provides evidence that the 'inter-group' model is the most effective model of extended contact. There was no effect of the prejudice-reduction interventions on implicit bias.

Chapter 5 presents the findings of Study 2. In this study 'inter-group' extended contact is once more tested, but also a further intervention based on another theoretical approach to prejudice development is evaluated. This is the multiple classification skills

intervention, which is derived from socio-cognitive developmental theory. As in Study 2, the target out-group was the disabled. In this study, children ($N = 71$) received either the multiple classification skills training intervention, the inter-group extended contact intervention, or no intervention (control group). Interventions were again evaluated using measures of out- and in-group attitude and intended behaviour. Implicit bias was measured using the 'implicit misattribution bias' measure. Results supported the use of inter-group extended contact to change children's attitudes towards the out-group, but suggested that multiple classification skills training did not change children's out-group attitudes. There was no effect of prejudice-reduction interventions on implicit bias.

Chapter 6 presents the findings of Study 3. In this study, children's attitudes towards a different out-group, refugees, are examined. This study tests 'inter-group' extended contact with a broader age group in order to determine whether it is effective with younger and older children. A refined version of the multiple classification skills training intervention is also administered. In addition a combined intervention is implemented which involves both multiple classification skills training and extended contact interventions. Children ($N = 198$) receive one of three interventions: 'inter-group' extended contact, multiple classification skills training and a combined condition in which they receive both extended contact and multiple classification interventions. There is also a control group who receive no intervention. To test the predictions of the extended contact hypothesis outlined by Wright, Aron, McLaughlin-Volpe & Ropp (1997) potential moderators of extended contact, in-group identity and age group (6-8 years and 9 – 11 years) are examined. Potential mediators of extended contact, 'inclusion of other in self' and perceived in-group norms are studied. The intervention is evaluated using measures of out- and in-group attitude, intended behaviour and affect. Implicit bias

is measured using the IAT. Results support the use of extended contact with children across the age range studied here: 'inter-group' extended contact and the combined condition is equally effective in younger and older age groups. The effect of extended contact on intended behaviour is moderated by in-group identification. Results suggest that extended contact is not mediated by perceived in-group norm. Findings suggest that there is no effect of interventions on implicit bias.

Chapter 7 presents the findings of Study 4. As in Study 3, children's out-group attitudes towards refugees are examined. In this study, 3 models of inter-group contact are tested: dual identity, common in-group identity and de-categorisation. The extended contact interventions incorporate aspects of the above theories so as to test their predictions regarding generalisation of out-group attitude from the contact situation to the whole out-group. In each condition children read stories featuring in- and out-group members, and aspects of these stories are altered so as to meet the requirements of the above models for intergroup contact. In the common in-group identity intervention stories emphasised a common group to which the story characters and the participant belong. In the dual identity condition, the sub-group memberships and the common in-group membership of the characters are emphasised. The de-categorisation condition is identical to that in Study 1, but features refugee children rather than disabled children. Children ($N = 253$) receive either dual identity, common in-group identity or de-categorisation extended contact interventions. Their out-group evaluations are measured using the same measures as in Study 3. The mediating effect of 'inclusion of other in self' and perceived in-group norm are also examined. In this study an additional measure of perceived in-group norm outside of the classroom is used. The moderating effects of age and identity are also tested as the dual identity and common in-group

identity models have not before been applied to young children, and it could be predicted that they may be more effective with older children and high identifiers. Results show that extended contact led to more positive out-group attitudes, and this was most pronounced in the conditions in which sub-group salience was maintained i.e. the common in-group identity and dual identity conditions. Results suggest that extended contact is mediated by 'inclusion of other in the self' but not by perceived in-group norms. There is no effect of condition on implicit bias, which is consistent with previous studies and suggests the intervention was ineffective at changing children's implicit attitudes. The effect of extended contact is not moderated by age, suggesting that extended contact is equally effective in children across this age range.

Chapter 8 summarises the findings from the reported studies in relation to the aims stated in Introductory Chapter. The implications of these findings for the design of future prejudice-reduction interventions, and for psychological theories of prejudice development are examined. The limitations of the research and possible areas of future research are examined. It is concluded that the research presented here supports the use of extended contact as a prejudice-reduction tool in children aged 5 to 11 and that this thesis demonstrates the potential benefits of bridging the gap between theory and practice through closer collaboration between practitioners and academics.

Chapter 1: Theoretical approaches to the development of prejudice in children

Summary

This chapter outlines one of the major contributions psychology could make to the development of more effective prejudice-reduction interventions. Psychology has focused on investigating the very existence of prejudice in children, and how it develops. The potential benefits of incorporating psychological theories in prejudice-reduction interventions are described. Initially, the findings in the psychological literature relating to prejudice in children are outlined. Then, the theoretical approaches to childhood prejudice are examined. The limitations of these theories are examined and their implications for prejudice-reduction interventions for children explored.

The Importance of Psychological Theories for Prejudice-reduction Interventions

As stated in the Introductory Chapter, it has been argued that the mixed findings in the intervention literature are due to a lack of collaboration between the two major branches of research into childhood prejudice (Bigler, 1999). While those in the education sector have focused on developing interventions to reduce prejudice, researchers in developmental and social psychology have been pre-occupied with investigating developmental trends in the expression of out-group bias and formulating theories to account for the development of prejudice in children. This lack of collaboration between the two lines of research has meant that practitioners often do not incorporate psychological theories and findings into interventions (Bigler, 1999; See Introductory Chapter under subheading 'The need for closer collaboration between the education sector and social and developmental psychology). One of the aims of the

current research is to bridge the gap between these two areas of research and design effective prejudice-reduction interventions that incorporate psychological theories and findings. In this chapter, psychological research on the development of prejudice in children, and the theoretical approaches to childhood prejudice that have emerged from these findings will be outlined.

Research on Childhood Prejudice

In the past 70 years researchers have been intrigued by, and compelled to study, the expression and development of prejudice in children. Psychological research in this area has examined not only the existence of prejudice in children, but also the underlying mechanisms behind childhood prejudice and factors that may impede or encourage it. In doing so, researchers have examined awareness of, and identification with, social categories, and also prejudice and stereotypes (Aboud, 1988; Brown, 1995; Nesdale, 2001).

According to Brown (1995), prejudice is “the holding of derogatory social attitudes or cognitive beliefs, the expression of negative affect, or the display of hostile or discriminatory behaviour towards members of a group on account of their membership of that group” (Brown, 1995, p8). There are three aspects of social development that are required for the expression of prejudice in children: awareness of social categories, identification with social categories and expression of inter-group bias itself (Ruble, Alvarez, Bachman, Cameron, Fuligni & Coll, 2004). Each of these areas reflects an increasingly complex and deeper understanding of social categories in children. Following the lead of other authors (Brown, 1995; Goodman, 1952; Ruble et al, 2004), the review presented here will deal with these three aspects of prejudice separately.

Much of the research on the development of prejudice has focused on two social categories: gender and ethnicity. This review will reflect the dominance of gender and ethnicity in the literature but will also examine other social groups where possible.

Children's Awareness of Social Categories

In order to express prejudice, children must first be aware of social categories and groups and be able to engage in categorisation of social objects according to social groups memberships (Ruble et al, 2004). Ruble et al (2004) define awareness as the "ability to distinguish the sexes or races or to label them correctly regardless of whether they view themselves correctly as a member of one or prefer the other" (Ruble et al, 2004). Awareness does not, then, require identification with social categories or intergroup bias, but is merely the ability to identify members of social categories and categorise objects according to social group membership. Awareness is, therefore, the most rudimentary concept in children's social development and the most basic requirement for the expression of prejudice in children. Children appear to be aware of social categories such as gender and ethnicity from a very young age. Using a variety of methodologies, researchers have consistently found that young children are aware of categories and do spontaneously engage in categorisation (Clark & Clark, 1947; Connolly, 1998; Katz & Kofkin, 1997; Ruble & Martin, 1998; Rutland, Cameron, Bennett & Ferrell, in press; Williams & Moreland, 1976).

Clark & Clark (1947) were some of the first researchers to study category awareness in children. Clark & Clark's (1947) doll studies consisted of presenting children with two dolls, each representing a different race. The 'black' dolls had brown skin and brown hair and the white dolls had white skin and yellow hair. Black children

aged 3-7 years were asked a series of questions relating to the dolls, including "which looks like a white child?" and "which looks like a coloured child?" Children responded by pointing to the doll. Clark & Clark (1947) found that the majority of children were able to correctly identify the ethnicity of the doll and the ability to identify ethnicity increased with age: 75% of the youngest age group could perform this task correctly and by 5 years, 90% of the children tested succeeded in identifying the dolls' ethnicity.

Clark & Clark's methods have been criticized for being over-simplistic (Brown, 1995). However, the results of subsequent studies using more elaborate techniques concur with Clark & Clark's doll studies (e.g. Katz, 1976; Levy, 1999; Yee & Brown, 1994 for gender categorisation and Katz & Kofkin, 1997 for ethnic categories). In these studies children were asked to identify members of social groups from a photographic array, or were asked to sort photographs of people according to social group membership (e.g. Katz, 1976; Katz & Kofkin, 1997). Results of studies using these techniques suggest that children aged 3 to 4 years are aware of social categories such as gender and ethnicity from a very young age (Williams & Moreland, 1976; Katz, 1996; Levy, 1999; Yee & Brown, 1994 for gender categorisation and Katz & Kofkin, 1997 for ethnic categories; Aboud & Amato, 2001; Leinbach & Fagot, 1986).

Evidence discussed thus far has focused on children's ability to respond to experimenters' requests to classify or identify members of social groups. However, the expression of prejudice requires the ability to categorise spontaneously according to social group memberships, in the absence of any prompt to use certain social categories. Research suggests that children do spontaneously discuss race and gender and other social categories (Connolly, 1998). Connolly (1998) conducted interviews with 5-6 year

old English children who attended a multi-ethnic inner-city school. In his observational work and structured interviews he found children were aware of race and gender and spontaneously discussed these topics.

Studies using a modified version of the sorting task have also provided evidence for spontaneous social categorisation in children (Davey, 1983; Yee & Brown, 1988). This technique involves presenting children with a range of photographic stimuli that vary along several dimensions such as age, socio-economic status, gender and ethnicity. Children are asked to sort the photos into groups according to how they 'belong together' or 'look alike'. This technique also allows researchers to examine the relative salience of different social categories by examining which social category children attend to first when asked to divide the photos into groups. Research suggests that, when given a set of photographs that vary across several dimensions, ethnicity is the most salient dimension in most 5 year olds (Davey, 1983; Yee & Brown, 1988). The prevalence and pervasiveness of ethnicity is especially interesting in these studies as other possible bases for categorisation are masked by the dominating influence of ethnicity. That is, children attend to ethnic social category boundaries and are more likely to classify along these dimensions, even when a number of other social categories are available to them.

Sorting techniques also reveal the level of distinction children make when categorising group members. Maras (1993) presented 5 to 10 year olds with photographs of individuals who were non-disabled, physically disabled or had learning difficulties. She found that while children were aware of the distinction between disabled and non-disabled, and sorted the photographs along this category boundary, children did not

distinguish between the physically disabled and individuals with learning difficulties (Maras, 1993).

Further evidence for the awareness of social categories and social categorisation in children comes from the detection of certain behaviours that are associated with social categorisation in adults, for instance recall error patterns (Bennett, Sani, Hopkins, Agostini & Malucchi, 2000). That is, when asked to recall information about in-group and out-group members, there is a tendency to make more errors where information is mistakenly attributed to another member of the in-group rather than a member of the out-group. Bennett et al (2000) found that children as young as 7 years old were more likely to make within-gender rather than between-gender errors, a pattern that is also found in adults.

Given the evidence from observational studies and structured interviews (Connolly, 1998), sorting tasks (Maras, 1993; Yee & Brown, 1988) and recall error patterns (Bennett et al, 2000) it seems that children are aware of, and spontaneously use, social categories such as ethnicity and gender to organise social objects from a young age. Indeed, young children's perception of people seems to be dominated by information relating to these two social categories. The early appearance of social category awareness suggests that children hold a prerequisite of prejudice, i.e. awareness of social categories, from a very young age.

Children's Identification with Social Categories

Brown's (1995) definition of prejudice does not require identification with a social group. However, according to some researchers, identification with social categories is important for children's inter-group attitudes and behaviour (e.g. Tajfel &

Turner, 1979; Ruble et al, 2004; Nesdale, 2004). Evidence suggests that children from the age of 3 years can identify with social categories such as gender, ethnicity and nationality (Katz, 1996; Katz & Kofkin, 1997; Barrett, 1996).

Gender identification: Given the ubiquitous nature of gender as a social category it is not surprising that children develop gender identities at such a young age (Maccoby, 1988). Katz & Kofkin (1997) report that children as young as 30 months can self-identify according to gender. However, at this young age they did have difficulty identifying the gender of others (Katz & Kofkin, 1997). Nevertheless, by three years of age most children can label their own gender and begin to recognise that other children are the same gender as they are (Katz, 1996; Leinbach & Fagot, 1986; Levy, 1999; Thompson, 1975; Weinraub, Clemens, Sockloff, Ethridge, Gracely & Meyers, 1984). In other words, by this age children understand gender is a collective identity and a social category to which they and others belong.

Children's identification with the gender category is also evident in their resultant behaviours. For example, children as young as 4 exhibit own-sex playmate preferences (Maccoby & Jacklin, 1987; Powlishta et al, 1994). Maccoby & Jacklin (1987) found evidence of gender segregation in children's choice of play-mate during free play in children as young as 4 ½ years.

Identification with ethnic or racial categories: There is also evidence that other social identities, such as ethnic or racial identities, are held by young children (Clark & Clark, 1947; see Brown, 1995 for review). Clark & Clark (1947) found that, when presented with dolls representing the 'black' and 'white' ethnic groups, young children identified themselves with the doll appropriate to their own ethnic group. This finding has been replicated more recently by Katz & Kofkin (1997) who examined ethnic self-

identification in young children. They found that at 3 years, 77% of the European American children they interviewed could correctly self-identify according to race.

National identification: Comparatively little research has been conducted to investigate the development of national identity in children (Barrett, Lyons & del Valle, 2004; Piaget & Weil, 1951; Barrett, 2001). Piaget & Weil (1951) were some of the first researchers to examine the development of children's knowledge and understanding of nations, and also their attitudes towards people from other countries. They found that children below 5 years old knew very little about their own country or national group. Lambert & Klineberg (1967) asked children the open-ended question: "what are you?" They found that children responded with gender and ethnic category labels and nationality was very rarely mentioned. Thus, young children did not appear to spontaneously identify with their country. However, when children were asked specifically about their country and nation, most children from 5 years up could correctly name their country and classified themselves as belonging to that social group (Barrett 1996; see Barrett, Lyons & del Valle, 2004 for review). In their review Barrett et al (2004) point out that the degree of identification with the national group and the importance of nationality for the self increases between 5/6 years and 11/12 years of age (Barrett, 2001). Thus, national identity appears to develop later than gender or ethnic identity.

One reason for the late appearance of national identity may be that one's country and nationality is a more abstract concept and less salient compared with gender and ethnicity. According to Piaget (1970), social categorisation in young children is dominated by perceptual cues. That is, they are more likely to categorise people and objects according to physical features such as colour of skin, than internal qualities.

Nationality has no physical marker, thus categorisation according to nationality is less salient and children will not engage in this type of categorisation until they have moved out of the perceptually dominant phase (Piaget, 1970; Aboud, 1988). In addition, young children are unlikely to have complete understanding of their country because they have difficulty comprehending part-whole relationships (Piaget & Weil, 1951) which are necessary in order to understand that a city, such as London, is part of England (Piaget & Weil, 1951). Thus, the later appearance of national identity may be due to more complex cognitive demands placed on children in order to categorise according to nationality.

Constancy and consistency: Ruble et al (2004) argue that true identification with social categories, and therefore true inter-group bias, requires more than mere self-identification with social categories. Although Ruble et al (2004) formulated this theory with gender identity in mind, it could also be applied to other social categories. Ruble et al (2004) argue that there are three aspects of identification with social categories: (1) correct categorisation of self and others, (2) an understanding of stability of category membership over time (constancy) and (3) an understanding of consistency of gender across superficial changes e.g. a boy wearing a dress is still a boy. Thus, according to this theory, children can identify their own and other social category memberships, but may not develop a true understanding of their own and others' social identities until they understand social category stability and finally consistency.

There is evidence that children's understanding of social identity develops in these three stages for gender identity (Szkrybalo & Ruble, 1999; Ruble & Martin, 1998) and ethnic and racial identity (Aboud & Ruble, 1987; Ocampo, Bernal & Knight, 1993; Rhee & Ruble, 1997). Children are believed to move through these phases between 3 and 7 years of age (Ruble et al 2004; Ruble & Martin, 1998; Rutland et al, 2005). While

many 3-4 year olds may be able to give correct responses in fixed-response constancy items, it is not likely they will have complete, true understanding of gender constancy until they are 6-7 years old (Szkrybalo & Ruble, 1999).

In summary, there is mixed evidence regarding young children's identification with and understanding of social categories. There appears to be sound evidence that by at least five years of age children do identify with social categories such as gender and ethnicity (Clark & Clark, 1947; Szkybalo & Ruble, 1999). Self-identification with other more abstract social categories may appear later in children's development (Barrett et al, 2004), and more complex and sophisticated understanding of social categories may appear slightly later still (Ruble et al, 2004). However, even taking into consideration the more complex requirements for holding meaningful social identities set out by Kohlberg (1966), such as constancy, it does seem that by 7 years of age children have a more sophisticated understanding of the meanings of social identities. The early appearance of identification with social categories points to the importance of developing a comprehensive theoretical account of prejudice development and interventions to reduce stereotyping and prejudice.

In-group Preference

Early studies of prejudice in children focused on children's preference for the in-group over the out-group (See Chapter 2 under sub-heading 'The distinction between in-group and out-group attitudes). In Clark & Clark's (1947) doll studies and in early studies using photographic stimuli (e.g. Horowitz, 1936), it was found that when asked to identify the most preferred stimuli, most children favoured the in-group stimuli (Asher & Allen, 1969; Clark & Clark, 1947; Vaughan, 1964). Davey (1983) found evidence of in-

group preference in children's distribution of sweets to (unknown) children of their own and other ethnic groups. Children consistently favoured their own group, over the other groups. There is evidence of in-group national preference in children aged 6 or 7 (Jaspers, Van de Geer, Tajfel & Johnson, 1972; Bennett, Lyons, Sani & Barrett, 1998; Tajfel, Jahoda, Nemeth, Campbell & Johnson, 1970). There is also some consensus regarding which nationality children would prefer to be (American, British and French) (Lambert & Klineberg, 1967). As discussed earlier, children also exhibit gender preference both in preference tasks and also other behaviours such as playmate preference (Hayden-Thompson, Rubin & Hymel, 1987; Maccoby, & Jacklin, 1987). In-group preference has also been shown in non-disabled children's preference for non-disabled children over disabled children in photographic stimuli tasks (Richardson & Green, 1971).

The in-group preference detected in these early studies is revealing but cannot be taken as evidence of prejudice in children (See Chapter 2 under sub-heading 'The distinction between in-group and out-group attitudes). However, since the early work of Clark & Clark (1957) and Horowitz (1936), researchers have gone beyond studying in-group preference and have investigated children's stereotypes of and inter-group attitudes and prejudice towards social groups such as ethnicity, gender and nationality.

Stereotyping in Children

Gender stereotypes: Research suggests that stereotypes and bias towards different social groups appears at different ages: some studies suggest that gender stereotypes and bias may be the earliest to appear in children (Ruble & Martin, 1998; Bigler, 1995; Bigler & Liben, 1992; Powlishta et al, 1994; Yee & Brown, 1994). By 3 years children know

the sex stereotypes for toys, clothing, games and occupations (Maccoby, 1988) and children use these stereotypes as cues for their own behaviour. For example, this is evident in sex-typed toy preference (Maccoby, 1988) and play mate preference (Serbin, Moller, Gulko, Powlishta & Colbourne, 1994). Children may also overlook individuating information when making judgements of people, instead focusing on gender category membership (Biernat, 1991). Biernat (1991) found that, while older children can attend to more individuating information, younger children rely on gender labels when judging others.

Ethnic stereotypes: Research suggests that ethnic stereotypes may develop slightly later than gender stereotypes (Bigler, Averhart & Liben, 2003). Children are highly knowledgeable of the cultural stereotypes of different ethnic groups (Augoustinos & Rosewarne, 2001; Bigler et al, 2003). Bigler et al (2003) asked African American children aged 6 – 12 years to rate the status of novel jobs. European Americans, African Americans or members of both ethnic groups were depicted in these novel occupations. It was found that children of all ages in this study used race as a cue to the status of the occupation. Children as young as 6 associated other ethnic groups, i.e. black people, with low status jobs and white people with high status occupations (Bigler et al, 2003). This demonstrates the stereotype-knowledge possessed by young children and their use of this knowledge when negotiating the social world.

National stereotypes: There is evidence that children also hold national stereotypes, but these may appear slightly later in children's development (e.g. Piaget & Weil, 1951; Lambert & Klineberg, 1967; Barrett & Short, 1992; Johnson, Middleton & Tajfel, 1970; Barrett et al, 2004). Barrett & Short (1992) examined English children's conceptions of their own and other nationalities. Their sample consisted of 5 – 10 year

olds. The target nationalities were French, German, Spanish and Italian. Barrett & Short (1992) found that children associated certain traits or characteristics with some nationalities more than others. For instance children associated 'lazy' with the Spanish significantly more than with the French, Germans or Italians. Barrett & Short (1992) also found some evidence of national stereotyping in their younger age group, 5-7 years. Children in this age group were beginning to show agreement on the traits associated with each of the nationalities. In older children, 8-10 years, national stereotyping was well established and there was high agreement on traits associated with each of the four nationalities examined.

To summarise, it seems that stereotyping of social groups appears in children from an early age and develops sequentially, beginning with the social category that is perhaps most salient and relevant to them, gender. The very existence of stereotypes in young children points to the need for theoretical accounts of prejudice development and underlines the importance of implementing interventions to tackle these stereotypes.

The Development of Inter-group Bias / Prejudice in Children

There are mixed findings regarding the development of prejudice in children (Cameron, Alvarez, Ruble & Fuligni, 2001). This may be due, in part, to methodological problems with research in this area (See Chapter 2 under sub-heading 'The distinction between in-group and out-group attitudes). Some researchers have reported that ethnic out-group bias appears in children as young as 4 years old and increases to a peak at 7 or 8 years and then declines (Davey, 1983; Black-Gutman & Hickson, 1996; Doyle & Aboud, 1995; Doyle, Beaudet & Aboud, 1988; see Cameron et al, 2001 for review). For instance, Davey (1983) found that children attributed more positive and less negative

traits to their own group compared with others and this dissociation was at its peak in younger children aged 7-8 years. However, racial bias has been found using the trait attribution task in even younger children. Majority group European Canadian children aged 5-6 years have been found to endorse negative adjectives for the black ethnic out-group (Black-Gutman & Hickson, 1996).

In addition to the early onset of gender and ethnic bias (around 6 years), there is also evidence of negative inter-group attitudes according to body type (Powlishta et al, 1994) and disability (Maras & Brown, 1996; 2000).

The pervasiveness of prejudice in young children, and the ability to engage in inter-group comparisons and form inter-group attitudes has also been highlighted in minimal group studies (Yee & Brown, 1992; Vaughan, Tajfel & Williams, 1981; Bigler, Jones & Lobliner, 1997). Bigler et al (1997) looked at the effects of minimal group membership on children aged 6-9 years. Children were assigned to either a "blue" or "yellow" group. Teachers made functional use of the "blue" and "yellow" categories, or did not. Bigler et al (1997) found that even using these minimal groups, which had no deeper meaning for the participants and had no social significance, participants showed in-group bias.

A methodological limitation of previous research examining prejudice in children is the confounding of in- and out-group attitudes (See Chapter 2 under sub-heading 'The distinction between in- and out-group attitudes'). Research in which in- and out-group attitudes are examined separately suggest that genuine out-group bias may not appear until a later age. Aboud (2003) found that, when out-group prejudice and in-group attitude are separated, prejudice did not appear until children were 5 years old. This is

two years later than the age at which it has been detected in previous studies using calculations that confounded the in-group and the out-group (e.g. Katz & Kofkin, 1997).

Consistent with this finding, Rutland (1999) found that when in- and out-group attitudes are examined separately, negative perception of the out-group does not appear until children are 10 years old (Rutland, 1999). Furthermore, Davey (1983) found that when in- and out-group attitudes are separated, children appear to be ambivalent towards the out-group (Davey, 1983). Therefore, although in-group preference may be exhibited in children from a very young age, genuine out-group derogation may not appear until children are approximately 5 years old, and for some social groups it may not appear until middle childhood (Rutland, 1999).

However, it could be argued that even in-group preference exhibited in young children may still be unnecessarily high. Research has shown that inter-group attitudes in children correlate with peer preferences (Bigler et al, 1997) and assignment of positive and negative attributes and social distance correlates with play preference (Powlishta et al, 1994). Children make decisions such as playmates, friends, and who they choose to interact with, on the basis of comparison. Given the evidence suggesting very high in-group favouritism, any out-group member would suffer on the basis of comparison (Aboud, 2003). If any in-group alternative is available for play, or for everyday social interactions, it would be unlikely that children would select an out-group member (Aboud, 2003). Therefore in-group preference may lead to behaviours that derogate the out-group and lead to segregation of the in-and out-group. In-group preference is, then, problematic for inter-group relations and should be tackled using prejudice-reduction interventions.

To summarise, there is evidence that young children hold the prerequisite requirements for the expression of prejudice (Ruble et al, 2004). They are aware of social categories, they identify with social categories and have some understanding of constancy. There is also evidence of in-group preference, and possibly at a slightly later age (5 years) out-group bias. Furthermore, even if out-group bias is not detected, in-group preference is also problematic as it leads to less favourable treatment of out-group members, compared to members of the in-group (Aboud, 2003). Thus, while findings concerning the exact age of onset of true prejudice are mixed, in-group favouritism certainly does seem to appear from a very young age for a number of social categories. The existence of these attitudes and behaviours in children points to the need to develop theories that account for the development of prejudice in children, and implies that prejudice-reduction interventions are indeed necessary in order to tackle prejudice in young children.

Theories of Prejudice Development in Children

One of most significant contributions psychology could make to the design of interventions is through the incorporation of psychological theories of childhood prejudice into prejudice-reduction interventions. A number of psychological theories have emerged, each claiming to account for the development of prejudice in children. These theories each have different implications for the content of prejudice-reduction interventions. Following the lead of Nesdale (2004), the following theories of prejudice developments will be examined: emotional maladjustment, social reflection / socialisation, socio-cognitive developmental theory (Aboud, 1988), Social Identity Theory (SIT) and Self-categorisation Theory (SCT; Tajfel & Turner, 1979; Turner, Hogg,

Oakes, Reicher, & Wetherell, 1987 respectively) and Social Identity Developmental Theory (SIDT, Nesdale, 2004). The ways in which these theories can be translated into prejudice-reduction interventions will also be examined.

Emotional Maladjustment

According to the 'emotional maladjustment' theory of prejudice development, prejudice is linked to the development of a specific personality type, the authoritarian personality (Adorno, Frenkel-Brunswick, Levinson & Sanford, 1950). This theory stems from the Freudian approach to personality development (Nesdale, 2004) and argues that, as a result of a repressive and disciplined upbringing, children will experience frustration, anger and hostility, but rather than directing these emotions towards their parents, children will direct them towards members of minority groups (Nesdale, 1999). One advantage of this approach is that it accounts for individual differences in prejudice levels in adults and children (Aboud, 1988).

Limitations: The emotional maladjustment theory cannot explain uniformity in the perpetrators or targets of prejudice. It cannot explain why in certain geographical locations or in certain points in time, large groups of people express prejudice towards certain groups, nor can it explain why some groups and not others are consistently the recipients of prejudice (Nesdale, 2004). The 'authoritarian personality' view also ignores the importance of social environment, which includes societal norms, inter-group relations and the prevailing out-group attitudes (Nesdale, 2004).

Emotional maladjustment and interventions: The 'authoritarian' personality approach does not lend itself to the design of effective prejudice-reduction interventions, as it implies the development of the authoritarian personality type is inevitable and

irreversible, meaning that once children have been exposed to a particular child rearing environment they will inevitably express prejudice towards stigmatised groups.

Social Reflection / Socialisation

Perhaps one of the most obvious explanations for prejudice in children is 'socialisation' or social reflection (Aboud, 1988). According to the 'socialisation' approach children's inter-group attitudes reflect the community's attitudes and values (Nesdale, 2004). It seems obvious that children will be attuned to the society they live in and pick up information about groups, for example their status, evaluation of groups and group stereotypes. Community attitudes and values could be transmitted via a number of sources including the media, school and parents. Thus in the same way that children learn other attitudes and behaviours from socialisation influences such as their parents and TV, they may also learn inter-group attitudes (Allport, 1954; Rosenfield & Stephan, 1981).

One possible source of socialisation influence is mass media, such as television. Children are surrounded by mass media influences in every aspect of their lives and the content of these media influences could lead to negative inter-group attitudes and stereotypes. Images of out-group members in the media can be stereotype-confirming (Graves, 1999). Members of social groups are often portrayed in the media in stereotypical roles (Graves, 1999). For instance, African-American children are more likely to appear in TV commercials with a musical or sports-related theme, rather than an educational or creative theme (Seiter, 1995). Furthermore, the images on television of inter-ethnic relations are superficial and infrequent (Graves, 1999).

Limitations of the socialisation approach: According to the 'socialisation' approach, one would expect children's out-group stereotypes to be related to their socialisation influences, such as their parents and other media such as TV. However, research suggests that the relationship between children and the social context may be more complex than the 'socialisation' approach allows (Aboud & Doyle, 1996). There appears to be no straightforward correlation between inter-group attitudes in children and their supposed social influences, such as parental attitudes (Aboud & Doyle, 1996; Horowitz & Horowitz, 1938; Davey, 1983). As with parental influence, findings regarding the influence of the media on children's inter-group attitudes are mixed (e.g. Greenberg & Brand, 1994; Dorr, Graves & Phelps, 1990; Zuckerman, Singer & Singer, 1980; see Graves, 1999 for review). Racial portrayals on American TV do not predict African and European American children's racial attitudes (Graves, 1980) and additional factors such as prior knowledge affect children's interpretation of portrayals of racial groups on TV (Livingstone, 1990).

Furthermore, socialisation cannot account for the ethnic preference patterns detected in minority children (Brown, 1995). There is some evidence that minority group children show *out-group* preference and identification (Branch & Newcombe, 1986; Davey, 1983). Presumably, this does not reflect their parent's views. However, this finding may be consistent with socialisation theory as children's attitudes could be related to other socialisation influences such as television (Graves, 1999).

Another weakness of the socialisation approach is that it cannot explain the constant level of inter-group bias found in children over the past 50 years (Brown, 1995; Graves, 1999). If children's inter-group attitudes are a result of socio-cultural influences, changes in society should be mirrored in children's inter-group attitudes. The past 50

years have seen many historical changes in racial and gender equality, and this has been reflected in adults' out-group attitudes but children's out-group attitudes remain unchanged. It seems, then, that the relationship between children's prejudice and possible socio-cultural influences such as parents and the mass media is complex and ambiguous (Brown, 1995; Zuckerman, 1980).

A further limitation of the 'socialisation' theory is that according to this approach children have no active role in the development of prejudice. Children are portrayed as being passive and merely absorb information from the social context. However, the pattern of prejudice found in children does not support this claim. Firstly, inter-group bias appears at an early age, before they are exposed to many social influences (Brown, 1995). Secondly, according to this socialisation approach the effect of socio-cultural influences on childhood prejudice would be incremental (Brown, 1995). In other words, it would predict a steady increase in out-group bias as a result of repeated exposure to social influences and also exposure to new social influences e.g. beginning school. However, evidence suggests that the developmental trajectory of prejudice does not follow the pattern predicted by socialisation and in fact prejudice seems to increase from 5 to 8 years where it reaches a peak and then declines (Asher & Allen, 1969; Aboud, 1988; Bigler & Liben, 1993; Aboud, 1988; Doyle & Aboud, 1995). Socialisation alone cannot explain the early onset of prejudice and the subsequent developmental trend observed.

Socialisation and interventions: One could predict that if the socialisation approach is accurate, and prejudice in children is a result of the prejudicial views of their parents and the stereotypical portrayal of the out-group in the media, then parental views and the media could also be used to create more positive out-group attitudes and inter-group behaviour and relations in children (Graves, 1999). This is evident in a number of

prejudice-reduction interventions that used the medium of television to attempt to change children's inter-group attitudes e.g. 'Different & The Same' (Graves, 1999) and 'Sesame Street' (Lovelace, Scheiner, Dollberg, Segui, & Black, 1994). Therefore, by changing the perceived out-group attitudes of parents or other influential social figures this may also lead to a change in children's out-group attitudes. However, given the mixed evidence regarding the relationship between children's views of the out-group and their parent's views and the portrayal of the out-group in the media, interventions should perhaps not rely on the socialisation effect alone. However, while intervention based solely on the socialisation approach may fail, media and parental influence could form part of a prejudice-reduction intervention, in conjunction with other techniques.

Socio-Cognitive Developmental Theory

In response to criticisms of the socialisation approach and its inability to account for findings, researchers and theorists have turned their attention to changes that naturally occur in children in the first 10 years of life that may lead to prejudice and the developmental trends observed in many studies (Aboud, 1988; Katz, 1976; Piaget & Weil, 1951; Maccoby, 1988; Vaughan, 1987). Social developmental theories of prejudice are built on the premise that prejudice cannot be explained by social influences alone, and there is something in children's cognitive makeup that causes them to express prejudice. These theories focus on the cognitive, social and affective changes in children (Aboud, 1988).

One such theory is Aboud's socio-cognitive developmental approach (Aboud, 1988). Although this theory focuses on the development of ethnic attitudes, there is no reason why this theory could not be applied to prejudice towards other out-groups

(Brown, 1995). According to Aboud (1988), different levels of and types of prejudice occur as a result of changes in children's cognitive structure and abilities (Aboud, 1988). Aboud (1988) argues that children move through a series of phases or stages of cognitive development that colour the way in which they make sense of the social world and how they locate themselves in that world in terms of social groups. This in turn influences inter-group attitudes and prejudice expressed by children. Therefore, at each of these stages there is a resultant level or type of prejudice expressed by children. Some cognitive stages are associated with high prejudice, while others lead to low levels of prejudice. Aboud (1988) argues that as children progress through these stages, the level of prejudice follows an inverted-u trajectory, increasing until it peaks at around 7-8 years, followed by a gradual decline. Thus, according to this theory, prejudice is inevitable at certain stages of socio-cognitive development, but it is short-lived as children quickly move on to the next stage of socio-cognitive development (Aboud, 1988).

Aboud (1988) argues that children's social cognitive development consists of two overlapping sequences. The first sequence is the process that dominates children's experience. That is, it is the process that controls how children experience the world. According to Aboud (1988), as children get older the process dominating their experience goes from affective states to perceptions and finally to cognitions. In the affective stage children's inter-group attitudes or the way in which they relate to or fit into the ethnic world is dominated by their emotions and preferences. At this stage children's perceptions of people are not influenced by social group memberships but instead are affected by emotional reactions, such as automatic responses like fear of strangers who look different (Aboud, 1988). Thus, information relating to affect, such as familiarity, will be more influential on attitudes than knowledge of group membership.

Changing children's intergroup attitudes

In the next stage, the perceptual stage, children's perceptions of others are based on perceived similarity or dissimilarity to the self. At this stage children will prefer people who they perceive to be similar to them. Similarity is based on external observable features rather than internal qualities. Thus, attitudes at this stage are based on physical characteristics (Aboud, 1988).

At the third stage of this sequence, cognitive understanding develops. It is at this stage that a real, meaningful understanding of categories develops and children understand that category membership goes beyond physical appearance and is constant. For instance, if a boy were to have long hair, children in this stage would understand he is still a boy. Categories are recognised as being permanent. Also at this stage, according to Aboud (1988), children can de-centre and understand two or more different perspectives. They can, therefore, understand that children belonging to different ethnic categories will have different preferences and perceptions from themselves. The latter two stages will occur in children aged 8 – 10 years. Together these two stages lead to a reduction in prejudice in children as they move away from perceptions based on affective responses and begin to see people as individuals and understand category membership is constant and unchangeable.

According to Aboud (1988), while children move through the above sequence of cognitive development, they will also simultaneously move through an overlapping sequence involving a change in children's focus of attention. In this sequence, children move from focusing on the self and being egocentric, to focusing on groups and finally focusing on the individual.

The egocentric stage occurs in children below 7 years of age. At this stage children are focused on the self. In the next phase, Aboud (1988) argues, prejudice is at

its peak. In this stage children are preoccupied with groups and the similarities and differences between one's own and other groups. Initially, children exaggerate the differences between groups however, later they recognise some similarities. This greater flexibility leads to a reduction in prejudice. At the third stage there should be even lower levels of prejudice as children begin to make evaluations of people based individual characteristics rather than focusing solely on group memberships. As such, like or dislike for a person occurs at the individual level, rather than group level (Aboud, 1988).

Support for the socio-cognitive approach: While the cognitive developmental approach to prejudice development does allow children a more active role in the development of prejudice, it may not provide a complete account of the development of prejudice in children. There is mixed support for Aboud's (1988) socio-cognitive developmental theory. There is some evidence that a peak in prejudice does occur at 7-8 years, as predicted by Aboud (1988; Doyle & Aboud, 1995; Clark, Hocevar & Dembo, 1980; Powlishta et al, 1994; Aboud & Mitchell, 1977; Bigler & Liben, 1993). For instance, Aboud & Mitchell (1977) studied liking for own and other ethnic groups in 6 and 8 year olds using a social distance measure. They found that younger children liked their own group better than other groups and older children were less positive towards their own group and were less negative towards the out-groups they disliked. This neutralisation of attitudes, or ambivalence in children around 8 years of age, indicates that by this stage, children have passed the peak of prejudice and hold less exaggerated, dichotomous attitudes towards the in- and out-group (Aboud, 1988).

Further evidence for the link between prejudice and social-cognition comes from studies that find a relationship between cognitive abilities and social cognitive abilities and the expression of prejudice. One such cognitive ability is conservation, which is

achieved in the concrete operational stage. This is correlated with ethnic flexibility, which is the increased perception of variation within ethnic groups and similarities between ethnic groups (Doyle, Beaudet & Aboud, 1988). Attainment of conservation has also been linked to ethnic constancy (Aboud, 1988). Furthermore, as predicted by socio-cognitive developmental theory, there is evidence that perceived similarity between and within races is related to prejudice scores in trait attribution tasks (Black-Gutman & Hickson, 1996; Aboud & Doyle, 1995) and the attainment of conservation has been shown to precede a reduction in prejudice (Doyle & Aboud, 1995; Doyle et al, 1988).

Another social cognitive ability that is linked to reduced prejudice is the ability to classify along multiple dimensions (Bigler & Liben, 1992; Aboud, 1988; Bigler, 1995; Bigler, Jones & Lobliner, 1997). This is the ability to simultaneously attend to more than one dimension of an object and categorise it along multiple dimensions. Children's classification skills become more complex and sophisticated with age (Piaget, 1965). Very young children have limited cognitive skills. They are unable to conserve and therefore cannot focus on more than one dimension of an object. Up to around the age of 3, they are able to sort objects along one dimension, but are unable to re-sort them along another dimension. As children get older and develop the cognitive ability to conserve, their classification skills become more complex (Piaget, 1965). This cognitive development manifests itself in children's social behaviour as they develop the ability to classify social objects, people, along multiple dimensions, or social categories. Children become able to sort objects along several dimensions in succession and finally can simultaneously classify along multiple dimensions (Bigler & Liben, 1992). Children develop the ability to recognise that people can belong to two or more social groups simultaneously and sometimes these groups will be incongruent or surprising as they do

not match traditional stereotypes e.g. a woman who is also an engineer. Research suggests there is a link between ability to classify along multiple dimension and prejudice and stereotyping (Bigler & Liben, 1992; Bigler, 1995; Bigler, Jones & Lobliner, 1997).

A consequence of the ability to attend to more than one dimension in categorisation is increased perception of similarities between groups and increased perceived differences within groups (Black-Gutman & Hickson, 1994). Perceived similarity between races and differences within races has been found to be related to prejudice in trait attribution tasks (Black-Gutman & Hickson, 1994; Aboud & Doyle, 1995).

Limitations of the socio-cognitive developmental approach: Socio-cognitive developmental theory has met with some criticism. Firstly, socio-cognitive developmental theory predicts a gradual increase in prejudice which peaks at 7 to 8 years and then declines (Aboud, 1988). However, research has not always found this pattern of prejudice development (e.g. Davey, 1983). Different developmental patterns of intergroup attitudes have been found for different ethnic groups (Black-Gutman & Hickson, 1996), gender and body type (Powlishta et al, 1994) and national out-groups (Rutland, 1999). There is also some evidence that out-group attitudes do not follow an inverted-u pattern and may remain the same throughout childhood (Black –Gutman & Hickson, 1996). Some out-group biases may not appear until 10 years of age, a point by which, according to socio-cognitive developmental theory, full socio-cognitive development should be attained (Rutland, 1999; Barrett et al, 2004). This variety of age trends suggests that prejudice development is not universal across target groups and prejudice towards one group is not reflected in prejudice towards other groups (Powlishta, 2004).

Secondly, if the socio-cognitive development approach to prejudice is followed through to its logical conclusion, and prejudice is indeed due to cognitive deficits in childhood, by adulthood prejudice should have disappeared. We know this is not the case, therefore cognitive development cannot be the sole cause of prejudice (Brown, 1995). Furthermore, evidence regarding the benefits of social cognitive interventions is mixed (Bigler et al, 1997; See Chapter 3 under sub-heading 'Cognitive interventions: Multiple classification training'). This puts into question the link between prejudice and social cognitive abilities in children.

A final and crucial limitation of socio-cognitive developmental theory is that it does not consider the social context or motivations of children (Nesdale, 2004). Many studies that found evidence to support cognitive developmental theory also point to the importance of social context in determining prejudice in children (e.g. Aboud & Amato, 2001; Bigler, 1995). Just as children are not passive receptors of social influence, as the socialisation approach contends, they are also not captives of their own cognitive limitations, isolated from the social world. In order to fully explain the development of prejudice in children, theories must also consider the importance of the social environment.

Socio-cognitive development and prejudice reduction interventions: The stages of cognitive development outlined by Aboud (1988) have implications for interventions to reduce prejudice. Aboud (1988) proposes that in each of the cognitive developmental phases, children's perceptions are characterised by different levels of understanding of groups and categorisation ability and different levels of focus. It could be argued that, in order to be successful, interventions should match the child's level of cognitive development. A mismatch between the content of prejudice reduction interventions and

the level of cognitive processing and focus the child is in, could mean information in the intervention may simply not be processed (Bigler, 1999). For instance, interventions that present children with more complex, sophisticated representations of out-group members may fail as children's pre-occupation with physical appearance, i.e. race, means they will continue to categorise people according to this salient dimension (Bigler, 1999; Bigler & Liben, 1992; See Introductory Chapter under subheading 'Content of prejudice-reduction interventions'). Young children may also distort information provided in interventions to fit their pre-existing stereotypes of the out-group. Bigler & Liben (1993) who found that when children were read a story that featured European American and African American children engaging in counter-stereotypic activities, children's memory for the events in the story was distorted. Children remembered that the African American child engaged in stereotypical behaviour, rather than counter-stereotypical behaviour, thus increasing their stereotypic beliefs about African Americans. Therefore, in order to create effective prejudice-reduction interventions for young children, the developmental constraints on children's cognitive abilities should be taken into consideration. On the other hand, one could argue that interventions that focus on specific cognitive abilities that are associated with low levels of prejudice, and concentrate on accelerating this ability could reduce prejudice in children.

To summarise, children's cognitive development does appear to be important in the development of prejudice in children. However, the exact nature of this relationship, and how this can be translated into prejudice-reduction interventions, is an area that requires further research. An important limitation of socio-cognitive theory is that it does not consider social context. Thus, interventions based solely on socio-cognitive theory may not be successful.

Social Identity Theory

One other approach to prejudice that does take into consideration the influence of social context and the importance of motivation is Social Identity Theory (SIT) (Tajfel & Turner, 1979) and the more recent elaboration of this theory, Self-Categorisation Theory (SCT, Turner et al, 1987). Although this approach has been examined extensively in adults, it has recently been applied to children (e.g. Yee & Brown, 1992). Given the applicability of this theory to findings in the adult literature (see Hogg & Abrams, 1988), this may be a useful framework in which to examine prejudice in children (Nesdale, 1999; 2004). If this theory can account for prejudice in children, its predictions regarding the causes of prejudice can be used in the design of effective prejudice-reduction interventions.

According to SIT, social identities are that part of an "individuals' self-concept which derives from his knowledge that he belongs to certain groups together with some emotional and value significance to him of this group membership" (Tajfel, 1978, p63). Social identity theorists contend that inter-group behaviours and attitudes are a result of individuals' need for a positive identity. Individuals obtain a positive identity by engaging in inter-group comparisons, comparing their own group to other groups. These inter-group comparisons are usually favourable for the in-group and lead to positive social identities and enhanced self-esteem (Tajfel & Turner, 1986). If the in-group is perceived as comparatively superior, this means the out-group will be perceived negatively, leading to a negative out-group orientation culminating in out-group bias in attitudes and behaviours. SIT also predicts that if the in-group is not comparatively superior, this may lead to several responses in order to maintain in-group superiority and

positive self-esteem (Tajfel & Turner, 1986). These responses could involve leaving the group or changing the dimension on which the groups are compared. SIT predicts other inter-group behaviours such as perceiving the out-group and in-group as being more dissimilar and the in-group members are perceived as being more similar to the self (Nesdale & Flessler, 2001).

Support for SIT: There is broad support for SIT and its predictions in adults and adolescents (see Brown, 1995 and Hogg & Abrams, 1988). Social Identity theorists would predict that the outcome of inter-group comparisons depends on strength of identification with the in-group. Strong in-group identification is linked to in-group favouring attitudes (Brown, 1986; Brown, Maras, Masser, Vivian & Hewstone, 2001). In situations where the salience of the inter-group context is heightened, there is a high correlation between in-group identification and out-group derogation and prejudice (Mummenday, Klink & Brown, in press). The effect of identification on inter-group attitudes is also moderated by perception of conflict between the in-group and the out-group (Brown et al, 2001). Brown et al (2001) found that in high-identifiers, conflict increased negative out-group evaluations, and in low identifiers, conflict decreased negative out-group evaluations. In other words, when participants perceived there to be high conflict between the in-group and the out-group, high-identifiers had significantly more negative out-group evaluations. There was no significant effect of identification in those perceiving low conflict between the groups.

A prediction of SIT that has been examined extensively is the effect of perceived status and perceived mobility on in-group identification and the desire to change groups. SIT predicts that people are sensitive to group status and the possibility for changing groups (mobility). In cases where the inter-group comparison is unfavourable and one

belongs to a low-status group, one may respond by changing groups when possible. However, this is not always possible. Some groups such as ethnicity have low mobility as you cannot change ethnic group. However, other social categories that are based on, for example, ability or some other inconsequential factor, and are easier to move between. There is evidence supporting the importance of status and mobility in the adult literature. Members of low-status groups show lower in-group bias (Mullen, Brown & Smith, 1992) and will change to a high-status group in cases of high mobility (Ellemers, Wilke & van Knippenberg, 1993, Brown 1995).

Limitations of SIT: Research applying SIT predictions to prejudice in children is limited (e.g. Yee & Brown, 1992). There are anecdotal reports that children are aware of group status and also engage in inter-group comparisons (Nesdale, 2004; Davey, 1983; Milner, 1996). Evidence from studies of majority and minority ethnic preference suggest that, as SIT predicts, minority and majority children identify with the dominant, majority group and thus gain positive distinctiveness by identifying with the high status group (Asher & Allen, 1969; Clark & Clark, 1947). However, further research is required to test these predictions in more detail.

Furthermore, there are several problems with SIT's account of prejudice when applied to children. Firstly, there are mixed findings regarding the direct relationship between inter-group comparisons and resultant inter-group attitudes and behaviours as predicted by SIT in children (Bigler et al, 1997). In a longitudinal study, Bigler et al (1997) found that high self-esteem measured at Time 1 was related to higher inter-group bias at Time 2, but low-self-esteem was not. In other words, inter-group comparison and bias maintained high self-esteem, but did not serve to boost self-esteem as SIT would predict. Secondly, SIT focuses on the in-group, rather than inter-group relations (Brown,

1995). Therefore, its value as a framework for understanding prejudice, an inter-group attitude, and its relevance for interventions to reduce prejudice is limited.

Thirdly, SIT as it is applied to adults, cannot account for developmental trends in prejudice in children (Rutland, 1999; Aboud, 1995; Yee & Brown, 1992). For example, Yee & Brown (1992) used a minimal group paradigm to examine whether Social Identity Theory's predictions could also be applied to children. They found age and gender effects on in-group and out-group bias. SIT cannot account for these age and gender trends. Also, liking for in-group was unaffected by team status, which again does not support the predictions made by SIT.

Thirdly, the original conception of SIT does not consider the importance of social context and norms (Nesdale, 2004). More recently social psychological research has pointed to the importance of in-group norms in determining prejudice and inter-group discrimination (e.g. Jetten, Spears & Manstead, 1996; 1997; Rutland, 1999). There is evidence that children are aware of in-group norms for prejudice and are influenced by these norms when evaluating out-groups (e.g. Rutland, Cameron, Milne & McGeorge, 2005). Therefore, perceived in-group norm for inter-group relations may be an important variable in determining prejudice in children.

Furthermore, when SIT is applied to children it assumes that children have certain cognitive abilities. In order to make inter-group comparisons, children must be able to compare social groups and must also be able to use the information from these comparisons in the formation of inter-group attitudes. There is conflicting evidence regarding children's ability to engage in these two cognitive tasks. Some researchers argue that young children lack the ability to engage in inter-group comparisons or are uninterested in the outcomes of these comparisons (Ruble, Boggiano, Feldman & Loebel,

1980; Suls & Sanders, 1982). Evidence suggests that children do not seek out information regarding inter-group comparisons (Aboud, 1976), therefore they cannot engage in favourable inter-group comparisons that are central to SIT. In addition, children may not have the ability to translate information from inter-group comparisons into evaluations until they are approximately 8 or 9 years old (Aboud & Amato, 2001).

Self-categorisation Theory

A recent elaboration of SIT that overcomes some of these limitations and may provide a better account of the development of prejudice in children is Self-Categorisation Theory (SCT, Turner et al, 1987). Self-categorisation theorists view categorisation as a process. According to proponents of SCT, we are constantly categorising, but the level of categorisation differs (Turner et al, 1987). Self-categorisation theorists view all levels of person perception as categorisation, but at different levels of abstraction. Thus, it is not a case of whether categorisation takes place, but the level of abstraction at which it occurs. Group boundaries are constantly shifting and level of categorisation depends on the social context.

Self-categorisation theorists contend that categorisation and stereotyping are meaningful activities that allow one to make sense of the social world and your place in it (Oakes, Haslam & Turner, 1994). They view stereotypes as meaningful constructs that are not static but changeable and fluid, depending on the comparative context in which they are formed (Oakes et al, 1994). Thus, according to SCT, stereotypes will change depending on the level of categorisation and the other groups being evaluated in that context. In the adult literature there is some support for SCT's predictions. It has been found that adults do alter their stereotypes of social groups depending on the relative

context (e.g. Haslam, Turner, Oakes & McGarty, 1992; Hopkins, Regan & Abell, 1997; Rutland & Cinnirella, 2000).

