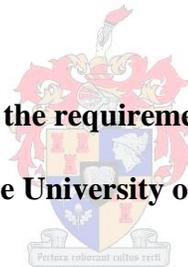


**COMPARING CROSS-GROUP AND SAME-GROUP FRIENDSHIPS AMONGST WHITE  
SOUTH AFRICAN STUDENTS AT STELLENBOSCH UNIVERSITY**

ANNEKE GOOSEN

**Thesis presented in partial fulfilment of the requirements for the degree of Master of Arts  
(Psychology) at the University of Stellenbosch**



Supervisors: Dr Hermann Swart and Dr Desmond Painter

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## DECLARATION

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## ABSTRACT

Friendships in general are a very powerful form of interpersonal contact, and cross-group friendships in particular have been shown to be particularly effective in promoting positive outgroup attitudes (Pettigrew & Tropp, 2006). Very few studies have compared same-group and cross-group friendships along their underlying processes. The present study aimed to explore, firstly, the differences and similarities between same-group and cross-group friendships along various interpersonal variables, including friendship length, friendship type, friendship contact, positive and negative reciprocal self-disclosure, friendship functions, and friendship affection. Secondly, the present study explored, and compared, the structural relationships between these interpersonal variables across the two friendship conditions. Thirdly, the present study explored how the generalization of attitudes towards the specific cross-group friendship influence attitudes to the outgroup as a whole. Finally, the present study explored the extent to which contact with a specific cross-group friend exposed the ingroup participants to a broader social network of outgroup members. Cross-sectional survey data was collected amongst 468 White South African first year students studying at Stellenbosch University using electronic surveys. The final sample comprised of 235 of the respondents in the same-group friendship condition (who completed questions relating to their closest same-gender, White South African friend) and 233 respondents in the cross-group friendship condition (who completed questions relating to their closest same-gender, Coloured South African friend). Results indicated that same-group friendships were qualitatively more intimate than cross-group friendships, characterized by significantly greater scores on all the interpersonal variables. Path analyses revealed a number of differences in the structural relationships between the interpersonal variables across the two friendship conditions, as well as a number of important mediation effects for both same- and cross-group friendships. Furthermore, cross-group friendship affection was significantly associated with more positive attitudes towards the outgroup in general, even when controlling for prior contact with the outgroup in general. Finally, contact with the cross-group friend was associated with greater contact with the cross-group friend's same-group friends, which was in turn associated with more outgroup friendships. Collectively, these results not only shed light on the mean-level and structural similarities and differences amongst interpersonal-level friendship variables associated with same- and cross-group friendships, but they also make a valuable contribution to the contact literature, providing a number of insights for the improvement of structured intergroup contact interventions that are aimed at facilitating the development of cross-group friendships and the improvement of outgroup attitudes.

## OPSOMMING

Vriendskappe oor die algemeen is 'n baie kragtige vorm van interpersoonlike kontak, en kruis-groep vriendskappe in die besonder is besonder effektief om positiewe buitegroep (outgroup) houdings te bevorder (Pettigrew & Tropp, 2006). Baie min studies het selfde-groep vriendskappe en kruis-groep vriendskappe met betrekking tot hul onderliggende prosesse vergelyk. Die huidige studie het beoog om eerstens, die verskille en ooreenkomste tussen selfde-groep en kruis-groep vriendskappe met betrekking tot verskeie interpersoonlike veranderlikes te bestudeer. Hierdie veranderlikes sluit in die lengte van die vriendskap, vriendskaps tipe, vriendskaps kontak, positiewe en negatiewe wedersydse self-bekendmaking, vriendskaps funksies