SCT and children: There is some evidence to support the applicability of SCT to prejudice in children. Sani & Bennett (2001) found that children's stereotypes are flexible and change in response to changes in the inter-group context. They investigated whether children are sensitive to comparative context when they stereotype their own and other groups. Sani & Bennett (2001) found that 6 and 7 year olds hold flexible in-group stereotypes that alter in response to changes in the inter-group context. In addition, they also found that the stereotypes varied in ways that reflected the inter-group comparison most salient in that particular social context. For example, boys saw themselves as brave and strong only when the inter-group context included girls. However, the sample used in this study was small and results from this study are limited to gender stereotypes, thus further research is required to test the predictions of SCT with children.

SCT would also predict that children's out-group attitudes and behaviour will reflect the social context and prevailing norms in society. This prediction has been supported in the adult literature (Jetten, Spears & Manstead, 1996) and in studies with children (Black-Gutman & Hickson, 1996). Black-Gutman & Hickson (1996) found differing levels of bias towards Asian Australians and Aboriginal Australians in their Australian sample and they attributed this finding to the differing levels of prejudice towards the two groups in Australian society. Australian Aborigines are a highly stigmatised minority group who are consistently subject to negative depictions in the media. Black-Gutman & Hickson (1996) argue that children are exposed to these negative images and stereotypes of Aborigines and this affects their perception of norms for inter-group behaviour and attitudes. Consequently children may believe prejudice

towards Aboriginal Australians is less unacceptable than prejudice towards other nationalities. Children, then, appear to be aware of the prevailing norms for prejudice.

This concurs with Rutland (1999) who also found that patterns of prejudice in children reflected societal norms for bias. He found that children from 6 to 16 were highly selective in the out-groups to whom they directed out-group bias. For instance, children were prejudice towards Germans, but not Australians, Americans or Russians. Rutland (1999) suggested that social context was one possible explanation for this finding. The recent VE day celebrations and classroom discussions of World War One and World War Two meant that Germany was a highly salient out-group and the discussions may have led to negative representations of this out-group. Children may also have felt that the norm for prejudice towards this particular out-group was more relaxed (Rutland, 1999). Rutland, Cameron, Milne & McGeorge (2005) also demonstrated the importance of norms for young children in determining bias. This study highlighted children's awareness of differing norms for out-group bias towards national and ethnic out-groups (Rutland et al, 2005). One reason for this divergence may be the existence of different norms for ethnic and national prejudice. This suggests children are aware of societal norms for inter-group attitudes and behaviours and supports SCT as a framework for the examination of prejudice in children.

Children also respond to norms for positive inter-group relations. Kinket & Verkuyten (1999) asked children to imagine that someone in their class is being harassed because he is from another country. Perceived classroom norms were measured by asking children: 'Does your teacher do something about this?' and 'Do you inform your teacher about this?' Kinket & Verkuyten (1999) found that if they responded that their teacher would not be happy about this behaviour, and that they would tell their teacher,

this was related to more positive out-group evaluation and in-group bias. In other words, if they perceived the classroom norm as promoting out-group tolerance and positive inter-group relations, they expressed less prejudice. SCT can account for the effect of norms of prejudice in children.

Limitation of SCT and children: Developmental predictions and the importance of norms: One limitation of SCT is that it does not predict any developmental changes in children's response to the context and norms (Nesdale, 2001). Research suggests there may be a developmental trend in the influence of norms on out-group bias. Rutland (1999) found a developmental trend in the negative evaluation of Germans. He found prejudice in children reflects social norms and context but this only appears in children over 10. There was no evidence of prejudice towards Germans in 6-10 year olds and significantly more negative evaluations of Germans in 12, 14 and 16 year olds. This trend is at odds with findings in the areas of ethnic and gender bias, where bias has decreased after 10 years (Brown, 1995). It may be that while ethnic bias is deemed unacceptable, national bias may be more admissible and may actually be encouraged. Rutland (1999) contends that older children are sensitive to these differing norms for ethnic and national prejudice and this is reflected in their inter-group behaviour.

This argument is supported by Nesdale & Flesser (2001) who identified developmental changes in inter-group attitudes that are comparable with Rutland (1999) and concluded that older children were more aware of group norms for inclusion than younger children. Furthermore, other researchers have found that older children are more sensitive to general norms for group behaviour e.g. "the black sheep effect" (Abrams et al, 2003).

These developmental trends have also been found in studies examining the effect of social desirability and self-presentation on children's inter-group attitudes. Clark et al (1980) found that white children showed a decrease in pro-white bias when interviewed by a black experimenter, but this effect was not found in younger children. In a detailed study of self-regulation and prejudice in children, Rutland et al (2005) found that heightened self-awareness led to less biased responses in younger children, while there was no effect of heightened salience of audience in older children. Rutland et al (2005) interpreted this to mean that both groups were aware of social norms for prejudice, but older children adjust their answers to fit the social norms in both low and high self-awareness conditions, while younger children alter their answers in high self-awareness conditions only.

In summary, SIT and SCT provide useful accounts of prejudice in adults. However, its application to the development of prejudice in children is limited. There is some support for the predictions of SIT and SCT in children (e.g. Sani & Bennett, 2001). However there may be developmental trends in children's ability to engage in inter-group comparisons and also in their sensitivity to group norms for prejudice. Thus, SIT and SCT may be helpful for understanding prejudice in older children over 8 years who hold these cognitive abilities.

SIT, SCT and interventions to reduce childhood prejudice: A number of models of inter-group contact have developed from Social Identity Theory, which have implications for prejudice-reduction interventions for children, such as the dual identity and Common In-group Identity model (Gaertner & Dovidio, 2000) and the 'inter-group' model of contact (Hewstone & Brown, 1986). These models have different predictions regarding

the characteristics of successful inter-group contact interventions. This will be discussed further in Chapter 3.

SIT and SCT have no predictions regarding developmental changes in prejudice, thus if these theories are applied to prejudice-reduction interventions, they may be unsuccessful as they would not take into consideration the cognitive limitations of young children which may prevent them from responding to the intervention. However, as stated earlier older children appear to be aware of social norms for discrimination and prejudice and do alter their behaviour in line with these norms (Nesdale, Maass, Durkin & Griffiths, 2005; Rutland et al 2005). Therefore, it is plausible that children's prejudice could be reduced by altering perceived in-group norms for inter-group bias. One theory of prejudice development that takes norms and children's cognitive development into consideration is Nesdale's (2004) Social Identity Development Theory (SIDT).

Social Identity Development Theory

Nesdale (2004) has proposed an account of ethnic prejudice development in children that is based on SIT and SCT, but can account for developmental changes in bias (Nesdale, 2004). According to Nesdale's Social Identity Development Theory (SIDT), children pass through four sequential development phases: undifferentiated, ethnic awareness, ethnic preference and ethnic prejudice. Each of these phases is exemplified by different behaviours (Nesdale, 2004).

The undifferentiated phase occurs in children up to 2 – 3 years of age. In this stage, racial cues are not salient and children do not respond to stimuli according to race. At around 3 years old, children enter the ethnic awareness phase, when they are able to identify and distinguish between different racial groups according to skin colour (e.g.

Clark & Clark, 1939; Nesdale, 2004). In this phase children's awareness of racial categories will be sharpened by negative evaluations of the racial groups, expressed by adults verbally or non-verbally (Milner, 1983; Nesdale, 2004). This phase of ethnic awareness may continue until children are 10 – 11 years old. An important aspect of this phase is children's ethnic self-identification. This is children's accurate identification of their own racial / ethnic group and the understanding that they are members of that group.

After children have achieved ethnic self-identification, they then move on to the next phase, the 'ethnic preference' phase. In this phase children are pre-occupied with the in-group, and exhibit in-group preference, but not out-group derogation.

According to SIDT, ethnic preference can lead to the fourth phase, ethnic prejudice, in some but not all children. The shift from ethnic preference to prejudice requires a shift in focus from the in-group to the out-group. In this phase, rather than liking the in-group member more than the out-group, out-group members are actually disliked or rejected (Nesdale, 2004).

Nesdale (2004) argues that a number of cognitive factors are required for the transition from ethnic preference to prejudice. In order to express prejudice they must understand constancy, and also have acquired social-cognitive skills, including the ability to de-centre and take the perspective of minority group children and the ability to empathise (Kohlberg, 1976; Nesdale, 2004). However, the effect of these social cognitive skills on ethnic prejudice remains to be tested.

Furthermore, while in the ethnic awareness stage children may merely be aware of negative information about the out-group, in the prejudice phase children now hold this negative information as their own belief. That is, they adopt the perceived in-group attitude as their own. However, in order to truly be an expression of prejudice rather than

in-group preference, it is important that children's *behaviour* is consistent with their out-group attitudes. Children who espouse these attitudes but "do not walk the talk" (Nesdale, 2004, p. 232), that is their attitudes do not impact upon their play and friendship preferences, are still in the ethnic preference phase (Chyatte, Schaefer & Spiggia, 1951; Nesdale, 2001; Nesdale, 2004).

According to SIDT, the change from ethnic preference to ethnic prejudice is facilitated by three factors. Identification with the dominant group is thought to be an important factor. With increasing identification with the in-group, it is increasingly likely that children will adopt that attitude as their own (Nesdale, 2004). Thus, when in-group attitudes towards the out-group are predominantly negative, children who identify highly with the in-group will be more likely to adopt these negative inter-group attitudes and this will also be manifested in their behaviour towards the out-group. Ethnic prejudice is also thought to be more likely if there is an increase in tension and threat between the dominant and minority ethnic groups (Brown, 1995). Furthermore, ethnic prejudice will be most likely when there is direct conflict between the groups.

Support for SIDT: As SIDT would predict, in-group preference is affected by perceived status of the group. Nesdale & Flessler (2001) found that children as young as 5 showed in-group bias and this was most pronounced in high in-group status conditions. When children believed they could change groups, low-status group members wanted to change groups more often than those in the high-status groups. Nesdale, Durkin, Maass & Griffiths (2005) replicated this finding, but also showed that the in-group preference effect was enhanced when the out-group comprised of ethnic out-group members, thus supporting the notion that ethnicity accentuates and sharpens category differences.

SIDT also highlights the importance of in-group norms. In a minimal group study, Nesdale, Maass, et al (2005) found that 7 to 9 year old children expressed the greatest level of prejudice when the in-group had a norm of exclusion and when there was out-group threat, thus supporting the predictions of SIDT. Thus, children aged 7 to 9 respond to the perceived in-group norms for inter-group behaviours.

SIDT and prejudice-reduction interventions: Nesdale's (2004) account of prejudice *development* has not yet been translated into interventions to *reduce* prejudice. However, this theory could potentially be developed into a prejudice-reduction intervention that would take into consideration the influence of social context as well as the importance of children's cognitive constraints. An intervention based on this theory would predict that genuine prejudice does not appear until children are 10 to 11 years old, thus interventions are not required until this stage. It could be predicted that, since some children adopt the negative attitudes of their in-group at this stage, they could also be encouraged to adopt positive inter-group attitudes, if they believe these attitudes are normative of the in-group. Furthermore, the effect of SIDT interventions may be moderated by identification: SIDT interventions may be most effective in high in-group identifiers

Conclusions

In this chapter, a number of theoretical approaches that purport to account for the development of prejudice in children have been examined. Despite 60 years of research examining prejudice in children, a clear developmental picture of prejudice has yet to emerge (Nesdale, 2001). Nevertheless, research suggests that children are aware of social categories from a very young age, and identify with social categories by at least four

years of age, though a more complex understanding of identification may not appear until children are five. There are conflicting findings regarding the existence of true prejudice in children, as opposed to mere in-group preference (Aboud, 2003; Katz & Kofkin, 1997). However, it could be argued that in-group preference is just as damaging for inter-group relations as prejudice because as a consequence of in-group preference, out-group members will be treated less favourably in comparison to the in-group (Aboud, 2003).

The aim of the current research is to design prejudice-reduction interventions based on psychological theories of prejudice development. The theories described in the current chapter each have benefits and drawbacks in terms of their ability to account for the development of prejudice in children. These theories also have different implications for the content of prejudice-reduction interventions for children. The emotional maladjustment theory is rather fatalistic and does not lend itself to the philosophy of prejudice-reduction interventions. The socialisation approach seems intuitive, but research does not support the predicted relationship between socialisation influences and prejudice in children. The socio-cognitive developmental approach and the SIT and SCT theories of prejudice may be more useful theories upon which to base prejudice-reduction interventions. Socio-cognitive developmental theory identifies a number of cognitive deficits that are related to prejudice, but ignores the importance of social context. On the other hand, the social identity theories do not make any specific developmental predictions, but acknowledge the importance of group norms. SIDT (Nesdale, 2004) combines these two approaches into a model of prejudice development that considers both cognitive and social influences. Perhaps the most effective prejudice-reduction

intervention for children would incorporate aspects of both social psychological theories and social cognitive developmental theories.

Previous research examining interventions based on both these approaches are examined in more detail in Chapter 3 under sub-headings 'Inter-group contact interventions' and 'Cognitive interventions: Multiple classification training'). In this chapter psychology's contribution to the content of prejudice-reduction interventions has been examined. As stated in Introductory Chapter, greater collaboration between psychology and the education sector could also improve the study of interventions in terms of the evaluation of the effectiveness of interventions. The contribution psychology could make to the evaluation of interventions is examined in Chapter 2: Measurement issues: Improving intervention evaluations.

Chapter 2: Measurement Issues: Improving Intervention Evaluations

Summary

In this chapter psychology's potential contribution to the design of more reliable and revealing evaluations of prejudice-reduction interventions will be outlined. Researchers in childhood prejudice have highlighted a number of methodological issues regarding the measurement of prejudice in children that should be addressed in order to obtain more reliable evaluations of prejudice-reduction interventions. Firstly, the importance of examining in- and out-group attitudes separately is highlighted. Next, the need for less obtrusive measures of bias is discussed. Finally, the issue of implicit bias is considered. The importance of measuring implicit bias is outlined and a number of implicit bias measures are described, including a new measure of implicit bias, 'the misattribution bias measure'. Possible implications for prejudice-reduction interventions are explored in terms of developmental trends in implicit bias and the ways in which implicit bias could be reduced.

The aim of the current research is to create more effective prejudice-reduction interventions through closer collaboration between the education sector and psychology. One limitation of previous research is the inadequate techniques used to evaluate prejudice-reduction interventions (Bigler, 1999). Psychological research has highlighted a number of methodological issues that should be considered if interventions are to be evaluated effectively (See Introductory Chapter under subheadings 'The need for closer collaboration between the education sector and social and developmental psychology' and 'Intervention design and evaluation'). In this chapter one of these methodological issues, the measurement of prejudice in children, will be examined.

The Distinction between In-group and Out-group Attitudes

A methodological question that has been raised in the prejudice literature is the distinction between in-group preference and out-group derogation, or in the words of Marilynn Brewer (1999) the difference between 'in-group love' and 'out-group hate'. In the early work of Clark & Clark (1947) and Horowitz (1936), this distinction was not made and in-group preference was taken as an indication of prejudice. Children were presented with a number of stimuli representing their own and other ethnic groups, such as dolls or pictures, and were asked to choose the stimuli they most preferred. White, majority children tended to select an in-group member as their most preferred doll, and this was interpreted by the researchers as an indication of prejudice.

However, subsequent researchers have argued that the in-group preference detected in these studies, although informative, is not an indication of prejudice or negative out-group attitude (Aboud, 2003; Brewer, 1999). According to Brown (1995) prejudice is "the holding of derogatory social attitudes or beliefs, the expression of negative affect, or the display of hostile or discriminatory behaviour towards members of a group on account of their membership of that group" (p8). Therefore, true prejudice requires more than a preference for one's in-group; it requires discrimination of the out-group. Thus, in-group preference studies such as Clark & Clark's (1947) doll studies cannot be used as evidence of prejudice in children.

In response to criticisms of early 'prejudice' measures, more recent measures of bias in children have used a more sophisticated trait attribution technique (Black-Gutman & Hickson, 1996; Doyle & Aboud, 1995). These measures, such as the PRAM (Preschool Racial Attitude Measure, Williams, Best, Boswell, Mattson & Graves, 1975) and MRA (Multi-Response Racial Attitude Measure, Doyle & Aboud, 1995), are thought

to provide independent measures of in-group preference and out-group derogation (Black-Gutman & Hickson, 1996; Davey, 1983; Doyle & Aboud, 1995). In both the PRAM and the MRA children are presented with positive and negative adjectives which must be assigned to either the in-group or the out-group. Studies using this technique have consistently found that in-group bias appears in children as young as 4 years old (Aboud, 1999; Doyle & Aboud, 1995). It then increases to a peak at 7 or 8 years and then declines (Black-Gutman & Hickson, 1996; Cameron et al, 2001; Doyle & Aboud, 1995; Doyle et al, 1988).

Although the MRA and PRAM respond to some of the criticisms of early preference techniques, these more sophisticated measures of prejudice are still open to the same criticisms as earlier, more simplistic bias measures. Trait attribution tasks continue to confound in-group preference and out-group prejudice in terms of both measurement design, and scoring and analysis.

Measurement design: In the PRAM, children are not given the opportunity to assign a trait to both the in- and out-group, or to assign the trait to none of the groups. Although children are given this option in the MRA, they are still unable to respond with 'neither', that is that neither of the groups holds a certain trait. Consequently, in both measures children may be forced to respond in a particular way that does not reflect their actual out-group attitude but is essential in order to maintain positive in-group evaluations. Children's responses may reflect a need to protect the positive in-group evaluation, rather than provide evidence of out-group bias (Cameron et al, 2001). In the absence of the option to assign a trait to neither the in- or out-group, children may respond to a negative attribute in several ways: they could assign the adjective to both

groups, forcing a negative evaluation on the in-group, or assign the adjective to the out-group, thereby preserving the in-group evaluation (Cameron et al, 2001).

Indeed, research suggests that, given the opportunity children usually prefer not to assign negative traits to any groups (Davey, 1983). Studies separating in- and out-group attribution scores suggest that children are almost ambivalent towards the out-group. That is, they may attribute more positive adjectives towards the in-group but the same number of negative adjectives towards the in- and the out-group. (Davey, 1983). Furthermore, when children are asked to rate the in- and out-group along bipolar rating scales, they invariably use the positive end of the scale only. That is they are positive to both the in-group and the out-group, and they express in-group preference by being less positive towards the out-group (Aboud & Mitchell, 1977); Nesdale, 1999). This suggests that, given the opportunity, children will express positive attitudes towards both the in-group and the out-group, which cannot be detected using trait attribution techniques which confound in- and out-group attitudes.

Scoring & analysis: In terms of scoring and analysing trait attribution responses, researchers continue to confound in- and out-group bias by using a relational score as an indicator of bias. This relational score combines in- and out-group adjective scores to form bias and counter-bias scores (Aboud, 1999; Doyle & Aboud 1995). Therefore, it is not possible to determine whether bias scores are due to in- or out-group attitude scores.

The confounding nature of prejudice measures in children could be the cause of mixed results found in the past 60 years regarding the age of onset of prejudice and the developmental trajectory it follows (Brewer, 1999; Brown, 1995). Early researchers using forced choice preference techniques claimed to demonstrate evidence of 'prejudice' in children as young as 3 years old (Clark & Clark, 1947). Researchers using the PRAM

and the MRA found similar results (Cameron et al, 2001). However, researchers who have used separate measures of in- and out-group bias have found that prejudice does not appear until 5 years of age (Aboud, 2003). Other researchers have found that, when the attribution of positive and negative adjectives was examined separately (Rutland, 1999), or when children were given the option of attributing adjectives to 'none' (Davey, 1983) out-group derogation and negative perception of the out-group do not appear until children are 10. Thus, the 'prejudice' demonstrated in studies using forced choice, preference techniques and trait attribution measures could in fact be a result of the measurements used. That is, the 'prejudice' detected using the early forced choice studies and the MRA and PRAM could reflect in-group preference, rather than out-group hate or a combination of the two (Brewer, 1999).

This argument is further supported by evidence that in- and out-group attitudes are unrelated to inter-group behaviours and stereotyping (Boulton, 1995; Zinser, Rich & Bailey, 1981). The apparent non-significant relationship between ethnic preference and out-group stereotypes and inter-group behaviours (Nesdale, 2004) suggest in- and out-group attitudes are dissociated. For instance, research has shown that out-group stereotyping is unrelated to out-group bullying (e.g. Boulton, 1995). Also, when asked why they prefer an in-group member, children rarely give out-group rejection as a reason for this (e.g. Nesdale, 2004; Zinser et al 1981). These research findings underline the complex relationship between in- and out-group attitudes, and point to the importance of investigating and analysing these attitudes separately.

The distinction between in-group love and out-group hate (Brewer, 1999) has important implications for prejudice-reduction interventions. It is important to measure prejudice accurately in order to provide a true assessment of the prejudice-reduction

intervention, therefore in- and out-group attitudes should be measured separately in order to get a true indication of prejudice levels and in-group attitudes. Furthermore, a successful intervention should reduce out-group prejudice, but should also leave in-group attitude unchanged. Attitudes towards the in-group should not be altered by a prejudice-reduction intervention as the aim of these interventions is to change the orientation towards the out-group only. Therefore, it is recommended that prejudice-reduction interventions be assessed using separate in- and out-group ratings, and in the present research, in- and out-group attitudes were measured and analysed separately.

Additional Measures of Out-group Orientation

Typically, research in prejudice in children has used inter-group attitude measures, such as the MRA and PRAM, as indicators of out-group orientation. However, in order to more reliably measure prejudice and evaluate interventions, multiple measures of bias should be included that tap into different aspects of inter-group relations, such as inter-group behaviour and play patterns (Aboud, 1989; Bigler, 1999; Nesdale, 2004). Further measures include reactions to prejudice behaviours, for example racist jokes and slurs (Aboud & Fenwick, 1999) and cross-group play mate preference (Aboud, 2003; Katz & Zalk, 1978). Also, behavioural observations, such as desire to play with a same-race or cross-race experimenter (Katz & Zalk, 1978) or teacher's observations of inter-group behaviour (Salzman & D'Andrea, 2001) could be included.

It is also important to assess prejudice-reduction interventions using a range of measures of inter-group orientation because interventions may have differing effects on different aspects of inter-group orientation, for example inter-group attitude and behaviour. Research suggests that explicit inter-group attitudes and behaviour are

dissociated (Fishbein & Imai, 1993; Powlishta et al, 1994; Sigelman & Singleton, 1986). Self-report measures of bias in children are often dissociated from other indicators of prejudice, such as actual behaviour, political beliefs, intended behaviours, friendships and playmate preferences (Fishbein & Imai, 1993; Powlishta et al, 1994; Sigelman & Singleton, 1986). Furthermore, researchers have also found a non-significant correlation between bullying out-group members and stereotypes of the out-group (Boulton, 1995). Nicolaraizi & De Reybekiel (2001) found that children's positive attitude towards the disabled was not reflected in their willingness to interact with disabled peers. On the other hand, Aboud, Mendelson & Purdy (2003) found that children who were less biased held more cross race friendships. Whether or not attitudinal and behavioural measures of bias are related, by including measures of both these aspects of inter-group orientation this will provide a more thorough evaluation of prejudice-reduction interventions.

Indirect Measures of Inter-group Bias

A methodological issue addressed in psychological research is the problem of social desirability (Nesdale, 2001). Self-report measures of bias, such as the MRA and PRAM, have been criticised for being overly explicit and prone to problems with social desirability (Nesdale, 2001). In these explicit bias measures, the aim of the research and the intent of the measure is often all too apparent, even to young children (Nesdale, 2001). This may lead children, and adults, to alter their responses to comply with social norms that disapprove of prejudice, in order to present themselves in a favourable way to the experimenter (Aboud & Amato, 2001). There is evidence that children alter expressed out-group attitudes in conditions of high self-focus in order to comply with

societal norms (Rutland et al, 2005). Therefore, social desirability is an issue that should be addressed when measuring prejudice and evaluating interventions to reduce prejudice.

One way in which social desirability problems can be avoided is through the use of indirect measures of bias. Typically these measures are less transparent and participants may be oblivious to the researcher's intentions. They may be unaware that the experiment they are taking part in is measuring inter-group bias. As a consequence of the reduced social desirability, participants are unlikely to mask their real attitudes for self-presentational reasons. Maass & Arcuri (1996) have examined bias using one such measure, the Linguistic Inter-group Bias (LIB) technique. This measure is based on people's tendency to describe behaviours of in-group and out-group members at different levels of linguistic abstraction, depending on whether the behaviours were expected or unexpected, given the group membership of the target. The theory contends that desirable in-group and undesirable out-group attitudes are expected and are thought to reflect general properties of the groups. Consequently, they are described using abstract terms. On the other hand, undesirable in-group and desirable out-group behaviours are unexpected and perceived as unusual and are described in less abstract terms. The LIB has potential as an indirect measure of bias as participants are unaware of the aims of the study and will not change their answers to comply with social desirability (Nesdale, 2001).

Nesdale (2001) outlines another way in which social desirability problems can be avoided. By reducing the emphasis placed on prejudice in measures, this could reduce the transparency of measures and avoid self-presentation effects. Nesdale (2001) suggests that the salience of the aims of the study could be reduced by providing a range of more realistic information regarding the target stimulus, rather than just their category

membership. Furthermore children's responses on a range of measures could be obtained, so as to reduce children's focus on the most critical bias measures (Nesdale, 2001). One measure that takes these two aspects into consideration is the Intergroup Narrative Test (INT, Nesdale, 2001). This method involves reading a fictional story featuring members of the participants' own ethnic group and another ethnic group. Within the story are placed various positive and negative traits and behaviours relating to the in- and out-group member. Children are asked a variety of questions regarding the story such as general recall of events, judgements of the characters and the character's attitudes and behaviours. Presenting the measure as a story, which is more familiar and realistic, and embedding the critical items relating to prejudice within a series of measures is purported to reduce the focus on prejudice in the measure, and will attenuate self-presentational concerns.

However, social desirability may not be as problematic for measures prejudice in children as Nesdale (2001) claims. Several researchers have tried to rule out this possible confound by examining correlations between children's prejudice scores and responses on the Children's Social Desirability Scale (Aboud & Doyle, 1996; Aboud & Fenwick, 1999). Researchers found scores on these two measures did not correlate (Aboud & Doyle, 1996; Aboud & Fenwick, 1999). Furthermore, when discussing out-group evaluations with peers, evaluations did not diverge from their own responses on self-report prejudice measures (Aboud & Doyle, 1996). This suggests that children may not always alter their responses to explicit bias measure in response to social desirability demands.

Research in the area of indirect, less obtrusive measures of bias underlines the importance of avoiding self-presentational concerns when measuring bias and also draws

attention to the value of using a range of measures that examine different aspects of inter-group bias in order to obtain a more complete picture of inter-group attitudes. This also extends to the evaluation of interventions. In order to obtain a complete analysis of the effect of that intervention, several different aspects of inter-group behaviour and attitude should be assessed and an attempt should be made to lower the self-presentational concerns of participants.

Implicit Measures of Inter-group Bias

A further methodological consideration that should be taken into account when evaluating prejudice-reduction interventions is the use of implicit, as well as explicit attitude measures. As discussed previously, there has been some movement towards the use of less obtrusive inter-group attitude measures, but this is usually under the premise of a need to measure 'real attitudes' by avoiding unwanted experimental demands or social desirability effects on responses to attitude measures. More recently researchers have begun to examine the possibility that we may hold implicit attitudes that are separate constructs from explicit attitudes. Implicit attitudes are thought to reflect the unconscious, while explicit attitudes reflect conscious attitudes (Skowronski & Lawrence, 2001). Proponents of implicit research argue that attitudes measured using implicit and explicit methods are equally viable and measure different aspects of individual's attitudes. Therefore, in order to fully evaluate an intervention, both implicit and explicit bias measures should be implemented.

Implicit attitudes are defined as "introspectively identified (or inaccurately identified) traces of past experience that mediate favourable or unfavourable feeling, thought or action toward social objects" (Greenwald & Banaji, 1995, p8). There is wide

support for the existence of implicit attitudes, for example the halo effect (e.g. Bar-Tal & Saxe, 1976), the mere exposure effect (Murphy, Zajonc & Monahan, 1995) and in subliminal attitude conditioning (see Greenwald & Banaji, 1995 for reviews; Niedenthal, 1990). In all these studies participants have developed favourable or unfavourable associations with an attitude object as a result of information processed at a subliminal or unconscious level. Participants were not aware they held these attitudes or associations. They were implicit.

Implicit bias measures tend to measure associations between the object e.g. insects and flowers or white and black, and different poles of an attribute e.g. favourable-unfavourable, good-bad, or positive and negative stereotypes. These measures use reaction times and error rates to gauge the strength of association between the object and the attribute as a measure of implicit attitude. Although research has only begun to focus on these implicit measures in earnest in the past 10 years, there is overwhelming evidence for the existence of implicit attitudes that are distinct from explicit attitudes (Ashburn-Nardo, Voils & Monteith, 2001; Banaji & Greenwald, 1995; Blair, Ma & Lenton, 2001; Dasgupta & Greenwald, 2001; Devine, 1989; Dovidio, Kawakami, Johnson, Johnson & Howard, 1997; Greenwald & Banaji, 1995; Karpinski & Hilton, 2001; Skowronski & Lawrence, 2001; Wittenbrink, Park & Judd, 2001).

For example, Gaertner & McLaughlin (1983) presented participants with pairs of letter strings that were either words or non-words. The real words were either positive or negative. Participants were asked to judge, as quickly as possible, whether the strings of letters were words or not. Before the words were presented, the race 'white' or 'black' was primed. The speed of 'yes' response times to words were a measure of the strength of association between the words and the primed racial category. That is, negative

attitude towards the race category 'black' was indicated by the speed of response to negative words when the black race category has been primed. Gaertner & McLaughlin (1983) found that participants responded faster to white-positive than black-positive pairs, suggesting they were more positive to 'white' group, than black. Using a priming procedure, other researchers have concluded that implicit inter-group attitudes do exist (Bargh, Chaiken, Gvender & Pratto, 1996; Dovidio et al, 1997; Kawakami, Young & Dovidio, 2002).

Using a slightly different implicit procedure, Banaji & Greenwald (1995) examined implicit gender stereotypes. They adapted an implicit memory procedure devised by Jacoby, Kelley, Brown & Jasechko (1989) to examine implicit gender stereotypes. Jacoby et al (1989) observed the implicit effects of prior exposure to names on subsequent fame judgements. Participants were exposed to a list of non-famous names. They were then presented with famous and non-famous names, some of which they had been exposed to earlier. Jacoby et al (1989) found that there were more false alarms (i.e. false fame) judgements for the non-famous familiar names compared with the non-famous unfamiliar names. Banaji & Greenwald (1995) altered this method to measure activation of gender stereotypes. Fame and achievement is one aspect of gender stereotypes and is associated with males. Banaji & Greenwald (1995) hypothesised that if the gender stereotype is activated in the unconscious, it would moderate the false-fame effect and there would be more false-fame judgements for male familiar names than female familiar names. This is in fact what they found. Participants were influenced by the gender stereotype at an implicit level and fame was more easily conferred upon male than female names.

Evidence for implicit attitudes also comes from studies using another implicit attitude test, the Implicit Associations Test (IAT) (Greenwald, McGhee & Schwartz, 1998). This method is similar to cognitive priming as it measures underlying automatic evaluations. It measures the association between two targets (e.g. flowers and insects or white and black) and two opposite poles of a dimension (e.g. unpleasant / pleasant). The association between target and attribute is measured using measures of response times. The IAT is perhaps the best known and most widely used measure of implicit bias (e.g. Kaprinski & Hilton, 2001; Kim, 2003; Monteith, Voils & Ashburn-Nardo, 2001; Skowronski & Lawrence, 2001).

Implicit bias measures and children: Research on implicit attitudes in children is limited. The adult version of the IAT has been used to examine implicit bias in 10 year olds (Sinclair, Dunn & Lowey, 2005; Skowronski & Lawrence, 2001) and a pictorial version has been devised for use with children aged 6 to 16 year olds (Rutland et al, 2005) and in 10 year olds and adults (Baron & Banaji, 2004). These studies found evidence of implicit bias in children as young as 6 years old.

Implicit and explicit bias: Intuitively, one might expect implicit and unconscious attitudes to be directly related to explicit attitudes as they are rooted in the same experiences and socialisation history (Dovidio et al, 1997). However, research suggests that implicit attitudes are dissociated from explicit attitudes and stereotypes. Dovidio (1995) administered participants with explicit attitude measures (Modern Racism Scale and Attitude towards Blacks Scale) and an implicit attitude measure (a subliminal priming procedure). Implicit bias was evident in both those scoring highly on explicit prejudice items and those showing low explicit bias. This weak correlation between implicit and explicit measures of bias has been replicated in several studies (e.g. Banaji &

Greenwald, 1995; Dasgupta & Greenwald, 2001; Kaprinski & Hilton, 2001; Skowronski & Lawrence, 2001; Wittenbrink et al, 2001).

In the current research, a new measure of implicit bias, the 'implicit misattribution bias measure', was tested. This measure was adapted from the 'who said what paradigm' (Bennett et al, 2000). One side-effect of social categorisation in adults is the prevalence of within group recall errors, compared with cross-group errors (Taylor, Fiske, Etofff & Ruderman, 1978). That is, when asked to recall information about in-group and out-group members, there is a tendency to make more errors where information is mistakenly attributed to another member of the in-group rather than a member of the out-group. Bennett et al (2000) adapted this technique to create an indirect measure of category activation in children called the 'who said what?' paradigm. Using this technique children are presented two male and two female characters that each produce a number of statements. The participant must then try to recall 'who said what'. This allows inter- and within-gender error rates to be examined. Bennett et al (2000) found that a number of statements that are children as young as 7 years old were more likely to make within-gender than between-gender errors. This suggests that, as in adults, children also engage in spontaneous gender categorisation (Bennett et al, 2000).

The 'who said what' measure was adapted to measure implicit bias in the current study by adding an evaluative element to the statements for recall. Children were exposed to in- and out-group members who were each assigned a number of positive and negative traits. Children were then asked to remember to whom these traits were assigned. Implicit bias was indicated by the type of misattribution errors made in the recall stage. It was expected that when children could not remember to whom these traits

had been assigned, they would fall back on implicit stereotypes of the out-group. This would be revealed in misattribution error rates as children would be more likely to mistakenly assign positive traits to the in-group and negative traits to the out-group. This measure has never before been tested with adults or children.

Implicit bias and inter-group behaviour and relations: Evidence suggests that, although individuals may be unaware of their unconscious, implicit attitudes, these attitudes nonetheless impede on inter-group behaviours (Kapriniski & Hilton, 2001). Kapriniski & Hilton (2001) argue that "implicit attitudes shape people's responses to attitude objects and subsequent interactions with them" (Kapriniski & Hilton, 2001, p774). In his research, Dovidio (1997) demonstrated a link between implicit attitudes and blinking and eye contact, which are spontaneous, uncontrollable nonverbal behaviours (Dovidio et al, 1997). Implicit attitudes predicted responses on a word completion task (Study 2) and nonverbal behaviours, blinking and eye contact (Study 3). The association between implicit attitudes and nonverbal behaviour is interesting as nonverbal behaviour is thought to be outside of conscious awareness (Crosby, Bromley & Saxe, 1980) and may be affected by negative attitudes, despite individual's efforts to behave in a non-prejudice manner (Fazio, Jackson, Dunton, & Williams, 1995).

The relationship between implicit attitudes and non-verbal inter-group behaviours underlines the importance of measuring implicit bias in children. Nonverbal behaviours have been shown to have an adverse effect on inter-racial interactions (Word, Zanna & Cooper, 1974). Duncan (1976) examined individuals' interpretation of ambiguous behaviours that were performed by white or black actors. These behaviours were more likely to be interpreted as hostile when they were performed by a black actor, compared to a white actor. Duncan (1976) contends that the presence of a black actor led to the

automatic activation of the black stereotype, which includes perception of black people as hostile or violent. This led to the participants' interpretation of that ambiguous behaviour as being violent or aggressive. This phenomenon has been replicated in adults (Devine, 1989, Study 2) and in school children (Sager & Schofield, 1980). Thus, implicit activation of stereotypes affects individuals' interpretation of the behaviour of out-group and in-group members.

Furthermore, implicit bias and the non-verbal behaviours associated with this bias may have a cumulative effect on inter-group relations. Interactions between group members are coloured by nonverbal behaviours, but this effect may be compounded by the different perspectives of the interaction held by the different group members. Many participants, whose nonverbal behaviours betray their implicit, unconscious bias, believe they have acted in a sincere and fair manner (Dovidio et al, 1997). The out-group member, however, may pick up on the mixed signals from direct and indirect, nonverbal behaviours and respond with distrust. The differing perceptions of the interaction could perpetuate the feelings of inter-group tension and distrust (Dovidio et al, 1997).

To summarise, nonverbal behaviours are not less consequential in their effects than more deliberative or controlled behaviours (Dovidio et al, 1997). Therefore, interventions should be evaluated not only in terms of how they affect explicit prejudice, but also how they affect implicit bias.

Implicit bias and prejudice-reduction interventions: Given the early appearance of implicit bias in children, the apparent dissociation of implicit and explicit attitudes and the importance of implicit attitudes in determining inter-group behaviours, it seems clear that any prejudice-reduction intervention should also tackle implicit bias, and evaluations of interventions should use both explicit and implicit bias measures to fully appraise the

intervention. Furthermore, as stated previously the effect of prejudice-reduction interventions on implicit bias has never before been examined in children.

Previous research has shown that explicit and implicit attitudes are distinct (Dovidio et al, 1997) therefore it is possible that prejudice-reduction interventions will have different effects on implicit and explicit attitudes. Clues to the differing effects of interventions on these attitudes could lie in the possible origins of implicit and explicit attitudes. The difference between implicit and explicit attitudes has also been framed as a distinction between personal beliefs and automatically activated stereotypes (Devine, 1989). According to Devine (1989), we all hold cultural stereotypes about social groups. These cultural stereotypes are based on information that we pick up from our surrounding environment. Devine (1989) argues that as we get older, we develop the ability to question these commonly held cultural stereotypes and develop our own personal beliefs regarding social groups (Devine, 1989). However, personal beliefs cannot immediately replace cultural stereotypes. This is because cultural stereotypes are activated more easily than personal beliefs as they have a longer history and are older cognitive structures than more recently established personal beliefs (Devine, 1989). This means that cultural stereotypes will be automatically activated, whether they are comparable with an individual's personal beliefs or not. That is, even if one's personal beliefs, or explicit attitudes, are discordant to the cultural stereotype, that stereotype will continue to be activated.

Therefore, even individuals with egalitarian, non-prejudiced personal beliefs, evident in measures of explicit bias, may be subject to the automatic activation of cultural stereotypes. This could explain the apparent dissociation between implicit and explicit

attitudes (Banaji & Greenwald, 1995; Dasgupta & Greenwald, 2001; Devine, 1989; Kaprinski & Hilton, 2001; Skowronski & Lawrence, 2001; Wittenbrink et al, 2001).

According to Devine (1989), through frequent activation of personal belief it becomes stronger after frequent activation, it becomes strong enough to compete with the chronically accessible, frequently activated implicit or automatic stereotype. This will then lead to a change in the implicit attitude so that it is in line with personal beliefs. The inhibition and replacement of stereotype-congruent responses with non-prejudiced responses could be described as "breaking a bad habit" (Devine, 1989, p15). Devine (1989) proposes that this process would require intention, attention and time. Firstly, an individual must consciously decide to replace the stereotype with the personal belief whenever the stereotype is activated (intention and attention) and this must be done frequently (time) (Devine, 1989). By this process the old, stereotypical associations, such as Black-negative will be made relatively weak and the new associations made stronger.

This has implications for prejudice-reduction interventions as implicit or automatically activated stereotypes and attitudes may be extremely difficult to change. In order to change an individual's implicit attitudes, one must overcome a lifetime of socialisation experience that has led to this stereotype (Devine, 1989). Previous research has identified a number of techniques which could, according to Devine (1989) lead to a change in implicit bias (Blair et al, 2001; Karpinski & Hilton, 2001; Turner & Hewstone, 2004; Wittenbrink et al, 2001).

According to Devine's (1989) argument, implicit bias can be reduced through frequent activation of non-stereotypical personal beliefs. This will eventually replace the cultural stereotype with the personal belief. Devine (1989) argues that the counter-stereotype consists of stereotypic associations, such as in-group-positive and out-group-

negative, while the personal belief consists of counter-stereotypic associations.

According to this argument implicit bias could be reduced through frequent activation of counter-stereotypic associations, such as out-group positive and in-group – negative pairings. This would artificially boost the activation of these pairings, which could lead to a reduction in implicit bias as the stereotypic associations are replaced with the counter-stereotypic associations.

There is some evidence that interventions based on this technique could effectively reduce implicit bias (Blair et al, 2001; Karpinski & Hilton, 2001). Karpinski & Hilton (2001) examined implicit attitudes in the context of “youth bias”. This phenomenon is the favourable evaluation of the young and the unfavourable evaluation of the elderly (Karpinski & Hilton, 2001), which may be due to individuals existing in an environment where they are repeatedly exposed to youth paired with pleasant words and elderly paired with unpleasant words (Karpinski & Hilton, 2001). Therefore, “youth bias” could potentially be attenuated by changing the frequency of these associations. Karpinski & Hilton (2001) found that when participants were repeatedly exposed to elderly-good word pairings, this influenced IAT scores. This technique of exposing individuals to counter-stereotypic pairings could be incorporated into an implicit prejudice reduction technique.

Another technique that has been shown to influence implicit attitudes is the activation of counter-stereotypical mental images (Blair et al, 2001). Blair et al (2001) examined the effect of a range of techniques on several implicit measures. Using the IAT, Blair et al (2001) found participants who were asked to imagine a strong woman (counter-stereotypical mental image condition) were faster in stereotype-inconsistent trials in the IAT, compared to participants in the neutral condition i.e. implicit bias was

reduced. There was no effect of condition on stereotype-consistent traits however (Blair et al, 2001, Study 2). This finding was partially replicated with other implicit measures.

Participants' responses on the GNAT (Nosek & Banaji, 2001) and the DRM false memory paradigm (Deese, 1959; Roediger & McDermott, 1995) were moderated by counter-stereotypic mental imagery (Blair et al, 2001, Study 4 and 5). Blair et al (2001) proposed that counter-stereotypic mental imagery works by inhibiting or decreasing stereotypic responses. They argue that there is an increase in relative strength of counter-stereotypic associations which leads to a decrease in accessibility of stereotypic associations. Dasgupta & Greenwald (2001) also found that exposing individuals to counter-stereotypic group exemplars attenuated implicit bias. Moreover, counter-stereotypic mental imagery may have a cumulative long-term effect on implicit stereotypes or attitudes (Blair et al, 2001). A single counter-stereotypic episode, as used by Blair et al (2001), may produce a short-term effect but this technique, when used frequently, has the potential to produce long-term change in implicit stereotypes (Blair et al, 2001). These techniques could be incorporated into a prejudice-reduction intervention for children in order to reduce implicit bias. Significantly, interventions that reduce implicit bias have a differential effect on explicit and implicit attitudes (Dasgupta & Greenwald, 2001; Karpinski & Hilton, 2001; Wittenbrink et al, 2001). This suggests that different interventions may be required to tackle implicit and explicit bias.

Developmental component of implicit bias: There may be an additional developmental component of implicit bias. Devine (1989) argues that, with effort, it is possible to change implicit attitudes in line with explicit attitudes. However, she argues that the ability to change implicit bias may depend on the source of motivation to do so. Plant & Devine (1998) specify two possible sources of motivation to change bias: internal

(IMS) and external motivation (EMS). External motivation to suppress bias is derived from knowledge of and compliance with norms to behave in a non-prejudicial way (Plant & Devine, 1998). Internal motivation, on the other hand, occurs when individuals hold internalised, personally important non-prejudicial beliefs (Plant & Devine, 1998).

Evidence suggests that those who are internally motivated not to respond with prejudice are better able to control responses on implicit measures of bias (Plant & Devine, 1998; Devine, Plant, Amodio, Harman-Jones & Vance, 2002). Dovidio et al (2002) examined the source of motivation to respond with non-prejudice. They found that those individuals with high internal motivation and low external motivation to respond without prejudice expressed low implicit bias. In other words, people who are motivated to respond without prejudice through internalised norms and personal beliefs are able to control the activation of stereotypes at an implicit level. This will then lead to a change in their implicit bias so that it is in line with their personal, explicit beliefs. Devine et al (2002) went further and examined the mechanism by which these individuals control responses on implicit measures. Devine et al (2002) suggest that individuals with high IMS and low EMS have weakened the strength of associations (Devine, 1989) or prevented their activation (e.g. Moskowitz & Skurnik, 1999).

If Devine's motivational approach is accepted, one might predict developmental trends in the effects of prejudice-reduction interventions on implicit bias and the dissociation between implicit and explicit attitudes. Developmental research suggests that young children are aware of the social norm that racial exclusion or discrimination is inappropriate (Killen & Stangor, 2001), which could lead them to respond to this norm by reducing expressions of explicit bias. Killen & Stangor (2001) found evidence of awareness of norms for prejudice in children as young as 6 years old. This suggests that

children from this young age up could be externally motivated to suppress racial prejudice and respond without bias on explicit bias measures (Crandall, Eshleman & O'Brien (2002). This is supported by Rutland et al (2005) who found that in conditions of high-self-focus, children as young as 6 altered explicit out-group attitude responses so as to comply with the cultural norm for less bias. Thus, children from a young age could be externally motivated to respond without bias.

However, research suggests that at this young age children may be unable to develop and react to internal motivations to respond without prejudice. The shift from external to internal motivation is also similar to Piaget's (1965) theory of the development of moral reasoning. Piaget argued that until about 10 years of age, children understand and follow norms laid down by external forces, such as parents, to the extent that if they follow these norms and rules they will not be punished and if they do not follow these norms they will be punished. After 10 years of age children's moral reasoning becomes autonomous and they begin to internalise the social norms and internally regulate their own behaviour. It could therefore be predicted that only children over approximately 10 years of age can be internally motivated to respond without bias and control implicit attitudes, as Devine (1989) envisages in adults.

This developmental shift from external to internal motivation to respond without bias has implications for prejudice-reduction interventions for children. One might predict that following exposure to a prejudice-reduction intervention, younger children, will be externally motivated to express less bias and so will express lower levels of explicit bias only. The dominance of external motivation and lack of internal motivation at this young age would mean they would be unable to control or modify their implicit, automatically activated stereotypes. Older children, however, may have developed the

cognitive ability to internalise social norms and question cultural stereotypes, thus they will have the ability to respond in a way that Devine (1999) envisages in that they can control their implicit attitudes and replace these with their controlled, explicit personal beliefs. Significantly, to our knowledge the effect of interventions on implicit attitudes has not previously been examined.

Conclusions

Since psychologists first turned their attention to the investigation of prejudice in children, they have identified and addressed a number of methodological issues associated with this area of research. In order to get a true indication of the effectiveness of prejudice-reduction interventions, these issues should be taken into consideration when designing the intervention evaluation. Researchers have highlighted the importance of examining in- and out-group attitudes separately in order to obtain a true measure of bias (Brewer, 1999). In response to problems with social desirability of explicit measures, a number of indirect measures of bias have been developed (Nesdale, 2001). In addition, it is recommended that observational bias measures, such as play mate preferences that do not rely on self-report be included (Aboud et al, 2003). Furthermore, it is important that evaluations measure the effect of interventions on implicit as well as explicit bias (Rutland et al, 2005; Sinclair et al, 2005).

The aim of the current research is to bridge the gap between theory and practice and design effective interventions based on psychological theories. In Chapters 1 and 2, the contribution that psychology could make to the design of effective prejudice-reduction interventions has been outlined. In Chapter 3, previous psychological research which has examined prejudice-reduction interventions will be discussed.

Chapter 3: Psychological Research in Interventions to Reduce Childhood

Prejudice

Summary

This chapter outlines the contribution psychological research has made to the investigation of prejudice-reduction interventions. Firstly, interventions implemented by practitioners that are not based directly on psychological theories of prejudice development, but could be interpreted in terms of these theories are examined. These include role playing interventions (Byrnes & Kiger, 1990), multicultural education programmes (Salzman & D'Andrea, 2001) and normative influence interventions (Graves, 1999). Secondly, interventions that have developed directly from psychological theories are outlined. Research relating to the inter-group contact hypothesis, and different models of inter-group contact, is examined. Evaluations of inter-group contact interventions are outlined (e.g. Maras & Brown, 1996), as well as research looking at the effect of school desegregation on children's out-group attitudes (Stephan, 1999). The implications for prejudice-reduction interventions of a new inter-group contact theory, the extended contact hypothesis is also explored. Finally, interventions derived from the socio-cognitive developmental approach to prejudice-reduction are evaluated (Aboud, 1988; Bigler & Liben, 1992).

Few researchers in psychology have turned their attention to the reduction of prejudice (Oskamp, 2000). In this chapter psychology's contribution to the study of prejudice-reduction interventions is examined. Researchers have developed and tested interventions based on their theories of prejudice development (e.g. Maras & Brown, 1996; 2000; Wright et al, 1997). However, the majority of psychological research in this

area evaluates interventions designed and implemented by practitioners who may be unaware of the psychological theories relating to their intervention techniques (e.g. Salzman & D'Andrea, 2000). Therefore, researchers tend to relate interventions to psychological theories of prejudice development, but the interventions do not provide direct tests of these theories. A further type of research in prejudice-reduction is opportunistic in that it does not test interventions as such, but uses changes in children's social environment that may have a political basis, such as desegregation in schools, in order to test psychological theories of prejudice (e.g. Stephan, 1999). These three forms of psychological research are important as they evaluate pre-existing prejudice-reduction interventions, and also provide evidence for the underlying mechanisms of interventions that could lead to changes in out-group attitudes.

Empathy and Role-playing / Perspective Taking

Role-playing and perspective taking are probably some of the earliest intervention techniques to be employed by education professionals (Aboud & Levy, 2000). This technique was first used with children around 50 years ago (Culbertson, 1957). This technique has been used as part of a number of intervention programmes (e.g. Hill & Augustinos, 2001; Salzman & D'Andrea, 2001), but has received little empirical evaluation.

Role playing or perspective taking typically involves the participant adopting the role or perspective of a member of a stigmatised group. Essentially, individuals "walk in the shoes" of a member of a discriminated group. It is thought that through this experience, individuals will adopt the perspective of a member of the other group and experience at first-hand how it feels to be a member of that group and be discriminated

against. The argument is that this will then lead the individual to empathise with members of the discriminated out-group and see themselves as being similar to that group. The thinking is that this will then lead to a reduction in prejudice because individuals will want to alleviate the pain and hurt of discrimination as if it were their own (Aboud & Levy, 2000).

Perhaps the most well-known perspective-taking prejudice-reduction intervention was the Blue Eyes/Brown Eyes experiment (Aboud & Levy, 2000). This intervention was devised by Jane Elliot, an elementary school teacher in the United States in the 1960s. She wanted to teach the children in her class how it felt to belong to a stigmatised group and experience discrimination. One day she told her class that students with blue eyes were superior to students with brown eyes and she favoured the blue-eyed students over the brown-eyed students. The next day she reversed the roles and favoured brown-eyed students. This gave students an insight into how it feels to be discriminated against, albeit for one day only.

More recently, Byrnes & Kiger (1990) assessed the effectiveness of the Blue-Eyes / Brown Eyes paradigm with non-black students and found the simulation significantly improved participants' attitudes towards black people. Those who took part in the intervention were significantly more likely to confront discriminatory situations compared to a control group. However, there was no significant difference in participant's social distance scores. This led Byrnes & Kiger (1990) to conclude that the intervention's effects on out-group attitudes may be limited to responding to discriminatory acts.

This finding has been replicated with children aged 9 years (Weiner & Wright, 1973). Weiner & Wright (1973) found that, compared to a control group who received

no intervention, children who took part in a version of the Blue-eyes / Brown-eyes simulation expressed greater willingness to engage in an activity with the out-group (Weiner & Wright, 1973). Breckheimer & Nelson (1976) also found that following role-playing interventions, adolescents expressed greater intention to engage in cross-race activities. Furthermore, the ability to take another's perspective and also to reconcile their own and other's perspectives, that is to see other's perspectives as legitimate, are linked to lower levels of prejudice in children (Abrams et al, 2003; Doyle & Aboud, 1995; Quintana, 1994, 1998, 1999; Selman, 1971, 1980). This evidence suggests that interventions based on role playing and perspective taking could be effective with young children.

While role-playing and perspective-taking interventions have been examined in adults and adolescents (Weiner & Wright, 1973), the effectiveness of these interventions for young children has received little empirical attention in psychology (Aboud & Levy, 2000). It could be predicted that the effectiveness of role-play and perspective taking interventions may have a developmental component. Young children are egocentric and do not have the cognitive abilities required to take the perspective of another person (Abrams et al, 2003; Quintana, 1994, 1999; Selman, 1971, 1980). Children below 8 years of age are relatively poor at coordinating and integrating various psychological perspectives such as first-, second- and third-person perspectives (Quintana, 1994, 1999; Selman, 1971, 1980). Given this developmental trend, role-playing and perspective-taking may reduce prejudice in older children who are capable of holding and accepting the perspective of others, but may be ineffective in younger children below 8 years who do not have this ability. It is important to tailor interventions to suit the target population (Bigler, 1999). That is, practitioners must consider the cognitive and emotional abilities

of children when designing interventions, as these interventions will be ineffective if children do not hold the cognitive abilities to process this information. Thus, role-taking and perspective taking interventions may be unsuccessful in younger children who do not hold these abilities.

Socialisation Approaches

Socialisation theorists contend that children's negative and positive associations with out-group members are a consequence of socialisation. These associations are transmitted directly to children from parents and other socialising influences such as school and the media (Aboud & Levy, 2000; See Chapter 1 under subheading 'Social reflection / socialisation'). Children learn these prejudiced associations through imitation, paired association and reinforcement (Aboud & Levy, 2000). Prejudice-reduction interventions that use the same sources of socialisation, such as parents and the media (Graves, 1999), to reduce prejudice in children could be interpreted in terms of this theoretical approach. There are two main types of prejudice-reduction interventions that have been associated with the socialisation approach to prejudice-development: multicultural interventions and interventions that present examples of positive out-group relations.

Multicultural Interventions

There are two main types of multicultural intervention: multicultural education interventions and anti-racist or anti-bias programmes. Multicultural education interventions use the influence of socializing agents to reduce prejudice and discrimination of members of other racial and cultural groups and do so in a number of

ways. Some multicultural programmes work under the assumption that prejudice is a result of ignorance about the out-group, and so try and reduce bias by presenting information about the out-group (Hill & Augustinos, 2001). Other multi-cultural interventions explicitly provide counter-stereotypic information about the out-group (e.g. Litcher & Johnson, 1969).

School-based multicultural interventions use a variety of different media as sources of the socialisation influence, such as story books, videos, tapes and games and activities. Some multi-cultural interventions involve slight changes to the curriculum, for instance the use of story books featuring out-group members (Bigler, 1999; see Litcher & Johnson, 1969). Other multi-cultural interventions adopt a more “transformative” approach to prejudice-reduction (Banks, 1995) that involves extensive changes to the curriculum (Bigler, 1999) and the introduction of a whole programme of activities designed to combat prejudice. These interventions tend to be more intensive and structured, and use a number of media and activities such as art, games and drama to tackle a different aspect of prejudice (e.g. Salzman & D’Andrea, 2001; see Bigler, 1999 for review).

For instance, Salzman & D’Andrea’s (2001) examined a multicultural prejudice-reduction intervention programme that was administered to a fourth-grade class in Hawaii. The intervention programme consisted of weekly sessions designed specifically to address the issue of multi-cultural awareness. The classes were held once a week for 10 consecutive weeks. The classes incorporated several different activities, some of which were based on psychological concepts known to be related to prejudice-reduction, while others were based on the intuition of the programme designers. A number of activities aimed to encourage children to identify their own and others’ cultural and

ethnic group and highlighted the differences and similarities between different cultures (e.g. 'Multicultural Bingo' and the 'Hands Activity'). One session employed the Blue-eyes / Brown-eyes approach discussed earlier to allow children to experience first hand the emotions that occur as a consequence of discrimination and prejudice. Children were also introduced to the concepts of "prejudice" and "stereotyping", and children were invited to examine their own prejudice and bias.

There are mixed findings regarding the benefits of multicultural education interventions (Best, Smith, Graves & Williams, 1975; Katz & Zalk, 1978; Koeller, 1977; Litcher, Johnson & Ryan, 1973; Litcher & Johnson, 1969). In the above study Salzman & D'Andrea (2000) found that following the intervention, teachers observed a significant improvement in children's cooperative social skills, compared to a control group who did not receive the intervention. This suggests that the multicultural intervention fostered intercultural social skills in children. One successful intervention was examined by Litcher & Johnson (1969) who evaluated a 4-week multi-cultural programme that involved reading stories featuring African American characters. Teachers did not draw children's attention to the ethnicity of the story characters and there was no discussion of race or ethnicity. Litcher & Johnson (1969) found prejudice levels were lower in the experimental conditions, compared to control conditions.

On the other hand, a number of researchers have shown that multicultural interventions are ineffective and may indeed have a detrimental effect on inter-group attitudes. For instance, Koeller (1977) found that exposing 11 year old children to stories about Mexican Americans did not lead to more positive racial attitudes. Furthermore, McAdoo (1970, cited in Bigler, 1999), implemented a 'Black Consciousness' programme that included various activities, including learning songs and stories about Black heroes,

reading stories that depict African American women and men in a positive light. This intervention actually led to an increase in racial stereotyping (McAdoo, 1970 cited in Bigler, 1999). Indeed, in their reviews of multi-cultural education programmes in the classroom, Williams & Moreland (1976) concluded that attitude modification in the classroom is difficult to achieve and Bigler (1999) concluded that the effects of these types of interventions are often non-significant and are inconsistent across populations (Bigler, 1999). While Salzman & D'Andrea (2001) found that multicultural interventions led to significant improvements in social interaction according to teacher's rating, this was not reflected in children's own self-ratings. Thus, even apparently successful interventions can also have mixed findings.

Furthermore, there are also a number of methodological problems with multicultural studies, which limit the conclusions that can be drawn from these interventions. As discussed previously, the additive nature of these programmes means that it is difficult to determine the underlying causes of any change in inter-group attitude subsequent to the intervention (See Introductory Chapter under subheading 'Intervention design and evaluation').

An alternative approach to classroom based multicultural interventions involves the direct discussion of prejudice and discrimination (Bigler, 1999). According to this approach children should be encouraged to discuss racism and are taught ways in which to recognise and confront racism and discrimination e.g. Teaching Tolerance (Aboud & Levy, 2000 ; Bigler, 1999; Derman-Sparks & Phillips, 1997; Sleeter & Grant, 1987). Like multicultural interventions, these interventions are based on the theoretical principle that prejudice is a result of ignorance, and when children are taught about prejudice, this will lead to its reduction. These types of interventions are often "TV spots" in the form of

extended, informative adverts, or advertisements on billboards or in newspapers and magazines. There is conflicting evidence regarding the effectiveness of anti-racist interventions. Research in the adult literature suggests that these interventions may actually have a negative effect on out-group attitudes (Kehoe & Mansfield, 1993). On the other hand, research with young adults suggests that alerting individuals to the need for improved inter-racial relations and increased harmony between racial groups leads to a reduction in in-group favouritism (Wolkso, Park, Judd & Wittenbrink, 2000).

Positive Examples of Inter-group Relations

Some interventions strive to reflect the multicultural society we live in and include members of a variety of different ethnic groups (Graves, 1999). Another intervention technique that can be interpreted in terms of socialisation theory is presenting children with positive out-group exemplars and examples of positive inter-group relations. In these interventions members of discriminated groups are often presented positively and are often portrayed counter-stereotypically and inter-group relations are generally portrayed as positive or neutral (Graves, 1999). Research has shown that positive portrayals of African Americans in children's TV programmes leads to more positive attitudes towards this group in European Americans (Dorr et al, 1980; Graves, 1975).

The television programme 'Sesame Street' developed a race relations curriculum that used modelling by adults and children to influence preschool children's inter-group attitudes (Lovelace et al, 1994). Actors were shown in cross-racial friendships, visiting each others homes and meeting and interacting with one another's families. The interactions were presented positively and the actors appeared to be comfortable and

having fun interacting with each other. Children were able to remember details about the show and related it to their own lives (Lovelace et al, 1994).

In a similar vein, 'Different and the Same' also used modelling in their prejudice reduction series. However, rather than challenging prejudice by presenting positive examples of inter-group relations, this television series presented children with models of pro-social behaviours to help them interact with members of different racial groups and also presented strategies for dealing with inter-racial conflict. This intervention had a positive effect on knowledge of sources of racial conflict and stereotypes and promoted cross-race friendship and improved racial attitude (Graves, 1999).

When evaluating these interventions, psychologists can only speculate about the mechanisms underlying any change in out-group orientation following exposure to these interventions. Socialisation theorists contend that children's negative and positive associations with out-group members are a consequence of socialization and are transmitted directly to children from parents and other socialising influences such as school and the media (Aboud & Levy, 2000). Children learn these associations through imitation, paired association and reinforcement (Allport, 1954). There is some evidence that children engage in behaviour modelling and observe and imitate cross-race and same-race models (Graves, 1975).

Summary: While the study of interventions used by practitioners, such as role play, multicultural interventions and the presentation of positive inter-group relations is helpful in terms of identifying practical techniques that could be used in future interventions, it is not particularly informative in terms of advancing psychological theories of prejudice development and designing prejudice-reduction interventions. The lack of psychological input in these interventions means that while psychological theories

of prejudice can be applied to these interventions after the fact, these interventions do not provide a direct test of the predictions of the psychological theories they may be related to. Whilst researchers can speculate about the underlying mechanisms of these interventions, the predictions of their psychological theories of prejudice development are not tested directly.

However, psychologists have also directly applied psychological theories of prejudice development and reduction to prejudice-reduction interventions for children. The two main psychological theories that have been applied to interventions to reduce prejudice are inter-group contact (Allport, 1954) and socio-cognitive developmental theory (Aboud, 1988).

Inter-group Contact Interventions

Compared to other prejudice-reduction techniques, inter-group contact interventions have perhaps received the greatest amount of attention in psychology. Research suggests that inter-group contact does lead to a reduction in prejudice (Pettigrew & Tropp, 2004). In addition, inter-group contact has formed a part of many interventions designed and administered by educators and practitioners in schools. Bringing members of conflicting groups together as a means of reducing prejudice seems intuitive to those unaware of the psychological literature. A number of prejudice reduction interventions in the United Kingdom, such as the Leicester Community Cohesion project (2004), aim to bring members of different communities together to discover the similarities and differences between their own and the opposing group. Psychologists have conducted experimental research on inter-group contact and have developed prejudice-reduction interventions based on these findings. Researchers have

also examined contact interventions implemented by practitioners who may be wholly unaware of the psychological findings in this area. Each of these areas of research is illuminating with regard to the development of future prejudice-reduction interventions, and in the following section each of these areas will be discussed.

Allport's Hypothesis

Psychological research in inter-group contact is based on Allport's (1954) inter-group contact hypothesis. According to this theory, under a given set of conditions, contact between members of different groups reduces existing prejudices. The underlying theory of the contact hypothesis is that prejudice and discrimination is a consequence of unfamiliarity with the out-group. Inter-group contact leads to positive experiences with the out-group and exposes individuals to stereotype disconfirming information, resulting in changes in beliefs, attitudes and behaviour towards the out-group (Allport, 1954). The majority of research suggests that contact can lead to a reduction in negative inter-group bias (Pettigrew & Tropp, 2000; 2004).

Optimal conditions for contact: Allport (1954) specifies the 'optimal conditions' under which contact is most likely to be successful. According to Allport (1954), in order to reduce prejudice the groups in contact must be equal in status, pursue common goals through co-operative interaction, there should be an opportunity to develop inter-group friendships and there should be institutional support. Inter-group contact should be personal and individualised and cooperative in nature (Allport, 1951).

Research suggests that the effect of contact is stronger in contexts in which Allport's optimal conditions are met (Brown & Hewstone, 2005; Pettigrew & Tropp, 2004). This research has important implications for inter-group contact interventions as

in order to effect the greatest change in inter-group attitudes, the conditions that lead to the most favourable inter-group attitude should be incorporated into the inter-group contact intervention.

Acquaintance potential: Allport (1954) predicted that when group members in contact have the opportunity to form friendships this will lead to more positive inter-group attitudes. Indeed, research suggests that cross-race friendships are also associated with out-group attitudes in adults (Hamberger & Hewstone, 1997) and children (Wagner, Dick, Pettigrew & Christ, 2003). Wagner et al (2003) examined the relationship between friendships with minority groups and prejudice in adolescents living in East and West Germany. Compared with West Germany, in East Germany there is less opportunity for contact with minority groups. Wagner et al (2003) found a significant relationship between contact experiences (number of foreign acquaintances, perceived importance of contact experiences, how many foreign students are in your classroom and how many foreign families are in your neighbourhood) and out-group prejudice. This finding has been replicated with younger children. Aboud, Mendelson & Purdy (2003) found that white children, aged 6 to 11 years, who expressed higher levels of out-group prejudice, were more likely to exclude cross-race classmates and had fewer cross-race friends.

Co-operative interaction: According to Allport (1954), a second requirement for successful inter-group contact is cooperative interaction in pursuit of common goals. A classic study that provides evidence pointing to the importance of co-operative interaction is Sherif and colleagues' Robbers Cave study (Sherif, Harvey, White, Hood & Sherif, 1961). This study was conducted at a boys' summer camp. The boys at the summer camp were divided into two arbitrary teams. The teams were encouraged to compete with each other, and this led to extreme negative intergroup behaviour culminating in

hostile verbal and physical behaviours. Only when these two groups were given tasks with super-ordinate goals that required inter-group co-operation, did these negative inter-group behaviours subside. Co-operative interaction has formed the basis of a number of prejudice-reduction interventions in the form of co-operative learning (Armstrong, Johnson & Balow, 1981; Acton & Zabatana, 1988; Desforges, Lord, Ramsey, Mason, Van Leeuwen, West & Lepper, 1991; Johnson, Rynders, Johnson, Schmidt & Haider, 1979; Maras & Brown, 1996; Sherif, Harvey, White, Hood & Sherif, 1961). These intervention studies tend to find co-operative learning leads to more positive inter-group attitudes (e.g. Maras & Brown, 1996).

Institutional support and equal status: Allport's other optimal conditions for contact, equal status and institutional support have also been found to be important for successful inter-group contact and school desegregation (see Schofield & Eurich-Fulcer, 2001 for review) and for contact more generally (Blanchard, Weigel, & Cook, 1975; see Brown & Hewstone, 2005 for review).

To summarise, subsequent research has shown that the optimal conditions for inter-group contact, as laid out 50 years ago by Allport, are indeed important for successful inter-group contact. Therefore, inter-group contact interventions should incorporate these principles in order to be successful. Indeed, some researchers have claimed that, where there were non-significant effects of inter-group contact interventions, this was because researchers did not have adequate control of the inter-group contact and could not ensure that Allport's optimal conditions for contact were met (e.g. Maras & Brown, 2000).

Inter-group Contact Prejudice-reduction Interventions

In addition to studying the characteristics of inter-group contact that are associated with the most favourable inter-group attitudes, psychological researchers have also assessed pre-existing inter-group contact interventions implemented by practitioners, and have also designed interventions themselves in order to test the inter-group contact hypothesis. Inter-group contact interventions have taken many forms, from co-operative learning groups (Maras & Brown, 1996; 2000) and bilingual education and racially integrated schooling (Genesee, 1987; Genesee, Allister & Morin, 1974; Lambert & Cazabon, 1994) to 'vicarious' contact through TV and fictional stories (Graves, 1999; Greenberg & Reeves, 1976).

Laboratory interventions

Research regarding interventions to reduce prejudice has been conducted in the laboratory as well as the field. A typical example of experimental laboratory research looking at interventions was conducted by Wolkso, Park, Judd & Bachelor (2003) who measured attitudes towards Latinos before and after interaction with a Latino confederate who behaved in a stereotype confirming or disconfirming manner along positive and negative dimensions. They found that in both stereotype-confirming and disconfirming instances, the contact intervention led to more positive evaluations of Latinos as a group, as compared with pre-intervention attitudes (Wolkso et al, 2003). In their review Pettigrew & Tropp (2000) examined 12 experimental studies of contact and found a negative relationship between contact and prejudice.

Desegregation

From a researcher's point of view, the study of desegregation in schools is an opportunity to examine the effect of contact on inter-group attitudes in real-life settings, outside the laboratory. Stephan (1999) conducted a broad review of studies examining desegregation in elementary and secondary schools. He concluded that the effects of desegregation differ depending on the participant's ethnic group. As a result of racial desegregation in schools, Black children's out-group attitudes are more likely to become positive than negative, but White children's out-group attitudes are more likely to become negative (Stephan, 1999). However, the majority of studies included in Stephan's meta-analysis were conducted just a few years after desegregation. Therefore, the long-term effects of contact cannot be inferred from this study. However, there is evidence that desegregation can lead to long-term improvements in inter-group relationships (Stephan, 1999). Attending a desegregated school is linked to individuals' relationships with racial out-group co-workers and willingness to live in racially desegregated communities in later life (Braddock & McPartland, 1989). Therefore, it appears that desegregation in schools can have positive effects on children's inter-group attitudes.

Another type of school desegregation is bilingual education programmes. In their review, Genesee & Gandara (1999) outlined two different types of bilingual education: 'Dual-Language Education' and 'Immersion'. The former is found in the United States e.g. the Amigos Two-Way Immersion Programme (Genesee & Gandara, 1999). In this model of bilingual education children whose primary language is the majority language (i.e. English) are educated alongside those for whom the primary language is the minority language. Children attend lessons taught in both languages. Dual-language education allows direct contact with out-group members and the opportunity for close inter-group

co-operation in the classroom. Research has shown that children attending dual-language schools are less prejudiced towards those who speak another language, compared to all-English speaking schools (Cazabon, 1999 cited in Genesee & Gandara, 1999).

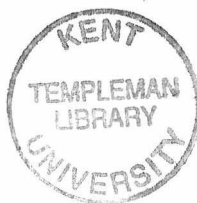
'Immersion' is a second model of bilingual education and is found in Canada. This model differs from Dual Language Education as it tends to be exclusively aimed at changing the inter-group attitudes of members of the ethno-linguistic majority, English-speaking Canadians, with no direct contact with the ethno-linguistic minority (French-Speaking Canadians). In 'immersion' children are taught in the minority language, French, and are taught using French materials and are immersed in French Canadian culture, but they do not have any direct contact with members of the linguistic out-group (French-speaking Canadians). This type of desegregation could also be viewed as a kind of vicarious contact with the out-group. Research indicates that the vicarious contact provided in immersion programmes leads to more positive inter-group attitudes. Immersion students are more positive towards French Canadians (Lambert & Tucker, 1972), see English-Canadians and French-Canadians as more similar and see *themselves* as more similar to French Canadians than non-immersion students do (Genesee, 1977). This could be due to increased experience of French Canadian culture through school materials, or as a consequence of a shared identity with French-Canadians (Genesee & Gandara, 1999). Importantly, identification with the in-group, English-Canadian, was unaffected by the intervention (Genesee, 1977). It is imperative that identification with one's own group should not be affected by prejudice-reduction interventions, the aim of which should be to change out-group attitude, but not in-group attitude. While immersion does not involve any direct contact, one could predict that education in another language and culture, and training in inter-group communication skills and cultural awareness

could facilitate future direct inter-group contact (Genesee & Gandara, 1999). The subsequent change in inter-group attitude following immersion education could mean that future direct contact will be more likely, and more successful.

There is some evidence that the success of school desegregation may depend on whether the contact between the racial groups meets the optimal conditions in Allport's 'Intergroup Contact' hypothesis (see Schofield & Eurich-Fulcer, 2001 for review).

Firstly, providing the opportunity for contact does not always lead to actual contact between groups. In desegregated schools, students sometimes adopt self-imposed re-segregation (Schofield, 1995) and may avoid inter-group interactions that cause anxiety (Stephan & Stephan, 1985). Therefore, desegregation does appear to lead to changes in out-group attitudes, but practitioners should ensure that inter-group contact is actually increased following desegregation and self-imposed segregation does not occur.

To summarise, racial desegregation in schools and desegregation in the form of dual language and immersion programmes provides researchers with an opportunity to examine the effect of direct and vicarious inter-group contact on children's inter-group attitudes. Evidence suggests that direct and indirect contact has a positive effect on children's out-group attitudes (Braddock & McPartland, 1989; Genesee & Gandara, 1999; Lambert & Tucker, 1972; Stephan, 1999) without affecting in-group identification (Genesee, 1977). There is also some evidence that Allport's (1954) optimal conditions should be met in order for the desegregation to successfully change inter-group attitudes. For instance, it is essential that inter-group contact actually take place following desegregation.



Co-operative Learning Groups

Co-operative learning interventions have been developed directly from psychological theories and research on inter-group contact. Co-operative learning incorporates the requirements of common goals and co-operation, and personalised contact outlined by Allport (Allport, 1954; Maras & Brown, 1996). These interventions have been found to improve inter-group attitudes in majority group adults (Acton & Zarbatan, 1988; Desforges, Lord, Ramsey, Mason, Van Leeuwen, West & Lepper, 1991) and children (Armstrong, Johnson & Balow, 1981; Johnson, Rynders, Johnson, Schmidt & Haider, 1979; Maras & Brown, 1996; Sherif, Harvey, White, Hood & Sherif, 1961).

Maras & Brown (1996) evaluated a cooperative learning intervention that involved mainstream children taking part in regular activities with disabled children. These activities were carefully structured so that children had to collaborate in order to complete the tasks. Using a sociometric preference measure, Maras & Brown (1996) found that children who took part in the programme expressed greater liking for the out-group compared to a control. Thus, inter-group contact that involves co-operative learning appears to lead to positive out-group attitudes. Furthermore, in interventions in which the contact between the two groups was not controlled and co-operative interaction could not be ensured, inter-group contact interventions have been unsuccessful (Maras & Brown, 2000).

While psychological research has focused on the characteristics of contact that are required to change inter-group attitudes, experimenters have also identified possible disadvantages of inter-group contact. One disadvantage is that contact between groups may induce anxiety in the participants which may prevent contact having a positive effect

on inter-group attitudes (Paolini, Hewstone, Cairns & Voci, 2004; Pettigrew & Tropp, 2000; Stephan & Stephan, 1985).

To summarise, evaluations of the effect of inter-group contact in school contexts, such as desegregation, and the assessment of interventions developed directly from inter-group contact theory, and those implemented by practitioners, provide evidence that inter-group contact can indeed lead to more positive inter-group attitudes. This is especially true when Allport's conditions for optimal contact are met (e.g. Maras & Brown, 1996). Thus, closer collaboration between psychology and the education sector could lead to an improvement in prejudice-reduction interventions. In order for inter-group contact to be successful, educationalists and practitioners must incorporate elements of psychological theory and research (Brown, Vivian & Hewstone, 1999; Maras & Brown, 1996, 2000).

Models of Inter-group Contact

More recently there have been further elaborations of Allport's inter-group contact hypothesis that could inform future inter-group contact interventions in schools. In a bid to understand the cognitive and motivational components of contact, theorists have combined inter-group contact theory with Social Identity Theory (Tajfel, 1978; Turner, 1975). However, different interpretations of Social Identity Theory have led to the emergence of a number of different models of contact each of which purport to describe the most effective and successful model of inter-group contact. These models are: de-categorisation, re-categorisation and inter-group contact. These models differ in a number of ways. Firstly they differ in their predictions regarding the level of categorisation that is most desirable in inter-group contact, i.e. the individual, sub-group

or super-ordinate level of categorisation. They also differ in their approach to another important issue in the contact literature, generalisation. This is the question of how changes in attitude following inter-group contact can be generalised beyond the contact situation to the whole out-group (Brown & Hewstone, 1986). In other words, can the change in out-group orientation be generalised from the out-group member one interacts with in the contact situation, to the out-group as a whole? These three models of inter-group contact predict differing conditions lead to generalisation. It is important to examine these models of inter-group contact further as they have important implications for inter-group contact interventions, since they each predict different conditions for successful inter-group contact. Furthermore, these models have rarely been tested with children (cf. Maras & Brown 1996; 2000) and so this aspect of inter-group contact warrants further investigation.

De-categorisation Model of Inter-group Contact: According to Brewer & Miller's (1988) 'de-categorisation' or personalisation theory of inter-group contact, prejudice is a consequence of individuals basing their inter-group behaviour and evaluations of the out-group on category membership alone, and ignoring individuating information. Furthermore, when interactions between members of different groups is category-based, there is a tendency to see out-groups as homogenous and undifferentiated (Brewer & Miller, 1988). Brewer & Miller (1988) argue that this interpersonal contact will also lead to generalisation of positive out-group attitude beyond the contact situation, since if one experiences personalised contact with several different members of the out-group, then the out-group will become individuated and group membership will become meaningless. According to this theory, when members of different groups interact they will not perceive each other as being members of different groups, but as individuals, and any

judgements made of the other will be at an individual level rather than a group level (Brewer & Miller, 1988). Therefore, according to this theoretical framework, effective inter-group contact is best achieved by de-emphasising category information and focusing on personal information. In terms of prejudice-reduction interventions, this model of contact suggests that inter-group contact should be structured in such a way that category membership is not salient and out-group members are individuated and not perceived as being members of a group.

Research on the de-categorisation model of contact has produced mixed results (Bettencourt, Brewer, Rogers-Croak & Miller, 1992, Bettencourt, Charlton & Kernahan, 1997; Gonzalez & Brown, 2003; Maras & Brown, 1996; Marcus-Newhall, Miler, Holtz & Brewer, 1993; Weber & Crocker, 1983). Miller, Brewer & Edwards (1985) found that a cooperative task requiring personalised contact led to more positive out-group attitudes towards the out-group members in the immediate setting and this positive attitude was extended to members of the out-group the participant had not met.

The link between cross-group friendships and prejudice also supports the de-categorisation approach to contact. Although contact with the out-group in general is linked to lower prejudice, close personal friendships with out-group members in particular, is highly related to lower levels of prejudice towards that group (Pettigrew & Tropp, 2000). One can assume that close friendship with an out-group member occurs at a personal or individual, rather than group level, thus supporting the de-categorisation model of contact. Likewise, the positive effect of cooperative learning interventions can be explained using this framework as cooperative contact occurs at a personal rather than group level. However, the assumption that close friendships operate at an individual level

to change group attitudes is neither psychologically necessary nor often empirically assessed (Brown & Hewstone, 2005).

However, the de-categorisation approach may have negative consequences for in-group perception. According to social theories of inter-group behaviour, individuals favour members of their own social group. Therefore, if social categories are de-emphasised, the positive orientation towards members of the same social group will disappear. Indeed, there is evidence that the reduction in inter-group bias as a result of de-categorisation is associated with reduced perceived attractiveness of former in-group members (Gaertner, Mann, Murrell & Dovidio, 1989; Wolkso, Park, Judd & Wittenbrink, 2000). This has implications for contact interventions that employ this model. De-categorisation may reduce inter-group bias, not by increasing positive attitude towards the out-group but by encouraging a perception of the in-group that is as negative as the out-group perception. The aim of prejudice-reduction interventions should be to change out-group attitudes, without affecting in-group orientation, thus the de-categorisation approach to inter-group contact may not be ideal for prejudice-reduction interventions.

Common In-group Identity model of Inter-group Contact: Gaertner and colleagues (Gaertner & Dovidio, 2000; Gaertner et al., 1989) developed an alternative to the de-categorisation model, the common in-group identity model. This approach, like that of Brewer & Miller, also emphasises the importance of reducing the salience of inter-group boundaries. However, while the de-categorisation model recommends the dissolution of these boundaries by focusing on the individual, Gaertner & Dovidio's approach proposes the replacement of old inter-group boundaries with new, more inclusive ones. Gaertner & Dovidio (2000) recommend the creation of a 'common in-group' that includes the in-group and former out-group members in one super-ordinate category. According to the

predictions of Social Identity Theory (Tajfel & Turner, 1986), by invoking a new common in-group, the positive orientation towards in-group members should then be applied to new in-group members, those erstwhile out-group members. From this perspective, cooperative interaction is effective because it increases perception of one group rather than two opposing groups. It increases perception of "Us" rather than "we" and "them"(Gaertner & Dovidio, 2000).

Research providing some support for this model comes from a variety of settings: multi-ethnic schools (Gaertner, Rust, Dovidio, Bachman & Anastasio, 1994; Houlette, Gaertner, Johnson, Banker, Riek & Dovidio, 2004; Nier, Gaertner, Dovidio, Banker, Ward & Rust, 2001), step-families trying to become one family unit (Banker & Gaertner, 1998) and minimal group studies (Gaertner et al, 1989). In these varied settings, participants responded to perceived categorisation (one-group, two-group or separate individuals) as predicted by Gaertner & Dovidio's (2000) Common In-group Identity model. Perceiving themselves and former out-group members as belonging to one group, they were more positive towards the out-group.

Nier et al (2001) compared the 'de-categorisation' and 'Common In-group Identity' models of contact in a study of interaction between Whites and Blacks. Nier et al (2001, Study 1) manipulated the salience of the inter-group boundaries during participants' interaction with a cross-racial confederate in line with either the de-categorisation or common in-group identity models of contact. The manipulation was successful and participants' inter-group perceptions changed as expected. Participants in the common in-group condition rated the confederate more positively than in the individuating condition.

Nier and colleagues replicated these laboratory findings in a real-life setting with high school students (Nier et al, 2001, Study 2). In this study, it was found that White participants were more likely to behave in a pro-social manner towards Black confederates with whom they shared a common in-group (University affiliation). This finding supports the common in-group approach to contact and suggests that contact should emphasise in-group and out-group members' common in-group in order to effectively change inter-group behaviours and attitudes.

The veracity of the common in-group effect has been demonstrated in minimal group studies. Gaertner et al (1989) found that common in-group contact reduced inter-group bias compared to the control condition. Furthermore, the mechanism behind this inter-group bias was consistent with the theoretical approach of the common in-group identity model, as the reduction in inter-group bias was due to increased attractiveness of former out-group members.

Despite its impressive empirical support, the Common In-group Identity model has rarely been tested for its ability to promote generalised attitude change i.e., towards out-group members not yet encountered (Gonzalez & Brown, 2003). Furthermore, it may be practically difficult to implement in some circumstances because it effectively requires group members to abandon their subgroup (e.g., ethnic) identities in favour of a super-ordinate (e.g., national) identity. In many multicultural societies, such an assimilationist strategy may not be willingly undertaken (Van Oudenhoven, Prins & Buunk, 1998; Verkuyten, 2005; Zagefka & Brown, 2002).

This criticism can be levelled at both the common in-group identity model and the de-categorisation approach to inter-group contact, since they both require individuals to abandon their previous social identities in favour of new identities. Individuals may be

willing to adopt and abandon social identities in this way in the short-term; it may be more difficult to manipulate group boundaries in this way in the long-run. According to optimal distinctiveness theory, people are motivated by a need to belong and so social identities are important for the individual's self-concept (Brewer, 1991). Therefore, de-categorisation may fail in the long-run as it does not allow individuals to hold social identities and so this approach would be rejected. Individuals are simultaneously driven by a need for differentiation or uniqueness and so prefer group boundaries to be distinct (Brewer & Gaertner, 2001). Consequently they may reject a larger more inclusive common in-group in the long-run. This means that while individuals may be provoked into engaging in these different levels of inter-group perception in the short-term, the simultaneous need for individuation and belonging might make these alternative inter-group categorisations difficult to maintain in the long-term and in different social circumstances (Brewer & Gaertner, 2001). This has implications for generalisation as it suggests changes in inter-group attitudes will be confined to the out-group members in the immediate contact situation.

Dual identity approach: An alternative to the wholesale implementation of a single common in-group identity is the Dual Identity strategy (Gaertner et al, 1994; Gonzalez & Brown, 2003). In this model, Gaertner & Dovidio (2000) contend that by accepting a super-ordinate identity, this does not necessitate the rejection of a subordinate identity. That is, it is possible for individuals to hold both the original in-group identity and the common in-group identity simultaneously (Gaertner & Dovidio, 2000). Thus the goal of the dual identity approach is to invoke a super-ordinate identity whilst simultaneously encouraging the retention of its constituent subgroup identities. Such an approach has much in common with 'integrationist', 'bicultural' and 'hybrid' identity

concepts that have been developed in the acculturation literature (Berry, 1984; Verkuyten, 2005). Its advantages are that it should not only facilitate generalisation from individual to group because some subgroup salience is maintained (Hewstone & Brown, 1986), but it should also be regarded as a psychologically less costly strategy for immigrant and minority groups who might most fear being assimilated into a larger category.

Evidence is beginning to emerge that it is, indeed, associated with less intergroup bias, especially among minority groups (Gaertner & Dovidio, 2000; Gonzalez & Brown, 2003; Zagefka & Brown, 2002). Gonzalez & Brown (2003) tested models of contact with different levels of categorisation salience. Participants took part in a cooperative learning task in a laboratory. The salience of different levels of categorisation was manipulated by changing aspects of the physical environment, such as the seating arrangement, physical identifiers of group membership and the goals of the contact task itself. They found that while bias was reduced in all conditions, generalisation of attitude to the out-group as a whole occurred only in conditions in which a super-ordinate category was induced and when super-ordinate and subordinate categories were induced (Gonzalez & Brown, 2003). The effectiveness of this model may also depend on the degree of sub-group identification. A Dual Identity intervention might be most useful amongst low identifiers since it should promote the effectiveness of contact by boosting the relatively low level of subgroup salience amongst this group.

Like the de-categorisation and Common In-group Identity models before it, the Dual Identity model has not previously been tested with young children or in extended contact settings. However, a number of predictions can be made regarding the effectiveness of the dual identity model based on cognitive developmental research

(Aboud, 1988). Developmental research (e.g. Barenboim, 1978, 1981; Bigler, 1995; Doyle & Aboud, 1995; Livesley & Bromley, 1973) suggests that older (i.e. over 7 to 8 years) rather than younger children can simultaneously consider multiple and abstract classifications (i.e. subordinate categories, super-ordinate categories). Therefore, it is conceivable that only older children will develop more positive attitudes from the interventions based on the dual identity and Common In-group Identity models, since these interventions require children to consider multiple and higher-order abstract categories.

'Inter-group' contact theory: In response to criticisms of the de-categorisation and common in-group models of contact, Hewstone & Brown (1986) proposed an alternative theory of contact, the 'inter-group' or 'mutual differentiation' model. According to this theory, if the positive effects of contact are to be generalised to the out-group, the salience of inter-group category boundaries must be maintained. Furthermore, inter-group contact should involve a common goal and inter-dependence between groups in order to achieve this goal. This will lead group members to recognize mutual superiorities and inferiorities between groups. This strategy allows individuals to maintain their social identities, and avoid inter-group comparisons that lead to negative out-group attitudes (Brewer & Gaertner, 2001).

According to Hewstone & Brown (1986), the typicality of out-group members and homogeneity of the out-group should be emphasised in order to maintain inter-group boundaries and increase the likelihood of generalisation from the contact situation to the out-group as a whole (Brown et al, 1999, Maras & Brown, 1996). Heightening the salience of inter-group boundaries has been linked to generalized positive out-group attitude in experiments (Brown et al, 1999, Study 1) and in self-report surveys (Brown et

al, 1999, Study 2). Brown et al (1999, Study 2) examined surveys administered in six European countries. In the surveys, participants were asked to describe contact they have with people from other countries. The survey included items measuring amount of contact, intimacy of contact, interdependence and salience of membership. Salience of group membership was measured by asking participants how often they made reference to one another's country or nationality and the perceived typicality of the out-group member they are in contact with for their group. Results showed that the amount of contact and the intimacy of this contact were related to evaluation of the out-group as a whole. However, this was more likely if the out-group person they were in contact with was perceived as being typical of their group and frequent references were made to category membership.

The 'inter-group' contact model has also been tested with children. Van Oudenhoven, Groenewoud & Hewstone (1996) tested the importance of category salience for generalisation of inter-group attitudes in Dutch and Turkish 14-16 year olds. Children completed a co-operative task in Dutch-Turkish pairs. Van Oudenhoven et al (1996) manipulated the salience of the ethnic category by varying the number of times ethnic group membership of participants was referred to. Children were generally highly positive towards their out-group partner, but this positive orientation only extended to the out-group as a whole in conditions in which the ethnic group memberships of the participants were made salient (Van Oudenhoven et al, 1996). Maras & Brown (1996) also found that inter-group contact, in which the inter-group boundaries were salient, had a positive effect on non-disabled children's attitudes towards the disabled.

On the other hand, there is some evidence to suggest that the inter-group approach may also have some negative consequences for inter-group attitudes. The 'mutual

'differentiation' model of contact, in which differences and similarities between groups are recognised, can be compared with the 'multicultural' approach to improving ethnic relations. According to the 'multicultural' approach to prejudice-reduction, prejudice can be eradicated by recognising and appreciating diversity (Wolkso et al, 2000). However, research has shown that when individuals are exposed to a message advocating the multicultural approach to prejudice reduction, in which group boundaries are recognised and differences celebrated, this can lead to stronger stereotyping of the out-group and use of category membership in evaluating members of the out-group (Wolkso et al, 2000). It should however, be stated that since its conception, research on the 'mutual differentiation' or 'inter-group' contact has focused on the importance of typicality and generalisation, rather than the importance of appreciating diversity (Brown & Hewstone, 2005).

Summary: There is mixed support for these four models of inter-group contact. Neither the dual identity model, nor the common in-group identity model of inter-group contact have been tested with young children. One thing that is clear from research in this area is the importance of considering psychological research and findings when designing inter-group contact interventions. Without careful management and control of inter-group contact, this can lead to negative inter-group behaviours and attitudes (Maras & Brown, 2000). Furthermore, inter-group contact interventions that are based on the different models of contact outlined here offer researchers an opportunity to test these models in the field, and so advance psychological theories of inter-group contact.

Extended Contact

One type of inter-group contact that could potentially be used as a prejudice-reduction intervention tool for children is 'extended contact'. The 'Extended contact hypothesis', is derived from the inter-group contact hypothesis and contends that 'knowledge that an in-group member has a close relationship with an out-group member can lead to more positive intergroup attitudes' (Wright et al, 1997, p 74). Recent research with adults suggests that having in-group friends who are themselves friends with out-group members is associated with more positive out-group attitudes (Paolini et al, 2004). Paolini et al (2004) conducted two surveys of Catholics and Protestants in Ireland and asked how many friends they had belonging to the out-group religion, and how many people they knew from their own religion that had friends from the other religion. In both studies, the authors found that direct and extended contact were associated with lower levels of out-group prejudice. This finding has been replicated in an adolescent white and Asian population in the UK (Turner et al, 2004, Study 2 and 3).

Underlying mechanisms of extended contact

Norms: Extended contact may change inter-group attitudes by changing the perceived norm for how desirable and permissible inter-group relationships are (Wright et al, 1997; Brown & Hewstone, 2005; Turner & Hewstone, 2005). Extended contact may lead to more positive out-group orientation by promoting the idea that positive inter-group relations are typical and are the norm. Wright et al (1997) point to the importance of perceived typicality for the extended contact effect. Turner & Hewstone (2005) found that perceived in-group norms (perceived attitudes of peers towards out-group) and perceived out-group norms (perceived attitudes of out-group towards in-group) mediated

the effect of extended contact on white adolescents' and adults' out-group attitudes towards Asians.

Inclusion of other in the self: Wright et al. (1997) suggest "inclusion of other in the self" (IOS i.e. to including in-group members and others in the self-concept) is a key mediator of effective extended contact. Research with adults has shown within the context of close relationships individuals spontaneously overlap their perceptions of themselves and the other (Aron et al, 1992; Sedikides, Olsen & Reis, 1993; Smith & Henry, 1996). This process means that one begins to treat in-group members, to some extent, like the self. Thus, when an in-group member, and thus part of the self, has an out-group close friendship, that person and indeed the out-group itself is seen positively as part of the self. It is conceivable that extended contact could lead individuals to expand their self-concept to include out-group members, and by this means inter-group bias is reduced. However, there is limited evidence that IOS is in fact a mediator of extended contact (cf Turner & Hewstone, 2004; Wright et al, 1997). Furthermore, the mediating effect of IOS for extended contact has not been examined in young children.

Extended contact and children: As discussed previously it is essential that interventions be tailored to suit the developmental level of the recipient (See Introductory Chapter under subheading 'Content of prejudice-reduction interventions'). This may be an important consideration when administering extended contact interventions to children as there may be a developmental component of this type of inter-group contact. It could be argued that the need for 'IOS' limits the use of extended contact to children who hold the ability to engage in this behaviour.

However, there is reason to believe that the ability to "include other in the self" develops during middle childhood, thus enabling effective extended contact interventions.

Changing children's intergroup attitudes

Developmental research has shown that social categories (e.g., ethnicity, gender, nationality) are meaningful for young children (e.g. Aboud, 1988; Abrams et al, 2003). Indeed, from the beginning of middle childhood the acquisition of a social identity is a primary goal of social development and children readily incorporate category memberships (i.e. an 'other') into their collective selves (Ruble et al, 2004). There are two significant developmental landmarks in middle childhood that promote the acquisition of the ability to 'include other in the self'. Firstly, social categories are no longer understood simply with reference to overt physical characteristics (e.g. dark skin), but increasingly in social psychological terms (e.g., norms, values). This 'concrete' to 'social psychological' shift appears to be an important developmental milestone that makes social identities significant to the self by the end of middle childhood (Ruble et al., 2004). Another important stage is the onset of group constancy in early to middle childhood (i.e. 3-9 years: Aboud & Ruble, 1987; Ocampo et al, 1993; Ruble & Martin, 1998). The development of constancy involves learning that group membership is not changeable but is stable over time and consistent across superficial transformations in appearance or context. This developmental landmark is significant because its mastery propels the child to seek out appropriate information about their group (e.g. stereotypes), so enriching the meaning of their social identity (Ocampo et al., 1993).

There may be an alternative developmental prediction relating to extended contact based on SIDT (See Chapter 1 under subheading 'Social Identity Development Theory'). Nesdale (1999) used a similar paradigm to the extended contact technique and exposed 6 to 12 year old children to in-group and out-group members through reading children stories that involved two characters, one belonging to the participants' ethnic in-group (Anglo-Australian) and the other belonging to an ethnic out-group (Vietnamese).

Nesdale (1999) manipulated the perceived relationship between the two characters. The relationship was either portrayed positively (the children were friends) or negatively (the two characters were often in dispute). It was predicted that given their shared group membership, when the relationship was positive, children would be more positive towards the out-group character, and when the relationship was negative, children would be more negative towards the out-group character. Contrary to predictions, children gave ethnic in-group preference responses and this was not affected by the perceived relationship between the characters. Nesdale (1999) argued that because children were focused on the in-group alone they based their in- and out-group attitudes on this, and therefore the relationship between the two characters was unimportant.

This finding suggests that young children's inter-group attitudes will not be affected by extended contact because they focus on the in-group only and do not attend to the out-group or the perceived relationship between the in- and out-group members. Thus, according to SIDT, extended contact will be effective only with older children who have acquired knowledge of the in- and out-group and attend to the relationship between in- and out-group members (Nesdale, 2004).

Extended Contact Interventions

Extended contact interventions derived directly from extended contact have been implemented by researchers. These interventions typically reduce prejudice by presenting participants with an in-group member who has had positive and friendship-based contact with an out-group member.

Wright et al (1997) tested the extended contact hypothesis in a series of studies. In their first two studies Wright et al (1997) asked participants to report whether or not

any of their in-group friends were friends with out-group members. Results indicated that knowing in-group members who were friends with out-group members was associated with less negative out-group attitudes (Study 1 & 2, Wright et al, 1997). In their third study, Wright et al (1997) tested the extended contact effect using artificially created groups. This allowed them to manipulate the relationship between the two groups and examine the effect of artificially induced extended contact. In a 4 day study Wright et al (1997) created two groups and encouraged conflict between these groups. They then introduced an intervention which involved the creation of cross-group friendships for a small subset of the group. This meant the remaining group members would not hold out-group friendships themselves, but would be aware of the cross-group friendships of other group members. Results showed that following the extended contact intervention participants' negative perceptions of the out-group were reduced. Finally in Study 4, the extended contact effect was demonstrated in a minimal group study. In this final study participants did not know the in-group member, but following exposure to an apparent in-group - out-group friendship, participants held less negative out-group attitudes. Thus it appears that knowing the in-group member is not necessary for the extended contact effect. The mere knowledge that an in-group member is friends with an out-group member is sufficient to reduce inter-group bias.

Liebkind & McAlister (1999) designed and evaluated an extended contact intervention that was administered to Finnish adolescents aged 13 to 15 years. Participants were exposed to an extended contact intervention in the form of printed stories of in-group members in close friendships with members of the out-group. In line with Wright's et al's (1997) predictions, Liebkind & McAlister (1999) also emphasised the typicality of the in- and out-group members in the extended contact for their groups.

The results showed that, compared to a control group who received no intervention, participants who received the extended contact intervention were more positive towards the out-group and were more tolerant of them.

Wright et al (1997) and Liebkind & McAlister (1999) have provided evidence for the extended contact effect in adults and adolescents. However, to our knowledge, there has been no research evaluating extended contact interventions in children below 13 years of age. Despite the lack of research in extended contact interventions, this method has a great deal of potential as a prejudice-reduction intervention for children. There are several advantages of extended contact compared to direct contact. Firstly, it allows the researcher to have greater control of the contact situation. Maras & Brown (2000) found that in a naturalistic setting, where contact is less structured and controlled, there was little positive effect of contact on inter-group attitudes. Extended contact allows interventions to be carefully constructed so as to meet Allport's requirements for contact. In addition, extended contact allows different models of inter-group contact such as the dual identity, common in-group identity and inter-group models to be tested. This is also interesting from a theoretical perspective as the greater control afforded by extended contact allows different models of contact to be compared, which also contributes to our theoretical knowledge of contact.

Another advantage of extended contact is that it avoids the problem of anxiety, which is often a by-product of direct contact. Negative emotions, such as anxiety, during contact can negate potential positive effects of contact and possibly worsen inter-group attitudes (Bodenhausen, 1993; Pettigrew & Tropp, 2000; Stephan & Stephan, 1985). Extended contact allows participants to experience contact while avoiding any anxiety or negative feeling, which may be caused by direct contact (Wright et al, 1997).

Furthermore, extended contact also has practical advantages, especially for educational interventions which must be efficient and cost-effective and reach as many children as possible. In contexts where the opportunity for direct contact is small, extended contact is advantageous as it allows inter-group contact to occur without the need for everyone to have an out-group friend.

Also, extended contact can be administered prior to real, direct contact. Out-group attitudes formed prior to direct contact with the out-group are more malleable (Fazio & Zanna, 1981). Indeed, Blanchard, Lilly & Vaughn (1991) argued that antiracist sentiment in America is malleable precisely because of this lack of contact between white people and ethnic minorities. Therefore, the use of extended contact is advantageous because it can be applied prior to direct out-group contact.

Furthermore, interventions applied prior to contact could facilitate real life contact, encouraging individuals to interact with out-group members and thereby improving real-life inter-group interactions. Initial expectations and stereotypes of the out-group are important in determining the outcome of inter-group contact (e.g. Brown et al, 1999; Pettigrew, 1997). Therefore, inducing more positive affect towards an out-group prior to direct contact could lead to more positive outcomes of actual contact between groups. Longitudinal surveys (Eller & Abrams, 2003; Levin, van Laar & Sidanius, 2003) and other evidence suggest that the contact-attitude relationship may be bi-directional (Brown & Hewstone, 2004). Therefore, contact can lead to prejudice reduction, and this change in attitude could lead to more contact. Likewise, the extended contact intervention could change attitudes towards the out-group and this would make out-group contact or out-group friendships more likely, leading to a further decline in prejudice.

Extended contact does hold a great deal of potential as a means of providing children with inter-group contact, especially in circumstances in which direct contact is not possible. However, further research should focus on the identification of the underlying mechanisms of extended contact and the conditions under which it is most effective.

Cognitive Interventions: Multiple-classification Skills Training

Another type of intervention that has been researched extensively in psychology is multiple classification skills training. This intervention has been developed directly from cognitive developmental theories of prejudice (Piaget (1965; Aboud, 1988). According to this approach prejudice in children is associated with different levels of cognitive development in children (See Chapter 1 under sub-heading 'Socio-cognitive developmental theory'). Social-cognitive developmental theory states that children will be unable to process information that is beyond their cognitive abilities. Thus, interventions should be designed with children's cognitive abilities in mind. If there is a mismatch between children's cognitive abilities and the intervention content, the information will not be processed, and there will be no change in inter-group bias. For instance, children aged 6-7 years will be unable to process individuating information because at that stage they will be focused on groups and exaggerate between group differences and within group similarities (e.g. Bigler & Liben, 1993).

On the other hand, a number of researchers have implemented interventions that specifically accelerate children's social cognitive abilities leading to changes in prejudice levels. In other words, they deliberately target children who lack a social cognitive skill and train them in this ability. Previous research has shown that interventions that focus

on improving cognitive abilities can reduce prejudice (e.g. Aboud & Mitchell, 1977; Bigler & Liben, 1992; Bigler, 1995; Doyle & Aboud, 1995; Katz & Zalk, 1978; Katz, Sohn & Zalk, 1975). For example, Katz & Zalk (1978) trained children to focus on individual characteristics of out-group members, rather than group membership, and this led to more positive attitudes towards the out-group (Katz & Zalk, 1978). Similarly, Aboud & Fenwick (1999) attempted to accelerate children's ability to differentiate between members of out-groups, thus reducing the out-group homogeneity bias, which is associated with high inter-group bias. Their intervention involved an 11-week programme, which was designed to improve children's ability to process information about individuals. Children were required to memorise the individual characteristics of 30 members of a multi-ethnic class. Aboud & Fenwick (1999) found that following the intervention children were more likely to spontaneously use these individual characteristics. In addition, participants who expressed high prejudice in the pre-test reported less prejudice after the intervention. Similarly, Jones & Foley (2003) also found that de-categorisation is linked to the perception of self-other similarities rather than differences.

Bigler (1995) also linked cognitive abilities to prejudice in children. In line with Aboud's (1988) socio-cognitive developmental predictions, she showed that out-group bias was accompanied by a lack of ability to classify objects along multiple dimensions. Older children who could classify along multiple dimensions demonstrated less out-group bias. Bigler & Liben (1992) developed an intervention which involved training children to classify along multiple dimensions in order to reduce bias. Multiple classification skills training involves presenting children with several objects that vary along two cross-cutting dimensions, such as male and female engineers and male and female cleaners.

Children are taught that the objects can belong to more than one category simultaneously by asking them to divide the objects along one dimension, engineers and cleaners, and then divide them by the second dimension, male and female, and finally divide the objects along both dimensions simultaneously. Bigler & Liben (1992) found that children trained in multiple classification expressed more egalitarian views in measures of gender stereotyping. They also found that children trained in multiple classification showed a greater memory for counter-stereotypic information that was embedded in stories. As with extended contact, one of the advantages of cognitive interventions is that they can be applied prior to real-life contact, when out-group attitudes are perhaps more malleable (Blanchard et al, 1991; Fazio & Zanna, 1981).

Limitations of socio-cognitive interventions: The link between prejudice and cognitive abilities is questionable and children's level of cognitive ability is not always related to lower levels of out-group bias in terms of attitude or behaviour (Bigler, 1995; Bigler et al, 1997). Bigler et al (1997) found that children's multiple classification skill was not a significant predictor of any of the intergroup attitude measures (inter-group stereotyping and prejudice), although this may be due to the use of novel categories for which children did not hold complex schema (Bigler et al, 1997). Also, in studies that purport to prove the existence of a relationship between cognitive abilities such as conservation and prejudice, 50% of children that could conserve still displayed prejudice (Doyle & Aboud, 1995; Nesdale, 2004).

Furthermore, while cognitive abilities such as flexibility may be connected to reductions in prejudice in some measures, they may not be connected to more immediate behavioural measures that have consequences for the participant, such as play partner preference, sociometric measures and social distance measures (Powlishta et al, 1994). In

addition, the long-term benefits of these interventions also remain to be assessed (Aboud & Levy, 2000). Thus it appears that multiple classification interventions could potentially be very useful tools for prejudice-reduction, but the effectiveness of these interventions requires further investigation.

Conclusions

In this chapter psychology's contribution to the intervention literature to date is discussed. The majority of psychological research into interventions is ad hoc. That is, psychologists apply their theories of prejudice development to interventions that have been designed and implemented by practitioners who may have been unaware of the psychological theories and findings that relate to their intervention (e.g. multicultural interventions and interventions using positive out-group examples). These studies are helpful in terms of identifying techniques that could be used in the field, but do not advance psychological theories of prejudice development and reduction. However, two theories of prejudice development have developed and tested interventions that are based directly on their models of prejudice development, namely the inter-group contact hypothesis (Allport, 1954) and socio-cognitive developmental theories (Aboud, 1988). Research suggests that inter-group contact interventions must be carefully controlled so as to meet Allport's (1954) optimal conditions. In addition, a number of models of inter-group contact have been proposed that have not been previously tested with young children, and may lead to more effective inter-contact prejudice-reduction interventions. Socio-cognitive developmental theory has also been translated directly into prejudice-reduction interventions for children but mixed findings point to the importance of further research in this intervention. Psychology has begun to make some contributions to the

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intervention literature and has considered how their theories of prejudice could be applied to prejudice-reduction, but further collaboration between psychologists and educators is required if effective prejudice-reduction interventions, based on psychological theories, are to be obtained.

*Chapter 4: The Benefits of Extended Contact: Changing Children's Out-group
Attitudes Towards the Disabled*

Summary

This chapter represents the first empirical study within the thesis. In keeping with the aims of the thesis, the objective of this study was to develop and assess a prejudice-reduction intervention for young children based on a relatively recent psychological concept, extended contact. In addition, the study aimed to inform psychological theories of inter-group contact by testing extended contact interventions based on different models of generalized inter-group contact. Non-disabled children ($N=69$) aged 5-10 took part in a 6-week intervention involving reading stories featuring disabled and non-disabled children in friendship contexts. The main dependent variables were children's out-group attitudes and intended behaviour and implicit bias. The findings point to the effectiveness of extended contact, especially 'inter-group' extended contact, as a prejudice-reduction tool for young children. The findings also add to the psychological literature, providing support for the Hewstone & Brown (1986) 'inter-group' model in the context of extended contact.

Introduction

There has been little collaboration between the two main branches of research in prejudice: social and developmental psychology and the education sector (Aboud & Levy, 2000; Bigler, 1999; Oskamp 2000; See Introductory Chapter under subheading 'The need for closer collaboration between the education sector and social and developmental psychology') which has meant that theoretical frameworks and

methodological issues highlighted in psychological research are often sidelined in the development of and administration of intervention strategies (Stephan, 1999). This disregard for psychological theories could be the cause of the failure to design effective prejudice-reduction interventions (Bigler, 1999). The aim of this thesis was to overcome the limitations of previous prejudice reduction interventions by designing and implementing interventions that are theoretically based and take psychological theories and methodological issues highlighted in psychological research into consideration. By incorporating psychological theories into prejudice-reduction interventions, this will also advance psychological theories of prejudice development and reduction by testing their predictions in real-life situations.

In Study 1, an intervention based on the 'extended contact hypothesis' was tested. The 'extended contact hypothesis' contends that exposure to an in-group member who is friends with an out-group member leads to reduced inter-group bias. This kind of 'vicarious contact' has a number of advantages over direct contact (See Chapter 3 under subheading 'Extended contact interventions') including the fact that it can be administered prior to exposure to out-group members. Extended contact therefore lends itself well to school based interventions, but has only been previously tested in adolescents and adults (Wright et al, 1997; Liebkind & McAllister, 1999; Paolini et al., 2004; See Chapter 3 under subheading 'Extended contact interventions'). In the present research, the extended contact intervention was tested with younger children aged 5 to 10 years. It is expected that extended contact will be effective with children across this age range (Chapter 3 under subheading 'Extended contact') as there is evidence that children have the complex understanding of social groups and collective identities (Aboud, 1988; Abrams, Rutland, & Cameron, 2003; See Chapter 1 under subheading 'Children's

awareness of social categories' and 'Children's identification with social categories') which may be necessary for extended contact (See Chapter 3 under subheading 'Extended contact').

One aim of the thesis was to advance psychological theories of prejudice development and reduction by testing the predictions of these theories in the field as part of interventions. Specifically the present research aimed to further theoretical knowledge regarding one issue surrounding inter-group contact, namely generalisation. The question of generalization concerns whether the positive out-group attitude following contact with an out-group member can be generalized and extended from the out-group member one interacts with in the contact situation, to the whole out-group. Two models of inter-group contact that have been developed in response to this question are the de-categorisation model (Brewer & Miller, 1984) and Hewstone and Brown's (1986) 'inter-group' contact model (See Chapter 3 under subheading 'Models of inter-group contact'). These models have different predictions regarding the characteristics of effective inter-group contact. According to the Brewer & Miller (1986) approach contact should be individualised, while Hewstone & Brown (1986) contend that group boundaries and typicality of group members should be salient during inter-group contact.

In order to test these two approaches to generalisation, in the present research two extended contact interventions, based on the 'inter-group' contact approach and 'de-categorisation' theory, were examined (Brewer & Miller, 1986; Hewstone & Brown, 1986). There has been little research in generalisation and contact in young children (cf. Maras & Brown, 1996) but given previous findings in the adult literature (e.g. Gonzalez & Brown, 2003), it was predicted that inter-group extended contact would be the most successful extended contact intervention. Thus, in addition to informing practitioners on

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the characteristics of extended contact that produces maximum effects on out-group attitudes, the results of the present research could also inform psychological theory concerning inter-group contact and generalisation.

In the current research, due to the psychological input at all stages of the design and evaluation of the intervention, the problems of previous intervention evaluations could be avoided through careful experimental control of these variables (See Introductory Chapter under subheading 'Intervention design and implementation'). Participants were randomly assigned to experimental conditions with a pre-post design meaning that prejudice levels were measured before and after the intervention took place. Furthermore, the researcher carefully controlled the administration of the intervention so that the frequency and duration of the intervention was constant. In addition, the additive effects could be avoided by including just one technique in the intervention. The measures of prejudice used in this study were based on previous psychological research. Explicit bias, as well as implicit bias and behavioural measures were used. In addition, manipulation checks were included to ensure interventions were having the intended effect on key variables such as perceived typicality and out-group homogeneity. This careful control of the design of the intervention and the informed selection of dependent variables means that the conclusions drawn from the intervention study were more reliable than previous intervention studies and could provide reliable support for psychological theories regarding extended and inter-group contact (See Introductory Chapter under subheading 'Intervention design and implementation').

Changing children's attitudes towards the disabled: Study 1 focused on encouraging positive attitudes in non-disabled children towards people with disabilities. Children's attitudes towards the disabled have recently become more significant within

the United Kingdom, with more direct contact between non-disabled and disabled children through the British government's policy of 'inclusion' in education (see Grubbs & Niemeyer, 1999; Norwich, 2002). Inclusion is the enrolment of disabled children in mainstream schools, as opposed to separate 'special schools'. The philosophy of 'inclusion' is that by providing equal educational opportunities for disabled children, and challenging non-disabled children's stereotypical views of disabled people, this will, in later years, lead to a more inclusive society in which disabled and non-disabled people have equal opportunities (DfES, 2001).

However, the limited body of research into the effect of direct contact on children's attitude towards the disabled is mixed (Maras & Brown, 1996, 2000; See Chapter 3 under subheading 'Co-operative learning groups'). There is some evidence that direct contact can have a positive effect on non-disabled children's attitudes towards people with disabilities (Krajewski & Hyde, 2000; Maras & Brown, 1996, 2000). In contrast, other studies suggest that direct contact does not always lead to a positive change in non-disabled children's attitudes towards the disabled (e.g. Furnham & Pendred, 1983; Hastings & Graham, 1995; Nabors, 1997).

The introduction of extended contact prior to the arrival of disabled children may help 'inclusion' become more successful in terms of changing non-disabled children's views of the disabled and thereby providing a positive educational experience for disabled children. Indeed, one of the advantages of extended contact is that it can be administered in the absence of out-group members. This means that interventions based on this theory can be implemented prior to the arrival of disabled children, thus easing their transition into mainstream schools by promoting more positive out-group attitudes in non-disabled children prior to their arrival. No study to date has examined the

potential impact of extended contact on children's attitudes towards people with disabilities.

There is mixed evidence regarding whether or not children recognise the distinction between people with learning difficulties and the physically disabled. A number of studies have found children do not make a distinction between these two groups (Abrams, Jackson & St Claire, 1990). In contrast, other studies have found that children do understand the difference between physical and learning disabilities and hold distinct attitudes towards these groups (Magiati, Dockrell & Logotheti, 2002). Therefore, in this study attitudes towards the physically disabled and those with learning difficulties were initially examined separately.

Design Overview and Hypotheses

An intervention was devised that could be implemented in British primary schools with non-disabled children. This consisted of reading several stories to children that portrayed friendships between non-disabled and disabled children. Three versions of extended contact were tested, consisting of the two models of contact, de-categorisation and 'inter-group', and the neutral extended contact condition. In the de-categorisation extended contact stories, the category memberships of the protagonists were little emphasized and their individual identities were stressed; in the 'inter-group' stories the category memberships were stressed and typicality emphasised; in neutral stories there was no emphasis placed on the individual qualities of the characters or the group memberships of the story characters. Children read the stories in small groups. After every intervention session, and still in their small groups, children discussed the story with the researcher. The intervention occurred once a week for six consecutive weeks.

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The main dependent variables were out-group attitude and intended behaviour and in-group attitude and intended behaviour. These measures were obtained prior to and subsequent to the intervention (i.e. pre- and post-intervention phase of interviews). In addition, in the post-intervention phase there were two manipulation checks: perceived typicality of the disabled story character and out-group homogeneity. The former measure was included in order to ensure the typicality manipulation in the 'inter-group' condition did indeed increase perceived typicality in this condition, while the latter measure was included to check that following the de-categorisation condition, children perceived the out-group as being more variable, and less homogenous.

The children's explicit intergroup attitudes were adapted from the Multiple-Response Racial Attitude (MRA) measure (Aboud, 2003; Doyle & Aboud, 1995). The measure was designed to overcome a limitation associated with previous methods that have typically confounded in-group and out-group attitudes (Aboud, 2003; Cameron et al, 2001; Nesdale, 2001; Chapter 2 under subheading 'The distinction between in-group and out-group attitudes'). It was predicted that following all extended contact interventions, children would hold more favourable out-group attitudes.

It has been recommended that a number of indicators be used to obtain a more complete measure of bias in children (Nesdale, 2004; Chapter 2 under subheading 'Additional measures of out-group orientation). Therefore a measure of children's intended behaviour was also obtained. This was a measure of how much they would like to interact with members of the in- and out-group in hypothetical scenarios. Research suggests that out-group intended behaviour may be substantially more difficult to change than out-group attitudes in prejudice-reduction interventions (e.g. Katz & Zalk, 1978).

Therefore, it could be predicted that extended contact will lead to a change in out-group attitudes, but not out-group intended behaviour.

It was hypothesised that explicit out-group attitudes would be more favourable following all the extended contact interventions, and this would be most pronounced in the 'inter-group' extended contact condition. It was also expected that, following the de-categorisation condition and the inter-group condition, there would be a decrease in out-group homogeneity and an increase in perceived out-group typicality respectively.

The effect of interventions on children's implicit attitudes was also examined (Chapter 2 under subheading 'Implicit measures of inter-group bias'). The implicit bias measure was an adaptation of the 'who said what' paradigm used to examine the activation of categories (Bennett et al, 2000). This 'implicit misattribution bias measure' was used to indicate participant's implicit evaluation of categories. This measure used frequency of positive and negative recall errors as an indication of implicit bias.

According to Devine (1989) implicit bias can be changed by replacing stereotype-congruent associations with non-prejudiced responses. The effect of prejudice-reduction interventions on implicit bias in children has not before been examined therefore this aspect of the study is largely exploratory in nature and there were no specific hypotheses relating to implicit bias.

Hypotheses:

- (1) Explicit out-group attitudes will be more favourable after the extended contact interventions, and this will be most pronounced in the 'inter-group' extended contact condition.

- (2) Out-group intended behaviour will not be affected effected by the extended contact intervention.

Method

Participants

In this study 69 children (29 males and 40 females) were tested. The children attended school in mixed social class suburban or rural areas in the South East of England. The vast majority of children in the participating schools were non-disabled, and the participants were all non-disabled. Participants' age ranged from 5 years to 10 years and 2 months. The mean age was 8 years and 2 months, $SD = 9.36$ months. Two schools were involved in the study (School A and School B). 10-11 year olds and 5-6 year olds attended School A and only 7-9 year olds attended School B. All analyses were initially conducted including school attended as a between subjects variable. There was no effect of school attended (all $p > .05$).

Design

The study was a 3 (intervention condition: neutral, de-categorisation and 'inter-group' interventions) x 2 (phase of interview: pre- intervention and post-intervention) x 3 (disability of target: learning difficulty, physically disabled, non-disabled) mixed design with the latter two factors being within participants.

Children were randomly assigned to an intervention condition after completing the pre-intervention phase interview. In order to create a truly random sample, rather

than assigning conditions to whole school classes, children in each class were randomly assigned to any of the three conditions.

Schools volunteered to take part in the project and headteachers and teachers were briefed on the aims and purpose of the research project. They were informed they could stop participating in the research project at any time if they wished. Permission was sought and obtained from participant's parents or guardians according to BPS Guidelines.

The Intervention

The participants were presented with stories, which involved in-group members who had close friendships with out-group members. These stories were based on pre-existing children's fiction books obtained from a local teaching training college library. Stories were chosen to match the reading ability of the age group and were illustrated with pictures of the main characters of the stories. The stories involved non-disabled and disabled children in friendship situations and followed them on adventures, for example a day exploring in the woods. The disabled and non-disabled characters were all presented in a positive light. Due to limitations in story availability, the in-group characters were all boys, two thirds of the out-group characters were boys and a third of the out-group characters were girls. If the children were capable of reading the stories, they read the stories aloud with the researcher's assistance. Where children were not capable of reading, the researcher read the stories to the children. This took place in groups of 2 or 3. These groups remained the same throughout the intervention. After reading the story, and still in their small groups, children took part in a group discussion of the story, which was led by the researcher. These intervention sessions occurred once a week for six consecutive weeks.

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There were 3 types of extended contact intervention, based on de-categorisation and inter-group theories of contact. Text in the story and post-story discussion was varied to construct the different conditions that were required for successful contact, according to the interpersonal and inter-group theories of contact. The three intervention conditions were: neutral, interpersonal and inter-group.

In the neutral condition, the stories were neutral in tone and there was no post-story discussion. Stories did feature non-disabled and disabled children in friendship situations, but there was no extra individuating information presented on the characters. Stories focussed on a neutral account of the events of the story. The disabled child's category membership was stated only once and this was done at the beginning of the story.

In the decategorisation condition, text within the story emphasised individual characteristics of the story characters such as preferences and qualities of the disabled characters e.g. they are kind, like chocolate, enjoy playing computer games. In the post-story discussion children were asked to remember what they learned about the characters in the story. The character's group membership of the category disabled was given once at the beginning of the story.

In the inter-group condition, the stories and post-story discussion were identical to that used in the de-categorisation condition but in addition, typicality of the story characters for their group was stressed. Throughout the story, it was emphasised that the disabled story character was typical of their category and many are similar to them. This maintained category salience (Brown, Vivian & Hewstone, 1999). In the post-story discussion children were asked to remember what they had learned about the characters

in the story and the group membership of the story characters and typicality was emphasised. See Appendix A1 for examples of the stories used in this intervention.

Dependent Measures

There were two phases of interview: pre- and post-intervention. Participants were interviewed one week before beginning the intervention and again approximately one week after the intervention ended. They were interviewed individually. The pre-intervention interview took approximately 20 minutes and post-intervention interview took approximately 25 minutes. Each interview took place over two interview sessions in order to shorten individual interview length. Explicit measures of out-group attitude and intended behaviour measures were obtained both prior to and post-intervention. The post-intervention interview schedule also included a measure of out-group variability and perceived typicality. The administration of materials was counterbalanced.

Before taking part in either the pre- or post-intervention interview, the researcher defined the different disability categories for children. These definitions were identical in all conditions. Children were told 'physically disabled children are children who have a part of their body that doesn't work properly. So maybe their legs don't work properly and they can't walk so they get around in a wheelchair or with sticks. A lot of children who are physically disabled have been like that since they were born and they probably will always be like that – it's not like a broken leg or arm, it won't fix properly after a while'. The category 'learning difficulty' was described as follows: 'Some children find it hard to learn things. They find it more difficult than other children and might have to get extra help. They sometimes behave differently too.' Non-disabled children were described as 'children who can learn things alright and whose body works fine.'

Explicit Intergroup Attitude Measure

This measure was a modified version of the MRA (Doyle & Aboud 1995). Children were presented with 10 positive and 10 negative attributes. The positive words were: clean, happy, friendly, good, hardworking, helpful, kind, nice, unselfish and polite and the negative words were: bad, dirty, nasty, unhelpful, unkind, sad, selfish, rude, lazy and unfriendly. These adjectives were taken from the Preschool Racial Attitude Measure II (Pram II) Series A (Williams et al, 1975) or chosen after a small sample of seven to nine year old children underwent an open-ended interview about their attitudes towards disabled people.

Children were presented with 3 copies of each word and were also presented with 3 cups. Each cup represented one of the following target disability categories: not disabled, physically disabled and learning difficulty. Each category was dealt with individually and the order in which the categories were dealt with was randomised. Participants were asked which words would match up with each of the categories. For instance, participants may have first been asked to think about people with learning difficulties and be asked which of the words they thought matched up with the group 'learning difficulty'. They would then be asked to do the same for the physically disabled category and the non-disabled category. The order in the words were assigned was randomised.

Pre- and post-intervention word attributions for physically disabled, learning difficulty and non-disabled positive and negative traits were subjected to separate reliability analyses and all proved reliable. For pre-test, physically disabled, learning difficulty and non-disabled attributions were reliable (Cronbach's alpha for physically disabled positive and negative traits = .89 and .8, respectively; for learning difficulty

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positive and negative traits = .89 and .81, respectively; for non-disabled positive and negative traits = .8 and .88). For post-test, physically disabled, learning difficulty and non-disabled attributions were reliable (Cronbach's alpha for physically disabled positive and negative traits = .84 and .84, respectively; for learning difficulty positive and negative traits = .82 and .85, respectively; for non-disabled positive and negative traits = .81 and .87). Given the satisfactory reliabilities, the ratings were collapsed to form single indices by calculating composite scores resulting in six measures for each child – non-disabled positive, non-disabled negative, physically disabled positive, physically disabled negative, learning disabled positive and learning disabled negative. These scores ranged from 0 to 10.

The higher the scores on positive traits the more positive the child's rating of the in-group or out-groups. The higher the scores on negative traits the more negative the child's rating of the in-group or out-groups. An in-group attitude score was calculated by subtracting the negative trait score for the non-disabled from the positive trait score for the non-disabled. This score had a minimum value of -10 and maximum value of +10, with a higher score indicating a more positive attitude towards the in-group. Two out-group attitude scores were also calculated by subtracting the negative trait score for each disabled group from the positive trait score for each disabled group. These scores also had a minimum value of -10 and maximum value of +10, with a higher score indicating a more positive attitude towards each disabled out-group.

Intended Behaviour Measure

This was a measure of how participants believed they would behave and feel in a hypothetical situation towards children who are non-disabled, physically disabled or have

a learning difficulty. Children were presented with three hypothetical scenarios in which they were asked to imagine they were at the park and there was a child there they knew from school. The three scenarios were identical and differed only in the disability of the child in the story who was either non-disabled, physically disabled or had a learning difficulty. The order in which these three scenarios were presented was randomised. After each scenario was read by the researcher, children were asked to indicate how much they would like to play with the target, how much they would like the target, how much they would like to have them over for a meal and to stay overnight. Children responded on a 5-point Likert-type scale using smiley faces to indicate their answer (see Maras & Brown, 1996). The scale ranged from 'not at all' (big frown = 1) through neutral (face not smiling or frowning = 3) to very much so (big smile = 5) (see Appendix A2). The higher the children's score the more positive their intended behaviour towards the group.

Using Cronbach's alpha, the reliability of the intended behaviour items was examined separately for learning difficulty, physically disabled and non-disabled and for interview phase and all proved reliable. Pre-intervention internal reliability scores for learning difficulty, physically disabled and non-disabled were .68, .71 & .77. Internal reliability for post-intervention learning difficulty, physically disabled and non-disabled were .86, .86 and .78 respectively. Therefore the mean of the four intended behaviour scores were calculated for each of the target groups resulting in three intended behaviour scores: non-disabled, learning difficulty and physically disabled intended behaviour.

Implicit Misattribution Bias Measure

Children were read an illustrated story set in a school context, which involved three characters who each belonged to one of the three categories: learning difficulty,

physically disabled and non-disabled. Before being introduced to the three main story characters (or targets) the participant was shown a picture of a schoolteacher and told that in this story the teacher has decided to go round her class and speak to some of the pupils about how they're getting on. The three pupils the teacher will speak to were then introduced. The three characters (or targets) were given names and their pictures (cartoon pictures) were presented on separate pieces of card along with a short description. The child who was physically disabled was given the following description: 'This is Billy. He is physically disabled and gets around in a wheelchair.' The child who had a learning difficulty was described follows. 'This is Ryan. He has a learning difficulty and finds some things really difficult that other children find easy and gets extra help in the class.'. The child representing the non-disabled category was described as follows: 'This is Jamie. He is not disabled and is a regular boy.' The story characters were sex-matched with the participant. The teacher then proceeded to direct three positive and three negative comments to each of the target children in turn. The materials were then removed and the participant was given a filler task for a few minutes. They were then asked to try and remember 'what was said to whom?'. To facilitate this children were presented with pictures of each of the targets and were subtly reminded which one was physically disabled, which was one non-disabled and which one had a learning difficulty. Printed copies of each of the teachers statements were given to the participant one by one and were also read aloud by the researcher. After reading each statement, children were asked to indicate which of the targets the teacher said this statement to.

The order in which the targets in the story were presented was randomised. Also, there was a pool of nine positive and nine negative statements. From this pool of

statements, the three positive and negative statements assigned to each of the targets were randomly selected. These statements are in Appendix A3.

The implicit bias measure was calculated using between-group misattribution errors. In this case there are two groups, non-disabled and disabled (consisting of physically disabled and learning difficulty). Between-group misattribution errors occur when a statement is assigned to the wrong target, and that target belongs to a different group. For instance, between group errors occur when a statement is wrongly assigned to the in-group non-disabled target, when the teacher actually said it to either of the two disabled targets (learning difficulty or physically disabled) or vice versa. There are six types of between-group misattribution errors (This is detailed in Table 4.1).

Table 4.1: Types of Implicit Misattribution Error.

Error Type	Correct Answer	Participant Answer
Error 1	Non-disabled	Learning difficulty
Error 2	Non-disabled	Physically disabled
Error 3	Learning difficulty	Non-disabled
Error 4	Physically disabled	Non-disabled
Error 5	Physically disabled	Learning difficulty
Error 6	Learning difficulty	Physically disabled

For instance, Error 1 occurs when a statement was originally said by the teacher to the non-disabled target, but the participant incorrectly assigned it to the learning difficulty out-group.

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In order to obtain implicit misattribution bias scores, the frequency of these different errors was calculated. The maximum frequency for each error type was 3 and the minimum was 0. From these scores, separate positive and negative misattribution bias scores were calculated. Positive and negative misattribution scores were calculated for the physically disabled target and learning difficulty target separately. Positive misattribution bias score for 'learning difficulty' is the number of misattribution error type 1 minus the number of error type 3. That is, it is the number of times a positive statement was incorrectly assigned to the learning difficulty target instead of the non-disabled *minus* the number of times a positive statement was assigned to the non-disabled target, instead of the learning difficulty target. In the same way positive misattribution bias score for physically disabled was number of misattribution error type 2 minus number of error type 4.

The negative misattribution bias scores for 'learning difficulty' was the number of misattribution error type 3 minus number of misattribution error type 1. That is, it is the number of times a negative statement was incorrectly assigned to the non-disabled target instead of learning difficulty *minus* the number of times a negative statement was incorrectly assigned to the learning difficulty target, instead of non-disabled. In the same way, the negative misattribution bias scores for physically disabled was number of misattribution error type 4 minus number of misattribution error type 2.

The maximum score for each of the misattribution bias scores was +3 and the minimum score was -3. For both positive and negative misattribution bias scores a higher score indicated a more positive implicit attitude and a lower score indicated a more negative implicit attitude of the target out-groups. This meant an overall bias score could be obtained by adding together positive and negative misattribution scores, where

higher scores indicate a more positive bias towards the disabled, and lower scores indicate negative bias towards the disabled. This overall bias score ranged from -6 to +6.

Manipulation checks

Out-group homogeneity: This was a measure of perceived homogeneity within the out-groups. Participants were presented with 10 positive and 10 negative words. The positive words were: clean, friendly, good, happy, hardworking, helpful, kind, nice, unselfish/sharing and polite. The negative words were bad, nasty, dirty, unhelpful, unkind, sad, selfish, rude, lazy and unfriendly. Next the researcher said: "Now, can you think about physically disabled people and people with learning difficulties? I want to ask you some questions about physically disabled and people with learning difficulties. Let's talk about physically disabled people first/now [depending upon order of administration]. Can you point to the picture which shows how many physically disabled people you think are.... [trait]". Children responded on a scale from 'none' to 'all', by circling 'none', 'some', 'most' or 'all'. Response options were also presented pictorially using different numbers of stick men figures to illustrate the different proportions of people corresponding to the different responses (Aboud et al, 2003; see Appendix A4). This measure was given in the post-intervention phase only. To calculate within out-group homogeneity 'all' or 'none' responses were coded as '1' and 'some' and 'most' responses were re-coded as '0'. The ratings for physically disabled and learning difficulty traits were subjected to separate reliability analyses and all proved reliable (Cronbach's alpha for physically disabled positive and negative traits = .74 and .74 respectively; for learning disabled positive and negative traits = .79 and .71 respectively). Therefore, the ratings were collapsed to form single indices by calculating composite scores resulting in two

measures for each child –physically disabled and learning difficulty within group homogeneity. These scores ranged from 0 to 20. High scores indicated the out-group was perceived as more homogenous, while a lower score indicated greater perceived heterogeneity and variability within the group. Out-group homogeneity scores were submitted to a 3 (condition: neutral, de-categorisation, 'inter-group' extended contact) x 2 (disability: physically disabled and learning difficulty) mixed design ANOVA, with the latter variable being within participants. Analyses showed there was a non-significant effect of condition, $F(2, 62) = .84, p = .34$ and disability, $F(1, 62) = .48, p = .49$ on out-group homogeneity.

Typicality: Participants were instructed to think about real disabled children and were asked: 'How many real disabled children are like / similar to the disabled children we read about in the stories?' Children responded on a scale from 'none' (1) to 'almost all' (5) by circling either 'none', 'a few of them', 'about half', 'a lot of them' and 'all of them'. Response options were also presented pictorially using different numbers of stick men figures to illustrate the different proportions of people corresponding to the different responses. This is shown in Appendix A5. This measure was given in the post-intervention interview phase only. Perceived typicality scores were submitted to a one-way (condition: neutral, de-categorisation, inter-group extended contact) between participants ANOVA. There was a significant main effect of condition, $F(2, 59) = 4.08, p < .05$. Contrasts revealed that typicality scores were significantly lower in the neutral condition ($M=3.25, SD=1.65$) compared to the de-categorisation ($M=4.29, SD=.86, t(62) = -3.09, p < .001$) and the inter-group condition ($M=4.29, SD = .64, t(62) = -2.98, p < .001$).

Results

The analysis was initially conducted with participant gender as a between participants variable. The data was also submitted to a 3 (condition: neutral, de-categorisation and 'inter-group') x 2 (gender: male and female) x 2 (target disability: physically disabled and learning difficulty) x 2 (phase of interview: pre- and post-intervention) mixed design ANOVA, with the latter two variables being within participants. There were no significant main effects and interactions involving participant gender for out-group attitude and out-group intended behaviour and implicit bias.

The analysis was also conducted with disability of the target as a within subjects variable (physically disabled and learning difficulty). The data was submitted to a 4 (condition: neutral, de-categorisation and 'inter-group') x 2 (target disability: physically disabled and learning difficulty) x 2 (phase of interview: pre- and post-intervention) mixed design ANOVA, with the latter two variables being within participants. There were no significant main effects and interactions involving target disability for out-group attitude, out-group intended behaviour and implicit bias. Learning difficulty and physically disabled out-group attitude ($r = .37, p < .01$) and intended behaviour ($r = .57, p < .001$) were moderately correlated. Thus, in order to obtain a general out-group attitude score and intended behaviour scores, scores towards the two target disabilities were combined to form a mean out-group attitude score and mean out-group intended behaviour score. Thus, due to non-significant effects of gender and disability, the analysis was conducted with the main independent variables, condition and phase of interview, only and using the general out-group attitude and intended behaviour scores.

Inter-group attitude

Attitude scores were submitted to a 3 (condition: neutral, de-categorisation and 'intergroup') x 2 (interview phase: pre and post-intervention) x 2 (target: ingroup and outgroup) mixed design ANOVA with the latter two variables being within participants. Analysis showed a non-significant main effect of condition, $F(2, 58) = .82, p = .44$ and phase of interview, $F(1, 58) = 1.38, p = .24$. Furthermore there was a non-significant effect of target, $F(1, 58) = .12, p = .73$ suggesting children were equally positive towards the out-group and in-group throughout the study.

There was a significant three-way interaction between target, time and condition, $F(2, 58) = 3.44, p < .05$. Therefore to examine the simple main effects of the above three-way interaction, the interaction between phase of interview and condition were examined for out-group attitude only. In order to test the hypotheses that the inter-group and decategorisation extended contact interventions would be superior to the neutral condition, two orthogonal contrasts were constructed. The first (C1) tested neutral against the decategorisation condition (+1, -1, 0). The second tested the neutral condition against the inter-group condition (+1, 0, -1). Contrast 1 revealed a non-significant interaction between condition (neutral vs decategorisation) and phase of interview, $F(1, 58) = 1.08, p = .30$. This indicates the out-group attitude was not significantly different in the decategorisation, compared to the neutral condition. For Contrast 2, analysis showed a significant interaction between condition (inter-group vs neutral) and phase of interview, $F(1, 58) = 11.11, p < .005$. The means (Table 4.2) indicate that post-intervention, children were significantly more positive towards the out-group in the inter-group condition compared with the neutral condition. Furthermore, prior to the

intervention, children in the inter-group condition were significantly less positive towards the out-group compared to the neutral condition.

One-sample t-tests were used in order to examine whether out-group attitude scores were significantly different from the midpoint (zero) in each condition in both pre- and post-intervention phases of interview. In the neutral condition, scores were significantly higher than the midpoint in pre-intervention and post-intervention interviews ($t(18) = 5.90, p < .001$ and $t(24) = 4.53, p < .001$ respectively). In the de-categorisation condition, scores were significantly higher than the midpoint in pre-intervention and post-intervention interview phases ($t(24) = 6.79, p < .001$ and $t(24) = 4.24, p < .001$ respectively). In the 'inter-group' condition, pre-intervention scores were not significantly different from zero ($t(19) = 1.59, p = .13$) and post-intervention out-group attitude scores were significantly higher than the midpoint ($t(19) = 10.2, p < .001$) (see Table 4.2). This finding suggests that the children were significantly positive towards disabled children, except at the pre-intervention phase in the inter-group condition.

Intended Behaviour

Intended behaviour scores were submitted to a 3 (condition: neutral, de-categorisation and 'intergroup') x 2 (interview phase: pre and post-intervention) x 2 (target: ingroup and outgroup) mixed design ANOVA with the latter two variables being within participants. Analyses showed a non-significant main effect of condition, $F(2, 25) = .13, p = .88$ and phase of interview, $F(1, 25) = .67, p = .42$. There was a non-significant effect of target, $F(1, 25) = 2.13, p = .16$ suggesting children were equally positive towards the out-group and in-group throughout the study. There was a marginally significant 3-way interaction between phase of interview, condition and target

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$F(2, 25) = 2.72, p = .09$. As in the analysis of attitude, analysis of this interaction focussed on the out-group, and planned contrasts (C1 and C2) were used to compare the neutral condition with the decategorisation and inter-group conditions. Contrast 1 revealed a significant interaction between condition and phase of interview, $F(1, 25) = 10.66, p < .005$. The means (See Table 4.2) show that children in the neutral condition post-intervention were less positive towards the out-group compared to before the intervention. But in the decategorisation condition, children hold more positive out-group intended behaviour scores post-intervention, compared to the pre-intervention phase. There was also a significant condition x phase of interview interaction using Contrast 2, $F(1, 25) = 7.54, p < .05$. The means (See Table 4.2) show that in the neutral condition, children held less positive views of the out-group post-intervention, compared with pre-intervention scores. However in the inter-group condition, children held more positive out-group intended behaviour scores post-intervention, compared to the pre-intervention phase.

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Table 4.2: Out-group and In-group Attitude and Intended Behaviour as a Function of Condition and Interview Phase.

Measure	Phase of interview	Condition		
		Neutral	Decat- gorisation	Inter-group
Out-group attitude	Pre-test	4.0(3.04)	4.02 (3.01)	1.6 (4.29)
	Post-test	4.36 (4.06)	3.19 (3.68)	6.00 (2.7)
In-group attitude	Pre-test	4.5 (4.88)	4.04 (4.13)	2.57 (5.7)
	Post-test	3.94 (4.84)	4.04 (3.71)	2.73 (5.75)
Out-group intended behaviour	Pre-test	4.21 (.54)	3.56 (.60)	3.89 (.49)
	Post-test	3.44 (1.48)	4.22 (.69)	4.26 (.36)
In-group intended behaviour	Pre-test	4.11 (1.19)	4.06 (.7)	3.81 (.62)
	Post-test	4.11 (1.15)	4.09 (.6)	4.38 (.44)

Note: Attitude scores score had a minimum value of -10 and maximum value of +10, with a higher score indicating a more positive attitude towards that group. Intended behaviour scores could range from a minimum value of +1 and a maximum value of +5. The higher the children's scores the more positive their evaluations.

Implicit Misattribution Bias Score

Mean implicit misattribution bias scores, averaged across disability, were submitted to a 3 (condition: neutral, de-categorisation and 'inter-group') x 2 (age: young and old) x 2 (phase of interview: pre and post-intervention) mixed design ANOVA with the latter two variables within participants. There was a non-significant effect of

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condition, $F(2, 54) = .44, p = .65$, age $F(1, 54) = 1.99, p = .16$ and phase, $F(1, 54) = .85, p = .36$ (See Table 4.3).

Table 4.3: Mean Implicit Misattribution Bias Scores (Standard Deviations) as a Function of Condition and Phase of Interview.

Interview phase	Condition		
	Neutral	Decat- egorisation	Inter-group
Pre-intervention	.26 (1.18)	-.27 (1.02)	-.38 (1.26)
Post-intervention	-.13 (.68)	.04 (.06)	.13 (.62)

Note. Implicit misattribution scores could range from a minimum value of -6 and a maximum of +6.

One-sample t-tests were conducted in order to deduce whether the implicit misattribution bias scores were significantly different from the midpoint, zero. In other words, were the misattribution bias scores significantly different from what would be expected had errors been made randomly? The misattribution bias scores were not significantly different from zero in the pre-intervention phase ($t(64) = -.97, p = .33$) and in the post-intervention phase ($t(61) = .2, p = .84$). This is evident in Table 4.3. This suggests that in this study participants are demonstrating random error pattern in their misattribution bias. That is, participants were not showing significant bias in their implicit misattribution bias scores.

Discussion

Study 1 demonstrated the effectiveness of extended contact as an intervention to change young children's out-group attitudes towards the disabled. This finding is consistent with our predictions, and concurs with the limited research on extended contact in the adult literature (see Brown & Hewstone, 2005; Paolini et al, 2004; Wright et al, 1997). Furthermore as predicted in hypothesis 1, within the extended contact interventions, 'inter-group' extended contact was superior at improving children's out-group attitudes towards the disabled. These results are both significant and original, since research has not previously shown the effectiveness of extended contact and especially 'inter-group' extended contact amongst young children. Significantly, following the intervention children's positive attitudes towards their in-group were not significantly different. Thus, as planned, the intervention had an effect on *out-group* attitudes only (See Chapter 2 under sub-heading 'The distinction between in-group and out-group attitudes').

Contrary to hypothesis 2, the effect of extended contact on out-group attitude was mirrored in out-group intended behaviour as both 'inter-group' and de-categorisation extended contact effectively changed out-group intended behaviour. Previous research suggests that behaviour is more difficult to change than attitudes using prejudice-reduction interventions (Katz & Zalk, 1978). However the results of this study suggest that extended contact can change children's attitudes and *intended* behaviour.

The findings of Study 1 have both practical and theoretical implications. In terms of psychological theory, this study provides support for the Hewstone & Brown (1986) 'inter-group' contact theory in the context of extended contact. The findings highlight the importance of maintaining group boundaries and heightening perceived typicality in

order to obtain generalisation from the contact situation to the whole out-group. Until now, the beneficial effect of group salience has been tested only in direct contact settings; our findings also point to the superior effects of group salience and typicality in extended contact. This finding also concurs with Wright et al (1997) and Liebkind & McAllister (1999) who also point to the importance of typicality in extended contact.

One explanation for the lesser effect of the de-categorisation condition is that the manipulation was insufficient to induce individuation of the out-group. The out-group homogeneity measure and manipulation check suggest that children in the de-categorisation condition did not perceive the out-group as more variable and group memberships were still relatively salient. This may be due to cognitive limitations in children of this age. According to Aboud (1988), children below 8 years of age are pre-occupied with the self and with group memberships. It is not until after this age that children begin to make evaluations of people based individual characteristics rather than focussing solely on group memberships. This has implications for interventions to reduce prejudice since interventions should match children's cognitive abilities (Bigler, 1999). Therefore, interventions that focus on individual qualities in young children may be ineffective since they could have difficulty attending to this information. This implies the non-significant effects of de-categorised extended contact may be limited to the age group sampled here. Children in this age group may respond better to explicit training in attending to individual characteristics of out-group members (Aboud & Fenwick, 1999) and training on categorising people along multiple dimensions (Bigler & Liben, 1992; See Chapter 3 under subheading 'Cognitive interventions: Multiple classification training'). In Study 2 a different type of intervention was examined that focussed more explicitly on accelerating children's ability to focus on individual characteristics of

groups, in order to encourage children to be less rigid in their perception of groups leading to a reduction in inter-group bias (Aboud, 1988; Bigler & Liben, 1992). This intervention is multiple classification skill training (Bigler & Liben, 1992; Bigler, 1995). In this intervention children are trained to classify people and objects along multiple dimensions. Previous research has associated multiple classification skills with reduced inter-group bias (Bigler & Liben, 1992; Bigler, 1995).

Study 1 also had practical implications in terms of identifying extended contact as a prejudice-reduction tool that can be used effectively with children aged 5 to 10 years. However, as stated earlier, researchers have highlighted the importance of tailoring interventions to suit children's age group and ability (Aboud & Levy, 2000, Bigler, 1999). The results of Study 1 suggest that extended contact can meet these requirements and is well-suited to children across the age range studied here. However, the small sample size meant that any age trends within the 5 to 10 age group could not be reliably tested. In Study 2 the effect of extended contact in younger children only was explored. Given evidence from the cognitive-developmental literature (See Chapter 3 under subheading 'Extended contact'), it was expected that this is the age group that may have the most difficulty with extended contact interventions.

An important aspect of this study was the use of implicit measures of bias. There was no evidence of implicit bias in children and there was no effect of condition on children's implicit misattribution bias in either age group. There are a number of possible reasons for this effect. Of course it may be that children are not implicitly biased towards the out-group. An alternative explanation could be that the measure is flawed. The implicit bias measure used in the present study relies on memory. There is evidence that children remember stereotype-consistent information better than counter-stereotype

information (Bigler & Liben, 1990). There is also evidence that negative out-group stereotypes held by children are associated with memory for counter-stereotypical information. Bigler & Liben (1992) found that children who have participated in an intervention aimed at reducing negative out-group stereotypes have improved memory for counter-stereotype information (Bigler & Liben, 1992). This suggests that the type of information remembered in the implicit measure may be affected by stereotype levels. This means the type of errors made will differ, which could affect the results. This is in direct contrast to Rutland et al (2005) who found evidence of implicit bias in children as young as 6 using the IAT (Implicit Associations Test). However, the misattribution bias measure has never before been implemented, therefore in Study 2 this measure was used again in order to see if this finding was replicated.

The overall aim of this thesis is to design and implement interventions based on psychological theories and concepts in an attempt to create more successful prejudice-reduction interventions, as well as inform future psychological theory. Study 1 represents a first step towards meeting these objectives. This first study demonstrated the effectiveness of a prejudice-reduction interventions derived from the extended contact hypothesis, and also provided evidence to support the extended contact hypothesis and Hewstone & Brown's (1986) 'inter-group' model of contact. In Study 2, the effectiveness of 'inter-group' extended contact will be compared with a different approach to prejudice-reduction, multiple classification training (Bigler & Liben, 1992).

Conclusions

Study 1 demonstrated the effectiveness of a prejudice-reduction intervention based on psychological theory and research. It also adds to social psychological literature

on inter-group contact, providing support for the 'inter-group' model of direct contact (Hewstone & Brown, 1986) in the context of extended contact. Extended contact has not previously been used with pre-adolescent children and this current study demonstrates its potential as a prejudice-reduction tool, especially inter-group extended contact. This research also underlines the benefits of closer collaboration between practitioners and educators, which, as Study 1 demonstrates, can lead to the design of effective prejudice-reduction interventions for young children, as well as advancing psychological theories of prejudice.

*Chapter 5 Changing Young Children's Attitudes Towards the Disabled: The Benefits of
Extended Contact and Multiple Classification Skills Training*

Summary

This chapter presents the findings of the second empirical study of the thesis. Study 2 ($N = 71$) tested whether two theoretically based prejudice-reduction interventions could change young children's (6 to 9 years) attitudes towards the disabled. The first intervention was derived from the extended contact hypothesis (Wright et al, 1997) and was identical to the 'inter-group' extended contact in Study 1. The second intervention was developed from the socio-cognitive developmental theory of prejudice development (Aboud, 1988) and involved multiple classification skills training. Results showed that out-group attitudes were significantly more favourable than the control in the extended contact condition only.

Introduction

In Study 2, the benefits of closer collaboration between practitioners and psychologists, in terms of the design of effective prejudice-reduction interventions, were further examined. The first aim of Study 2 was to test the reliability of findings in Study 1 regarding 'inter-group' extended contact. In Study 1 extended contact, and 'inter-group' extended contact especially, was found to be an effective prejudice reduction tool, leading to increased positivity towards the disabled. Study 2 aimed to replicate this finding.

Secondly, in Study 2 the effectiveness of a further theoretically-based prejudice-reduction intervention, multiple classification skills training, was tested (see Aboud,

1988, Bigler, 1995; See Chapter 3 under subheading 'Cognitive interventions: Multiple classification skills training'). The 'multiple classification' intervention was derived from socio-cognitive developmental theory (Bigler, 1992, Bigler, 1995; Aboud & Doyle, 1995; See Chapter 1 under subheading 'Socio-cognitive developmental theory'). This intervention involves teaching children to classify people along a number of dimensions, in addition to the salient categories such as disabled and non-disabled. In this way dimensions that cut across salient categories become more prominent and individual characteristics of out-group members are emphasised. Multiple classification training holds potential as a prejudice-reduction tool, but requires further research (See Chapter 1 under subheading 'Socio-cognitive developmental theory' and Chapter 3 under subheading 'Cognitive interventions: Multiple classification skills training').

Study 2 also differed from Study 1 in that a between-participants design was adopted as opposed to the pre-post design used in Study 1. According to Campbell & Stanley (1966) the adoption of a between-participants design increases the internal and external validity of the study. For example, between-participants designs avoid 'history variables' which are compounded by repeated measures design and also avoid pre-testing which can cause participants to respond more strongly to an intervention as a result of the pre-test itself. These variables reduce the generalizability of findings from pre-post designs, and by using between-participants design these problems can be avoided (Campbell & Stanley, 1966).

The small sample in Study 1 meant that age trends in the extended contact effect could not be examined. Extended contact is likely to pose difficulty for younger children rather than older (See Chapter 1 under subheading Children's Awareness of Social Categories and Children's identification with social categories). In order to test the

effectiveness of extended contact with younger children Study 2 focussed on children aged 6 to 8 years only. Also, children in this age group have not yet developed multiple classification skills and therefore they are more likely to benefit from this intervention (Bigler & Liben, 1992; Aboud, 1988).

Design Overview and Hypotheses

Two interventions were devised that could be implemented in British Primary Schools with non-disabled children aged 6-9 years. The extended contact intervention was identical to the inter-group extended contact intervention tested in Study 1. The researcher read several stories with children that portrayed friendships between non-disabled and disabled children. In these stories and post-story discussions the category memberships of the protagonists (i.e. disabled and non-disabled children) were made salient, while the typicality of the out-group character was also emphasized. The multiple classification skills training intervention involved teaching children to classify photographs of disabled and non-disabled children on multiple dimensions.

The children were interviewed post-intervention only. A control group was used to provide a base line for prejudice. The interview took place approximately one week after the final intervention, and included measures of the children's in- and out-group attitudes and intended behaviours. Based on the findings of Study 1, it was predicted that following the interventions children would hold more favourable out-group attitudes *and* intended behaviour scores. Also two manipulation checks were included. As in Study 1 out-group typicality was measured to ensure that children in the inter-group extended condition perceived the out-group members as being typical of the out-group. In addition perceived out-group homogeneity was measured. Research suggests that multiple

classification is associated with increased perceived variability of the out-group and this is related to lower prejudice (Black-Gutman & Hickson, 1996; Aboud & Doyle, 1995; See Chapter 1 under subheading 'Socio-cognitive developmental theory' and Chapter 3 under subheading 'Cognitive interventions: Multiple classification training'). Therefore, out-group homogeneity was also included as a manipulation check. Implicit bias was again measured using the 'implicit misattribution bias' measure. This measure of implicit bias was used for the first time in Study 1 and Study 2 provided an opportunity to test its reliability as an implicit bias measure. Based on Devine's (1989) theory, it was predicted that implicit bias would be unaffected by the prejudice-reduction interventions.

Hypotheses:

- (1) There will be a main effect of condition with extended contact and multiple classification skills training both leading to more favourable out-group attitudes and intended behaviour, compared to the control.
- (2) Implicit bias will be unaffected by condition.

Method

Participants

Seventy-one children (35 males and 36 females) were tested. The children's age ranged from 6 to 9 years. Their mean age was 7 years and 9 months ($SD = 8.66$ months). The children attended schools in mixed social class suburban or rural areas outside a large metropolitan city in the south-east region of England. The vast majority of children in these schools were non-disabled. Approximately equal numbers of children across the age range were randomly assigned to each intervention condition: control ($N = 28$),

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extended contact ($N = 21$), and multiple classification ($N = 22$). In order to optimize the truly experimental nature of the design, rather than whole school classes to conditions, children in each class were individually and randomly assigned to one of the four conditions.

Design

The study used a 3 (condition: control, multiple classifications skills training, extended contact) x 2 (target disability: learning difficulty, physically disabled) mixed design, with the last factor being within participants.

Procedure

The study involved two intervention conditions (multiple classifications skills training and extended contact) and a control condition that did not include an intervention. The materials and the administration of the extended contact intervention were identical to the inter-group extended contact intervention administered in Study 1. Children were read stories about friendships between non-disabled and disabled children. In accordance with the 'inter-group' model of contact (Brown & Hewstone, 2005; Brown et al, 1999; Hewstone & Brown, 1986), it was continually stated that the children in the stories were typical of disabled children and lots of disabled children were like these children. The transcripts of the story are shown in Appendix A1. As in Study 1, the intervention was administered once a week for six weeks, and each session lasted approximately 15-20 minutes.

The multiple classifications skills training condition was based on the intervention developed by Bigler & Liben (1992). Like theirs, the intervention focused on increasing

children's ability to engage in multiple classifications. As with the extended contact condition, the multiple classifications skills training condition involved a session (approximately 15-20 minutes) per week for six consecutive weeks. Groups of two or three children in each session practiced sorting 12 photographs of disabled and non-disabled children along multiple dimensions. Initially, children were presented with photographs of children aged approximately 3-8 years and were told which were disabled (learning difficulties and physically disabled) and non-disabled children. These photographs also varied along other dimensions, namely: happy/not happy, helpful/not helpful and likes computers/likes books. Symbols were placed on the photographs to distinguish whether children were happy or not happy, liked books opposed to computer, or were helpful as opposed to unhelpful. Within each session, children were asked to put together the photographs that belong together in the appropriate cells of a 2 x 2 matrix that had been created by two crossed sticks. Children were first asked to sort the photographs by disability and then by an additional dimension (e.g. happy/not happy). Each week photographs were divided along a different additional dimension (i.e. happy/not happy, helpful/not helpful and likes computers/likes books). Finally, children were asked to sort the photographs into four piles so that matching groups of disability and the additional dimension were formed along the matrix rows and columns. After each sort the children were asked to justify their arrangement. If the cards had been incorrectly sorted, the researcher presented the children with the correct 2 x 2 matrix and explained to the children the general category represented by the matrix rows (e.g. all disabled children) and the general category represented by the matrix column (e.g. all helpful). Then the children were asked for a justification of the corrected arrangement. The

children continued the sorting the photographs until they could correctly justify the correct arrangement.

Dependent measures

The interview was in two parts; each lasting approximately 15 to 20 minutes and the administration of materials was counter-balanced. Children were interviewed by the researcher who was female and non-disabled. The interview took place approximately one week after the final intervention session. Explicit measures of in-group and out-group attitude and intended group behaviour were obtained. Before the each of the explicit measures were administered, children were told they would be asked to rate the in- and the out-groups so as to make the inter-group context salient (Abrams et al, 2004). Implicit bias measures were also administered, as well as two manipulation checks: typicality and out-group homogeneity.

Explicit Intergroup Attitude Measure

This measure was identical to the 'out group homogeneity' measure used in Study 1, but a different scoring procedure was used in order to obtain inter-group attitude scores. Children rated how typical they thought positive and negative traits were for the non-disabled in-group and two disabled out-groups (See Appendix A4). Rather than scoring responses as 1 or 0 as in the out-group homogeneity procedure, in order to obtain attitude scores the responses were coded on a scale from 1 to 4 as follows: none = 1, some = 2, most = 3 and all = 4.

The ratings for non-disabled, physically disabled and learning disabled traits were subjected to separate reliability analyses and all proved reliable (Cronbach's alpha for

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non-disabled positive and negative traits = .87 and .93, respectively; for physically disabled positive and negative traits = .76 and .86, respectively; for learning disabled positive and negative traits = .77 and .93). Given the satisfactory reliabilities, the ratings were collapsed to form single indices by calculating composite scores. This produced 6 scores for each child: positive and negative physically disabled, learning difficulty and non-disabled and these scores ranged from 10 to 40.

Higher scores on positive traits indicate more positivity toward that group, and higher scores on negative traits indicate more negativity. An in-group attitude score was calculated by subtracting the negative trait score for the non-disabled from the positive trait score for the non-disabled. This score had a minimum value of -30 and maximum value of +30, with a higher score indicating a more positive attitude towards the in-group. Two out-group attitude scores were also calculated by subtracting the negative trait score for each disabled group from the positive trait score for each disabled group. These scores also had a minimum value of -30 and maximum value of +30, with a higher score indicating a more positive attitude towards each disabled out-group.

Intended behaviour measure

This measure was identical to that used in Study 1. The ratings for non-disabled, physically disabled and learning disabled intended behaviour items were subjected to separate reliability analyses and all proved reliable (Cronbach's alpha for non-disabled = .77; for physically disabled = .83; for learning disabled = .83). Given the satisfactory reliabilities, the ratings were collapsed to form single indices by calculating the mean score of these items resulting in three measures of intended behaviour for each child:

physically disabled out-group intended behaviour, learning difficulty intended behaviour and in-group (non-disabled) intended behaviour.

Implicit Bias Measure

This was identical to that used in Study 1.

Manipulation checks

Out- Group Homogeneity: In this study, an additional out- group homogeneity measure was not required as the attitude measure could be re-coded in order to obtain a measure of out-group variability. Scores on the 10 positive and 10 negative adjectives in the attitude measure were recoded so that the most extreme responses, 'all' and 'none' were scored as '1' and the intermediate responses, 'some' and 'all' were scored as '0'.

The ratings for physically disabled and learning disabled traits were subjected to separate reliability analyses and all proved reliable (Cronbach's alpha for physically disabled traits = .87; for learning disabled traits = .89). Given the satisfactory reliabilities, the ratings were collapsed to form single indices by calculating composite scores resulting in four measures for each child –physically disabled positive, physically disabled negative, learning disabled positive and learning disabled negative. These scored ranged from 0 to 20. High scores indicated the group was perceived to be more homogenous and similar to each other, while a low score indicated more perceived heterogeneity and variability within the group.

The children's out group homogeneity scores were submitted to a 3 (condition: control, extended contact and multiple classification) x 2 (disability: learning difficulty, physically disabled) mixed design ANOVA with the latter variable being within

participants. There was a non-significant effect of condition, $F(2, 64) = 1.64, p = .2$, and disability, $F(2, 128) = .82, p = .44$.

Typicality: This manipulation check was identical to that used in Study 1, and was administered only to children in the extended contact condition. A one-sample t-test showed that the mean typicality score ($M = 4.24, SD = 1.04$) was significantly different from the mid-point of the scale, $t(20) = 5.43, p < .01$. This finding indicated that within the extended contact condition the children perceived the disabled story characters as typical of their group.

Results

The analysis was initially conducted with participant gender as a between participants variable. The data was also submitted to a 3 (condition: control, multiple classification, extended contact) x 2 (participant gender) x 2 (target disability: physically disabled and learning difficulty) mixed design ANOVA, with the latter variable being within participants. There were no significant main effects and interactions involving participant gender for out- and in-group attitude, out- and in-group intended behaviour and implicit bias.

As in Study 1, data was also initially analysed with disability of the target as a between subjects variable (physically disabled and learning difficulty). The data was submitted to a 4 (condition: control, multiple classification, extended contact) x 2 (target disability: physically disabled and learning difficulty) mixed design ANOVA, with the latter variable being within participants. There were no significant main effects or interactions involving target disability for out- and in-group attitude, out- and in-group intended behaviour and implicit misattribution bias. Learning difficulty and physically

disabled out-group attitude and intended behaviour were highly correlated ($r = .7, p < .01$; $r = .58, p < .001$ respectively). Thus, in order to obtain a general out-group attitude score and intended behaviour scores, scores towards the two target disabilities were combined to form a mean out-group attitude score and mean out-group intended behaviour score. Also a general out-group implicit bias score was obtained by calculating the mean of physically disabled and learning difficulty implicit misattribution bias scores. Given the findings of these initial analyses, subsequent analysis was conducted using only the main independent variable, condition, and the overall out-group attitude, intended behaviour and implicit bias scores.

Inter-group attitude

Attitude scores were submitted to a 3 (condition: control, multiple classifications, extended contact) x 2 (target: in- and out-group) mixed design ANOVA with the latter variable being within participants. There was a non-significant effect of target, $F(1, 60) = .16, p = .69$. This suggests that the out-group and the in-group are perceived equally in each of the conditions.

As anticipated, there was a significant main effect of condition, $F(2, 60) = 4.64, p < .05$. In order to test the hypothesis that the multiple classification and extended contact interventions would lead to more favourable out-group attitudes, two orthogonal constructs were constructed. The first (C1) tested multiple classification against the control (-1, +1, 0). The second tested extended contact against the control (-1, 0, +1). Contrast 1 showed that out-group attitude in the multiple classification condition was not significantly different from the control condition, $F(1, 60) = .04, p = .84$ (See Table 5.1 for means). Contrast 2 showed that out-group attitude in the extended contact condition

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was significantly higher than the control condition, $F(1, 60) = 1.46, p < .01$ (See table 5.1 for means).

Table 5.1: Mean In-group and Out-group Attitude and Intended Behaviour Scores (Standard Deviations) as a Function of Condition.

	Condition		
	Control	Extended contact	Multiple classification
<i>Out-group attitude</i>	9.60(5.29)	14.95 (6.47)	10.00 (7.7)
<i>In-group attitude</i>	10.00 (5.90)	14.55 (7.48)	10.95 (5.96)
<i>Out-group Intended behaviour</i>	4.13 (.52)	4.26 (.47)	3.77 (.85)
<i>In-group Intended behaviour</i>	4.22 (.74)	4.17 (.62)	4.19 (.92)

Note. Out-group and in-group attitude scores could range from a minimum value of -30 and a maximum value of +30. The higher the children's scores the more positive their evaluations. Intended behaviour scores could range from a minimum value of +1 and a maximum value of +5. The higher the children's scores the more positive their evaluations.

Intended behavior

Intended behaviour scores were submitted to a 3 (condition: control, multiple classifications, extended contact) x 2 (target: in- group and out-group) mixed design ANOVA with the latter variable being within participants. Analysis showed a non-significant main effect of condition, $F(2, 67) = .88, p = .42$. There was a marginally significant main effect of target, $F(1, 67) = 3.85, p = .05$. Means (See table 5.1) suggest that children were more positive towards the out-group than the in-group.

The effect of target was qualified by a significant target x condition interaction, $F(1, 67) = 3.72, p < .03$. As in the analysis of attitude, analysis of this interaction focussed on the out-group, and planned contrasts (C1 and C2) were used to compare the neutral condition with the multiple classification and extended contact conditions. Contrast 1 revealed a significant interaction between condition and phase of interview, $F(1, 67) = 4.06, p < .05$. The means (See Table 4.2) show that children in the multiple classification condition were less positive towards the out-group compared to the neutral condition. Contrast 2 revealed a non-significant condition x phase of interview interaction, $F(1, 67) = .47, p = .50$. This suggests that out-group intended behaviour scores in the extended contact condition did not differ from the control condition (see table 5.1 for means).

One-way t-tests showed that out-group intended behaviour scores were significantly different from the mid-point of the scale in the control condition, $t(28) = 7.93, p < .001$, in the extended contact condition, $t(20) = 11.62, p < .001$ and in the multiple classification training condition, $t(20) = 2.68, p < .05$. These findings indicate that in each condition the children showed significantly positive intended behaviour towards the disabled out-groups, but that the effect of the multiple classification was to

slightly worsen the behavioural orientation to the out-group relative to the other two conditions.

Implicit Misattribution Bias

Using one-way between-participants ANOVA, a non-significant main effect of condition on implicit misattribution bias was shown, $F(2, 68) = .17, p = .84$. This is evident in Table 5.2.

Table 5.2: *Mean Implicit Misattribution Bias (Standard Deviations) as a Function of Condition and Target Disability.*

Control	Extended contact	Multiple classification
.64 (1.27)	.43 (1.15)	.52 (1.41)

Note. Implicit misattribution bias scores could range from a minimum value of -6 and a maximum of +6.

One sample t-tests showed that general misattribution bias was significantly different from the midpoint zero ($t(71) = 3.79, p < .001$). This suggests that scores are significantly above the midpoint, zero, and children are therefore significantly positively biased towards the out-group, disabled.

Discussion

In Study 2, extended contact was again shown to be an effective prejudice-reduction tool in children as young as 6 years old. Following the extended contact intervention children were more positive towards the disabled out-group. Importantly,

the out-group story character was perceived as being typical of their group amongst the children in the extended contact condition. In addition to changing out-group attitudes, extended contact also met the secondary requirement of prejudice reduction interventions in that the effects of the extended contact intervention were limited to the out-group attitude only, and children did not become more negative towards the in-group following the interventions. Together these results underline extended contact's potential as a prejudice-reduction intervention. However, contrary to our prediction, the multiple classification skills training intervention was ineffective in changing children's attitudes and intended behaviour towards the disabled out-group.

As in Study 1, the extended contact intervention successfully changed out-group attitudes, providing partial support for hypothesis 1. In the 'inter-group' extended contact intervention category memberships of the story characters were made salient, and the typicality of characters for their group was emphasized (Gonzalez & Brown, 2003; Hewstone & Brown, 1986). According to Hewstone & Brown's (1986) theory, children in this condition became more positive towards the out-group because in the inter-group extended contact condition children were more likely to generalize from the protagonists in the stories to the out-group in general. This replication of Study 1's findings strengthens support for the inter-group model of contact (Hewstone & Brown, 1986) and emphasises the importance of maintaining group salience and typicality during prejudice-reduction interventions such as extended contact.

Study 2 demonstrates the effectiveness of extended contact as a prejudice reduction tool with young children. However the comparative effectiveness of extended contact with younger and older children remains to be tested. At approximately 8 years of age children reach a number of cognitive milestones that may be important for

extended contact (Ruble et al, 2004; Aboud, 1988; See Chapter 1 under subheading 'Socio-cognitive developmental theory' and Chapter 2 under sub-heading 'Extended contact'). Therefore in Study 3 the effectiveness of extended contact in changing out-group attitudes in children in the age groups 6 to 8 years and 9 to 11 years was examined.

Surprisingly, children's out-group attitudes and intended behaviours in the multiple classification condition were not significantly higher than those in the control condition. This was unexpected, as previous research has shown that training in social cognitive skills can lead to a reduction in intergroup attitudes and gender stereotyping (Aboud & Fenwick, 1999; Bigler & Liben, 1992; Katz & Zalk, 1978). This was coupled with a non-significant effect of condition on out-group homogeneity. This finding is in direct contrast to previous research in this area which found a reduction in out-group homogeneity following interventions that emphasise individual qualities rather than group memberships and multiple classification training (Bigler, 1992, Aboud & Fenwick, 1999).

There are a number of possible explanations for the failure of the multiple classifications intervention. Firstly, the multiple-classification ability of children may have already peaked resulting in a ceiling effect. Thus, the children's ability to categorize along multiple dimensions could not be increased further in the multiple classification condition, resulting in a non-significant change in out-group attitude. However, given the age of the children in Study 2, it is unlikely that a significant majority of the children could classify along multiple dimensions prior to training (Aboud, 1988; Aboud & Doyle, 1995). Nonetheless, this possibility cannot be ruled out, as Study 2 did not include a measure of multiple classification skill. Secondly, there is a potentially important difference in multiple classification skills training adopted in Study 2 and that used by

Bigler & Liben (1992). Bigler & Liben's multiple classification training intervention focused on classifying along multiple dimensions that were relevant to each group's stereotypes. The children were taught to classify men and women along the additional dimension of 'occupations' and the occupations were consistent with male and female stereotypes (e.g. nurse, engineer). In Study 2, however, children were trained to classify social stimuli (i.e. disabled children) but along dimensions that were not stereotype-relevant (i.e. happy/not happy, likes computers/ likes books). In Study 3, this limitation was addressed by testing a refined version of the multiple classification training that more closely resembled Bigler & Liben's (1992) multiple classification training technique. Also, the limited age range in Study 2 did not allow age trends in the effects of multiple classification training to be examined. Cognitive developmental theory would predict the older children (above the age range included here) would already hold multiple classification skills, therefore one might expect this training intervention to have little effect on their out-group attitudes. However, Bigler & Liben (1992) found that few children aged 5 to 11 years hold multiple classification skills prior to training therefore this intervention may reduce inter-group bias in older children also. In response to this, in Study 3 the effect of multiple classification training on children aged 6-8 and 9-11 years was examined.

While the effects of extended contact on out-group attitudes were as predicted, the effect of extended contact on intended behaviour was more limited. Children's intended behaviour scores in the extended contact condition were not significantly different from the control. In order to further explore the effect of prejudice-reduction interventions on out-group orientations, Study 3 included a further explicit measure of out-group attitude, out-group affect.

As in Study 1, a crucial feature of Study 2 was the use of implicit bias measures.

In contrast to the findings of Study 1, in Study 2 implicit bias was detected using the implicit misattribution bias measure. Due to the mixed findings using the implicit misattribution bias measure, in Study 3 implicit bias was determined using a more established measure of implicit bias, the IAT (Rutland et al, 2005). This will be discussed further in Chapter 8 under subheading 'Limitations and suggestions for future research'.

In contrast to hypothesis 2, implicit bias was not reduced following the prejudice-reduction interventions. This is in line with Devine's (1989) argument that implicit attitudes are more difficult to change than explicit attitudes. She argues this is because implicit attitudes reflect years of socialization and activation, while explicit attitudes or personal beliefs have been formed more recently and are more embryonic, and therefore more malleable. The results of Study 2 suggest that extended contact intervention was rigorous enough to change explicit out-group attitude, but not intense enough to cause an equivalent change in implicit bias. However, the non-significant effect of interventions on implicit bias may be due to cognitive constraints of the age group studied here. Devine & Plant (1998) argue that changing implicit attitudes requires internal motivation, and this ability may be as yet undeveloped in the age group studied here (Piaget, 1965; See Chapter 2 under subheading 'Implicit measures of inter-group bias'). In order to explore this further, Study 3 examined the effect of interventions on implicit bias in children across two age groups, 6 to 8 years and 9 to 11 years.

The findings of Study 2 have several implications for psychological theory and prejudice-reduction interventions. In terms of informing psychological theory, Study 2 replicated the findings of Study 1 and showed that 'inter-group' extended contact can

effectively change out-group attitudes and intended behaviour, which provides further support for the Hewstone & Brown (1986) model of inter-group contact. With regards to practical applications, the findings underline the potential of extended contact as an intervention technique and reiterate the importance of implementing prejudice-reduction interventions that are based on psychological theory in order to change views of the out-group.

However, a number of theoretical questions remain regarding extended contact. Firstly, what are the underlying mechanisms of extended contact (the mediators), and secondly, under which conditions is extended contact, and especially 'inter-group' extended contact most effective (the moderators)? Wright et al (1997) suggest that "inclusion of other in the self" (IOS i.e. the spontaneous inclusion of in-group members in the self-concept) might be important for extended contact (See Chapter 3 under subheading 'Extended contact'). Another possible mediator of the extended contact effect is perceived norm. Brown & Hewstone (2005) and Wright et al (1997) argue that one possible way in which extended contact changes out-group attitudes is by changing the perceived norm for how desirable and permissible inter-group relationships are (Wright et al, 1997; Brown & Hewstone, 2005; See Chapter 3 under subheading 'Extended contact'). A factor that is related to norms and could be important for extended contact is in-group identification (See Chapter 3 under subheading 'Extended contact'). Therefore in Study 3, the importance of these variables for extended contact in children was examined.

Conclusions

The aim of this thesis is to develop effective prejudice-reduction interventions and advance psychological theories of prejudice through the design and evaluation of theoretically-based prejudice-reduction interventions. In Study 2, two interventions were tested, that were each derived from psychological theories of prejudice, namely socio-cognitive developmental theory (Aboud, 1988) and 'inter-group' extended contact (Wright et al, 1997; Hewstone & Brown, 1986). The findings of this study suggest that extended contact could be used effectively as a prejudice-reduction tool in schools. However, further research is required to check the generalisability of this effect to out-group attitudes towards other stigmatized groups. In addition, the underlying mechanisms of extended contact should be identified in order to develop more effective interventions, as well as advance psychological theories of inter-group contact. Multiple classification training appears to be ineffective as a prejudice-reduction tool, but this may be due to methodological problems with the training technique in the current study.

Chapter 6: Changing Children's Attitudes towards Refugees: The Effects of Extended Contact and Multiple Classification Skills Training

Summary

This chapter presents the third empirical study within the thesis. In Study 3, three different intervention techniques were investigated: extended contact, a refined version of the multiple-classification skills training and a combined intervention consisting of extended contact and multiple-classification skills training. To improve upon the limitations of Studies 1 and 2, the third study included a significantly larger sample of almost 200 children ($N = 198$), across a broader age range of children (6 to 11 years). This larger sample permitted the investigation of possible moderators of extended contact, including age and identification with the in-group and also potential mediators such as 'inclusion of the other in the self' (IOS) and perceived in-group norms. The importance of participant age for multiple classification skills training could also be examined. Again, only the 6-11 year old children who experienced the extended contact interventions (extended contact and the combined condition) showed significantly more positive attitudes towards the refugee out-group compared to the control. This supports the use of extended contact as an intervention tool, but it is stressed that additional research is required to examine the underlying mechanisms of this effect.

Introduction

Study 3 built on the findings of Study 1 and 2, and addressed some of the limitations of these earlier studies. Using a larger sample across a broader age range, the extended contact effect, and its moderators and underlying mechanisms, could be

explored further. Three interventions were administered: multiple classification, 'inter-group' extended contact and a combined condition.

Study 3 focused on children's inter-group attitudes and intended behaviour towards refugees rather than people with disabilities for a number of reasons. Firstly, in Study 2 multiple classification training was found to have no significant effect on out-group orientation. This is inconsistent with Bigler & Liben's (1992) previous findings. One possible reason for this conflicting finding was that the multiple classification intervention deviated from Bigler & Liben's (1992) methodology in one important way; while in Bigler & Liben's (1992) study children were trained to classify along stereotypical dimensions, in Study 2 they were not. In order to fully evaluate multiple classification training, it was essential to re-test this intervention and train children to classify along stereotype-relevant dimensions. In order to do this it was important to have an out-group that was perceived to vary along stereotypical dimensions such as holding different occupations to the in-group.

Currently in United Kingdom (UK) there is heightened public and political concern about immigration (e.g. MORI, 2003). The current research was conducted in the South of England, a region where tensions have periodically arisen between the majority white British community and ethnic minority immigrants because it contains one of the major ports of entry for families and children seeking asylum. In this context, it was highly likely that white British children would be aware of stereotypical occupations held by their in-group and the refugee out-group. It was predicted that this refined version of the multiple classification training would be effective, and following this intervention children would hold more favourable views of the out-group.

Secondly, the use of refugees as an out-group meant the success of the extended contact interventions in reducing children's intergroup bias could be tested with another stigmatized group (i.e. ethnic minority refugees). Ethnic intergroup bias is by no means unusual amongst young white children and is typically high in middle childhood though it can decline into early adolescence (See Chapter 1 under subheading 'The development of inter-group bias / prejudice in children'). As with the disabled, in the UK, refugees are a group that children are increasingly coming into contact with at school and in their communities. Furthermore, there has been little research examining children's views of refugees. Determining children's views of refugees and identifying prejudice-reduction interventions that change these views is of value for educational practitioners as effective interventions could be used to help promote positive relationships between British and refugee children. It was anticipated that extended contact would be equally effective in improving children's inter-group attitudes and intended behaviour towards refugees as it was towards the disabled in Studies 1 and 2.

Having established extended contact, and 'inter-group' extended contact as an effective intervention technique, one of the aims of Study 3 was to advance intergroup extended contact theory by investigating the conditions under which extended contact is most effective (the moderators) and the processes by which extended contact may instigate change in out-group orientation (the mediators).

Mediators of extended contact

'Inclusion of other in self': According to Wright et al (1997), one of the underlying mechanisms of extended contact could be 'inclusion of other in self' (Wright et al, 1997; See Chapter 3 under subheading 'Extended contact'. This is the inclusion of

in-group members and others in the self-concept. There is some empirical evidence to suggest that extended contact may indeed be mediated by IOS (Turner & Hewstone, 2005). However it has not previously been examined in the age group studied here. Therefore, in Study 3 a measure of IOS was taken in those children who received extended contact. It was predicted that the extended contact effect would be mediated by IOS.

In-group norm: Extended contact may change inter-group attitudes by changing the perceived norm for how desirable and permissible inter-group relationships are (Wright et al, 1997; Brown & Hewstone, 2005; Turner & Hewstone, 2005; See Chapter 3 under subheading 'Extended contact'). To investigate this proposition in the present study a measure of perceived classroom norms for exclusion was included. It was predicted that following extended contact children would perceive the in-group norm as being less excluding of the out-group, leading to a reduction in out-group prejudice.

Moderators of extended contact

In-group identification: A possible moderator of extended contact is in-group identification. If extended contact does indeed change out-group attitudes by changing the perceived in-group norm for inter-group relations, it could be predicted that this is more likely to occur in conditions in which participants identify highly with the in-group (See Chapter 3 under subheading 'Extended contact'). Therefore in the present study, children's identification with the in-group, English, was measured as a potential moderator of extended contact.

Age: It is important that interventions be tailored to suit children's developmental stage (Bigler, 1999). Study 2 demonstrated the effectiveness of extended contact with

very young children, but the comparable effect of extended contact in younger and older children remains to be tested. In the Study 3, two age groups were examined, 6-8 and 9-11 year olds. These age groups were chosen because at around 8 years children reach a number of cognitive milestones that could be important for the effectiveness of both extended contact and multiple classification skills training (Ruble et al, 2004; Aboud, 1988; See Chapter 1 under subheading 'Socio-cognitive developmental theory' and Chapter 3 under subheading 'Extended contact'). Thus the moderating effect of age for multiple classification skills training could also be examined. It was predicted that younger children would benefit more from multiple classification skills training as they have not yet developed these abilities (See Chapter 3 under subheading Cognitive interventions: Multiple classification training).

One limitation of Study 2 was that there was no measure of actual multiple classification ability, so it was not possible to ascertain whether training did indeed improve multiple classification ability. In order to investigate whether training did lead to improvements in this ability, a measure of multiple classification skill was taken in all children after the intervention. It was predicted that children who received the more refined multiple classification training would be more positive towards the out-group and this would be mediated by multiple classification ability.

Study 3 also included an additional third intervention, which was a combined intervention in which children received both extended contact and multiple-classifications skills training. Educational practitioners often adopt the additive approach and include as many intervention techniques as possible in an intervention (Aboud & Levy, 2000; Paluck & Green, 2003; See Introductory Chapter under subheading 'Intervention design and implementation'). This often makes evaluations of interventions problematic since it

is difficult to determine which of the techniques has led to any intervention effect.

However, within our experimental design it would be possible to determine the relative values of combining or not the two interventions from Study 2. It was predicted that since the combined condition includes both extended contact and multiple classification skills training, this would be the most effective intervention at changing children's out-group attitudes.

Consistent with studies 1 and 2, the prejudice-reduction interventions were assessed using measures of inter-group attitude and intended behaviour. Based on the findings of Study 2, it was predicted that following all interventions children would hold more favourable out-group attitudes and intended behaviour, but it was expected that the effect of interventions on out-group intended behaviour would be more limited. Two manipulation checks were administered: perceived typicality and out-group homogeneity. It has been recommended that prejudice-reduction interventions measure out-group orientation using multiple measures (Nesdale, 2004; See Chapter 2 under sub-heading 'Additional measures of out-group orientation'). Therefore, in order to gain a better insight into children's out-group orientation and a more complete evaluation of the prejudice-reduction interventions, a measure of out- and in-group affect was included.

As in previous studies, an important aspect of Study 3 was the effect of interventions on implicit bias. Due to conflicting results found using the implicit misattribution bias measure in Studies 1 and 2, a more established measure of implicit bias was used in Study 3, the Implicit Associations Test (IAT) (Greenwald et al, 1998; See Chapter 2 under subheading 'Implicit measures of inter-group bias'). It was expected that the present study would produce results comparable with previous studies that found implicit bias in children as young as 6 using the IAT (Rutland et al, 2005). It was

therefore predicted that implicit bias would be detected in children across the age range tested here, and that there would be a main effect of age, with older children responding faster overall than younger children.

In addition, the larger sample in Study 3 allowed possible developmental trends in the effect of intervention on implicit bias to be examined. The ability to change implicit bias may have a developmental component (See Chapter 2 under subheading 'Implicit measures of inter-group bias'). Devine (1989) argues that the process of replacing stereotypical associations requires internal motivation and developmental research suggests that children may not be able to engage in this behaviour until they are approximately 10 years old (Piaget, 1965). Thus, in the age groups in the current study, one might predict a comparable effect of prejudice-reduction interventions on explicit and implicit attitudes in older children, but not younger children. It was therefore predicted the effect of condition on implicit bias would be qualified by an age effect: the intervention would reduce implicit bias in older children, but not younger children (See Chapter 2 under subheading 'Implicit measures of inter group bias').

Design Overview and Hypotheses

In summary, Study 3 addressed the limitations of the first study through the use of a modified multiple classifications skills training intervention, a larger sample of children aged 6 to 11 years, the inclusion of measures assessing multiple classification ability, possible mediators and moderators of extended contact ('inclusion of other in the self', in-group identification and perceived norm for exclusion) and an evaluation of a combined intervention condition.

Hypotheses:

- (1) Explicit out-group attitudes, intended behaviour and out-group affect will be more favourable after the extended contact, multiple classification and combined interventions, compared to the control, and this will be most pronounced in the combined condition.
- (2) Children who receive multiple classification skills training (multiple classification and combined conditions) will have more advanced multiple classification skills than children in the extended contact and control conditions.
- (3) The effect of condition will be mediated by perceived norm and 'inclusion of other in the self'
- (4) The effect of condition will be moderated by in-group identification.
- (5) There will be an interaction between condition and age for implicit bias: Implicit bias will be significantly lower in the extended contact, multiple classification and combined conditions, compared to the control, but this will be found in the older age group only.

Method

Participants

One hundred and ninety-eight English children (99 males and 99 females) were tested. The children's age ranged from 6 to 11 years. Their mean age was 9 years 0 months ($SD = 17.41$ months). There were two age groups: 6-8 years ($n = 102$) and 9-11 years ($n = 96$). The mean age in the younger age group was 7 years and 10 months ($SD = 8.76$ months) and the mean age of the older age group was 10 years and 4 months ($SD =$

7.74 months). The children were from the same socio-economic and geographical areas as those tested in Study 1 & 2. The vast majority of children attending the schools in these areas were English and not refugee children. Approximately equal numbers of children across the age range were randomly assigned to each intervention condition: control ($n = 47$), extended contact ($n = 51$), multiple classification ($n = 55$) and combined ($n = 45$). As in Study 1 and 2, children in each class were individually and randomly assigned to one of the four conditions.

Design

The study used a 4 (condition: control, extended contact, multiple-classification skill training and combined) x 2 (English ethnic identity: low and high) x 2 (age group: 6-8 years and 9-11 years) between participants design.

Procedure

Before the intervention began, in all conditions the term 'refugee' was explained using educational materials. Children were shown photographs of refugees and a map of the world in which several countries of origin of many refugees in Britain was highlighted. The children also discussed reasons why people may leave their country and come to England.

The study involved three intervention conditions (extended contact, multiple classification skills training and a combined condition in which both extended contact and multiple classification interventions were administered) and a control condition that did not include an intervention.

In line with Study 1 and 2, children in the extended contact intervention condition read stories which involved in-group members who had close friendships with out-group members. This intervention was identical to that used in Study 2, however the stories concerned refugees rather than disabled children (See Appendix C6 for example transcripts of stories).

As in Study 2, the multiple classifications skills training condition was based on the intervention developed by Bigler & Liben (1992). Initially, children were presented with photographs of refugees and English people. While in Study 2, the photographs varied along several different dimensions, the photographs in Study 3 varied along just one other dimension, namely occupation. Preliminary tests had shown occupation to be a salient and stereotype-relevant dimension when considering English people and refugees and the occupations chosen for the task were identified as being thought of as typical occupations held by English people and refugees. There were 12 possible occupations, six high-status and six low-status. In each session half the English and half the refugees held the same high-status occupation (e.g. doctor), and the other half held the same low-status occupation (e.g. cleaner). The procedure for the intervention was identical to that used in Study 2. In the combined condition, participants received both the extended contact and socio-cognitive interventions in full.

Dependent measures

The interview took place in two parts; each lasting approximately 15 to 20 minutes and the administration of materials was counter-balanced. The interview took place approximately one week after the final intervention session. Children were interviewed by the researcher, who was white and female. Before each of the explicit

measures were administered, children were told they would be asked to rate the in- and the out-groups so as to make the inter-group context salient (Abrams et al, 2004).

Explicit Intergroup Attitude Measure

This measure was a slightly modified version of that used in Study 2. First, the children were shown a collage made of people from different ethnic groups and they were told these people were refugees who live in England. Next the participants rated how typical they thought positive and negative traits were of the in-group, English people, and the out-group, refugees. Children were presented with 7 positive and 7 negative words. The positive words were: clean, friendly, good, hardworking, kind, nice and polite (See Appendix C7). The negative words were bad, not nice, dirty, unkind, rude, lazy and unfriendly. These adjectives were taken from the Preschool Racial Attitude Measure II (PRAM II) Series A (Williams et al, 1975) and previous explicit measures of ethnic intergroup bias used with 6-16 year olds (Rutland, Cameron, Milne & McGeorge, 2005) or chosen after a small sample of seven to eleven year old children underwent an open-ended interview about their attitudes towards refugees. The subsequent procedure was the same as in Study 2. Children were asked to indicate, on a scale of 1 (none) to 4 (all) how many refugees they thought held each of the traits. As in the two previous studies, separate indices were calculated for in-group attitude and out-group attitude.

The ratings for English and refugee traits were subjected to separate reliability analyses and all proved reliable (Cronbach's alpha for English positive and negative traits = .79 and .82, respectively; for refugee positive and negative traits = .85 and .85, respectively). Given the satisfactory reliabilities, as in previous studies the ratings were

collapsed to form single indices by calculating composite scores resulting in four measures for each child – English positive, English negative, refugee positive and refugee negative, each ranging from 7 to 28. An in-group attitude score was calculated by subtracting the negative trait score for English from the positive trait score for English. This score had a minimum value of -21 and maximum value of +21, with a higher score indicating a more positive attitude towards the in-group. Out-group attitude scores were also calculated by subtracting the negative trait score for refugee from the positive trait score for refugee. These scores also had a minimum value of -21 and maximum value of +21, with a higher score indicating a more positive attitude towards each disabled out-group.

Intended behaviour measure

This measure was identical to that used in Studies 1 & 2. Children were asked to indicate from the scale how much they would like to engage in different activities with refugees and English children (See Appendix C8). The ratings for English and refugee intended behaviour items were subjected to separate reliability analyses and all proved reliable (Cronbach's alpha for English = .84; for refugees = .84).

Given the satisfactory reliabilities, the ratings were collapsed to form single indices by calculating composite means resulting in two measures of intended behaviour for each child.

In-group Identification

The children's English identity was measured using questions previously used successfully to measure children's national identity (Rutland et al, 2003; Verkuyten,

2001). This measure consisted of four questions: "Do you feel like you are really English?" "Do you like being English?" "Are you proud to be English?" "How much do you like being English?" The children's responses to these questions were given by pointing to a scale of 1 (not at all) to 5 (very much so). These responses were illustrated pictorially with 5 boxes that increased in size from "not at all" to "very much so". The children's responses to these 4 questions were subjected to reliability analysis and proved reliable (Cronbach's alpha for = .77). Given this satisfactory reliability a composite English identity score was obtained for each child by collapsing the 4 ratings to form a single index. A median split (median = 4.5) was performed on the children's composite mean English identity scores to create two groups, high and low identifiers.

Multiple classification skill

The children's ability to classify along multiple dimensions was measured using a technique developed by Bigler (1995). Children were presented with objects that varied along two cross-cutting dimensions. They were shown 12 pictures of shoes and hats that were either red or blue. This set of pictures consisted of 3 pictures of red hats, 3 pictures of blue hats, 3 pictures of red shoes and 3 pictures of blue shoes. Children were then given the same quadrant (or grid) board used in multiple classification skills training and asked to divide the pictures up into any number of groups, putting together the objects that belong together. The children were instructed: "Think about which of these objects belong together. Put the objects in the grid below. Put objects that belong together in the same square of the grids. You do not have to use all the grid squares." The experimenter then asked for a justification of their sorting behaviour, if it correctly involved 2 dimensions, by asking; first, "why are these pictures together in this group?" and, second,

“why are these pictures put in a separate box from these pictures?” However, if the child sorted the pictures incorrectly (i.e. by sorting on only one dimension or with no pattern of classification) the experimenter showed the child a correct sorting of the pictures. Next the experimenter asked the child to justify why this was the correct way to sort the pictures using the same justification questions as above.

A child who incorrectly sorted the pictures and was unable to justify the classification when shown the correct sorting method was assigned a score of 0. In contrast, a child who sorted the objects on both dimensions, but was unable to correctly justify why, was assigned a score of 1. A score of 2 was assigned if the objects were sorted incorrectly, but the child was able to justify the sorting method when shown the correct classifications. Finally, if the pictures were correctly sorted with a correct justification the child was assigned a score of 3. The multiple classification score had a minimum of 0 and a maximum of +3. Higher scores indicated better multiple classification skills.

English and Refugee Affect

Refugee affect was measured by asking children: “How do you feel about refugees in England?”. English affect was measured by asking children “How do you feel about English people?” Responses were made on a 5-point Likert-type scale from 1 (not at all) to 5 (very much). Responses on each of the 5 points on this scale was illustrated with a smiley face going from 1 (big frown) to 2 (small frown), 3 (neutral), 4 (small smile) to 5 (big smile) (See Appendix C9). This gave refugee and English affect scores with a minimum of 1 and a maximum of 5.

Potential mediators:

Classroom Norms: This measure was included as potential mediator of extended contact. Measures of classroom norms were based on those used by Rutland et al (2005). Children were presented with a short 'exclusion' vignette set in a classroom. This story depicted a refugee child who was left out of a game in the playground by white English children purely because they were a refugee. Children were then asked how they thought the teacher in the story would feel about this (perceived teacher norm) and how the other children in the class in the story would feel about this (perceived children norm). Scores for perceived teacher norm and children norm were rated on a 5-point Likert type smiley face scale identical to that used in the affect measure going from 1(very unhappy) to 5 (very happy). These scores were then reversed so higher scores indicated greater unhappiness with the exclusion of the refugee child, on the part of the other children and the teacher.

Inclusion of 'other in the self' (IOS): This measure was included as a potential mediator of extended contact. It included two questions that evaluated how close the children perceived their 'self' and 'collective self' to refugees. First, children were asked to imagine they met a refugee child. Then the children were presented with pairs of circles with a stick figure in each to represent themselves (i.e. their self) and the refugee child. There were three pairs of circles with different degrees of overlap between the circles (see Appendix A10). No overlap (0), which indicated low IOS, partial overlap (1) which indicated intermediate IOS and complete overlap (2) which indicated high IOS. Children were asked to point to the pair of circles that best represented their closeness to the refugee child. Next the children were presented with a similar set of circles in pairs,

as used in the first question, and asked to point to the pair of circles that best represented English children's closeness to the refugee child. A composite IOS score was then obtained from the mean of the responses on these two items.

Implicit Inter-group Bias Measure.

The Implicit Association Test (IAT), devised by Greenwald, et al., (1998), was used as the computer-based implicit measure. All children were tested on this task within their schools using the same Mac notebook computer. The IAT is a task devised to measure uncontrolled or automatic concept-attribute associations. The underlying assumption of the test is that strongly associated (compatible) attribute-concept pairs should be easier to classify together than weakly associated or opposed (incompatible) attribute-concept pairs. Typically the IAT involves participants being presented with a series of words on a computer screen, which are exemplars of a concept, (e.g. names associated with the Black ethnic category, i.e. Latishia, Ebony), and an attribute, (e.g. pleasant and unpleasant words). Furthermore, participants have to categorize these words as quickly as possible by pressing a left or right key on a keyboard.

In this study a pictorial version of the IAT was used (Rutland et al, 2005) which uses photographs of people to represent racial categories and cartoon faces rather than words to indicate valence (pleasant and unpleasant). The procedure was identical to that used by Rutland et al (2005). As in Rutland et al (2005), the faces were approximately 3 x 4 cm in size. The sex of faces was matched with each child's sex. The cartoon faces were used as an alternative to "pleasant" and "unpleasant" words were simple line drawings of "happy" or "sad" cartoon faces as the attributes. Rutland et al (2005) reported that their main study and pilot work clearly indicated that children saw "sad"

cartoon faces as “unpleasant” and “happy” cartoon faces as “pleasant”. The cartoon faces varied in shape (e.g. squares, triangles, circles) and were 4 x 4 cm in size. As in Rutland et al (2005), for ease of use, children were required to respond by making movements with the mouse (‘towards’ or ‘away’) rather than the keyboard. In addition, arrows were attached to the computer screen to indicate the appropriate direction of response for each stimulus category. This pictorial version of the IAT was used successfully by Rutland et al (2005) with 6 to 16 year olds.

This pictorial version of the IAT, in line with previous research using the IAT (e.g. Greenwald et al, 1998; Monteith et al., 2001), involved a sequence of five blocks, which together allowed for an assessment of children's uncontrolled association between concepts and an attribute. Block 1 trials introduced the initial concept discrimination and required children to distinguish between unfamiliar ethnic refugee and White English faces, by assigning one concept to a response by an ‘away’ mouse movement and the other to a response by a ‘towards’ mouse movement. The attribute dimension was introduced in Block 2. The children were presented with simple line drawings of cartoon faces and asked to categorize these faces as either ‘happy’ or ‘sad’, by assigning one cartoon face to a response by an ‘away’ mouse movement and the other to a response by a ‘towards’ mouse movement. The first two blocks of the IAT are important since they allowed the children to learn the assignments of particular stimuli to certain response modes (i.e. ‘towards’ or ‘away’) that would be used in Blocks 3 and 5. After this introduction to the target concepts and to the attribute dimensions, the two were superimposed in Block 3. The stimuli for the concepts and attributes appeared on alternate trials within this block. This was termed the *stereotype-consistent* block, since the White English faces (in-group) were paired with ‘happy’ cartoon faces and the ethnic

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refugee faces (out-group) with 'sad' cartoon faces. Block 4 was identical to Block 1, except the response assignments were reversed for the concepts. Namely the children were presented with the same stimuli as in Block 1, except they responded to refugee and White faces using the opposite mouse movements (i.e. towards or away). This was important since it allowed the children to learn the response assignments for concepts used in Block 5. Block 5 was called the *stereotype-inconsistent* block, since the target concepts were reversed and combined with the same attribute dimensions as in Block 3. This meant that the target White English faces were paired with 'sad' cartoon faces and the target ethnic refugee faces were paired with 'happy' cartoon faces.

Implicit intergroup bias (i.e. an IAT effect) was shown if the white children recorded quicker response times (RTs) in the stereotype-consistent block compared to the stereotype-inconsistent block. An IAT score was calculated by subtracting the RTs in the stereotype-consistent from the RTs in the stereotype-inconsistent. This meant a higher IAT score indicated more implicit bias. The order in which stereotype-consistent and stereotype-inconsistent blocks were presented was counterbalanced, as were response assignments (i.e. towards and away mouse movements). There were 16 trials involving the presentation of stimuli (i.e. ethnic faces or cartoon faces) within Blocks 1, 2 and 4 (i.e. 8 'happy' and 8 'sad' or 8 ethnic refugee and 8 White English) and 32 trials in the critical stereotype-consistent and stereotype-inconsistent blocks (Blocks 3 and 5). A pilot study was conducted with 10 children aged 6 to 8 years and results suggested the youngest children both understood and could complete the IAT.

Preparation of IAT data for analysis

The data for each trial within each block included response latencies in milliseconds. Subsequent to conducting the analyses, distributions of these measures

were examined, showing the usual impurities for speeded tasks (Greenwald et al., 1998). These constituted a very small number of extremely fast and extremely slow responses. These outlying scores typically indicate, either responses undertaken prior to presentation of the stimulus (i.e. anticipations) or momentary inattention. The responses in the tails of the latency distribution, while lacking theoretical interest, are troublesome as they distort means and inflate variances. There are various means of dealing with these few problematic responses (cf. Barnett & Lewis, 1984). In terms of the present analysis we adopted a standard accommodation procedure used in previous response latency research (e.g. Sroufe, Sonies, West & Wright, 1973). This is the use of children's median response times (RTs) within each trial block. The use of the median RT as a robust estimator is commonplace within psychology since this measure is relatively uninfluenced by spuriously fast or slow RTs (cf. Stuart & Ord, 1987; Rutland et al, 2005).

Manipulation checks

Typicality: The same manipulation check as that used in Study 1 and 2 was administered, but disabled was replaced with refugee (See Appendix A5). A one-sample t-test showed that the mean typicality score in the extended contact ($M = 5.72, SD = .97$) and combined conditions ($M = 3.54, SD = 1.1$) were significantly different from the mid-point of the scale, $t(46) = 5.72, p < .001, t(40) = 3.13, p < .005$ respectively). This finding indicates that within the extended contact and combined conditions the children perceived the refugee story characters as typical of their group as intended.

Out-group homogeneity: As in Study 2, out group homogeneity scores were obtained by re-coding the inter-group attitude scores. The ratings of positive and

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negative words for refugee traits were subjected to reliability analyses and proved reliable (Cronbach's alpha = .9). Given the satisfactory reliabilities, the ratings were collapsed to form a single index of out-group homogeneity by calculating composite scores for each child with a maximum score of 14 and a minimum of 0.

Using a single factor between participants ANOVA, a main effect of condition (4: control, multiple classification, extended contact and combined) on out-group homogeneity was found, $F(3, 181) = 3.24, p < .05$. Post hoc tests showed that out-group homogeneity in the extended contact condition ($M = 6.36, SD = 4.69$) was significantly higher than the control condition ($M = 3.93, SD = 3.67, p < .01$ LSD test), multiple classification training ($M = 4.28, SD = 3.94, p < .05$ LSD test) and combined condition ($M = 4.49, SD = 4.16, p < .05$ LSD test).

Results

The analysis was first conducted with participant gender as a between participants variable. The data was submitted to a 4 (condition: control, extended contact, multiple classification, combined extended contact and multiple classification) x 2 (age group: 6-8 years, 9-11 years) x 2 (identity: low and high) x 2 (gender) between participants ANOVA. There was a significant main effect of gender on out-group intended behaviour, $F(1, 139) = 3.93, p < .05$. However, there were no significant main or interaction effects involving gender for out-group attitude, in-group attitude and in-group intended behaviour or implicit bias. Therefore the analysis was conducted without gender as an independent variable.

Inter-group Attitude

The children's attitude measures were submitted to a 4 (condition: control, extended contact, multiple classification, combined extended contact and multiple classification) x 2 (age group: 6-8 years, 9-11 years) x 2 (identity: low and high) x 2 (target: in-group and out-group) mixed design ANOVA with the latter two variables within participants. There were non-significant effects of age, $F(1, 160) = 3.09, p = .08$, identity, $F(1, 160) = 2.87, p = .09$ and condition, $F(3, 160) = 1.28, p = .29$. There was a significant main effect of target, $F(1, 160) = 6.00, p < .05$. Means show that children were more positive towards the out-group than the in-group (See table 6.1). However the main effect of target was qualified by a significant target x condition interaction, $F(3, 160) = 5.54, p < .005$.

In order to test the hypothesis that the multiple classification, extended contact and combined interventions would lead to more favourable out-group attitudes compared to the control, three orthogonal constructs were constructed. The first (C1) tested extended contact against the control (-1, +1, 0, 0). The second (C2) tested multiple classification against the control (-1, 0, +1, 0). The third tested combined against the control (-1, 0, 0, +1). Contrast 1 showed that out-group attitude in the extended contact condition was significantly more positive than the control condition, $F(1, 160) = 6.80, p < .01$ (See Table 6.1 for means). Contrast 2 showed that out-group attitude in the multiple classification condition was not significantly different from the control condition, $F(1, 160) = .06, p = .81$ (See table 6.1 for means). Contrast 3 revealed that out-group attitudes were significantly more positive in the combined condition compared to the control, $F(1, 160) = 5.26, p < .05$ (see table 6.1 for means).

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Table 6.1: Mean In-group and Out-group Attitude, Intended Behaviour and Affect Scores (Standard Deviations) as a Function of Condition.

	Condition			
	Control	Extended contact	Multiple classification	Combined
Out-group attitude	5.21 (6.81)	10.09 (6.52)	5.36 (6.09)	9.18 (4.78)
In-group attitude	5.54 (5.33)	6.37 (5.27)	7.15 (5.17)	6.84 (4.03)
Out-group intended behaviour	3.66 (1.02)	3.99 (.78)	3.97 (1.06)	3.92 (1.00)
In-group intended behaviour	3.93 (.97)	3.98 (.81)	4.21 (.86)	4.05 (.90)
Out-group affect	3.37 (1.14)	3.72 (1.13)	3.20 (1.45)	3.98 (.90)
In-group affect	4.11 (.9)	4.34 (.87)	4.39 (.92)	4.33 (1.05)

Note Attitude scores could range from a minimum value of -21 to a maximum value of +21. The higher the children's scores the more positive their evaluations of the refugee out-group. Intended behaviour and affect scores range from +1 to +5. The higher the children's scores the more positive their evaluations.

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Out-group attitude score was significantly above zero in the control $t(40) = 4.96, p < .0001$, extended contact, $t(47) = 11.01, p < .0001$, multiple classification training, $t(54) = 6.54, p < .0001$ and the combined conditions $t(41) = 11.7, p < .0001$. These findings indicate that in all conditions the children showed significantly positive attitudes towards refugees, but this was especially pronounced in the two conditions involving extended contact.

Intended behaviour

Intended behaviour scores were submitted to a 4 (condition: control, extended contact, multiple classification, combined extended contact and multiple classification) x 2 (age group: 6-8 years, 9-11 years) x 2 (identity: low and high) x 2 (target: in-group and out-group) mixed design ANOVA with the latter variable being within participants. Analysis showed a non-significant main effect of condition, $F(3, 165) = 2.41, p = .07$ and identity, $F(1, 165) = 1.23, p = .27$. There was a significant main effect of target, $F(1, 165) = 7.11, p < .01$. Means (See table 6.1) suggest that children were more positive towards the in-group than the out-group.

Table 6.2: Mean In-group and Out-group Intended Behaviour Scores (Standard Deviations) as a Function of Age and Condition.

Age group	Condition				
	Target	Control	Extended contact	Multiple classification	Combined
Younger	Ingroup	4.3 (.67)	4.22 (.76)	4.41 (.89)	3.91 (1.05)
	Outgroup	4.08 (.93)	4.31 (.76)	4.05 (1.21)	4.01 (1.1)
Older	Ingroup	3.5 (1.1)	3.77 (.82)	4.03 (.78)	4.14 (.68)
	Outgroup	3.18 (.94)	3.71 (.68)	3.88 (.91)	3.86 (.81)

Note Intended behaviour scores could range from a minimum value of +1 and a maximum value of +5. The higher the children's scores the more positive their evaluations of the group.

Analysis showed a main effect of age, $F(1, 165) = 9.18, p < .005$. Inspection of means shows that younger children were more positive to both the in-group and the out-group than older children were (See table 6.1). The effect of age was qualified by a significant age x condition interaction, $F(3, 165) = 2.85, p < .05$. As in the analysis of attitude, examination of this interaction focussed on the out-group, and planned contrasts (C1, C2 and C 3) were used to compare the control condition with the multiple

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classification, extended contact and combined conditions within the two age groups. For younger children, C1, C2 and C3 were non-significant showing that extended contact, multiple classification and combined conditions were not significantly different from the control, $F(1, 165) = .07, p = .79$, $F(1, 165) = .63, p = .42$ and $F(1, 165) = .62, p = .43$ respectively. In the older age group C1, C2 and C3 were significant, $F(1, 165) = 3.74, p = .05$, $F(1, 165) = 7.89, p < .01$ and $F(1, 165) = 5.68, p < .05$ respectively. The means suggest that out-group intended behaviour is significantly higher in the extended contact, multiple classification and combined conditions, compared to the control (See Table 6.2).

Analyses also showed a marginal interaction between condition and identity, $F(3, 165) = 2.45, p = .065$. As in the above analysis, examination of this interaction focussed on the out-group, and planned contrasts (C1, C2 and C3) were used to compare the control condition with the multiple classification, extended contact and combined conditions within low and high identifiers. For low identifiers, C1 and C3 were non-significant, $F(1, 165) = .05, p = .84$ and $F(1, 165) = .26, p = .62$. C2 was significant, $F(1, 165) = 5.73, p < .05$. This suggests for low identifiers, the extended contact and combined conditions were not significantly different from the control but the multiple classification condition was significantly higher than the control. For high identifiers, C1 was marginally significant, $F(1, 165) = 3.55, p = .06$, C3 was significant, $F(1, 165) = 4.39, p < .05$ and C2 was non-significant, $F(1, 165) = 1.82, p = .18$. Means show that for high identifiers in the extended contact and combined conditions out-group intended behaviour scores were higher than the control group, but multiple classification was not significantly higher than the control (See table 6.3).

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One-way t-tests showed that out-group intended behaviour scores were significantly different from the mid-point of the scale in the control condition, $t(28) = 7.93, p < .001$, in the extended contact condition, $t(20) = 11.62, p < .001$ and in the multiple classification training condition, $t(20) = 2.68, p < .05$. These findings indicate that in each condition the children showed significantly positive intended behaviour towards the out-group, but that the effect of the multiple classification was to slightly worsen the behavioural orientation to the out-group relative to the other two conditions (See table 6.3 for means).

Table 6.3: Mean Out-group Intended Behaviour Scores (Standard Deviations) as a Function of Identity and Condition.

	Condition			
	Control	Extended contact	Multiple classification	Combined
High	3.59	4.31	3.88	4.20
identity	(.97)	(.71)	(1.16)	(.91)
Low	3.70	3.73	4.06	3.53
identity	(1.07)	(.76)	(.96)	(1.03)

Note Intended behaviour scores could range from a minimum value of +1 and a maximum value of +5. The higher the children's scores the more positive their evaluations of the refugee out-group.

Out-group intended behaviour scores in low and high identifiers were examined to see whether they were significantly different from the midpoint (3). Low identifier's out-

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group intended behaviour scores were significantly higher than the midpoint in the control ($t(31) = 9.6, p < .005$), extended contact ($t(21) = 4.34, p < .001$) and multiple classification condition ($t(25) = 5.6, p < .001$) and were marginally higher than the midpoint in the combined condition ($t(15) = 2.07, p = .06$). For high identifiers, out-group intended behaviour was significantly higher than the midpoint in the control ($t(13) = 2.28, p < .05$), extended contact ($t(21) = 8.62, p < .001$), multiple classification ($t(24) = 3.79, p < .005$) and combined condition ($t(25) = 6.75, p < .001$). This is evident in Table 6.3. This indicates that in all conditions children held significantly positive out-group intended behaviour scores.

Affect

Affect were submitted to the same 4 (condition: control, extended contact, multiple classification, combined) x 2 (age group: 6-8 years, 9-11 years) x 2 (identity: low and high) x target (in- and out-group) mixed design ANOVA. Analysis showed a non-significant main effect of condition, $F(3, 172) = 2.16, p = .09$ and age, $F(1, 172) = .19, p = .66$. There was a significant main effect of identity, $F(1, 172) = 11.98, p < .001$. Means showed that high identifiers held more positive intended behaviour scores ($M = 4.17, SD = .77$) than low identifiers ($M = 3.7, SD = .76$). Analyses also showed a significant main effect of target, $F(1, 172) = 35.04, p < .0001$ and means show that children were more positive towards the in-group than the out-group (See table 6.1). The main effect of target was qualified by a target by condition interaction, $F(3, 172) = 2.6, p = .05$. As in previous analyses the effect of condition on out-group affect was examined using orthogonal contrasts C1, C2 and C3. Analyses showed that C1, C2 and C3 were non-significant, $F(1, 172) = .86, p = .35$, $F(1, 172) = 2.06, p = .16$ and $F(1, 172) = 2.67, p$

= .1 respectively. This suggests that none of the intervention conditions were significantly different from the control. Means also show that the in-group affect did not differ from the control (See Table 6.1 for means).

Mediators

Multiple Classification Skill

The children's multiple classification skill scores were submitted to a 4 (condition: control, extended contact, multiple classification; combined) x 2 (age group: 6-8, 9-11) between participants ANOVA. This analysis showed, as expected, a significant main effect of Age group, $F(1, 180) = 7.02, p < .01$. Multiple classification skill scores were significantly higher in the older age group ($M=2.47, SD=.86$) than the younger age group ($M=2.04, SD=1.16$). There was also a main effect of Condition $F(3, 180) = 5.24, p < .01$. Post hoc analysis showed that multiple classification skill scores in the multiple classification condition ($M=2.57, SD=.73$) were significantly higher than in the control condition ($M=1.77, SD=1.31, LSD \text{ test } p < .001$). Multiple classification skill scores were also significantly higher in the combined condition ($M=2.46, SD=1.02$) compared to the control condition (LSD test $p < .001$). However, there was no significant difference between the extended contact condition ($M=2.19, SD=.96$) and any other condition. These findings indicate that children's multiple classification skills were significantly improved (relative to the control) when they experienced some multiple classification skills training.

Further analysis was conducted to examine whether there was a ceiling effect in multiple classification skills amongst older children. In this analysis, a distinction was made between children who are 'classifiers' and 'non-classifiers' (Bigler & Liben, 1992).

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This dichotomy was created by separating those children with no classification skills (i.e. scored 0) from children with partial or complete classification skills (i.e. scores 1 to 3). In the younger age group there was a significant difference in the number of 'classifiers' and 'non-classifiers' across condition ($\chi^2(3) = 13.94, p < .01$). In all intervention conditions there was significantly more 'classifiers' than 'non-classifiers': multiple classification ($n=20$ and 2), extended contact ($n = 21$ and 3), combined ($n=20$ and 3, respectively). In contrast, in the control condition there were equivalent numbers of 'classifiers' and 'non-classifiers' ($n=11$ and 12 respectively). Amongst older children there was no significant difference in number of 'classifiers' and 'non-classifiers' according to condition ($\chi^2(3) = 5.02, p = .17$). In all conditions there were significantly more 'classifiers' than 'non-classifiers': multiple classification ($n=29$ and 0), extended contact ($n = 19$ and 3), combined ($n=17$ and 1) and control ($n=17$ and 3 respectively). The high number of classifiers in the control condition of the older age group suggests that there may have been a ceiling effect in older children as it was not possible to improve their multiple classification ability further. In younger children, on the other hand, there were equal numbers of classifiers and non-classifiers, suggesting that younger children could benefit from multiple classification training in terms of improving this ability.

Although multiple classification skills were improved in conditions in which children received multiple classification training, multiple classification skills did not mediate the effect of Condition on any dependent variable. Regression analyses showed that multiple classification skill was not a significant predictor of out-group attitude, out-group intended behavior, in-group attitude and in-group intended behavior ($\beta = -.11, p = .19, \beta = -.12, p = .12, \beta = -.01, p = .85, \beta = 1.64, p = .1$ respectively). This was true

amongst both younger children ($\beta = .12, p = .28, \beta = -.19, p = .07, \beta = .15, p = .16, \beta = -.06, p = .59$ respectively) and older children ($\beta = -.11, p = .34, \beta = .14, p = .22, \beta = .20, p = .07, \beta = .15, p = .18$ respectively).

Norm Measure

There were two measures of classroom norm: teacher's norm and child norm, the former measured children's perceptions of how teachers feel about the exclusion of refugees, and the latter measured children's perceptions of how *other children* feel about the exclusion of refugees.

Perceived teacher's norm: The children's perceived teacher norm scores were first analysed as a dependent variable and were submitted to a same 4 (condition: control, extended contact, multiple classification, combined) x 2 (age group: 6-8 years, 9-11 years) x 2 (identity: low and high) between participants ANOVA. Analyses showed a significant main effect of age on teacher's norms, $F(1, 173) = 4, p < .05$. Teacher norm scores were significantly higher in the younger age group ($M = 4.66, SD = .82$) than the older age group ($M = 4.42, SD = .98$). There was no significant main effect of condition, $F(3, 173) = 1.67, p = .18$ or identity, $F(1, 173) = 1.27, p = .26$.

Teacher's Norm as Mediator: Given the non-significant effect of condition on teacher's norm, it can be assumed that teacher's norm did not mediate the significant main effect of condition on the main dependent variables. Regression analysis did reveal that, across all conditions, teacher's norm significantly predicted out-group attitude ($\beta = .22, p < .01, t = 3.03$) and out-group intended behaviour ($\beta = .19, p < .05, t = 2.56$).

Perceived children norm: The children's perceived children norm scores were submitted to a 4 (condition: control, extended contact, multiple classification, combined)

x 2 (age group: 6-8 years, 9-11 years) x 2 (identity: low and high) between participants ANOVA. Analyses showed a significant main effect of age on perceived children's norms, $F(1, 189) = 7.24, p < .01$. Perceived children norm scores were significantly higher in the younger age group ($M=3.83, SD=1.31$) than the older age group ($M=3.34, SD=1.11$). There was no significant main effect of condition, $F(3, 173) = .2, p = .89$ or identity, $F(1, 173) = .3, p = .59$.

Children's Norm as Mediator: Given the non-significant effect of condition on children's norm, it can be assumed that children's norm did not mediate the significant main effect of condition on the main dependent variables. Regression analysis did reveal that children's norm significantly predicted out-group intended behaviour ($\beta=.2, p < .01, t=2.78$) but did not predict out-group attitude ($\beta = .03, p = .66, t = .44$).

Inclusion of Other in the Self

Inclusion of other in the self (IOS) composite scores were submitted to a 2 (age group: 6-8 years, 9-11 years) x 2 (identity: low and high) between participants ANOVA. This measure was administered to those in the extended contact and combined conditions only and therefore condition was not a factor in this analysis. There was no significant main effect of age ($F(1, 78) = .36, p = .55$). However, there was a significant main effect of identity on IOS $F(1, 78) = 3.82, p = .05$. Inspection of means showed that high identifiers had significantly higher IOS scores ($M = 1.7, SD = .38$) than low identifiers ($M = 1.53, SD = .33$).

In a further analysis, multiple regressions examined whether dependent variables could be predicted by the inclusion of other in the self composite measure (this analysis includes extended contact and combined conditions only). IOS did not predict out-group

attitude ($\beta = .15, p = .18, t = 1.35$) but was significant predictor of out-group intended behaviour ($\beta = .25, p < .05, t = 2.31$).

Implicit Attitude Measure

The children's median response times on the *stereotype-consistent* and *stereotype-inconsistent* blocks of the IAT were submitted to a 4 (condition: control, extended contact, multiple classification and combined) x 2 (age: young and old) x 2 (English identity: low and high) x 2 (IAT block: stereotype-consistent and stereotype-inconsistent), mixed design ANOVA with the last factor being within-participants. Analyses showed a significant main effect for age, $F(1, 152) = 13.61, p < .001$ and a main effect for IAT block, $F(1, 152) = 41.94, p < .001$. There was a non-significant effect of condition ($F(3, 152) = .48, p = .7$) and identity ($F(3, 152) = .49, p = .49$). Inspection of means showed that the children's responses gradually became quicker with age: younger age group ($M = 2032.91$ ms, $SD = 738.24$), older age group ($M = 1577.02$ ms, $SD = 536.03$). The main effect for IAT block revealed the children's responses were significantly quicker on the stereotype-consistent block ($M = 1546.91$ ms, $SD = 554.81$) compared to the stereotype-inconsistent block ($M = 1823.96$ ms, $SD = 690.2$). Thus, children in all age groups were showing evidence of implicit intergroup bias.

Discussion

In Study 3, the extended contact effect demonstrated in Study 1 and 2 was replicated with a larger sample, across a wider age range and with a different stigmatized group, demonstrating the robustness of the extended contact effect. Study 3 also provides evidence relating to the underlying mechanisms of extended contact, such as 'inclusion of

other in self' and norms. Study 3 has implications for the design of future prejudice-reduction interventions and also informs psychological theory regarding inter-group contact theory and extended contact.

Contrary to expectations, the combined intervention did not induce the most change in children's out-group attitudes. However, it is clear that the conditions involving extended contact were the most effective prejudice-reduction interventions. The extended contact intervention implemented in the present research was 'inter-group' and emphasised typicality and salience in accordance with Hewstone & Brown's (1986) inter-group contact model. Along with Studies 1 and 2, this provided evidence that inter-group extended contact and inter-group contact in general, is most effective and leads to the greatest level of generalisation to the whole out-group when the 'inter-group' model of contact is employed.

The effect of extended contact on out-group attitudes was the same in younger and older children. It has been argued that interventions should be tailored to suit participants' age group (Aboud & Levy, 2000, Bigler, 1999; See Chapter 1 under subheading 'Socio-cognitive developmental theory' and Chapter 3 under subheading 'Cognitive interventions: Multiple classification training'). The findings of Study 3 suggest that extended contact could be a useful prejudice-reduction tool for use with children across a wide age range.

As with Studies 2 and 3, the findings showed that the children's attitudes and intended behaviour towards their in-group did not become more negative following the intervention. Thus, as intended, this intervention had quite specific effects on *out-group* attitudes, meeting the second requirement for effective prejudice reduction interventions.

Mediators and moderators of Extended Contact

Analyses provided partial support for hypothesis 3. 'Inclusion of other in self' was a significant predictor of out-group attitude. However, it was not possible to test for full mediation of extended contact by 'inclusion of other in self' as only children who received the extended contact intervention completed the measure of IOS, meaning there was no control group. In order to complete a full mediational analysis, in Study 4 children in all conditions completed measures of IOS.

Contrary to expectations, extended contact was not mediated by perceived norms (hypothesis 3) (Wright et al, 1997, Brown & Hewstone, 2005). However, this may be an artifact of the norm measure used. In Study 3, children's views of exclusion of refugees in the classroom were used as an indication of exclusion norms. However, it is possible that these norms were particular to the classroom context, where children may be subject to differing norms because of authority figures present in the classroom, such as the teacher. It may be that by measuring general classroom norms for exclusion, this led to a ceiling effect, meaning any mediation of extended contact by perceived norm could not be detected. The possible importance of norms for the extended contact effect was also highlighted in the moderating effect of in-group identification. It was found that high identifiers in the extended contact and the combined conditions has significantly more positive out-group intended behaviour scores, compared to low identifiers. Thus the interventions involving extended contact were most effective among high identifiers. Research has shown that adherence to perceived group norms is moderated by in-group identification (See Chapter 3 under subheading 'Extended contact'). Therefore, if extended contact does indeed rely on changing perceived norms for inter-group relations, one would predict high identifiers to be more affected by extended contact. In order to

further investigate the importance of perceived group norms for extended contact, in Study 4, perceived norm for inter-group behaviour out-with the classroom was measured.

Surprisingly the findings of Study 2 were replicated as the effect of the 'refined' multiple classification skills training intervention on the children's out-group attitudes and intended behaviour was very limited. Indeed an effect of this intervention was found for the intended behaviour measure only and this effect was limited to low identifiers. This result cannot be explained by the fact the intervention failed to improve the children's multiple classification skills, since the multiple classification skills measure indicated that it did. In addition, the mediation analysis showed that multiple classifications skills did not predict children's out-group attitudes and intended behaviour. Thus the multiple classification skills training intervention did improve the children's multiple classification skills, but this was not related to any significant change in the children's out-group attitudes or intended behaviour. Furthermore, as in Study 2, the manipulation check revealed that following multiple classification, the out-group were not seen as more variable. This contradicts previous findings that report a correlation between multiple classification skills and out-group homogeneity (Bigler & Liben, 1992).

One possible explanation for these contradictory results lies in the dependent variables. Study 3 used the same multiple classification skills training intervention as Bigler & Liben (1992), since children were trained to classify using the multiple dimension of occupations, which were stereotype relevant to the refugee and non-refugee groups. However, a fundamental difference between the present studies and the Bigler & Liben (1992) study was that they examined the effect of training multiple classification skills on out-group *stereotyping*. In contrast both Study 2 and Study 3 considered the

influence of training on *intergroup attitudes*. It may be that the effects observed by Bigler & Liben (1992) resulted from a change in the children's stereotype knowledge or willingness to stereotype. Conceivably, multiple classification skill training changes the children's stereotype knowledge (i.e. they think that both group can now fill either occupation), but does not effect their personal, more affective orientated, intergroup attitudes. Further research is required, which includes both measures of stereotyping and intergroup attitudes, to test this proposition.

It was predicted that the combined intervention, which involved both extended contact and multiple classification skills training would be the most successful condition. Given the non-significant effect of multiple classification skills training on out-group attitude and intended behaviour it was not surprising that the combined condition was not more effective than extended contact alone.

Interestingly, extended contact had a more limited effect on intended behaviour which concurs with previous findings that suggest that out-group behaviour is substantially more difficult to change in a limited period of time (Katz & Zalk, 1978; See Chapter 2 under subheading 'Additional measures of out-group orientation'). This underlines the importance of including multiple measures when evaluating prejudice reduction interventions in order to obtain a more complete evaluation of the intervention effects.

Implicit Bias

Study 3 extends the findings of Study 2 by providing evidence of implicit bias in children using a different implicit bias measure (the IAT) and with a different out-group. However, as in Studies 1 and 2, hypothesis 5 was not supported and implicit bias was not

reduced following prejudice-reduction interventions in either the young or older age group. Thus, Study 3 corroborates the findings in Studies 1 and 2 and strengthens the earlier argument that the divergence between explicit and implicit bias measures is a result of greater difficulty in changing implicit attitudes (Devine, 1989). Following Devine's (1989) argument, it appears the interventions used in this study were strong enough to cause changes in explicit attitude, but not implicit inter-group bias. In Study 4, it was attempted to replicate this finding. Study 4 did not include the multiple classification skills intervention, which was the least effective intervention at changing explicit out-group attitudes. In Study 4 extended contact techniques only were used. The effect of extended contact on implicit bias was tested by contrasting implicit bias in the control group with the three extended contact conditions. It was hoped this would reveal any effect of extended contact prejudice reduction interventions on implicit bias.

Studies 1, 2 and 3 have focused on the 'inter-group' model of contact. However, there are a number of other theories concerning inter-group contact which have implications for extended contact interventions, such as common in-group identity (Gaertner et al, 1989) and dual identity (Gaertner & Dovidio, 2000; Gonzalez & Brown, 2003), the latter being an amalgam of Gaertner et al.'s (1989) common in-group identity model and Hewstone and Brown's (1986) 'inter-group' model (See Chapter 3 under subheading 'Models of intergroup contact'). There has been little empirical research examining the applicability of these models to inter-group contact in children in general and to *extended* contact with children in particular. Consequently, extended contact interventions based on these inter-group theories were examined in Study 4.

Conclusions

The findings of Study 3 suggest that theoretically derived interventions could be introduced successfully into an educational setting and act as an effective prejudice-reduction intervention tool. Study 3 demonstrates the robustness of the extended contact effect by replicating the findings of Study 2 in a larger sample, over a broader age range and with a different out-group, refugees. Study 3 provides further evidence to support the use of extended contact as a prejudice-reduction tool, but also points to the benefits of basing prejudice-reduction interventions on the extended contact hypothesis rather than multiple classification training. The latter form of intervention, though, may be effective at changing children's stereotyping of stigmatized groups. Study 3 demonstrates that effective prejudice-reduction interventions can be derived from psychological theories of prejudice, thus supporting the supposition that collaboration between psychologists and practitioners could lead to improved prejudice-reduction interventions (Aboud & Levy, 2000; Bigler, 1999; Levy & Bigler, 2004; Oskamp, 2000; Stephan, 1999; Vrij & Smith, 1999).

*Chapter 7: Changing Children's Attitudes Towards Refugees: Testing Different Models
of Extended Contact.*

Summary

This chapter presents the fourth empirical study within the thesis. This study evaluated extended contact interventions in children aged 6 to 11, which aimed to change children's intergroup attitudes and behaviour towards refugees. In addition, the study ($N = 253$) tested three models of extended contact, namely Dual Identity, Common In-group Identity and De-categorisation. Furthermore, the mediating effects of norms and 'inclusion of other in the self' (IOS), and the moderating effects of in-group identification and age were examined. Results showed that out-group attitudes were significantly more positive in the extended contact conditions, compared to the control and this was mediated by 'inclusion of other in self'. The dual identity intervention was the most effective extended contact model at improving out-group attitudes. The effect of condition on out-group intended behaviour was moderated by in-group identification. The interventions had no effect on implicit bias. These findings have practical and theoretical implications: In terms of designing more effective prejudice-reduction interventions, the research has identified a number of characteristics of extended contact that will most likely lead to a change in children's out-group attitudes. This research also advances psychological theories of prejudice by providing evidence for the Dual Identity model of inter-group contact in the context of extended contact and with children as young as 6 years old.

Introduction

In Study 4 the mutual benefits of collaboration between psychologists and educators are again explored. In this study it was attempted to design more effective prejudice-reduction interventions and advance psychological theories of prejudice, specifically the extended contact hypothesis (Wright et al, 1997) and the question of generalisation (Brown & Hewstone, 2005). Studies 1, 2 and 3 have provided evidence supporting the use of extended contact as an intervention tool, and also the moderators and mediators of the extended contact effect were explored. Consequently, the first aim of Study 4 was to build on studies one to three by replicating their findings and overcoming their limitations in order to further investigate the underlying mechanisms of extended contact and the conditions under which it is most effective. The second aim of Study 4 was to re-visit the question of generalisation which was first tackled in Study 1 (See Chapter 3 under subheading 'Models of intergroup contact'). In Study 1, extended contact was used to test two models of extended contact that each have different predictions relating to generalization of the inter-group contact effect, namely 'de-categorisation' and 'intergroup' models of inter-group contact. In Study 4, the question of 'generalisation' was investigated once more and two further models of inter-group contact, common in-group identity and dual identity were tested in addition to the 'de-categorisation' model (See Chapter 3 under subheading 'Models of inter-group contact'). The aims of Study 4 were, then, both theoretical and practical, as the findings would advance psychological theories of inter-group contact and also contribute to the design of prejudice-reduction interventions for children.

Based on the findings of Studies 1 to 3, it was predicted that the extended contact effect would be shown and children would hold more positive out-group attitudes

following the intervention. In addition, given previous research findings (See Chapter 3 under subheading 'Models of intergroup contact') it could be predicted that the dual identity model of extended contact will be the most effective in changing children's out-group attitudes. Following the results of Studies 2 and 3 it was expected that the effect of condition on out-group intended behaviour would be more limited.

The theoretical models, 'dual identity' and 'common in-group identity' tested in the current study have not previously been applied to children therefore any developmental predictions based on these theories are unclear. However, there is reason to believe that these approaches may have a developmental component. Both the 'dual identity' and the 'common in-group identity' approach would require children to hold multiple and abstract identities, an ability which does not appear until children are approximately 7 to 8 years old (See Chapter 3 under subheading 'Models of intergroup contact' and Chapter 1 under subheading 'Socio-cognitive developmental theory'). Therefore, it is conceivable that only older children will develop more positive attitudes from the interventions based on the Dual Identity and Common In-group Identity models, since these interventions require children to consider multiple and higher-order abstract categories. In order to test the moderating effect of age in the present study two age groups were examined: 6 to 8 year olds and 9 to 11 year olds. It was predicted that the Dual Identity and Common In-group Identity models would be more effective with children in the older age group, compared to the younger age group.

As in Study 3, following the intervention, children's out- and in-group attitudes, intended behaviour and affect were measured. Possible moderators and mediators of extended contact, in-group identification and inclusion of the other in the self' (IOS), and norms were also examined. One limitation of Study 3 was that IOS

could not be tested as a mediator of the effect of condition because all children did not complete the IOS measure. In Study 4, children in all conditions, including the control group completed this measure thus it was possible to test IOS as a mediator. One of the limitations of Study 3 was that the norm measure was confined to the classroom environment: children were asked about reactions to exclusion in the classroom. It may be that general classroom norms for inclusion led to a ceiling effect, meaning any mediation of extended contact by perceived norm could not be detected. Therefore, a measure of 'park' norms was included to measure reactions to exclusion away from the classroom and the influence of school authority figures such as teachers. It was thought this norm may better reflect children's personal norms for exclusion. Both classroom and park norms were investigated as possible mediators of the effect of condition on out-group attitude and intended behaviour.

The effectiveness of the dual identity model may also depend on the degree of sub-group identification. A dual identity intervention might be most useful amongst low identifiers since it should promote the effectiveness of extended contact by boosting the relatively low level of subgroup salience amongst this group (See Chapter 3 under subheading 'Models of inter-group contact'). Therefore, the children's degree of identification with the sub-group (English) was measured in the present study. It was expected that the Dual Identity model of extended contact would be particularly effective in low in-group identifiers.

As in Study 3, in Study 4 implicit bias was also measured. Extended contact and multiple classification interventions used in studies 1 to 3 had no effect on implicit bias, despite changing explicit attitudes in case of the former technique. Thus, in Study 4 the effect of two additional models of extended contact, dual identity and common in-

group identity, on implicit bias was tested. Furthermore, in Study 4 the three interventions tested were all based on extended contact, which has been shown to cause the most change in explicit attitude. It was expected that by comparing the three intervention conditions to the control, a main effect of condition will be evident and implicit bias would be reduced following extended contact interventions.

Design Overview and Hypotheses

As in previous studies, the intervention consisted of reading several stories to children that portrayed friendships between majority and refugee children. The text within the story and post-story discussions were arranged so as to meet the requirements for optimal inter-group contact laid out in each of the theories of inter-group contact under investigation. Therefore, in some of these stories the category memberships of the protagonists were little emphasized and their individual identities were stressed (De-categorisation); in others the super-ordinate (school) category membership was a recurring theme (Common Ingroup Identity); in others, the subgroup identities of the protagonists as host majority members and refugees were salient whilst also underlining their common school identity (Dual Identity). There was also a control group of children who were not exposed to any intervention. At the conclusion of the intervention, the children's intergroup attitudes, intended behaviors and in-group (subgroup) identification were assessed.

Hypotheses

The specific hypotheses within the present study were:

- (1) Children in the three extended contact conditions will demonstrate more positive attitudes towards refugees than those in the control condition and this will be most pronounced in the dual identity condition.
- (2) The effect of condition on out-group intended behaviour will be more limited than the effect on out-group attitude.
- (3) The Dual Identity and Common In-group Identity condition will be more effective in older children than younger.
- (4) The effect of extended contact will be mediated by inclusion of 'other in the self' and perceived in-group norms.
- (5) The effect of extended contact will be moderated by in-group identification.
- (6) There will be main effect of condition on implicit attitudes in the older age group, but not the younger.

Method

Participants

253 white British children (166 male, 137 girls) from primary schools were tested. The age of children ranged from 5 years 0 months to 11 years and 11 months and their mean age was 8 years and 9 months, $SD = 21.09$ months. There were two age groups: 5-8 years ($n = 124$) and 9-11 years ($n = 129$). The mean age in the younger age group was 7 years and 2 months ($SD = 5.96$ months) and the mean age of the older age group was 10 years and 6 months ($SD = 7.12$ months). Approximately equal numbers of children in

each age group were randomly assigned to each intervention condition: control ($n = 54$), de-categorisation ($n = 70$), common in-group identity ($n = 68$) and Dual identity ($n = 69$). In order to create a truly random sample, rather than assigning conditions to whole school classes, children in each class were individually and randomly assigned to any of the four conditions.

Design

The study used a between-participants design. A 4 (intervention condition: control, dual identity, de-categorisation, common in-group identity and dual identity) x 2 (age group, 5-8 and 9-11 years) x 2 (English identity: high and low).

Procedure

As in Study 3 the term 'refugee' was initially explained using educational materials in all conditions. Children were shown photographs of refugees and a map of the world in which several countries of origin of refugees in Britain were highlighted. The children also discussed reasons why people may leave their country and come to England.

There were 3 types of extended contact intervention, based on Common In-group Identity, Dual Identity and De-categorisation theories of intergroup contact. In the control condition the children did not receive any intervention. As in previous studies, the extended contact interventions each involved reading stories to the children, which involved in-group members who had close friendships with out-group members (i.e. refugees). Text in the story was varied in each extended contact condition in line with

each theory of inter-group contact. After reading the story, and still in their small groups, children took part in a group discussion of the story. This post-story discussion in each condition was also varied according to the theories of inter-group contact. The text within the story emphasized individual characteristics of the story characters and also group memberships, depending on the extended contact condition. See Appendix D11 for example story transcripts of each condition,

De-categorisation intervention: In these stories emphasis was placed on the individual preferences and qualities of the refugee characters (e.g. they are good at football, like animals, enjoy playing computer games). The children were asked to remember individual characteristics of the children within the stories. These were discussed further in the post-story discussion. The category membership was referred to only once at the beginning of the story and was not referred to during post-story discussion.

Common in-group identity intervention: In this condition, the story text stressed the common in-group identity (i.e. school). The stories purported to take place in the participant's school. In addition, the names of teachers and headteachers in the story were the same names as the child's own teacher and headteacher. The post-story discussion was used to emphasize the common in-group identity shared by the story characters and the child. Additional similarities shared between story characters and the child was explored in the post-story discussion. Sub-category membership, English and Refugee, was mentioned only once at the start of the story.

Dual identity intervention: This technique was identical to that used in the Common In-group Identity intervention. However, as well as emphasizing the common in-group identity (i.e. school), the characters sub-group memberships (i.e. refugee and

English) were also emphasized. The typicality of the refugee characters regards their own sub-group was also stressed throughout the stories and in the group discussions. In accordance with the category salience model (Hewstone & Brown, 1986; Brown & Hewstone, 2005; Brown, Vivian & Hewstone, 1999), it was continually stated that the children in the stories were typical of their sub-group. An example section of the transcripts from each condition is shown in Appendix D11.

Dependent measures

The interview took place in two parts; each lasting approximately 15 minutes and the administration of materials was counter-balanced. The interview took place approximately one week after the final intervention session. Before the explicit and implicit measures were administered, children were told they would be asked to rate the in- and the out-groups so as to make the inter-group context salient (Abrams et al, 2004). For the majority of the children, the interventions and interview were conducted by different researchers.

Explicit Intergroup Attitude Measure

This measure was used to derive separate indices of in-group attitude and out-group attitude and was identical to that used in Study 3. As in the previous studies, the ratings for English and refugee traits were subjected to separate reliability analyses and all proved reliable (Cronbach's alpha for English positive and negative traits = .87 and .85, respectively; and for refugee positive and negative traits = .88 and .85, respectively). Given the satisfactory reliabilities, the ratings were collapsed to form single indices by calculating composite means resulting in four measures for each child – English positive, English negative, refugee positive and refugee negative. These scores ranged from 7 to

28. As in Study 2 and 3, from these scores in-group and out-group attitude measures were obtained. Attitude scores ranged from -21 to +21 and higher values indicate more positivity and less negativity towards that group.

Intended behaviour measure

This measure was identical to that used in Study 3. The ratings for refugee and English intended behaviour items were subjected to separate reliability analyses and all proved reliable (Cronbach's alpha for English = .89; for refugees = .9). Given the satisfactory reliabilities, the ratings were collapsed to form single indices by calculating composite means resulting in three measures of intended behaviour for each child.

English and Refugee Affect

Refugee affect and English affect were measured as in Study 3. This gave refugee and English affect scores with a minimum of 1 and a maximum of 5.

English identity measure

This was identical to that used in Study 3. As in the previous study, the children's responses to these 4 questions were subjected to reliability analysis and proved reliable (Cronbach's alpha for = .77). Given this satisfactory reliability a composite English identity score was obtained for each child by collapsing the 4 ratings to form a single index. A median split (median = 4.5) was performed on the children's composite English identity scores to create two groups, high and low identifiers.

Mediators

Classroom Norms: The measure of classroom norms was identical to that used in Study 3, providing two measures of classroom norm: perceived teacher norm and perceived children norm. In addition, a measure of norms out-with school was taken. This measure was 'park' norms, so called because children were asked questions relating to their feelings if they witnessed exclusion of a refugee child out-with the school context, in the park. Children were read a short vignette about a number of children playing ball in a park, and refusing to let a refugee join in the game. Children were asked: 'how would you feel if you saw this happen?' And 'how would other children feel if they saw this happen'. The former gives a measure of personal norm (personal park norm) and the latter is a measure of the perceived norm held by others (other park norm). Children responded on a 5-point smiley faces as in the school norm measure, and scores were reversed so that higher scores indicate greater unhappiness with the exclusion of the refugee.

Inclusion of 'other in the self' (IOS): This measure identical to that administered in Study 3.

Implicit Intergroup Bias Measure

The Implicit Association Test (IAT) was used as in Study 3.

Manipulation Checks

Typicality: The manipulation check was identical to that used in Study 3. One-sample t-tests were conducted in order to examine whether the perceived typicality of the refugee story characters were significantly higher than the mid-point, 3, in each condition. In the dual condition, refugee typicality ($M=3.4$, $SD=1.21$) was significantly higher than the midpoint, $t(67) = 2.7$, $p < .01$. In the de-categorisation and common in-group condition, refugee typicality ($M=3.04$, $SD=1.18$ and $M=3.26$, $SD=1.3$ respectively) was not significantly higher than the midpoint.

Out-group homogeneity: This measure was identical to that in Study 3. Using a single factor between participants ANOVA, a non-significant main effect of condition was found, $F(3,234) = .34$, $p = .79$.

Results

The analysis was first conducted with participant gender as a between participants variable. The data was submitted to a 4 (condition: control, dual identity, common in-group identity, de-categorisation) x 2 (age: low and high) x 2 (English identity: median split, high and low, median = 4.49) x 2 (gender) X 2 (target: in- and out-group) ANOVA with the latter variable being within-participants. There was a significant main effect of gender on out-group intended behaviour, $F(1, 205) = 5.31$, $p < .05$. However, there were no significant main or interaction effects involving gender for out-group attitude, in-group attitude and in-group intended behaviour. Therefore, the analysis was conducted without gender as an independent variable.

Inter-group Attitude

The children's out-group attitude scores were submitted to a 4 (condition: control, dual identity, common in-group identity, de-categorisation) x 2 (age: low and high) x 2 (English identity: high and low) x 2 (target: in- and out-group) mixed design ANOVA with the latter two variables being within-participants. There was a significant main effect of condition, $F(1, 216) = 3.68, p < .05$. As in previous studies, a priori contrasts were used to test the effects of condition on out-group attitude. To test hypothesis 1, two orthogonal contrasts were constructed. The first (C1) tested control against the three extended contact conditions (weights -3, +1, +1, +1). The second (C2) tested the Dual Identity condition against the other two extended contact conditions (weights: 0, -2, +1, +1). In support of hypothesis 1, C1 revealed the out-group attitude in the extended contact conditions was significantly higher than in control, $F(1, 216) = 7.49, p < .01$. In addition, and in support of hypothesis 2, C2 revealed that out-group attitudes in the Dual Identity condition were more positive than in the Common In-group Identity and De-categorisation conditions, $F(1, 216) = 6.95, p < .01$ (See Table 7.1).

Analysis also showed a non-significant main effect of target, $F(1, 216) = .92, p = .34$ suggesting across conditions there was no difference in in-group and out-group attitudes. There was a non-significant main effect of identity, $F(1, 216) = 1.80, p = .18$. There was a main effect of age, $F(1, 216) = 33.4, p < .0001$. Examination of means showed that younger children held more positive attitudes across in- and out-group ($M = 9.16, SD = 6.74$) than older children ($M = 4.78, SD = 3.96$). Further analysis showed that out-group attitudes were significantly above the midpoint in the dual identity $t(66) = 12.3, p < .001$, de-categorisation ($t(65) = 6.72, p < .01$), common in-group identity ($t(61) = 7.86, p < .001$) and control conditions ($t(51) = 3.02, p < .005$) (See Table 7.1). This

Changing children's intergroup attitudes

indicates that children's were significantly positive towards the out-group in all conditions.

Changing children's intergroup attitudes

Table 7.1: Mean In-group and Out-group Attitude, Intended Behaviour and Affect Scores (Standard Deviations) as a Function of Condition

	Condition			
	Control	De- categorisation	Common Ingroup	Dual Identity
Out-group attitude	4.38 (9.59)	6.19 (7.66)	6.71 (6.25)	9.49 (6.20)
In-group attitude	6.81 (6.65)	6.77 (7.23)	7.56 (6.43)	8.38 (5.47)
Out-group intended behaviour	3.84 (1.13)	3.72 (1.22)	3.72 (1.20)	3.94 (1.06)
In-group intended behaviour	4.26 (.97)	3.81 (1.13)	4.16 (.98)	4.30 (.83)
Out-group affect	3.53 (1.43)	3.42 (1.4)	3.61 (1.29)	4.00 (1.05)
In-group affect	4.55 (.99)	4.28 (1.12)	4.22 (1.05)	4.69 (.63)

Note Attitude scores could range from a minimum value of -21 to a maximum value of +21. The higher the children's scores the more positive their evaluations of the refugee out-group. Intended behaviour and affect scores could range from a minimum value of +1 and a maximum value of +5. The higher the children's scores the more positive their evaluations.

Intended behaviour

Intended behaviour scores were submitted to a 4 (condition: control, dual identity, common in-group identity, de-categorisation) x 2 (age: low and high) x 2 (English identity: high and low) x 2 (target: in- and out-group) mixed design ANOVA. There was a significant main effect of age, $F(1,229) = 10.03, p < .005$. Intended behaviour scores were significantly higher in younger children ($M = 4.18, SD = .93$) compared with older children ($M = 3.75, SD = .75$). There was non-significant main effect of condition, $F(3, 229) = 2.02, p = .11$. There was a significant main effect of identity, $F(1,229) = 7.05, p < .01$. Means show that high identifiers were significantly held more positive intended behaviour scores ($M = 4.13, SD = .83$) than low identifiers ($M = 3.74, SD = .89$). There was a significant main effect of target, $F(1, 229) = 14.24, p < .0005$. Inspection of means shows that children were more positive towards the in-group ($M = 4.12, SD = .99$) than the out-group ($M = 3.82, SD = 1.14$). This was qualified by a significant target x condition x identity interaction, $F(3,229) = 3.14, p < .05$. As in the above analysis of attitudes, orthogonal contrasts were used to examine the effect of condition on out-group intended behaviour in low and high identifiers. For low identifiers, C1 was non-significant, $F(1, 229) = 1.20, p = .27$. This suggests that for the extended contact conditions were not significantly different from the control in the low identifiers. C2 was significant, $F(1, 229) = 7.22, p < .01$. Means suggest that Dual Identity out-group intended behaviour is significantly higher than the other extended contact conditions in low identifiers (See table 7.1 for means). For high identifiers, C1 and C2 were non-significant, $F(1, 229) = .43, p = .5$ and $F(1, 229) = .39, p = .5$ respectively. This suggests for high identifiers children who received extended contact did not differ in

intended behaviour scores from the control, and the dual identity condition did not differ from the other extended contact conditions (See table 7.2 for means).

One-sample t-tests showed that out-group intended behaviour scores in low identifiers in the dual ($t(25) = 6.29, p < .001$), de-categorisation ($t(32) = 2.85, p < .01$) and control conditions ($t(18) = 3.17, p < .01$) were significantly different from the midpoint, but not in the 'common in-group identity' condition ($t(29) = .83, p = .41$). In high identifiers out-group intended behaviour was significantly different from the midpoint in the dual ($t(40) = 4.85, p < .001$), de-categorisation ($t(34) = 4.04, p < .001$), 'common in-group identity' ($t(33) = 7.45, p < .001$) and control condition ($t(30) = 4.13, p < .001$) (See Table 7.2). This shows that children in all conditions but low identifiers in the common in-group identity condition, held significantly positive out-group intended behaviour scores.

Table 7.2: Mean Out-group Intended Behaviour (standard deviation) as a Function of Identity.

Identity	Condition			
	Control	De-categorisation	Common in-group identity	Dual
Low	3.91(1.25)	3.59(1.19)	3.18(1.21)	3.96(.78)
High	3.80(1.08)	3.86(1.27)	4.24(.97)	3.92(1.22)

Note Intended behaviour scores could range from a minimum value of +1 and a maximum value of +5. The higher the children's scores the more positive their evaluations of the English in-group.

Affect

Affect was submitted to the same 4 (condition: control, dual identity, common in-group identity, de-categorisation) x 2 (age: low and high) x 2 (English identity: high and low) x 2 (target: in- and out-group) mixed design ANOVA. Analyses showed a significant main effect of target, $F(1, 235) = 58.07, p < .000001$. Means showed that children were more positive towards the in-group ($M = 4.42, SD = 1.00$) than the out-group ($M = 3.66, SD = 1.30$). Analyses also showed a significant main effect of age, $F(1, 235) = 13.56, p < .0005$. Means showed that younger children ($M = 4.25, SD = .92$) were significantly held more positive affect than older children ($M = 3.84, SD = .77$). There was a significant main effect of condition, $F(3, 235) = 3.88, p < .01$. There was a significant main effect of condition, $F(3, 235) = 3.88, p < .01$. As in previous analyses the effect of condition on out-group affect was examined using orthogonal contrasts C1 and

C2. C1 was non-significant, $F(1, 235) = .51, p = .48$. This suggests that out-group affect in the extended contact conditions did not differ significantly from the control group. C2 was significant, $F(1, 235) = 4.01, p < .05$. Examination of means suggests that out-group affect in the dual identity condition is significantly higher than the other two extended contact conditions (See Table 7.1 for means). There was a non-significant main effect of identity, $F(1, 235) = 1.30, p = .26$.

Norm Measure

There were two measures of classroom norm: teacher's norm and child norm, the former measured children's perceptions of how teachers feel about the exclusion of refugees and the latter is a measure of children's perceptions of how *other children* feel about the exclusion of refugees. There were also two measures of 'park' norm: personal park norm and other park norm. The former asked children how they would feel if they saw a refugee being excluded from games in the park, and the latter is a measure of how they perceive *other* children would feel if they saw this.

All norm measures were submitted to a 4 (condition: control, dual identity, common in-group identity, de-categorisation) x 2 (age: low and high) x 2 (English identity: high and low) between participants ANOVA. With regards to classroom norm, for teacher's norm and child norm, there was no significant effect of condition ($F(3, 237) = 1.52, p = .21$; $F(3, 236) = .13, p = .94$ respectively), identity ($F(1, 237) = 0.00, p = .99$; $F(1, 239) = .33, p = .56$, respectively) and age ($F(1, 237) = 1.82, p = .18$; $F(1, 236) = .21, p = .65$, respectively).

With regards to 'park' norm measures, for personal norm, there was no significant effect of identity ($F(1, 187) = .06, p = .82$ or age ($F(1, 187) = 1.21, p = .27$). There was a

significant main effect of condition ($F(3, 187) = 4.96, p < .05$). Planned contrasts revealed that control did not differ from the three extended contact variables (C1: $t(200) = .33, p = .75$), and dual identity did not differ from the other two extended contact conditions (C2: $t(200) = 1.73, p = .09$). Post hoc analysis showed that personal park norm was significantly lower in de-categorisation ($M = 4.14, SD = .12$) compared with dual ($M = 4.67, SD = .64, p < .01$ LSD test) and 'common in-group identity' ($M = 4.68, SD = .52, p < .01$ in LSD).

For the other park norm measure, there was no significant effect of condition, $F(3, 186) = 1.03, p = .38$ and age, $F(1, 186) = .59, p = .45$. There was a significant main effect of identity, $F(1, 186) = 4.23, p < .05$. Low identifiers have significantly lower other park norm scores ($M = 3.27, SD = 1.4$) compared with high identifiers ($M = 3.63, SD = 1.45$).

Norm as a mediator: Given the significant effects of condition on personal park norm and out-group attitude, the mediational hypothesis of norm was then tested. Two mediational analyses were run: the first to examine whether the effects of extended contact per se (C1) on out-group attitude could be accounted for by norm; the second to assess whether the differential effects of extended contact (C2) could be so explained. Multiple regression analyses were employed with the condition variable dummy coded in line with the two previously defined contrasts C1, C2. For the C1 and the C2 dummy variable, the criteria for mediation analysis were not met. For C1 analysis, park 'self' norm was unrelated to condition ($\beta = .01, p = .89$). Furthermore, Dummy 1 was related to out-group attitude ($B = .18, p < .005$), and this was reduced when personal norm was included in the model ($\beta = .12, p = .08$). However, according to the Sobel Test, as specified in Baron and Kenny (1986; see also MacKinnon, Warsi, & Dwyer, 1995), this reduction was not significant, $Z = .17, p = .86$. For C2 analysis, personal norm was

related to condition ($\beta = .16, p = .04$), and the C2 dummy variable had a significant effect on out-group attitude ($\beta = .22, p < .005$), but this was not reduced when personal park norm was included in the model ($\beta = .24, p < .005$). Therefore park 'self' norm was not a mediator for C1 and C2 contrasts.

Inclusion of Other in the Self (IOS)

The composite measure of IOS was submitted to the same 4 (condition: control, dual identity, common in-group identity, de-categorisation) x 2 (age: low and high) x 2 (English identity: high and low) between participants ANOVA. This revealed a main effect of age, $F(1, 234) = 14.54, p < .001$, with younger participants scores ($M = .88, SD = .57$) higher than older participants ($M = .59, SD = .61$). In addition, there was a main effect of condition, $F(3, 234) = 9.31, p < .001, MSE = .31$. Contrast C1 showed that the scores in the extended contact conditions (dual identity, $M = .89, SD = .60$; de-categorisation, $M = .71, SD = .54$; common in-group, $M = .99, SD = .61$) were significantly higher than in the control ($M = .48, SD = .58, t(252) = 4.14, p < .0001$). However, contrast C2 was non-significant, $t(252) = .7$. There was no significant effect of identity, $F(1, 234) = .8, p = .37$.

IOS as a mediator: Given the significant effects of condition on inclusion of other in the self and out-group attitude, the mediational hypothesis of IOS was tested. Two mediational analyses were run: the first to examine whether the effects of extended contact per se (C1) on out-group attitude could be accounted for by IOS; the second to assess whether the differential effects of extended contact (C2) could be so explained. Multiple regression analyses were employed with the condition variable dummy coded in line with the two previously defined contrasts C1, C2. As expected, the C1 dummy

variable had a significant effect on out-group attitude ($\beta = .18, p < .01$) which was reduced to non-significance when IOS was included in the model ($\beta = .11, p < .09$). According to the Sobel Test, as specified in Baron and Kenny (1986; see also MacKinnon, Warsi, & Dwyer, 1995), this reduction was significant, $Z = 2.6, p < .01$. Finally, satisfying the criteria for mediation IOS was significantly related to Condition ($\beta = -2.5, p < .001$) and out-group attitude ($\beta = .18, p < .01$). For C2 dummy variable one of the mediation criteria was not met since IOS was unrelated to condition ($\beta = .03, p = .62$).

Implicit intergroup bias

The children's median response times on the *stereotype-consistent* and *stereotype-inconsistent* blocks of the IAT were submitted to a 4 (condition: control, dual identity, common in-group identity, de-categorisation) x 2 (age: low and high) x 2 (English identity: high and low) x 2 (IAT block: stereotype-consistent and stereotype-inconsistent), mixed design ANOVA with the last factor being within-participants. Results showed a significant main effect for age, $F(1, 178) = 29.08, p < .001$ and a main effect for IAT block, $F(1, 178) = 20.79, p < .001$. There were no effect of identity, $F(1, 178) = .04, p = .85$, or condition $F(3, 178) = 2.05, p = .11$. The age main effect showed that the children's responses gradually became quicker with age: younger age group ($M = 2016.13\text{ms}, SD = 746.31$); older age group ($M = 1555.16\text{ms}, SD = 490.56$). The main effect for IAT block revealed the children's responses were significantly quicker on the stereotype-consistent block ($M = 1587.18\text{ms}, SD = 573.17$) compared to the stereotype-inconsistent block ($M = 1795.15\text{ms}, SD = 675.73$). Thus, children in all age groups were showing evidence of implicit bias.

Discussion

In line with studies 1, 2 and 3, Study 4 demonstrated the effectiveness of extended contact as an intervention to encourage positive out-group attitudes towards refugees in children. This finding concurs with the limited research on extended contact in the adult literature (see Brown & Hewstone, in press; Paolini et al, 2004; Wright et al, 1997; See Chapter 3 under subheading 'Extended contact'). Moreover, the study also demonstrated that within the extended contact interventions, the dual identity condition was superior in improving children's out-group attitudes towards refugees. As in Study 3, the effect of condition on out-group intended behaviour was qualified by English identity. Amongst low identifiers and within the extended contact conditions, children showed the most positive out-group intended behaviour under the dual identity intervention. Furthermore the effect of extended contact was limited to out-group attitudes, without changing in-group attitudes thus meeting the further requirement of prejudice-reduction interventions (See Chapter 2 under sub-heading 'The distinction between in-group and out-group attitudes'). Finally, the non-significant effect of extended contact on implicit bias suggests that the interventions used in Study 4 were not appropriate for changing implicit bias in children.

Study 4 advances the theoretical account of inter-group contact and inter-group extended contact in number of ways. Firstly, Study 4 once again demonstrated the benefits of using extended contact as a prejudice-reduction intervention. As in Studies 1, 2 and 3, out-group attitude was more positive following extended contact intervention. Furthermore, in Study 4 a number of different versions of extended contact, based on different models of inter-group contact were implemented. The 'dual identity' model in Study 4 was superior to the common in-group and de-categorisation models. In the 'dual

identity' condition, the sub-group (English and refugee) and super-ordinate group (school) to which the participant, the in-group and out-group characters belong were emphasized. In addition, in line with the inter-group approach, typicality of the protagonists in the extended contact conditions was emphasized. This has implications for inter-group contact theory, and extended contact specifically, and also the theoretical question of generalization. Presumably children in the dual identity condition were more positive towards the out-group because they were more likely to generalize beyond the contact situation to the whole out-group (Brown & Hewstone, 2005). Thus in the dual identity condition, in which sub- and super-ordinate group salience and typicality were emphasized, generalization was more likely to occur leading to more positive out-group attitudes. Furthermore, the non-significant effect of the de-categorisation intervention replicates the findings of Study 1. There was a lesser effect of condition on out-group homogeneity which suggests that the de-categorisation condition did not lead to greater perceived variability in the out-group, as proponents of this model of inter-group contact would predict (See Chapter 3 under sub-heading 'Models of inter-group contact').

Secondly, Study 4 also provided evidence regarding the mediators of extended contact. One limitation of Study 3 was that it was not possible to fully test mediation of extended contact by 'inclusion of other in self', and this was rectified in Study 4. Mediation analysis showed that IOS is indeed a mediator of extended contact. This is consistent with Wright et al's (1997) argument that one of the underlying mechanisms for successful extended contact is an increase in perception of an overlap between the self and the (out-group) other.

Wright et al (1997) also argued that extended contact could be mediated by perceived norm for inter-group relations (See Chapter 3 under subheading 'Extended

contact'). However, this argument was not supported in Study 4. In both studies 3 and 4 there was little evidence that extended contact was mediated by perceived in-group norms. This finding contradicts the limited research on the mediation of extended contact conducted to date (See Chapter 3 under sub-heading 'Extended contact'). Turner & Hewstone (2005) found that extended contact is mediated by, among other variables, perceived in-group norm and out-group norm. One explanation for the contradictory findings in the present study lies in the norm measure used, which will be discussed in Chapter 8 under subheading 'Limitations and suggestions for future research'.

Thirdly, Study 4 adds to the growing literature on implicit bias by testing for implicit bias in young children. As in studies 2 and 3, implicit bias was evident in children across the age range in Study 4. However, contrary to hypothesis 5, but consistent with the studies 1 to 3, there was no effect of condition on implicit bias. While explicit bias was reduced by extended contact, implicit bias remained unaffected in both age groups. This finding is consistent with previous literature pointing to the dissociative nature of implicit and explicit attitudes (See Chapter 2 under subheading 'Implicit measures of inter-group bias'). It is also consistent with Devine's (1989) argument, as it appears that explicit attitudes can be changed more easily than implicit bias (See Chapter 2 under subheading 'Implicit measures of inter-group bias').

Overall, the effectiveness of extended contact in changing children's out-group intended *behaviour* was more limited than it was for attitudes. This finding is line with previous research that suggests out-group attitudes and behaviour are distinctive phenomenon (Aboud et al., 2003; Powlishta et al, 1994; Nesdale, 2001) and out-group behaviour is substantially more difficult to change in a limited period of time (Katz & Zalk, 1978). As in Study 3, level of identification moderated the effect of extended

contact on out-group intended behaviour. In Study 4, the effect of the three different extended contact interventions was confined to the 'low' identifiers, with those in the Dual condition once again showing the most favourable attitudes towards refugees. It may be that low identifiers benefited from a boost in sub-group salience in the dual identity condition in terms of enhancing the extended contact effect. For the 'high' identifiers, the differences between the three extended contact conditions were not reliable, perhaps because for them the level of (national) group salience was already relatively high. Therefore, this suggests that 'high' identifiers may have been operating in a dual identity mode in all extended contact conditions.

The interventions used in Study 4 did meet the secondary requirement of prejudice reduction interventions in that they did not reduce the positivity of in-group attitude, there was an effect of condition on in-group intended behaviour, moderated by age. Importantly, and consistent with Studies 1 to 3, age did not interact with condition, which underlines the potential use of extended contact as an intervention tool with children across the age group studied here. It is especially interesting that there were no age trends in the dual and common in-group identity versions of extended contact as it was predicted that these would prove to be particularly difficult for young children. However, this was proved not to be the case and therefore dual identity extended contact can be recommended as a prejudice-reduction tool with children as young as 6 years old.

Conclusions

Study 4 replicated the findings of Studies 1 to 3 and demonstrated the benefits of extended contact, especially 'dual identity' extended contact, as a prejudice-reduction tool for young children. IOS was also identified as a mediator of extended contact. The

differential effect of extended contact on implicit and explicit attitude underlines the dissociative nature of these two constructs and points to the need for future research in order to identify an intervention that can reduce implicit bias. Study 4 has important practical implications as it has identified one of the underlying mechanisms of extended contact and also the conditions under which extended contact is most successful. This information could inform future prejudice-reduction interventions.

Chapter 8: General Discussion, Conclusions and Future Directions

Summary of Thesis

Aim: The aim of this thesis was to design and evaluate theoretically-derived prejudice-reduction interventions for children, with the goal of creating more effective interventions and also informing psychological theories of childhood prejudice.

Introductory Chapter: In this chapter a gap in previous research in prejudice and prejudice-reduction interventions was identified. Previously, there has been little collaboration between academics in psychology and practitioners in the field. While the former have focussed on developing theories of prejudice development, the latter have concentrated on implementing prejudice-reduction interventions. In the Introductory Chapter it was argued that this lack of collaboration may have led to poor prejudice-reduction interventions that are not grounded in psychological theory and unreliable evaluations of these interventions. From this argument, the main theme of this thesis was developed, namely to bridge the gap between the two branches of research in prejudice and develop prejudice-reduction interventions derived from psychological theories. Psychology's potential contribution to the design of effective interventions in terms of intervention content, design and implementation and evaluation was outlined. The mutual benefits of closer collaboration were also discussed. The incorporation of psychological theories in prejudice-reduction interventions offers psychologists an opportunity to test their approaches to prejudice development in the field, and therefore advance these psychological theories. From this premise the second aim of this thesis was derived: the advancement of psychological theories of prejudice development.

Chapter 1: In this chapter, psychology's potential contribution to prejudice-reduction interventions in terms of theoretical approaches to prejudice development, were discussed. A number of theories of prejudice development were outlined, including Socio-cognitive Developmental Theory and Social Identity Theory. Research supporting and opposing these theories was discussed. It was concluded that both of these approaches to prejudice-development hold potential as the basis for future prejudice-reduction interventions, but both warrant further research. A limitation of Socio-cognitive Developmental Theory is that it does not consider social context, and the exact nature of the relationship between cognitive development and prejudice development is unclear. Social Identity Theory and Self-categorisation Theory have not previously been applied to children (cf Sani & Bennett, 2001) and they do not consider developmental trends in children's cognitive abilities, however they could potentially be modified to account for the development of childhood prejudice.

Chapter 2: In this chapter, psychology's contribution to the development of effective prejudice-reduction interventions in terms of the accurate evaluation of these interventions was outlined. A number of methodological issues that should be considered when evaluating interventions were identified including the need for separate measures of in- and out-group attitude, multiple measures of out-group orientation and the need for implicit bias measures. The implicit attitude literature was reviewed and a number of potential interventions to reduce implicit bias were identified. Based on Devine's (1988) implicit attitudes, developmental predictions regarding the possible reduction of implicit bias in children were proposed. It was hypothesised that implicit bias in younger children would not be reduced following prejudice-reduction interventions because they have not yet developed internal motivation to control their out-group attitudes. It was concluded

that closer collaboration between practitioners and psychologists would lead to more reliable and accurate evaluations of prejudice-reduction interventions.

Chapter 3: In Chapter 3, psychology's contribution to the intervention literature to date was examined. This included a review of interventions that have been derived directly from psychological theories of prejudice development and reduction (e.g. Bigler & Liben, 1992; Maras & Brown, 1996; 2000). One of the main areas of psychological research in prejudice-reduction is inter-group contact (Allport, 1954), and in Chapter 3 the research in this area was reviewed. Following Allport's initial inter-group contact hypothesis, one question that had been addressed by researchers is the generalisation of attitude change from the contact situation to the whole out-group. In response to this a number of models of inter-group contact have been developed in response to this question. Four models of inter-group contact are discussed in this chapter: de-categorisation, 'inter-group' contact, Common In-group Identity and Dual Identity. The implications of these models of contact for prejudice-reduction interventions were discussed. Evidence relating to each of the models was discussed and it was concluded that further research is necessary in order to test the predictions of these models with respect to young children, especially the Common In-group Identity and Dual Identity models.

In addition, this chapter examined the extended contact hypothesis in detail. It was emphasised that while there is support for the extended contact hypothesis in the adult literature, it has not before been tested with children below 13 years of age (Wright et al, 1998; Liebkind & McAlister, 1999). It was argued that, considering the evidence from cognitive developmental literature, extended contact could effectively change out-group attitudes in young children. The advantages of using extended contact as an

intervention tool were outlined and it was argued that extended contact holds potential as a prejudice-reduction intervention for children and warrants further study. Possible mediators of extended contact were explored, including 'inclusion of other in the self' and perceived in-group norms. In-group identification was also discussed as a potential moderator of extended contact. It was argued that in order to create the most effective interventions, the mediators and moderators of extended contact must be determined as this will inform the design of future prejudice-reduction interventions. Multiple classification skills training was also identified as a potential prejudice-reduction tool that warrants further study, as it has previously been shown to be effective in changing gender stereotypes only (Bigler & Liben, 1992).

Chapter 4: In this chapter, Study 1 was presented. In Study 1 children ($N = 69$) aged 5 to 10 years received one of three types of extended contact ('inter-group', de-categorised and neutral). The target out-group was the disabled. Analysis revealed that following the interventions, children held more favourable out-group attitudes and this was most pronounced in the 'inter-group' extended contact condition, thus providing support for the 'inter-group' model of contact (Hewstone & Brown, 1986). Children in all conditions expressed more positive intended behaviour after the interventions, but this was most pronounced in the 'inter-group' and 'de-categorisation' conditions. Therefore, contrary to predictions, the intervention led to changes in out-group intended behaviour, as well as out-group attitude. There was no trace of implicit bias detected in children using the 'implicit misattribution bias' measure. There was no effect of condition on in-group attitude, thus meeting the secondary requirement of prejudice-reduction interventions that the in-group attitude should not be changed following the intervention. It was concluded that extended contact can be used effectively with children across this

age range (5 – 10 years) and of the extended contact conditions, the 'inter-group' model was most effective.

Chapter 5: In this chapter, Study 2 was presented. In Study 2, children ($N = 71$) aged 6 to 9 years experienced either multiple classification training, 'inter-group' extended contact or no intervention (control). As in Study 1, the target out-group was the disabled. 'Inter-group' extended contact led to more favourable out-group attitudes and intended behaviour, but multiple classification skills training had no effect on these variables. This replicated the findings of Study 1 in a younger age group only, and showed that extended contact can be used effectively as a prejudice-reduction tool with children aged 6 to 9 years. The non-significant effect of multiple classification training suggested that this intervention was not suitable for children in this age group. Children did not become more negative towards the in-group following the intervention. Implicit bias was detected using the 'misattribution bias measure', but this implicit bias was not affected by the interventions. This replicated the findings of Study 1, and is consistent with Devine's (1989) argument that implicit bias may be more difficult to change than explicit attitudes.

Chapter 6: In this chapter, Study 3 was presented. In Study 3 ($N = 199$) three interventions were implemented (refined multiple classification, 'inter-group' extended contact' and a combined condition) that dealt with children's attitudes towards refugees. The control condition received no intervention. Children who received interventions involving extended contact (the combined and extended contact conditions) had more favourable out-group attitudes compared to the other conditions. Analyses showed the main effect of condition on out-group intended behaviour was moderated by in-group identity; out-group intended behaviour in the extended contact and combined conditions

were significantly higher in the high-identifiers, than the low. This supports Wright et al's (1997) hypothesis that in-group identification may be important for the extended contact effect. Thus, extended contact interventions are particularly well-suited to high in-group identifiers. Results suggested that the extended contact effect was mediated by 'inclusion of other in self' but not perceived in-group norm, though the latter finding may be due to methodological problems which will be discussed in the limitations section. As in Study 2, the multiple classification skills training intervention, despite leading to an improvement in multiple classification skills, did not lead to a change in out-group attitude. Together with the findings of Study 2, this suggests multiple classification skills training may be less useful in changing out-group attitudes. However, this training may be more effective in changing out-group stereotypes, rather than out-group attitudes. This will be discussed further in the 'Limitations and future research' section of the current chapter.

There was no significant effect of condition on in-group attitude demonstrating the effect of extended contact on out-group attitude, but not out-group intended behaviour. Using the IAT this study found evidence of implicit bias in young children, but this was not reduced following the intervention. This is consistent with Study 2, and also with Devine's (1989) argument that implicit bias may be more difficult to change than explicit attitudes.

This study demonstrated the veracity of the extended contact effect by showing its effectiveness in a larger sample, across a broader age range and with a different stigmatised target group. The effect of extended contact was not moderated by age, suggesting that extended contact can be used as a tool to reduce prejudice in children aged 6 to 11.

Chapter 7: In this chapter, Study 4 was presented. In Study 4, children ($N = 253$) aged 6 to 11 years were exposed to extended contact interventions based on one of three models of inter-group contact: dual identity, common in-group identity and de-categorisation. As in Study 3 the out-group was refugees. As predicted children were more positive towards the out-group following the extended contact intervention, and this finding was most pronounced in the 'dual identity' extended contact condition. This highlights the importance of heightening the salience of sub-group boundaries during extended contact and supports . According to Hewstone & Brown (1986) this is because children are more likely to generalise positive out-group attitude from the contact situation to the whole out-group when group boundaries are salient. This is also consistent with Wright et al's (1997) prediction that perceived typicality and heightened group boundaries are important for the extended contact effect.

Results also suggested that extended contact is mediated by 'inclusion of the other in self', thus supporting Wright et al's (1998) hypothesis and also corroborating findings in the adult literature (Turner & Hewstone, 2005). It appears that extended contact leads to the inclusion of members of the out-group in the recipient's self-concept, which leads to more positive out-group attitudes. Contrary to expectations, the effect of extended contact appears not to be mediated by perceived in-group norm. This may be an artefact of the norm measure used in this study. This will be discussed further in the 'Limitations and Suggestions for Future Research' section of this chapter.

As in Study 3, condition did not interact with age and the extended contact intervention was equally effective with 6-8 and 9-11 year olds. It is important that interventions be tailored to suit the age and ability of recipients, thus it appears that

extended contact, and importantly dual identity extended contact, can be used effectively with children across the age range tested here.

In Study 4 implicit bias was detected using the IAT, but, as in Study 2 and 3, this was not affected by the extended contact intervention. This is consistent with Devine's (1989) argument that implicit bias may be more difficult to change than explicit attitudes.

Key findings and Strengths of Research

Implications for future intervention design: The present research has clear implications for future prejudice-reduction interventions among children. The findings demonstrate that extended contact can be used as a tool to encourage more positive out-group attitudes in children across the age group studied here (5 to 11 years). It is important to tailor interventions to suit the age and ability of children (Bigler, 1999), and the present research suggests extended can effectively change out-group attitude in children as young as 5. Furthermore, in the current research, the aspects of extended contact that lead to the greatest change in out-group attitude, and the underlying mechanisms of the interventions were examined. The most successful model of extended contact was the 'inter-group' and the 'dual identity' interventions. This suggests that future extended contact school interventions should focus on encouraging a more inclusive common in-group identity while simultaneously emphasizing the sub-group identities.

Employing extended contact interventions has several benefits, including that of cost-effectiveness since a wide audience can be reached in a short time. In addition, extended contact allows participants to develop some acquaintance with an out-group while avoiding the anxiety that is often provoked in direct contact situations (Wright et al,

1997, See Chapter 3 under sub-heading 'Extended contact'). Furthermore, extended contact can be administered prior to direct contact, which could facilitate direct contact and inclusion of refugees should any attend the child's school at a later date. Initial expectations are important in determining the outcome of inter-group contact (e.g. Pettigrew, 1997). Therefore, inducing more positive affect towards an out-group could lead to more positive outcomes of actual contact between groups.

Finally, in the current research, the multiple classification training intervention (Bigler & Liben, 1992) which was derived directly from socio-cognitive developmental theory (Aboud, 1988), was shown to be less effective in changing children's out-group attitudes than extended contact. Thus, it is recommended that practitioners employ extended contact interventions, as opposed to the multiple classification training.

The advancement of psychological theory: Firstly, the research in this thesis represents the first time extended contact has been tested as a prejudice-reduction tool with young children. Research into the extended contact effect in children is limited (cf Turner & Hewstone, 2005), and the extended contact hypothesis has never been tested in interventions in children younger than 13 years of age (Liebkind & McAlister, 1999).

Secondly, the present research adds to psychological theories of prejudice by testing different models of inter-group contact in the context of extended contact, and providing evidence for their predictions regarding generalisation. In the series of studies presented here, children who received the 'dual identity' and 'inter-group' extended contact intervention were more favourable toward the out-group compared to the other extended contact conditions (Common In-group Identity and de-categorisation).

According to 'inter-group' contact theory (Hewstone & Brown, 1986), this is because they were more able to generalize from the protagonists in the stories to the out-group in

general. In addition Wright et al. (1997) speculated that extended contact would be effective to the extent that some degree of subgroup salience was maintained in the way people perceived the situation. As Brown and Hewstone (2005) have argued, this is one of the key potential advantages of an intergroup contact model over the alternative models of Brewer and Miller (1984) and Gaertner and Dovidio (2000). Until now, the evidence for such beneficial effects of group salience has been obtained only in direct contact settings; our findings suggest that similar effects can be obtained in extended contact situations also. Furthermore, two of the models of inter-group contact tested, the common in-group identity model and the dual identity model have not previously been examined in children. Thus, the present research provides evidence for the applicability of these models to a younger age group.

Thirdly, the research also contributes to knowledge of the extended contact effect by testing the mediators and moderators of this effect. Wright et al (1997) suggested that the effectiveness of extended contact is mediated by 'inclusion of other in the self' (Aron & Aron, 1996). Study 4 tested this proposition and found clear evidence that IOS is indeed a mediator of extended contact in children: extended contact led to more 'inclusion of other in the self', which led in turn to a more positive out-group attitude. This provides support for Wright et al.'s (1997) hypothesis that one of the underlying mechanisms for successful extended contact is an increase in perception of an overlap between the self and the (out-group) other. Significantly, the present research suggests that extended contact is not mediated by perceived in-group norm. This is inconsistent with previous research (e.g. Turner & Hewstone, 2005) and contrary to Wright et al's (1998) argument. However, these mixed findings might be a result of methodological problems, which will be discussed in the limitations section of this chapter.

Implicit bias

There has been little research to examine implicit bias in children (cf. Rutland et al, 2005; Baron & Banaji, 2004). The present research adds to this limited literature, and is also the first study to examine the effect of prejudice-reduction interventions on childhood implicit bias. In the present research, a new measure of implicit bias was developed, the 'implicit misattribution bias measure' (S1 and S2). However, this measure produced conflicting results that were inconsistent with previous research using different measures of implicit bias in children (Rutland et al, 2005). These mixed findings may be due to possible methodological problems with the misattribution bias measure, which will be discussed in the limitations section of this chapter.

Furthermore, in the series of studies presented here, contrary to predictions, children's implicit bias was not lowered following interventions. This is consistent with Devine's (1989) argument that explicit attitudes can be changed more easily than implicit bias (Chapter 2 under subheading 'Implicit measures of inter-group bias'). According to Devine (1989), we all hold cultural stereotypes that are activated automatically, and may not be consistent with our own personal beliefs. This automatically activated stereotype can be equated with implicit bias (See Chapter 2 under subheading 'Implicit measures of inter-group bias'). According to Devine (1989) in order to change cultural stereotypes one must deliberately and continually activate counter-stereotypic associations. Eventually, the counter-stereotype will be stronger than the automatically activated cultural stereotype and will replace it as the new implicit attitude. It appears that the current extended contact intervention does not instigate this change in implicit bias. This

may be because extended contact does not involve activation of counter-stereotypic associations at the frequency required to change implicit bias.

Alternatively, the non-significant effect of the extended contact intervention on implicit bias could be due to cognitive developmental constraints of the age group tested here. Plant & Devine (1998) argue that implicit bias reduction also requires internal motivation to reduce this bias. Although some of the older children in the sample studied here may be able to hold internal motivation, it is possible that most of the children did not hold this ability (Rutland et al, 2005; See Chapter 2 under sub-heading 'Implicit Measures of Inter-group Bias'). Consequently, the children in the present research would be unable to reduce implicit bias in line with their explicit attitudes. The effect of prejudice-reduction interventions on children's implicit bias has not previously been studied and this thesis represents the first attempt at examining this. One conclusion that can be drawn from this study regarding implicit bias is the need for further research examining the existence of implicit bias in children, and the types of interventions that could reduce this bias.

Strengths of the Current Research

One typical limitation of prejudice-reduction interventions is that the long-term effects of these interventions are rarely examined (e.g. Wright et al, 1997; see Hill & Augustinos, 2001; Katz & Zalk, 1978 for exceptions). One strength of the research reported here is that the dependent variables were not measured immediately after the intervention took place, but were taken approximately one week after the final intervention session. Thus, it appears extended contact interventions may have some long-term effects.

Intergroup contact interventions are often criticized for being too brief (Brown & Hewstone, 2005). Typically, interventions are one-off events and time limited, and research indicates the most successful interventions occur over a long period of time (Duckitt, 1992). The interventions in the present research were conducted once a week for six weeks, which is longer than typical intervention studies.

Furthermore, practitioners typically do not test the applicability of prejudice-reduction interventions to different target out-groups (Paluck & Green, 2004). In the current research, the extended contact effect is demonstrated with two stigmatised groups, the disabled and refugees.

Limitations and Suggestions for Future Research

Alternative explanations for findings

The extended contact effect: It could be argued that the intervention effects found in the present research may have been the result of mere exposure to members of the out-group. However, this explanation is unlikely for a number of reasons. Firstly, in Studies 2 and 3, children were exposed to a number of out-group members in the multiple-classification skills training intervention, and their out-group attitudes and intended behaviour were unaffected. Secondly, results indicate that inclusion of other in the self mediated the effect of extended contact on out-group attitude, and there is little reason to believe that mere exposure to members of the out-group would lead to greater 'inclusion of the other in the self'. However, in order to rule out this explanation future research should include an additional mere exposure condition which consists of in- and out-group members who are not friends.

The superiority of 'dual identity': The underlying cause of the superior effect of the dual identity intervention is difficult to ascertain since the study had no direct test of whether super-ordinate identity is necessary to change children's inter-group attitudes. The success of the dual identity extended contact intervention in Study 4 may have been due only to the increased salience of sub-groups, as found in Study 1. Nonetheless, previous research (e.g. Gaertner & Dovidio, 2000; Gonzalez & Brown, 2003) has pointed to the importance of maintaining super-ordinate identities in order to change inter-group attitudes. In order to address this issue future research should compare a dual identity extended contact intervention with another intervention in which only sub-group identities are made salient.

Possible confound of group membership: Due to limitations of story availability, and the necessity of using illustrated stories, the gender of the characters in the story was not matched to each participant's gender. Thus some children were exposed to ethnic in-group members who were of the same gender to themselves (boys), whereas some children were exposed to ethnic in-group members who were of the opposite gender to themselves (girls). This is problematic given the crossed categorisation literature which suggests that when children are presented with members of crossed categories, where one is gender (male and female) and one is ethnicity (in- and out-group ethnicity), the gender effect is dominant and ethnic bias disappears (Brewer et al, 1987). In other words when evaluating people who vary along ethnicity and gender, children might overlook ethnicity and focus on the gender of the target. Furthermore, in the current research, it is possible that children reading about an ethnic out-group member or a disabled child, who was the same gender as them may have been more positive towards them due to their common gender. Likewise, children reading about an in-group member who is a different gender

from themselves may be less likely to 'include the other in the self', thereby lessening the extended contact effect. However, initial analyses found no evidence of interaction between gender and condition for any dependent variables.

Lack of effect of multiple-classification skills measure: It may be that the effects observed by Bigler & Liben (1992) resulted from a change in the children's stereotype knowledge or willingness to stereotype. Conceivably, multiple classification skill training changes the children's stereotype knowledge (i.e. they think that both group can now fill either occupation), but does not effect their personal, more affective orientated, intergroup attitudes. Further research is required, which includes both measures of stereotyping and intergroup attitudes, to test this proposition.

Social desirability: In Studies 1 to 3, children's responses may have been subject to high social desirability demands as the same researcher conducted the intervention and collected the dependent variables. It could be argued that the findings presented here are a result of this heightened social desirability. However, the multiple classification task and the extended contact intervention had differing effects on out-group attitude. This suggests that children were not merely responding in a socially desirable manner, since if this was the case children in the multiple classification condition would be giving comparable responses to the extended contact condition. Furthermore, in Study 4, where, for the majority of children the intervention and interview were administered by different researchers, the extended contact effect was also demonstrated.

In addition, there may be some demand characteristics as a result of the way in which the intervention was administered. For example, children may have responded more positively towards the out-group because they believed that more positive responses

were expected by the experimenter, or by other children in the group. On the one hand, one experimenter obtained the measurements, and a different experimenter administered the interventions. Therefore, it is unlikely that the children were responding to expectations created by the experimenter administering the intervention. On the other hand, the experimenter administering the intervention maintained strict control over the post-story discussions to ensure that mutual influence amongst the children was eliminated. Therefore, it is unlikely that the effects of these interventions can be dismissed as an artefact of demand characteristics.

Methodological issues

Perceived in-group norm: The finding that extended contact was not mediated by norm was surprising, given previous research (Turner & Hewstone, 2005; See Chapter 3 under sub-heading 'Extended contact'). However, these conflicting findings may be due to methodological differences between the current study and Turner & Hewstone (2005). Turner & Hewstone (2005) measured *peer* norms for inter-group relations by asking participants how their in-group (White) peers feel about the out-group. In the present study, *general* in-group norms were measured, rather than peer in-group norms. Furthermore, the current study measured the perceived norm for 'exclusion' of the out-group, while Turner & Hewstone (2005) focused on friendship norms. As an intervention, extended contact is less concerned with condemning exclusion and poor inter-group relationships, which one can assume are associated with exclusion norms, and is more concerned with promoting inter-group friendships. Therefore, it may be that extended contact is mediated by perceived *peer* norms for *inclusive* inter-group relations and friendships, rather than norms that condemn exclusion.

Future studies should examine the mediating effect of in-group peer friendship norms for extended contact. There are a number of other possible mediators of extended contact that should be examined, including the importance of positive in- and out-group exemplars, empathy, social perspective taking and intergroup anxiety (Wright et al, 1998; Brown & Hewstone, 2005; Turner & Hewstone, 2005).

Inclusion of other in self: The index of IOS differed from that used in previous studies (Aron et al, 1992; Aron & Aron, 1996) by giving children a choice of just three levels of overlap. This was done in order to simplify the measure for young children. However, a more sensitive measure of IOS may have picked up more subtle differences in 'inclusion of other in the self'.

Story-reading group composition: The composition of the story-reading groups remained the same throughout the interventions because of the need to match children on reading ability. This was not ideal since certain children may have had undue influence on their peers in group discussions. However, the discussions were led by the researcher, who ensured the content of post-story discussions were similar across groups within each intervention condition. In addition, the researcher deliberately focused the discussion on certain characteristics of the story (e.g. common in-group membership).

Out-group attitude measure: Although the attitude measures had high internal reliability across the age range and for young and old age groups separately, it is feasible that the traits obtained from the PRAM II were valued less by the older participants. Indeed, these traits have mainly been used in research with children under aged 9 years of age (e.g. Aboud, 2003; Doyle & Aboud, 1995). However, a number of researchers have used traits from the PRAM II with children aged between 9 and 11 years (e.g. Bigler, Brown & Markell, 2001; Rutland et al, 2005). It would be interesting also to examine the

effect of extended contact interventions on additional bias measures such as resource allocation tasks (Gonzalez & Brown, 2003).

Intended behaviour measure: It should be noted that intended behaviour as measured in the current research is not the same as other behavioural measures; it is not a direct observation of children's behaviour, or a measure of classmate preference. Indeed, it would not have been possible to administer these measures as children were in an environment where opportunity for inter-group contact and friendships was almost non-existent. Intended behaviour does have an attitudinal and affective component, therefore it is not purely a measure of inter-group behaviour. However, the change in this variable following prejudice-reduction interventions is still encouraging as it implies a more positive out-group orientation.

Future research should examine the effect of extended contact on subsequent inter-group behaviour. The effect of these interventions on subsequent direct contact with members of the out-group should be examined in future studies. Research suggests that the contact-attitude relationship may be bi-directional (e.g. Eller & Abrams, 2003; Levin, van Laar & Sidanius, 2003). This implies that contact can lead to prejudice reduction, and this change in attitude could lead to more contact. In a similar way extended contact could change attitudes towards the out-group and this would make actual out-group contact or out-group friendships more likely, leading to a further decline in prejudice.

However, there is evidence to suggest that, if direct contact does not occur at some point after vicarious contact, the positive out-group attitudes produced as a consequence of indirect contact could disappear (Genesee et al, 1974). Perhaps, without the chance to confirm the counter-stereotypical views of the out-group that are produced

by extended contact, these more positive out-group attitudes will decline. The effect of direct contact, subsequent to extended contact, is an area for future research.

Misattribution implicit bias measure: The conflicting results found using the 'implicit misattribution bias' measure of implicit bias may be an artefact of the measurement used. The misattribution bias measure relies on memory. There is evidence that children remember stereotype-consistent information rather than counter-stereotype information (Bigler & Liben, 1992). There is also evidence that negative out-group stereotypes held by children are associated with memory for counter-stereotypic information. Bigler & Liben (1992) found that children who have participated in an intervention aimed at reducing negative out-group stereotypes have improved memory for counter-stereotypic information (Bigler & Liben, 1992). This suggests that the type of information remembered in an implicit measure may be affected by stereotype levels. This means error types may be affected by memory biases, rather than prejudice. One way to avoid this problem with memory in the misattribution error measure could be to use new items in the recall stage and seen who they were attributed to (as in Fame-Gender task, Jacoby et al, 1989).

The IAT: There are several problems with the IAT. Ashburn-Nardo et al (2001) found evidence of the IAT effect in minimal groups and unknown groups. One could argue this points to the veracity of the IAT effect, but it also begs the question, what exactly is the IAT measuring? It is purported to be a measure of implicit bias or prejudice, but if the same effect can be obtained with groups about which the participant can hold no beliefs or stereotypes, can it really be claimed it is a measure of bias? It may be more appropriately described as a measure of association rather than bias: it is a measure of the association between target groups and the evaluative component

(unfavourable/favourable). Cameron, Alvarez & Bargh (2000) examined the inter-relationship between numerous implicit attitude measures and found little evidence of a relationship between the IAT and other implicit measures and IAT scores were unrelated to inter-group behaviours. There are, then, questions surrounding what exactly the IAT is measuring.

A second criticism of the IAT is that it is impossible to separate positive in-group from negative out-group associations. It is a relative attitude measure. One measure that does allow in-group and out-group associations to be separated is the Go/No-Go Association Task (GNAT, Nosek & Banaji, 2001). This technique measures automatic reactions to a single category so it is not relative and avoids the use of complementary or contrasting characteristics. The GNAT measures the strength of association between the target category and the different poles of the attribute dimension (good-bad) independently. This measure could possibly be adapted for children, although it may be too lengthy for very young children.

Implicit bias in young children has received little empirical attention, and the relationship between implicit bias and children's non-verbal behaviours remains to be tested. Future research should also examine this relationship as there may be no need for interventions to tackle implicit bias if it has no effect on inter-group behaviours.

Target out-groups: In the current research, prior to the intervention and in the control groups, children were not significantly negative towards the target out-groups refugees or the disabled. That is, children did not express prejudice towards these groups. Previous research has shown that, when given the opportunity, children prefer to assign negative traits to neither the in- nor the out-group (Davey, 1983). Therefore they differentiate between the two groups along the positive dimension and through this

express in-group preference by being more positive to the in-group. It is possible that children in the present research are expressing in-group preference by holding positive attitudes towards the in- and out-groups, but *more* positive attitudes towards the in-group.

It could be argued if children are not expressing prejudice, and are positive to both groups, then there is no need for prejudice-reduction interventions. However, in-group preference may still be problematic for children's inter-group relations because as a result of in-group preference, out-group members will always suffer in comparison to the in-group. If any in-group alternative is available for play, or for everyday social interactions, it would be unlikely that children would select an out-group member (Aboud, 2003). Therefore, in-group preference may lead to behaviours that derogate the out-group and lead to segregation of the in-and out-group. In-group preference is, then, problematic for inter-group relations and should be tackled using prejudice-reduction interventions (Chapter 2 under sub-heading 'The distinction between in-group and out-group attitudes').

It would be interesting to examine the effectiveness of extended contact in changing children's attitudes towards groups which they may initially feel more negative (e.g. obese people, homosexuals). Furthermore, out-groups which have a hostile relationship with the recipient's in-group could be examined. The relationship between in-group identification and out-group attitudes has also been shown to be moderated by perceived conflict between groups (Brown et al, 2001), therefore it would be interesting to examine the effect of extended contact on out-group attitudes towards groups that are believed to have a more hostile relationships with the in-group.

Extended contact involving known in-group members: In line with Liebkind & McAllister (1999) and Wright et al (1997), our findings demonstrate the success of

extended contact even when the participant has a less intimate personal relationship with the in-group member. However, the findings presented here suggest IOS is important for successful extended contact. Therefore, extended contact may be more effective if the in-group member is a friend of the participant as they are more likely to include a friend, and one of *their* friends (the out-group member) in the self. Future research could investigate the effect of extended contact interventions for children when the in-group member is known to the out-group member. This would be an intervention that more closely resembled that of Wright et al (1998, Study 3) in which cross-group friendships were manipulated in order to artificially create extended contact. It is predicted that an intervention such as this may be even more effective in changing children's out-group attitudes, and given the results in the present research there is no reason this type of intervention should not be effective with children as young as six years.

Interventions to reduce implicit bias: The research presented here suggests that implicit bias does not diminish in response to extended contact and multiple classification skills training. Future studies could also examine the effect of interventions such as exposure to counter-stereotypical pairings of out-group-positive word pairings (Karpinski & Hilton, 2001) and repeated activation of counter-stereotypical mental images (Blair et al, 2001) that have proven to successfully reduce implicit bias in adults. In addition, the relationship between children's implicit bias and their nonverbal behaviours warrants further research. Although a relationship between these two variables has been found in adults (Dovidio et al, 1997), this relationship has not yet been investigated in children.

Long-term effects of interventions: It would be interesting in future studies to examine the more long-term implications of the interventions. In studies where long-term effects have been measured, it has been found that initial changes in out-group

attitude following interventions have not been sustained in follow-up interviews a number of months later (Hill & Augustinos, 2001; Katz & Zalk, 1978).

Further theoretically-derived interventions: Another theoretical approach to prejudice development that could lead to prejudice-reduction interventions is Nesdale's (2004) Social Identity Developmental Theory (See Chapter 1 under sub-heading 'Social Identity Developmental Theory'). This theory combines social identity theory and cognitive developmental theory in that it considers both social context and norms, as well as constraints of children's cognitive abilities, in its account of prejudice-development in children. According to SIDT, children who develop prejudice are influenced by the prevailing inter-group norms and attitudes and in this way they develop prejudice. In addition, according to SIDT there are certain circumstances under which this is more likely to happen, for example when a child identifies highly with the in-group. It could be argued that if children are sensitive to negative societal norms and attitudes towards the out-group and adopt these as their own attitudes, then children could also be influenced by positive inter-group attitudes and norms. Therefore, the same process that could lead to prejudice in some children could also lead to positive inter-group orientation. SIDT also specifies the conditions under which such an intervention would be most effective. If the greatest level of prejudice occurs in conditions of in-group exclusion norms (Nesdale, Maass et al, 2005), it could be argued that prejudice-reduction interventions could create lower levels of prejudice by exposing children to positive inter-group attitudes espoused by an in-group member, that represent inclusion norms. Also, ethnic awareness is more likely to develop into prejudice in high identifiers, therefore an SIDT norm intervention would be most effective with high in-group identifiers. However, according to SIDT prejudice does not occur until children hold ethnic

identification, and this does not occur until around 7 years of age, therefore such an intervention would only be effective with children over 7 years of age who identify with the in-group.

Final Conclusions

The aim of the current thesis was to devise and evaluate theoretically-driven prejudice-reduction interventions for children, thereby creating effective prejudice-reduction tools for use in the field, and also advancing psychological theories of prejudice. The present research demonstrated that a theoretically derived intervention (extended contact) could be introduced successfully into an educational setting and act as an effective prejudice-reduction intervention tool. Moreover, the specific characteristics of extended contact that lead to the greatest change in out-group attitude (i.e. heightened sub-group salience and typicality) were identified and one of the underlying mechanisms of extended contact (IOS) was determined. Also, using extended contact, a number of models of inter-group contact were tested in young children and results suggested that extended contact interventions that maintain sub-category salience and typicality are most effective at changing children's out-group attitudes. These findings have both practical and theoretical implications as they will lead to the design of more effective prejudice-reduction interventions, as well as advancing psychological theory by contributing to our understanding of extended contact.

This thesis represents a step in bridging the gap between two separate lines of research in childhood prejudice. Firstly, the development of psychological theories to account for prejudice development in children and, secondly, the implementation of prejudice-reduction interventions by practitioners in the field. It demonstrates the

benefits to be gained from greater collaboration between these two branches of research, bringing together theory and practice to develop effective interventions and advance psychological theories of prejudice. This thesis emphasises the importance of addressing the issue of intergroup discrimination in children and it is hoped that this research aids the development of effective strategies that reduce this bias. As Mohandas Karamchand Gandhi once observed, "If we are to obtain real peace in this world, we will have to begin with the children."

References

- About, F. E. (1976). Self-evaluation: Information-seeking strategies for inter-ethnic social comparisons. *Journal of Cross-Cultural Psychology*, 7, 289 – 300.
- About, F. (1988). *Children and Prejudice*. Oxford: Blackwell.
- About, 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.
- About, F.E. & Amato, M. (2001). Developmental and Socialization Influences on Intergroup Bias. In Rupert Brown and Sam Gaertner, (Eds.), *Intergroup processes*. (pp. 65-85). Oxford, UK: Blackwell Publishing.
- About, F.E. & Doyle, A.B. (1996). Does talk of race foster prejudice or tolerance in children? *Canadian Journal of Behavioural Science*, 28, 161-170.
- About, F.E. & Fenwick, V. (1999). Exploring and evaluating school-based interventions to reduce prejudice. *Journal of Social Issues*, 55, 767-785.
- About, F.E. & Levy, S.R. (2000). Interventions to reduce prejudice and discrimination in children and adolescents. In Stuart Oskamp, (Ed.), *Reducing prejudice and discrimination*. (pp. 269-293). NJ, US: Lawrence Erlbaum Associates Publishers.
- About, F.E., Mendelson, M.J. & Purdy, K.T. (2003). Cross-race peer relations and friendship quality. *International Journal of Behavioural Development*, 27, 165-173.
- About, F.E. & Mitchell, F.G. (1977). Ethnic role taking: The effects of preference and self-identification. *International Journal of Psychology*, 12, 1-17.

- Aboud, F. & Ruble, D. N. (1987). Identity constancy in children: Developmental processes and implications. In T. M. Honess & K. M. Yardley, (Eds.), *Self and identity: Individual change in development*. (pp 95 – 107). London: Routledge & Kegan Paul.
- Abrams, D., Jackson, D. & St Claire, L. (1990). Social identity and the handicapping functions of stereotypes: Children's understanding of mental and physical handicap. *Human Relations*, 43, 1085 – 1098.
- Abrams, D., Rutland, A. & Cameron, L. (2003). The development of subjective group dynamics: Children's judgments of normative and deviant in-group and out-group individuals. *Child Development*, 74, 1-17.
- Acton, H. M. & Zarbatan, L. (1988). Interaction and performance within cooperative groups: Effects on nonhandicapped students' attitudes towards their mildly mentally retarded peers. *American Journal of Mental Retardation*, 95, 16-23.
- Adorno, T. W., Frenhal-Brunswick, E., Levinson, D. J. & Sanford, R. N. (1950). *The authoritarian personality*. New York: Harper.
- Allport, G. W. (1954). *The Nature of prejudice*. New York: Doubleday Anchor Books.
- Armstrong, B., Johnson, D.W. & Balow, B. (1981). Effects of cooperative vs. individualistic learning experiences on interpersonal attraction between learning-disabled and normal-progress elementary school students. *Contemporary Educational Psychology*, 6, 102-109.
- Aron, A. & Aron, E. N. (1996). Self-expansion motivation and including other in the self. In S. Duck, (Ed.), *Handbook of Personal Relationships: Theory, research and interventions*. (2nd Ed, pp 251-270). New York: John Wiley & Sons.

- Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of other in the Self Scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology, 63*, 596-612.
- Ashburn-Nardo, L., Voils, C.I. & Monteith, M.J. (2001). Implicit associations as the seeds of intergroup bias. How easily to they take root? *Journal of Personality and Social Psychology, 81*, 789-799.
- Asher, S. R. & Allen, V. L. (1969). Racial preference and social comparison processes. *Journal of Social Issues, 25*, 157 – 166.
- Augoustinos, M. & Rosewarne, D. L. (2001). Stereotype knowledge and prejudice in children. *British Journal of Developmental Psychology, 19*, 143 – 156.
- Banaji, M.R. & Greenwald, A.G. (1995). Implicit gender stereotyping in judgements of fame. *Journal of Personality and Social Psychology, 68*, 181-198.
- Banker, B.S. & Gaertner, S.L. (1998). Achieving stepfamily harmony: An intergroup relations approach. *Journal of Family Psychology, 12*, 310-325.
- Barenboim, C. (1981). The development of person perception in childhood adolescence: From behavioral comparisons to psychological constructs to psychological comparisons. *Child Development, 52*, 129-144.
- Bargh, J.A., Chaiken, S., Govender, R. & Pratto, F. (1996). The generality of the automatic attitude activation effect. *Journal of Personality and Social Psychology, 62*, 893-912.
- Banks, J.A. (1995). Multicultural education: Its effects on students' racial and gender role attitudes. In J.A. Banks & C. A. M. Banks, (Eds.), *Handbook of research on multicultural education*. (pp 617-627). New York: Macmillan.

- Barnett, V. & Lewis, T. (1984). *Outliers in statistical data* (2nd ed.). New York: Wiley.
- 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.
- Baron, A.S. & Banaji, M. R. (2004). The development of implicit attitudes Evidence of race evaluations from 6, 10 and adulthood. *An unpublished manuscript*.
- Barrett, M. (1996). English children's acquisition of a European identity. In G. Breakwell & E. Lyons, (Eds.), *Changing European identities: Social psychological analyses of social change*. (pp. 349 – 369). Oxford: Butterworth–Heinemann.
- Barrett, M. (2001). The development of national identity: A conceptual analysis and some data from Western European studies. In M. Barrett, T. Riazanova & M. Volovikova, (Eds.), *Development of national, ethnolinguistic and religious identities in children and adolescents*. (pp. 16 – 58). Moscow: Institute of Psychology, Russian Academy of Sciences (IPRAS).
- Barrett, M. & Short, J. (1992). Images of European people in a group of 5-10-year-old English school children. *British Journal of Developmental Psychology*, *10*, 339 – 363.
- Barrett, M., Lyons, E. & del Valle, A. (2004). The development of national identity and social identity processes: Do social identity theory and self-categorisation theory provide useful heuristic frameworks for developmental research? In M. Bennett & F. Sani, (Eds.), *The development of the social self*. (pp 159 – 188). Hove & New York: Psychology Press

- Bar-Tal, D. & Saxe, L. (1976). Physical attractiveness and its relationship to sex-role stereotyping. *Sex Roles*, 2, 123-148.
- Bennett, M., Sani, F., Hopkins, N., Agostini, L. & Malucchi, L. (2000). Children's gender categorization: An investigation of automatic processing. *British Journal of Developmental Psychology*, 18, 97 – 102.
- Bennett, M., Lyons, E., Sani, F. & Barrett, M. (1998). Children's subjective identification with the group and in-group favouritism. *Developmental Psychology*, 34, 902 – 909.
- Berry, J. W. (1984). Cultural relations and plural societies: Alternatives to segregation and their sociopsychological implications. In N. Miller & M. B. Brewer, (Eds.), *Groups in contact: The psychology of desegregation*. (pp. 11 – 28). New York: Academic Press.
- Best, D.L., Smith, S.C., Graves, D.J. & Williams, J.E. (1975). The modification of racial bias in preschool children. *Journal of Experimental Child Psychology*, 20, 193-205.
- Bettencourt, B.A., Brewer, M.B., Rogers-Croak, M. & Miller, N. (1992) Co-operation and the reduction of intergroup bias: The role of reward structure and social orientation. *Journal of Experimental Social Psychology*, 28, 301-319.
- Bettencourt, B.A., Charlton, K. & Kernahan, C. (1997). Numerical representations of groups in co-operative settings: social orientation effects on in-group bias. *Journal of Experimental Social Psychology*, 33, 630-659.
- Biernat, M. (1991). Gender stereotypes and the relationship between masculinity and femininity: A developmental analysis. *Journal of Personality and Social Psychology*, 61, 351 – 365.

- Bigler, R.S. (1995). The role of classification skill in moderating environmental influences on children's gender stereotyping: A study of the functional use of gender in the classroom. *Child Development, 66*, 1072-1087.
- Bigler, R.S. (1999). The use of multicultural curricula and materials to counter racism in children. *Journal of Social Issues, 55*, 687-705.
- Bigler, R. S., Averhart, C. A., & Liben, L.S. (2003). Race and the work force: Occupational status, aspirations, and stereotyping among African American children. *Developmental Psychology, 39*, 572-580.
- Bigler, R. S., Brown, C. S., & Markell, M. (2001). When groups are not created equal: Effects of group status on the formation of intergroup attitudes in children. *Child Development, 72*, 1151-1162.
- Bigler, R. S., Jones, L. C. & Lobliner, D. B. (1997). Social categorisation and the formation of inter-group attitudes in children. *Child Development, 68*, 530 – 543.
- Bigler, R.S. & Liben, L.S. (1992). Cognitive mechanisms in children's gender stereotyping: Theoretical and educational implications of a cognitive-based intervention. *Child Development, 63*, 1351-1363.
- Black-Gutman, D. & Hickson, F. (1996). The relationship between racial attitudes and social-cognitive development in children: An Australian study. *Merrill-Palmer Quarterly, 41*, 209-228.
- Blair, I.V., Ma, J.E. & Lenton, A.P. (2001). Imagining stereotypes away. The moderation of implicit stereotypes through mental imagery. *Journal of Personality and Social Psychology, 81*, 828-841.

- Blanchard, F.A., Crandall, C.S., Brigham, J.C. & Vaughn, L.A. (1994). Condemning and condoning racism: A social context approach to interracial settings. *Journal of Applied Psychology*, 79, 993-997.
- Blanchard, F.A., Lilly, T. & Vaughn, L.A. (1991). Reducing the expression of racial prejudice. *Psychological Science*, 2, 111-115.
- Blanchard, P. A., Weigel, R. H. & Cook, S.W. (1975). The effect of relative competence of group members upon interpersonal attraction in cooperating interracial groups. *Journal of Personality and Social Psychology*, 32, 519 – 530.
- Bodenhausen, G.V. (1993). Emotions, arousal, and stereotypic judgments: A heuristic model of affect and stereotyping. In Diane M. Mackie & David Lewis Hamilton, (Eds.), *Affect, cognition, and stereotyping: Interactive processes in group perception*. (pp. 13-37). San Diego, CA, US: Academic Press, Inc.
- Boulton, M. (1995). Patterns of bully/victim problems in mixed race groups of children. *Social Development*, 4, 277-293.
- Braddock, J.H. & McPartland, J.M. (1989). How minorities continue to be excluded from equal employment opportunities: Research on labour market and institutional barriers. *Journal of Social Issues*, 43, 5-39.
- Branch, C. W. & Newcombe, N. (1986). Racial attitude development among young Black children as a function of parental attitudes: A longitudinal and cross-sectional study. *Child Development*, 57, 712 – 721.
- Breckheimer, S. E. & Nelson, R. O. (1976). Group methods for reducing racial prejudice and discrimination. *Psychological Reports*, 39, 1259 – 1268.
- Brewer, M. B. (1991). The social self: On being the same and different at the same time. *Personality and Social Psychology Bulletin*, 17, 475 – 482.

- Brewer, M. & Miller, N. (1988). Contact and cooperation: When do they work? In P. A. Katz, D. A. Taylor, (Eds.), *Eliminating racism: Profiles in controversy. Perspectives in social psychology*. (pp. 315-326). New York, NY, US: Plenum Press.
- Brewer, M. B. & Gaertner, S.L. (2001). Toward reduction of prejudice: intergroup contact and social categorization. In R. Brown & S. L. Gaertner, (Eds.), *Blackwell handbook of social psychology: Intergroup processes*. (pp 451-474). Oxford: Blackwell.
- Brewer, M. B. (1999). The psychology of prejudice: In-group love or out-group hate? *Journal of Social Issues*, 55, 429-444.
- Brown, R. J. (1995). *Prejudice: Its social psychology*. Oxford: Blackwell.
- Brown, R. J. & Hewstone, M. (2005). An integrative theory of intergroup contact. *Advances in Experimental Social Psychology*, 37, 255-343.
- Brown, R., Maras, P., Masser, B., Vivian, J. & Hewstone, M. (2001). Life on the ocean wave: Testing some intergroup hypotheses in a naturalistic setting. *Group Processes and Intergroup Relations*, 4, 81 – 97.
- Brown, R. J., Vivian, J. & Hewstone, M. (1999). Changing attitudes through intergroup contact: The effects of group membership salience. *European Journal of Social Psychology*, 29, 741-764.
- Byrnes, D.A. & Kiger, G. (1990). The effect of prejudice-reduction simulation on attitude change. *Journal of Applied Social Psychology*, 20, 341-356.
- Cameron, J. A., Alvarez, J. M., & Bargh, J. A. (2000). Examining the validity of implicit measures of prejudice. Poster presented at the first annual meeting for the Society of Personality and Social Psychology, Nashville, TN.

- Cameron, J. A., Alvarez, J.M., Ruble, D. N. & Fuligni, A. J. (2001). Children's lay theories about in-groups and out-groups: Re-conceptualizing research on prejudice. *Personality and Social Psychology Review*, 5, 118-128.
- Campbell, D. T., & Stanley, J. C. (1966). *Experimental and quasi-experimental designs for research*. Chicago: Rand McNally.
- Cazabon, M. (1999). *The Amigos Program*. Unpublished Manuscript, Cambridge School District, Cambridge USA. In Genesee, F. & Gandara, P. (1999). Bilingual education programs: A cross-national perspective. *Journal of Social Issues*, 55, 665-686.
- Chen, M. & Bargh, J. A. (1999). Consequences of automatic evaluation: Immediate behavioural predispositions to approach or avoid the stimulus. *Personality and Social Psychology Bulletin*, 25, 215 – 224.
- Chyatte, C., Schaefer, D. F. & Spiggia, M. (1951). Prejudice verbalisation among children. *Journal of Educational Psychology*, 42, 421 – 431.
- Clark, K. B. & Clark, M. B. (1937). Segregation as a factor in the racial identification of Negro pre-school children: A preliminary report. *Journal of Experimental Psychology*, 8, 161 – 163.
- Clark, A., Hogevar, D. & Dembo, M. H. (1980). The role of cognitive development in children's explanations and preferences for skin colour. *Developmental Psychology*, 16, 332 – 339.
- Clark, K.B. & Clark, M.P. (1947). Racial identification and preference in Negro children. In H. Proshansky & B. Seidenberg, (Eds.), *Basic Studies in Social Psychology* (1955 edition). New York: Holt Rinehart and Winston.

- Connolly, P. (1998). *Racism, gender identities and young children: social relations in a multi-ethnic, inner-city primary school*. New York: Routledge.
- Cotton, K. (1993). Fostering intercultural harmony in schools: Research finding. Social Improvement Research Series. URL:
<http://www.nwrel.org/scpd/sirs/8/topsyn7.html>
- Crandall, C. S., Eshleman, A., & O'Brien, L. (2002). Social norms and the expression and suppression of prejudice: The struggle for internalization. *Journal of Personality and Social Psychology*, *82*, 359-378.
- Crosby, F., Bromley, S. & Saxe, L. (1980). Recent unobtrusive studies of Black and White discrimination and prejudice: A literature review. *Psychological Bulletin*, *87*, 546 – 563.
- Culberston, F. M. (1957). Modification of an emotionally held attitude through role-playing. *Journal of Abnormal and Social Psychology*, *54*, 230 – 233.
- Dasgupta, N. & Greenwald, A.G. (2001). On the malleability of automatic attitudes. Combating automatic prejudice with images of admired and disliked individuals. *Journal of Personality and Social Psychology*, *81*, 800-814.
- Davey, A. (1983). *Learning to be Prejudiced*. London: Edward Arnold.
- Deese, J. (1959). On the prediction of occurrence of particular verbal intrusions in immediate recall. *Journal of Experimental Psychology*, *58*, 17-22.
- Derman-Sparks, L. & Phillips, C. B. (1997). *Teaching/learning anti-racism: A developmental approach*. New York: Teachers College, Columbia University.
- Desforges, D. M., Lord, C.G., Ramsey, S.L., Mason, J.A., van Leeuwen, M.D., West, S.C. & Lepper, M.R. (1991). Effects of structured cooperative contact on

changing negative attitudes towards stigmatized groups. *Journal of Personality and Social Psychology*, 60, 531-544.

Devine, P.G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology*, 56, 5-18.

Devine, P.G., Plant, E.A., Amodio, D.M., Harmon-Jones, E. & Vance, S.L. (2002). The regulation of explicit and implicit race bias: the role of motivations to respond without prejudice. *Journal of Personality and Social Psychology*, 82, 835 – 848.

Department for Education and Skills (2001). *Meeting Special Needs: A Programme of Action*. London, England: Her Majesties Office.

Dorr, A., Graves, S.B. & Phelps, A. (1980). Television literacy for young children. *Journal of Communication*, 24, 130-137.

Dovidio, J.F., Kawakami, K., Johnson, C., Johnson, B. & Howard, A. (1997). On the nature of prejudice: Automatic and controlled processes. *Journal of Experimental Social Psychology*, 33, 510 – 540.

Doyle, A.B. & Aboud, F.E. (1995). A longitudinal study of white children's racial prejudice as a social-cognitive development. *Merrill-Palmer Quarterly*, 41, 209-228.

Doyle, A.B., Beaudet, J., Aboud, F.E. (1988). Developmental patterns in the flexibility of children's ethnic attitudes. *Journal of Cross Cultural Psychology*, 19, 3-18.

Duckitt, J. (1992). *The social psychology of prejudice*. Praeger: New York.

Duncan, B.L. (1976). Differential social perception and attribution of intergroup violence: Testing the lower limits of stereotyping of blacks. *Journal of Personality and Social Psychology*, 34, 590-598.

- Ellemers, N., Wilke, H. & Van Knippenberg, A. (1993). Effects of the legitimacy of low group or individual status as individual and collective status-enhancement strategies. *Journal of Personality and Social Psychology*, *64*, 766 – 778.
- Eller, A. & Abrams, D. (2003). 'Gringos' in Mexico: Cross-sectional and longitudinal effects of language school-promoted contact on intergroup bias. *Group Processes and Intergroup Relations*, *6*, 55-75.
- Fazio, R. H., & Zanna, M. P. (1981). Direct experience and attitude-behaviour consistency. In L. Berkowitz, (Ed.), *Advances in experimental social psychology* (Vol. 14, pp. 161-202). New York: Academic Press.
- Fazio, R.H., Jackson, J. R., Dunton, B. C. & Williams, C. J. (1995). Variability in automatic activation as an unobtrusive measure of racial attitudes: A bona fide pipeline? *Journal of Personality and Social Psychology*, *69*, 1013-1027.
- Fishbein, H.D. & Imai, S. (1993). Preschoolers select playmates on the basis of gender and race. *Journal of Applied Developmental Psychology*, *14*, 303-316.
- Furnham, A. & Pendred, J. (1983) Attitudes towards the mentally and physically disabled. *British Journal of Medical Psychology*, *56*, 179-187.
- Gaertner, S.L. & Dovidio, J.F. (2000). *Reducing intergroup bias: The common in-group identity model*. Hove, East Sussex: Psychology Press.
- Gaertner, S.L. & McLaughlin, J.P. (1983). Racial stereotypes: Associations and ascriptions of positive and negative characteristics. *Social Psychology Quarterly*, *46*, 23 – 30.
- Gaertner, S.L., Mann, J., Dovidio, J.F., Murrell, A. & Dovidio, J.F. (1989). Reducing intergroup bias: The benefits of recategorization. *Journal of Personality and Social Psychology*, *57*, 239-249.

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- Gaertner, S. L., Rust, M., Dovidio, J. F., Bachman, B. & Anastasio, P. (1994). The contact hypothesis: The role of a common ingroup identity on reducing intergroup bias. *Small Group Research*, 25, 224 – 249.
- Genesee, F. (1977). French immersion students' perceptions of themselves and others: An ethnolinguistic perspective. Unpublished manuscript, McGill University, Montreal, Quebec, Canada.
- Genesee, F. (1987). Second language learning and language attitudes. *Working Papers in Bilingualism*, 16, 19 – 42.
- Genesee, F., Allister, R. & Morin, S. (1974). Evaluation of the 1973 – 1974 pilot Grade 11 French immersion class. *Unpublished manuscript*, McGill University, Montreal, Quebec, Canada.
- Genesee, F. & Gandara, P. (1999). Bilingual education programs: A cross-national perspective. *Journal of Social Issues*, 55, 665-686.
- Gonzalez, R. & Brown, R. (2003). Generalization of positive attitude as a function of subgroup and superordinate identifications in intergroup contact. *European Journal of Social Psychology*, 33, 195-214.
- Graves, F. (1975). Racial diversity of children's television: Its impact on racial attitudes and stated program preferences. *Unpublished doctoral dissertation*, Harvard University, Cambridge, MA.
- Graves, S.B. (1999). Television and prejudice-reduction: When does television as a vicarious experience make a difference? *Journal of Social Issues*, 55, 707-727.
- Greenberg, B. S. & Brand, J. E. (1994). Minorities and the mass media: 1970s to the 1990s. In J. Bryant & D. Zillman, (Eds.), *Media effects: Advances in theory and research* (pp. 273 – 314). Hillsdale, NJ: Erlbaum.

- Greenberg, B.S. & Reeves, B. (1976). Children and the perceived reality of television. *Journal of Social Issues*, 32, 86–97.
- Greenwald, A.G. & Banaji, M.R. (1995). Implicit social cognition: Attitudes, self-esteem and stereotypes. *Psychological Review*, 102, 4-27.
- Greenwald, A.G., McGhee, D.E. & Schwartz, J.L.K. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology*, 74, 1464 – 1480.
- Grubbs, P.R. & Niemeyer, J.A. (1999). Promoting reciprocal social interactions in inclusive classrooms for young children. *Infants & Young Children*, 11, 9-18.
- Hamberger, J. & Hewstone, M. (1997). Inter-ethnic contact as a predictor of blatant and subtle prejudice: tests of a model in four West European nations. *British Journal of Social Psychology*, 36, 173-190.
- Haslam, S. A., Turner, J. C., Oakes, P. J. & McGarty, C. (1992). Context-dependent variation in social stereotyping I: The effects of intergroup relations as mediated by social change and frame of reference. *European Journal of Social Psychology*, 22, 3 – 20.
- Hastings, R.P. & Graham, S. (1995). Adolescents' perceptions of young people with severe learning difficulties: the effects of integration schemes and frequency of contact. *Educational Psychology*, 15, 149-158.
- Hayden-Thompson, L., Rubin, K. H. & Hymel, S. (1987). Sex preferences in sociometric choices. *Developmental Psychology*, 23, 558 – 562.
- Hewstone, M. & Brown, R.J. (1986) Contact is not enough: an intergroup perspective on the contact hypothesis. In M. Hewstone & R. Brown, (Eds.), *Contact and conflict in intergroup encounters*. (pp. 1-44). Oxford: Blackwell.

- Hill, M.E. & Augustinos, M. (2001). Stereotype change and prejudice reduction: Short- and long-term evaluation of a cross-cultural awareness programme. *Journal of Community and Applied Social Psychology, 11*, 243-262.
- Hirschfeld, L. (1996). *Race in the making: Cognition, culture, and the child's construction of human kinds*. Cambridge, MA: MIT Press.
- Hogg, M. A. & Abrams, D. (1988). *Social identifications: A social psychology of intergroup relations and group processes*. London: Routledge.
- Home Office (2004). *Community cohesion pathfinder programme*. London: HMSO.
- Hopkins, N., Regan, M. & Abell, J. (1997). On the context dependence of national stereotypes: Some Scottish data. *British Journal of Social Psychology, 36*, 553 – 563.
- Horowitz, E.L. (1936). The development of attitude towards the Negro. *Archives of Psychology, 1*, 301-338.
- Horowitz, E. L. & Horowitz, R. E. (1938). Development of social Attitudes in children. *Sociometry, 1*, 301 – 338.
- Houlette, M., Gaertner, S. L., Johnson, K. M., Banker, B. S., Riek, B. M., & Dovidio, J. F. (2004). Developing a more inclusive social identity: An elementary school intervention. *Journal of Social Issues, 60*, 35-55.
- Jacoby, L.L., Kelley, C.M., Brown, J. & Jasechko, J. (1989). Becoming famous overnight: Limits on the ability to avoid unconscious influences of the past. *Journal of Personality and Social Psychology, 56*, 326-338.
- Jaspers, J. M. F., Van de Geer, J. P., Tajfel, H. & Johnson, N. (1972). On the development of national attitudes in children. *European Journal of Social Psychology, 2*, 347 – 369.

- Jetten, J., Spears, R. & Manstead, A. S. R. (1996). Intergroup norms and intergroup discrimination: Distinctive self-categorisation and social identity effects. *Journal of Personality and Social Psychology*, 71, 1222 – 1223.
- Jetten, J., Spears, R. & Manstead, A. S. R. (1997). Strength of identification and intergroup differentiation: The influence of group norms. *European Journal of Social Psychology*, 27, 603 – 609.
- Johnson, N., Middleton, M. & Tajfel, H. (1970). The relationship between children's preferences for and knowledge about other nations. *British Journal of Social and Clinical Psychology*, 9, 232 – 267.
- Johnson, R., Rynders, J., Johnson, D.W., Schmidt, B. & Haider, S. (1979). Interaction between handicapped and nonhandicapped teenagers as a function of situational goal structuring: Implications for mainstreaming. *American Educational Research Journal*, 16, 161-167.
- Jones, L.M. & Foley, L.A. (2003). Educating children to decategorize racial groups. *Journal of Applied Social Psychology*, 33, 554-564.
- Karpinski, A. & Hilton, J.L. (2001). Attitudes and the Implicit Attitude Test. *Journal of Personality and Social Psychology*, 81, 744-788.
- Katz, P. A. & Kofkin, J. A. (1997). Race, gender and young children. In S. S. Luthar, J. A. Burack, D. Cicchetti & J. Weisz, (Eds.), *Developmental psychopathology: Perspectives on adjustment, risk and disorder*. (pp. 51 – 74). New York: Academic Press.
- Katz, P.A. & Zalk, S.R. (1978) Modification of children's racial attitudes. *Developmental Psychology*, 14, 447-461.

- Katz, P.A. (1976). The acquisition of racial attitudes in children. In P. A. Katz, (Ed.), *Toward the elimination of racism*. (pp. 125 – 154). New York: Pergamon Press.
- Katz, P.A., Sohn, M. & Zalk, S.R. (1975). Perceptual concomitant of racial attitudes in urban grade-school children. *Developmental Psychology*, *11*, 135-144.
- Kawakami, K., Young, H. & Dovidio, J.F. (2002). Automatic stereotyping: Category, trait, and behavioural activations. *Personality and Social Psychology Bulletin*, *28*, 3-15.
- Kehoe, J. & Mansfield, E. (1993). The limitations of multicultural education and anti-racist education. *Multiculturalism*, *15*, 3-8.
- Killen, M. & Stangor, C. (2001). Children's social reasoning about inclusion and exclusion in gender and race peer groups contexts. *Child Development*, *72*, 174 – 186.
- Kim, D. Y. (2003). Voluntary controllability of the Implicit Association Test (IAT). *Social Psychology Quarterly*, *66*, 83-96.
- Kinket, B. & Verkuyten, M. (1999). Intergroup evaluations and social context: a multilevel approach. *European Journal of Social Psychology*, *29*, 219 – 237.
- Kleinpenning, G. & Hagendoorn, L. (1991). Forms of racism and the cumulative dimension of ethnic attitudes. *Social Psychology Quarterly*, *56*, 21-36
- Koeller, S. (1977). The effects of listening to excerpts from children's stories about Mexican-Americans on the attitudes of sixth graders. *Journal of Educational Research*, *70*, 329 – 334.
- Kohlberg, L. A. (1966). A cognitive-developmental analysis of children's sex role concepts and attitudes. In E. E. Maccoby, (Ed.), *The development of sex differences*. (pp. 82 – 173). Stanford, CA: Stanford University Press.

- Kohlberg, L. (1976). Moral stages and moralization: The cognitive-developmental approach. In T. Lickona, (Ed.), *Moral development and behaviour*. New York: Holt, Rinehart & Winston.
- Krajewski, J.J. & Hyde, M.S. (2000) Comparison of teen attitudes toward individuals with mental retardation between 1987 and 1998: Has inclusion made a difference? *Education and Training in Mental Retardation and Developmental Disabilities*, 35, 284-293.
- Lambert, W. E. & Cazabon, M. (1994). *Students' views of the Amigos Program (Research Report No. 11)*. Santa Cruz, CA: National Centre for Research on Cultural Diversity and Second Language Learning.
- Lambert, W. E. & Klineberg, O. (1967). *Children's views of foreign peoples*. New York: Appleton Century Crofts.
- Lambert, W. E. & Tucker, G. R. (1972). *Bilingual education of children: The St. Lambert Experiment*. Rowley, MA: Newbury House.
- Leinbach, M. D. & Fagot, B. I. (1986). Categorical habituation to male and female faces: Gender schematic processing in infancy. *Infant Behaviour and Development*, 16, 317 – 332.
- Levin, S., van Laar, C. & Sidanius, J. (2003). The effects of in-group and out-group friendships on ethnic attitudes in college: a longitudinal study. *Group Processes and Intergroup Relations*, 6, 76-92.
- Levy, S. R. (1999). Reducing prejudice: Lessons from social-cognitive factors underlying perceived differences in prejudice. *Journal of Social Issues*, 55, 745 – 766.

- Levy, S. R. & Bigler, R. S. (2004, June). *Meta-analytic review of mechanisms underlying improved racial/ethnic attitudes among youth*. In S. R. Levy (Chair), Understanding and reducing racial/ethnic prejudice among youth. Symposium conducted at the biennial meeting of the Society for the Psychological Study of Social Issues, Washington, DC.
- Liebkind, K. & McAlister, A. (1999). Extended contact through peer modelling to promote tolerance in Finland. *European Journal of Social Psychology, 29*, 765-780.
- Litcher, J. H. & Johnson, D. W. (1969). Changes in attitudes towards Negroes of White elementary school students after use of multiethnic readers. *Journal of Educational Psychology, 60*, 148 – 152.
- Litcher, J. H., Johnson, D. W. & Ryan, F. L. (1973). Use of pictures of multiethnic interaction to change attitudes of White elementary school children toward Blacks. *Psychological Reports, 33*, 367 – 372.
- Livingstone, S. M. (1990). Interpreting a television narrative: How different viewers see a story. *Journal of Communication, 40*, 72 – 85.
- Lovelace, V., Scheiner, S., Dollberg, S., Segui, I & Black, T. (1994). Making a neighbourhood the Sesame Street way. Developing a methodology to evaluate children's understanding of race. *Journal of Educational Television, 20*, 69-77.
- Maass, A. & Arcuri, L. (1996). Language and stereotyping. In N. Macrae, M. Hewstone, and C. Stangor, (Eds.), *The foundations of stereotypes and stereotyping*. (pp 193-226). New York: Guildford.
- Maccoby, E. E. (1988). Gender as a social category. *Developmental Psychology, 24*, 755 – 765.

- Maccoby, E. & Jacklin, C. (1987). Gender segregation in childhood. *Advances in Child Development and Behaviour*, 20, 239 – 287.
- MacKinnon, D. P., Warsi, G., & Dwyer, J. H. (1995). A simulation study of mediated effect measures. *Multivariate Behavioral Research*, 30, 41-62.
- Macrae, C. N., Shepherd, J. W. & Milne, A. B. (1992). The effects of source credibility on the dilution of stereotype-based judgements. *Personality and Social Psychology Bulletin*, 18, 765 – 775.
- Magiati, I., Dockrell, J.E. & Logotheti, A. (2002) Young children's understanding of disabilities: the influence of development, context and cognition. *Applied Developmental Psychology*, 23, 409-430.
- Maras, P. F. (1993). The integration of children with disabilities into the mainstream. *Unpubl. PhD thesis*, University of Kent.
- Maras, P. & Brown, R. (1996) Effects of contact on children's attitudes towards disability: A longitudinal study. *Journal of Applied Social Psychology*, 26, 2113 – 2134.
- Maras, P & Brown, R. (2000) Effects of different forms of school contact on children's attitudes toward disabled and non-disabled peers. *British Journal of Educational Psychology*, 70, 337-351.
- Marcus-Newhall, A., Miller, N., Holtz, R. & Brewer, M.B. (1993). Cross-cutting category membership with role assignment: A means of reducing intergroup bias. *British Journal of Social Psychology*, 32, 125-146.
- McAdoo, J. L. (1970). *An exploratory study of racial attitude change in Black preschool children*. Unpublished doctoral dissertation, University of Michigan.

- Miller, N., Brewer, M.B. & Edwards, K. (1985). Cooperative interaction in desegregated settings: A laboratory analogue. *Journal of Social Issues, 41*, 63-79.
- Milner, D. (1983). Racial identification and preference in Black British children. *European Journal of Social Psychology, 3*, 281 – 295.
- Milner, D. (1996). Children and racism: Beyond the value of the dolls... In W. Peter Robinson, (Ed.), *Social groups and identities: Developing the legacy of Henri Tajfel*, Oxford: Butterworth-Heinemann.
- Monteith, M. J., Voils, C. I., & Ashburn-Nardo, L. (2001). Taking a look underground: Detecting, interpreting, and reacting to implicit racial biases. *Social Cognition, 19*, 395-417.
- Moskowitz, G.B., & Skurnik, I. (1999). Contrast effects as determined by the type of prime: Trait versus exemplar primes initiate processing strategies that differ in how accessible constructs are used. *Journal of Personality and Social Psychology, 76*, 911-927.
- Mullen, B., Brown, R. & Smith, C. (1992). Ingroup bias as a function of salience, relevance and status: An integration. *European Journal of Social Psychology, 22*, 103 – 122.
- Mummenday, A., Klink, A. & Brown, R. (2001). Nationalism and patriotism: National identification and out-group rejection. *British Journal of Social Psychology, 40*, 159-172.
- Murphy, S.T., Zajonc, R.B. & Manahan (1995). Affect, cognition and awareness: Affective priming with optimal and suboptimal stimulus processes. *Journal of Personality and Social Psychology, 64*, 723-729.

- Nabors, L. (1997) Playmate preference of children who are typically developing for their classmates with special needs. *Mental Retardation*, 35, 107 – 113.
- Nesdale, D. & Flessner, D. (2001). Social identity and the development of children's group attitudes. *Child Development*, 72, 506 – 517.
- Nesdale, D. (1999). Developmental changes in children's ethnic preference and social cognitions. *Journal of Applied Developmental Psychology*, 20, 509 – 519.
- Nesdale, D. (2001). Development of prejudice in children. In M. Augoustinos & K. J. Reynolds, (Eds.), *Understanding prejudice, racism and social conflict*. (pp. 57-72). London: Sage.
- Nesdale, D. (2004). Social identity processes and children's ethnic prejudice. In M. Bennett & F. Sani, (Eds.), *The Development of the Social Self*. Hove & New York: Sage.
- Nesdale, D., Durkin, K., Maass, A. & Griffiths, J. (2005). Threat, group identification, and children's ethnic prejudice. *Social Development*, 14, 189 – 205.
- Nesdale, D., Maass, A., Durkin, K. & Griffiths, J. (2005). Group norms, threat and children's racial prejudice. *Child Development*, 76, 652 – 663.
- Nicolarazi, M. & de Reybekiel, N. (2001). A comparative study of children's attitudes towards deaf children, children with wheelchairs and blind children in Greece and in the UK. *European Journal of Special Needs Education*, 16, 167-182.
- Niedenthal, P.M. (1990). Implicit perception of affective information. *Journal of Experimental Social Psychology*, 26, 505-527.
- Nier, J.A., Gaertner, S.L., Dovidio, J.F., Banker, B.S., Ward, C.M. & Rust, M.C. (2001). Changing interracial behaviour: The effects of a common group identity. *Group Processes and Intergroup Relations*, 4, 299-316.

- Norwich, B. (2002). *LEA inclusion trends in England 1997 – 2001: Statistics on Special School placements and pupils with statements in Special Schools*. Bristol: CSIE.
- Nosek, B.A. & Banaji, M.R. (2001). The no/no-go association task. *Social Cognition*, 19, 625-664.
- Oakes, P. J., Haslam, A. & Turner, J. C. (1994). *Stereotyping and social reality*. Oxford: Blackwell publishers.
- Ocampo, A., Bernal, M. E. & Knight, G. P. (1993). Gender, race and ethnicity: The sequencing of social consistencies. In M.E. Bernal & G.P.Knight, (Eds.), *Ethnic identity formation and transmission among hispanics and other minorities* (pp11-30). New York: State University of New York Press.
- Oskamp, S. (2000). *Reducing prejudice and discrimination*. NJ, US: Lawrence Erlbaum.
- Paluck, E.L. & Green, D.P. (2003, September). *Reducing intergroup bias in the world: What do we know?* Paper presented at a joint medium size meeting of the European Association of Experimental Social Psychology (EAESP) and Society for the Psychological Study of Social Issues (SPSSI), University of Kent, Canterbury, UK.
- Paluck, E. L. & Green, D.O. (2004), Intergroup bias: What do we know? *Unpublished manuscript*.
- Paolini, S., Hewstone, M., Cairns, E., & Voci, A. (2004). Effect of direct and indirect cross-group friendships on judgements of Catholics and Protestants in Northern Ireland: The mediating role of an anxiety-reduction mechanism. *Personality and Social Psychology Bulletin*, 30, 770-786.
- Pate, G.S. (1988). Research on reducing prejudice. *Social Education*, 52, 287-289.

- Pettigrew, T. (1997). Generalized intergroup contact effects on prejudice. *Personality and Social Psychology Bulletin*, 23, 173-185.
- Pettigrew, T. F. and Martin, J. (1987). Shaping the organizational context for Black American inclusion. *Journal of Social Issues*, 43, 41 -78.
- Pettigrew, T.F. & Tropp, L.R. (2000). Does intergroup contact reduce prejudice: Recent meta-analytic findings. In Stuart Oskamp, (Ed.), *Reducing prejudice and discrimination. 'The Claremont Symposium on Applied Social Psychology'*. (pp. 93-114). Mahwah, NJ, US: Lawrence Erlbaum Associates, Publishers.
- Pettigrew, T.F. & Tropp, L. (2004). A meta-analytic test of inter-group theory. A manuscript under review.
- Piaget, J. (1965). *The moral judgment of the child*. New York: Free Press.
- Piaget, J. (1970). *The science of education and the psychology of the child*. NY: Grossman.
- Piaget, J. & Weil, A.M. (1951). The development in children of the idea of the homeland and of relations to other countries. *International Social Science Journal*, 3, 561-578.
- Plant, E. A. & Devine, P.G. (1998). Internal and external motivation to respond without prejudice. *Journal of Personality and Social Psychology*, 75, 811-832.
- Powlishta, K.K. (2004). Gender as a social category: Intergroup processes and gender-role development. In M. Bennett & F. Sani, (Eds.), *The development of the social self*. Hove & New York: Sage.
- Powlishta, K.K., Serbin, L.A., Doyle, A. & White, D.R. (1994). Gender, ethnic and body type biases: The generality of prejudice in childhood. *Developmental Psychology*, 30, 526-536.

- Quintana, S. M. (1998). Children's developmental understanding of ethnicity and race. *Applied and Preventative Psychology, 7*, 27-45.
- Quintana, S. M. (1999). Role of perspective-taking abilities and ethnic socialization in development of adolescent ethnic identity. *Journal of Research on Adolescence, 19*, 161-184.
- Rhee, E. & Ruble, D. N. (1997). Development of gender and racial constancy. Poster session presented at the biannual meeting of the Society for Research in Child Development, Washington, DC.
- Roediger, H.L. & McDermott, K.B. (1995). Creating false memories: Remembering words not presented in lists. *Journal of Experimental Psychology: Learning, Memory & Cognition, 21*, 803-814.
- Rosenfield, D. & Stephan, W. G. (1981). Intergroup relations among children. In S. Brehm, S. Kassin, & F. Gibbons, (Eds.), *Developmental social psychology*. (pp. 271-297). New York: Oxford
- Ruble, D. N., Boggiano, A. K., Feldman, N., & Loebel, J. (1980). A developmental analysis of the role of social comparison in self-evaluation. *Developmental Psychology, 16*, 105-115
- Ruble, D.N. & Martin, C.L. (1998). Gender Development. In D.W. (Eds.), *Handbook of child psychology* (5th Ed, Vol 3). New York: J. Wiley.
- Ruble, D.N., Alvarez, J., Bachman, M., Cameron, J., Fuligni, A. & Coll, C.G. (2004). The development of a sense of "we": The emergence and implications of children's collective identity. In M. Bennett & F. Sani, (Eds.). *The development of the social self*. East Sussex, England: Psychology Press.

- Rutland, A., & Cinnirella, M. (2000). Context effects on Scottish national and European self-categorization: The importance of category accessibility, fragility and relations. *British Journal of Social Psychology, 39*, 495-519.
- Rutland, A. (1999). The developmental of national prejudice, in-group favouritism and self-stereotypes in British children. *British Journal of Social Psychology, 38*, 55-70.
- Rutland, A., Cameron, L., Bennett, L. & Ferrell, J. (in press). Interracial contact and racial constancy: A multi-site study of racial intergroup bias in 3-5 year old Anglo-British children. *Journal of Applied Developmental Psychology*.
- Rutland, A., Cameron, L., Milne, A. & McGeorge, P. (2005). Social norms and self-presentation: Children's implicit and explicit intergroup attitudes. *Child Development, 76*, 451-466.
- Sager, H.A. & Schofield, J.W. (1980). Racial and behavioural cues black and white children's perceptions of ambiguously aggressive acts, *Journal of Personality and Social Psychology, 39*, 590-598.
- Salzman, M. & D'Andrea, M. (2001). Assessing the impact of a prejudice prevention project. *Journal of Counselling & Development, 79*, 341-347.
- Sani, F. & Bennett, M. (2001). Contextual variability in young children's gender ingroup stereotype. *Social Development, 10*, 221 – 229.
- Schofield, J.W. (1995). Review of research on school desegregation's impact on elementary and secondary school students. In J.A. Banks & C.A. McGee Banks, (Eds.), *Handbook of research on multicultural education*. (pp 635-646). New York: Macmillan Publishing Company.

- Schofield, J.W. & Eurich-Fulcer, R. (2001). When and how school desegregation improves intergroup relations. In R. Brown & S. Gaertner, (Eds.), *Intergroup processes*, UK: Blackwells.
- Schofield, J.W. & Francis, W.D. (1982). An observational study of peer interaction in racially mixed "accelerated" classrooms. *The Journal of Educational Psychology*, 74, 722-732.
- Sedikides, C., Olsen, N., & Reis, H. T. (1993). Relationships as natural categories. *Journal of Personality and Social Psychology*, 64, 71-82.
- Seiter, E. (1995). Different children, different dreams: racial representation in advertising. In G. Dines & J. M. Humez, (Eds.), *Gender, race and class in media*. (pp. 99 – 108). Thousand Oaks, CA: Sage.
- Selman, R. L. (1971). Taking another's perspective: Role-taking development in early childhood. *Child Development*, 42, 1721-1734.
- Selman, R. L. (1980). *The growth of interpersonal understanding: Development and clinical analyses*. San Diego: Academic Press.
- Serbin, L. A., Moller, L. C., Gulko, J., Powlishta, K. K. & Colbourne, K. A. (1994). The emergence of gender segregation in toddler playgroups. In C. Leaper, (Ed.), *Childhood gender segregation: Causes and consequences. New directions for child development, Vol. 65*. (pp. 7 – 17). San Francisco: Jossey-Bass.
- Sherif, M., Harvey, O.J., White, B.J., Hood, W.R. & Sherif, C.W. (1961). *Intergroup conflict and cooperation: the robber's cave experiment*. Norman, Okla: University of Oklahoma.

- Sigelman, C.K. & Singleton, L.C. (1986). Stigmatization in Childhood S. C. Ainlay, G. Becker & L.M. Coleman (Eds.) *The dilemma of difference: A multidisciplinary view of stigma*. New York: Plenum.
- Sinclair, S., Dunn, E. & Lowey, B.S. (2005). The relationship between parental racial attitudes and children's implicit prejudice. *Journal of Experimental Social Psychology, 41*, 283-289.
- Skowronski, J.J. & Lawrence, M.A. (2001). A comparative study of the implicit and explicit gender attitudes of children and college students. *Psychology of Women Quarterly, 25*, 155-165.
- Sleeter, C.E. & Grant, C.A. (1987). An analysis of multicultural education in the United States. *Harvard Educational Review, 57*, 421 – 444.
- Smith, E. R., & Henry, S. (1996). An in-group becomes part of the self: Response time evidence. *Personality and Social Psychology Bulletin, 22*, 635-642.
- Sorcher, M. & Spence, R. (1982). The interface project: Behaviour modelling as social technology in South Africa. *Personnel Psychology, 35*, 557-581.
- Sroufe, L. A., Sanies, B. C., West, W. D. & Wright, F. S. (1973). Anticipatory heart rate deceleration and reaction time in children with or without referral for learning disability. *Child Development, 44*, 267 – 273.
- Stephan, W. G. (1999). *Improving intergroup relations in the schools*. New York: Columbia Teachers College Press.
- Stephan, W. G & Stephan, C. (1985). Intergroup anxiety. *Journal of Social Issues, 41*, 157-176.
- Stuart, A. & Ord, J. K. (1987). *Kendall's advanced theory of statistics: Vol. 1 Distributional theory*. London: Griffin.

- Suls, J. & Sanders, G. S. (1982). Self-evaluation through social comparison: a developmental analysis. In L. Wheeler, (Ed.), *Review of personality and social psychology*, vol. 3. Beverly Hills, Cal.: Sage.
- Szkrybalo, J. & Ruble, D. N. (1999). "God made me a girl": Gender constancy judgements and explanations revisited. *Developmental Psychology*, 35, 392 – 402.
- Tajfel, H. (1978). *Differentiation between social groups: Studies in the social psychology of intergroup relations*. London: Academic Press.
- Tajfel, H. & Turner, J. (1979). An integrative theory of intergroup conflict. In W. Austin & S. Worchel, (Eds.), *The social psychology of intergroup relations*. (pp. 33 – 47). Monterey, CA: Brooks/Cole.
- Tajfel, H. & Turner, J. (1986). The social identity theory of intergroup behaviour. In S. Worchel and W. G. Austin, (Eds.), *Psychology of Intergroup Relations*. (pp. 7-24). Chicago: Nelson.
- Tajfel, H., Jahoda, G., Nemeth, C., & Johnson, N. (1970). The development of children's preference for their own country: A cross-national study. *International Journal of Psychology*, 5, 245 – 253.
- Taylor, S. E., Fiske, S. T., Etoff, N. L. & Ruderman, A. J. (1978). Categorical and contextual bases of person memory and stereotyping. *Journal of Personality and Social Psychology*, 45, 118 – 126.
- Thompson, S. K. (1975). Gender labels and early sex-role development, *Child Development*, 46, 339 – 347.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D. & Wetherell (1987) *Rediscovering the social group: A self-categorisation theory*. Oxford: Basil Blackwell.

- Turner, J.C. (1975). Social comparison and social identity theory: Some prospects for intergroup behaviour. *European Journal of Social Psychology*, 5, 5-34.
- Turner, R. & Hewstone, M. (2005). A test of the extended intergroup contact hypothesis: The mediating role of perceived in-group and out-group norms, intergroup anxiety and inclusion of the out-group in the self. Presentation made at the 14th General Meeting of the European Association of Experimental Social psychology, Wurzburg, Germany, 19 – 23rd July .
- Turner, R.N., Hewstone, M. & Voci, A. (2004). The impact of cross-group friendship on explicit and implicit prejudice in children. *Manuscript submitted for publication*.
- Van Oudenhaven, J.P., Groenwoud J.T. & Hewstone, M. (1996) Cooperation, ethnic salience and generalisation of interethnic attitudes. *European Journal of Social Psychology*, 26, 649-662.
- Van Oudenhoven, J.P., Prins, K.S., & Buunk, B.P. (1998). Attitudes of minority and majority members towards adaptation of immigrants. *European Journal of Social Psychology*, 28, 995-1013.
- Vaughan, G. M. (1964). Ethnic awareness in relation to minority group membership. *Journal of Genetic Psychology*, 105, 119 – 130.
- Vaughan, G., Tajfel, H. & Williams, J. A. (1981). Bias in reward allocation in an intergroup and interpersonal context. *Social Psychology Quarterly*, 44, 37 – 42.
- Verkuyten, M. (2001). National identification and intergroup evaluations in Dutch children. *British Journal of Developmental Psychology*, 19, 559-571.

- Verkuyten, M. (2005). Ethnic group identification and group evaluation among minority and majority groups: testing the multiculturalism hypothesis. *Journal of Personality and Social Psychology*, 88, 121 – 138.
- Vrij, A. & Smith, B.J. (1999). Reducing ethnic prejudice by public campaigns: An evaluation of a present and new campaign. *Journal of Community and Applied Social Psychology*, 9, 195-215.
- Vrij, A. & Van Schie, E. (1996). Reducing ethnic prejudice through public communication programs: A social-psychological perspective. *Journal of Psychology*, 130, 413-421.
- Wagner, U., van Dick, R., Pettigrew, T.F. & Christ, O. (2003). Ethnic prejudice in East and West Germany: the explanatory power of intergroup contact. *Group Processes and Intergroup Relations*, 6, 22-36.
- Weber, R. & Crocker, J. (1983). Cognitive processes in the revision of stereotypic beliefs. *Journal of Personality and Social Psychology*, 45, 961-977.
- Weiner, M. J. & Wright, F. E. (1973). Effects of undergoing arbitrary discrimination upon subsequent attitudes towards a minority group. *Journal of Applied Social Psychology*, 3, 94 – 102.
- Weinraub, M., Clemens, L. P., Sockloff, A., Ethridge, T., Gracely, E. & Meyers, B. (1984). The development of sex role stereotypes in the third year: Relationship to gender labelling, identity and sex-types toy preference, and family characteristics. *Child Development*, 55, 1493 – 1503.
- Williams, J.E. & Morland, J.K. (1976). *Race, colour and the young child*. Chapel Hill: University of North Carolina Press.

- Wittenbrink, B., Judd, C. M., & Park, B. (2001). Evaluative versus conceptual judgments in automatic attitude activation. *Journal of Experimental Social Psychology*, 37, 244-252.
- Wolkso, C., Park, B., Judd, C.M. & Bachelor, J. (2003). Intergroup contact: Effects on group evaluations and perceived variability. *Group Processes and Intergroup Relations*, 6, 22-36.
- Wolkso, C., Park, B., Judd, C.M. & Wittenbrink, B. (2000). Framing interethnic ideology: Effects of multicultural and colour-blind perspectives on judgements of groups and individuals. *Journal of Personality and Social Psychology*, 78, 635-654.
- Word, C.O., Zanna, M.P. & Cooper, J. (1974). The nonverbal mediation of self-fulfilling prophecies in interracial interaction. *Journal of Experimental Social Psychology*, 10, 109-120.
- 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.
- Yee, M. D. & Brown, R. J. (1988). Children and Social Comparisons, final report to the ESRC, University of Kent.
- Yee, M. D. & Brown, R. J. (1992). Self evaluations and intergroup attitudes in children aged three to nine. *Child Development*, 63, 619 – 629.
- Yee, M. D. & Brown, R. J. (1994). The development of gender differentiation in young children aged three to nine. *British Journal of Social Psychology*, 33, 183 - 196.

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- Zagefka, H. & Brown, R. (2002). The relationship between acculturation strategies, relative fit and inter-group relations: Immigrant-majority relations in Germany. *European Journal of Social Psychology*, 32, 171-188.
- Zinser, O., Rich, M. & Bailey, R. C. (1981). Sharing behaviour and racial preference in children. *Motivation and Emotion*, 5, 179 – 187.
- Zuckerman, D. M., Singer, D. G. & Singer, J. L. (1980). Children's television viewing, racial and sex-role attitudes. *Journal of Applied Developmental Psychology*, 10, 281 – 294.

Appendix A1:

Sample Transcripts from Stories used in the Disabled Neutral, 'Inter-group' and De-categorised Extended Contact Conditions

{Beginning of story introducing characters}

Neutral extended contact: This is a story about Bryn who is physically disabled. That means that part of Bryn's body doesn't work properly: his legs. He has to use a special frame to walk. Bryn loved school. He loved the busy-busy-busy sounds, and playing with the other children, and the dressing-up corner with all the silly hats. When he went down the hill to school (but not when mam was watching) he liked to take his feet off the ground and whiz down, very fast(refer to picture). Bryn had lots of friends, and when they played football Bryn nearly always went in goal, because he was really good at saving goals. Everyone said so. Owain was Bryn's best friend at school. When Owain picked the teams he always made sure he chose Bryn first because he was the best in goals.[The neutral condition did not place extra emphasis on group memberships and individual characteristics].

De-categorisation extended contact: This is a story about Bryn who is physically disabled. That means that part of Bryn's body doesn't work properly: his legs. He has to use a special frame to walk. Bryn loved school. He loved the busy-busy-busy sounds, and playing with the other children, and the dressing-up corner with all the silly hats. Bryn loved board games too and he was really good at snakes and ladders. He always won. He was really good at counting up the numbers on the dice. When he went down the hill to school (but not when mam was watching) he liked to take his feet off the ground and

whiz down, very fast(refer to picture). Bryn had lots of friends, and when they played football Bryn nearly always went in goal, because he was really good at saving goals. Everyone said so. Owain was Bryn's best friend at school. Owain got jealous sometimes because Bryn was so good at sports but he was still his best mate. Owain was mad about sports. He would play every position himself if he could – goalie, striker, the lot! Owain wasn't as good in goals as Bryn but he was really good at basketball and could jump really high. When Owain picked the teams he always made sure he chose Bryn first because he was the best in goals. [The inter-personal condition focussed on the individual characteristics of the story characters].

Inter-group extended contact: This is a story about Bryn who is physically disabled. That means that part of Bryn's body doesn't work properly: his legs. He has to use a special frame to walk. Bryn loved school. He loved the busy-busy-busy sounds, and playing with the other children, and the dressing-up corner with all the silly hats. Bryn loved board games too and he was really good at snakes and ladders. He always won. He was really good at counting up the numbers on the dice. Even though he loved school, sometimes he got cross, because he had wonky legs, which meant he couldn't run very fast and had to use a special frame with wheels to help him walk. His Dad made him laugh, because he said that Bryn had two left feet. When he went down the hill to school (but not when mam was watching) he liked to take his feet off the ground and whiz down, very fast(refer to picture). Bryn had lots of friends, and when they played football Bryn nearly always went in goal, because he was really good at saving goals. Everyone said so. Even though Bryn needed to use a walking frame he was still really good at sports. A lot of people who are disabled, where parts of their body don't work properly, are good at

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sports like basketball and football. Owain was Bryn's best friend at school. Owain got jealous sometimes because Bryn was so good at sports but he was still his best mate. Owain was mad about sports. He would play every position himself if he could – goalie, striker, the lot! Owain wasn't as good in goals as Bryn but he was really good at basketball and could jump really high. When Owain picked the teams he always made sure he chose Bryn first because he was the best in goals. [The inter-group condition focussed on group memberships and typicality].

{Story ending common to all conditions}

Soon they were at the top. Bryn had climbed all the way up, [inter-group only: even though it had been very hard because he was disabled]. And he had helped Owain. Bryn looked at Owain. Owain looked at Bryn. Then they both looked over the battlements at everyone below, and waved. They'd done it! Going down was much easier for Bryn and Owain. Soon they were at the bottom outside the gate door. [inter-group only: Bryn, who was disabled and couldn't walk without his frame], had still made it to the top and all the way back down again. Dan Williams began it. "BRY_YN!" he chanted, and one by one the whole class joined in. "Bryn-and-Owain-made it to the top!" they shouted and then "Hooray for Bryn-and-Owain!" "We made it to the top, Owain!" said Bryn. "We did didn't we?" said Owain. And Bryn smiled his great, big smile.

Appendix A2:

Intended Behaviour Measure for Disabled

Now I am going to ask you some questions about doing different activities with children who are disabled and children who are not disabled. All the questions are answered by putting a tick next to a picture of a face.

For example, the question below asks what the weather is like today. If the weather was really good you would tick the face with the biggest smile.

What is the weather like?



If it was quite good you could tick the face with a small smile.

What is the weather like?



If it was not good or bad you could tick the middle face.

What is the weather like?



If it was quite bad you could tick the face with the small frown.

What is the weather like?



If it was really bad you would tick the face with the biggest frown.

What is the weather like?



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I want you to imagine that you know someone called Lee who is the same age as you and has a learning difficulty. That means that Lee finds some things difficult that other children might find easy and needs extra help. Pretend that you have met Lee in the park.

How much would you like to play with Lee?



Not at all



Very Much

How much would you like Lee?



Not at all



Very much

How much would you like to have Lee over to your house for tea?



Not at all



Very much

How much would you like to have Lee stay overnight?



Not at all



Very much

Changing children's intergroup attitudes

I want you to imagine that you know someone called Jo who is the same age as you and is physically disabled. That means that Jo can't walk and gets around in a wheelchair. Pretend that you have met Jo in the park.

How much would you like to play with Jo?



Not at all



Very Much

How much would you like Jo?



Not at all



Very much

How much would you like to have Jo over to your house for tea?



Not at all



Very much

How much would you like to have Jo stay overnight?



Not at all



Very much

Changing children's intergroup attitudes

I want you to imagine that you know someone called Kris who is the same age as you and is not disabled. Pretend that you have met Kris in the park.

How much would you like to play with Kris?



Not at all



Very Much

How much would you like Kris?



Not at all



Very much

How much would you like to have Kris over to your house for tea?



Not at all



Very much

How much would you like to have Kris stay overnight?



Not at all



Appendix A3:

Statements used in 'Misattribution Bias Measure'

Positive statements:

Shared pencils

Kind

Desk tidy

Excellent

Very polite

Very good

Doing very well

Well done

Very helpful

Negative statements:

Not sharing

Selfish

Untidy

Bad

Misbehaving

Very rude

Not doing very well

Awful today

Not very helpful

Appendix A4:

Out-group Homogeneity Measure










The next few questions are going to ask you to think about people in Britain who are disabled and people in Britain who are not disabled. You answer the questions in a very special way. The example below shows you how to answer the questions. You answer the questions by ticking one of the groups of people.

Think about all the children in your school.










How many of the children in your school would say they:

Like eating sweets.

If you thought **almost all** the children in your school love eating sweets you would tick the **'All of them'** group.










			
			_____
			
All	Most	Some	None

If you thought most of them the children in your school love eating sweets you would tick the **'most'** group.










			
			_____
			
All	Most	Some	None

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If you thought **some** of the children in your school love eating sweets you would tick the 'some' group.

			
			_____
			
All	Most	Some	None










If you thought **none** children in your school love eating sweets you would tick the 'none' group.

			
			_____
			
All	Most	Some	None










Changing children's intergroup attitudes

Now, can you think about physically disabled people and people with learning difficulties? I want to ask you some questions about physically disabled and people with learning difficulties. Let's talk about physically disabled people first/now [depending upon order of administration]. Can you point to the picture which shows how many physically disabled people you think are....










Kind

			
			_____
			
All	Most	Some	None

Unfriendly

			
			_____
			
All	Most	Some	None

Selfish

			
			_____
			
All	Most	Some	None

Changing children's intergroup attitudes

Hardworking





All

Most

Some

None

Clean





All

Most

Some

None

Lazy





All

Most

Some

None

Changing children's intergroup attitudes

Dirty





All

Most

Some

None

Rude





All

Most

Some

None

Polite





All

Most

Some

None

Friendly





All

Most

Some

None

Changing children's intergroup attitudes

Good



All

Most

Some

None

Rude



All

Most

Some

None

Nice



All

Most

Some

None

Bad



All

Most

Some

None

Changing children's intergroup attitudes

Happy





All

Most

Some

None

Mean





All

Most

Some

None

Helpful





All

Most

Some

None

Unselfish





All

Most

Some

None

Changing children's intergroup attitudes

Appendix A5:

Out-group Typicality Measure

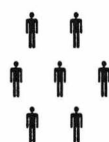
I want you to think about the stories we read about together. Think about the disabled children in the story. How many real disabled children are like / similar to the disabled children we read about in the stories?



All of them



a lot of of them



about half them



a few of them



None of them

Appendix C6:

Sample Transcripts from Stories used in the Refugee 'Inter-group' Extended Contact

Conditions

Nicky wanted to be a rock star. He was fantastic at singing. He was fantastic at dancing. He looked fantastic too. Nicky had curly black hair and big brown eyes. Nicky always wore leather. Nicky looked cool. Nicky was a refugee [*frequent references made to sub-group category*]. Nicky loves chocolate ice cream. Nicky was really popular and had lots of friends. Lots of refugee children are like Nicky and have lots of friends. Kevin is Nicky's best friend...he is English [*frequent references made to sub-group category*]...Kevin didn't look cool, but he had a great smile and he was Nicky's best friend.

"There must be SOMETHING we can do" said Nicky. "I know lets form a band. If we can prove to Mr Smith how good we are then maybe he will let us enter the competition!"The boys all worked really hard. Micky worked hard at singing. Ricky worked hard at dancing. Kevin tried at everything. Nicky worked hardest of all. He never stopped singing or dancing [researcher comment: Lots of refugees are like Micky and work hard].










Subsequent discussion emphasised the sub-category memberships, refugee and English, are emphasised. Also the typicality of the refugee characters for the sub-category is stressed.

Appendix C7:










Inter-group Attitude Measure for Refugees

We are going to talk about people who are refugees [or English depending on order]. These are people who have had to leave the country they are from because they did not feel safe. They have to go to a country where they can feel safe and some refugees come to England. Think about all the real refugees in England. Can you circle the picture that shows how many refugees you think are:

Kind

			
			_____
			
All	Most	Some	None

Not nice

			
			_____
			
All	Most	Some	None

Changing children's intergroup attitudes

Unkind





All

Most

Some

None

Hardworking





All

Most

Some

None

Clean





All

Most

Some

None

Changing children's intergroup attitudes

Lazy





All

Most

Some

None

Dirty





All

Most

Some

None

Unfriendly





All

Most

Some

None

Changing children's intergroup attitudes

Polite



All

Most

Some

None

Friendly



All

Most

Some

None

Good



All

Most

Some

None

Changing children's intergroup attitudes

Rude



All

Most

Some

None

Nice



All

Most

Some

None

Bad



All

Most

Some

None

Appendix C8:

Intended Behaviour Measure for Refugees

Now I am going to ask you some questions about doing different activities with children who are refugees and children who are not refugees. All the questions are answered by putting a tick next to a picture of a face.

I want you to imagine that you know someone called Lee who is the same age as you and a refugee. Lee had to leave their country because they couldn't live there anymore. Now Lee lives in Britain. Pretend you have met Lee in the park.

How much would you like to play with Lee?



Not at all



Very Much

How much would you like Lee?



Not at all



Very much

How much would you like to have Lee over to your house for tea?



Not at all



Very much

How much would you like to have Lee stay overnight?



Not at all



Very much

Changing children's intergroup attitudes

I want you to imagine that you know someone called Jo. Jo lives in Britain and has lived there their whole life. Jo is English and is not a refugee. Pretend that you have met Jo in the park.

How much would you like to play with Jo?



Not at all



Very Much



How much would you like Jo?



Not at all



Very much

How much would you like to have Jo over to your house for tea?



Not at all



Very much

How much would you like to have Jo stay overnight?



Not at all



Very much

Appendix C9:

English and Refugee Affect Measure

Let's think about English people who are not refugees. They are English people and were born in English. Do you like or dislike English people?



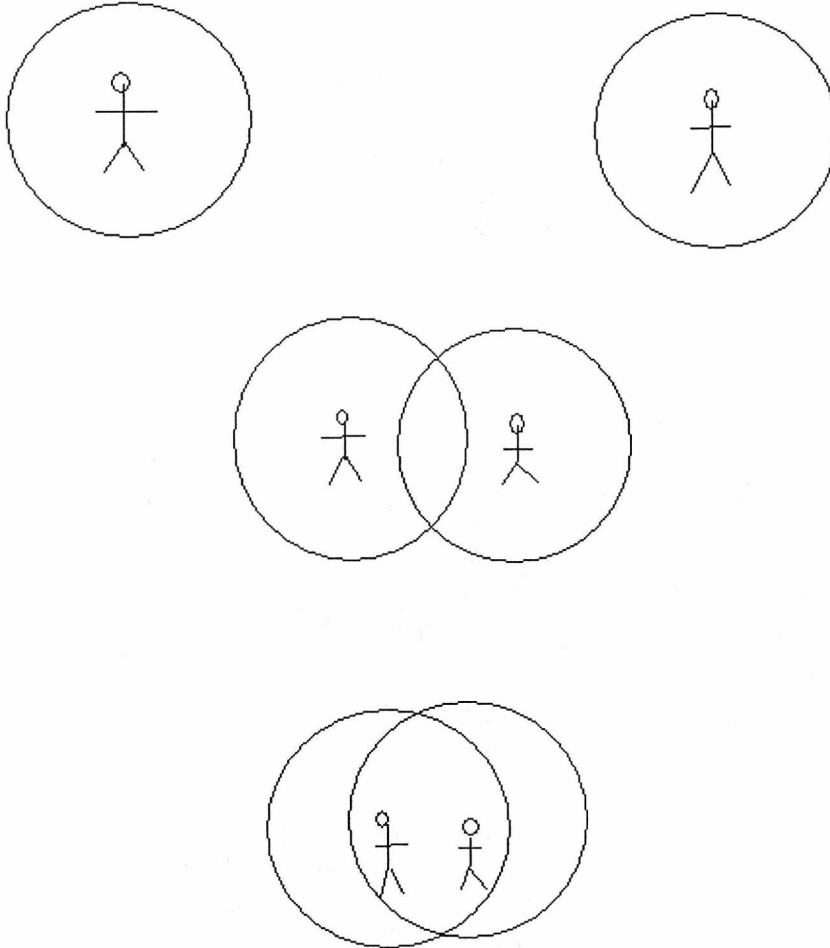
Dislike a lot

**neither like
Nor dislike**

like a lot

Appendix C10:

Measure of 'Inclusion of the Other in the Self'



Appendix D11:

Sample Transcripts from Stories used in the Refugee Dual Identity, Common In-group Identity and De-categorisation Extended Contact Conditions

Common In-group Identity

....Nicky wanted to be a rock star. He was fantastic at singing. He was fantastic at dancing. He looked fantastic too. Nicky had curly black hair and big brown eyes. Nicky always wore leather. Nicky looked cool. Nicky was a refugee [*only reference made to sub-group category*]. Nicky loves chocolate ice cream. Nicky was really popular and had lots of friends. Kevin is Nicky's best friend....he is English [*only reference made to sub-group category*]...Kevin didn't look cool, but he had a great smile and he was Nicky's best friend.

Nicky, Micky, Ricky and Kevin all went to school together. They all went to [*insert participant's school*]. One day [*insert name participant's headteacher*] told them about a special talent competition being held in [*insert participant's town*]. Schools from all over [*participant's town*] were entering their most talented children in the competition.

“But the children who are entered have to be VERY talented.” Said [*participant's headteacher*]. “But we don't have anyone to enter the competition yet from [*participant's school*]. Do YOU have any special talents....if we don't find someone

with a special talent soon, there's no way the school could even enter the competition.

There must be someone talented here at [*participant's school*]"

"There must be SOMETHING we can do" said Nicky. "I know lets form a band. If we can prove to [*headteacher*] how good we are then maybe he will let us enter the competition!"... The band all worked really hard. Micky worked hard at singing. Ricky worked hard at dancing. Kevin tried at everything. Nicky worked hardest of all. He never stopped singing or dancing.

Subsequent discussion emphasises the fact that the children in the story attend the same school as each other and the participant, and will be representing the school in a competition if they are good enough.

Dual Identity

...Nicky wanted to be a rock star. He was fantastic at singing. He was fantastic at dancing. He looked fantastic too. Nicky had curly black hair and big brown eyes. Nicky always wore leather. Nicky looked cool. Nicky was a refugee [*frequent references made to sub-group category*]. Nicky loves chocolate ice cream. Nicky was really popular and had lots of friends. Lots of refugee children are like Nicky and have lots of friends. Kevin is Nicky's best friend....he is English [*frequent references made to sub-group category*]...Kevin didn't look cool, but he had a great smile and he was Nicky's best friend.

Nicky, Micky, Ricky and Kevin all went to school together. They all went to *[insert participant's school]*. One day *[insert name participant's headteacher]* told them about a special talent competition being held in *[insert participant's town]*. Schools from all over *[participant's town]* were entering their most talented children in the competition.

“But the children who are entered have to be VERY talented.” Said *[participant's headteacher]*. “But we don't have anyone to enter the competition yet from *[participant's school]*. Do YOU have any special talentsif we don't find someone with a special talent soon, there's no way the school could even enter the competition. There must be someone talented here at *[participant's school]*”

“There must be SOMETHING we can do” said Nicky. “I know lets form a band. If we can prove to *[headteacher]* how good we are then maybe he will let us enter the competition!”The boys all worked really hard. Micky worked hard at singing. Ricky worked hard at dancing. Kevin tried at everything. Nicky worked hardest of all. He never stopped singing or dancing. *[researcher comment: Lots of refugees are like Micky and work hard]*.

Subsequent discussion emphasised the fact that the children in the story attend the same school as each other and the participant, and will be representing the school in a competition if they are good enough. Also the sub-category memberships, refugee and English, are emphasised. Also the typicality of the refugee characters for the sub-categories is stressed.

De-categorisation

Nicky wanted to be a rock star. He was fantastic at singing. He was fantastic at dancing. He looked fantastic too. Nicky had curly black hair and big brown eyes. Nicky always wore leather. Nicky looked cool. Nicky was a refugee [*only reference made to sub-group category*]. Nicky loves chocolate ice cream. Nicky was really popular and had lots of friends. Kevin is Nicky's best friend.... he is English [*only reference made to sub-group category*]. Kevin's favourite thing is the swings. Kevin wanted to be a rock star. But he wasn't great at singing, or dancing. And he didn't look great either.....One day Nicky and Kevin were playing on their bikes doing wheelies and building ramps. Nicky had a really cool mountain bike and he loved playing on it. Kevin and Nicky also played on their skateboards too.....Ricky, Micky and Nicky formed a band.... The band all worked really hard. Micky worked hard at singing. Ricky worked hard at dancing. Kevin tried at everything. Nicky worked hardest of all. He never stopped singing or dancing.

Subsequent discussion emphasises the individual characteristics of the characters in the story. No reference was made to the category membership.

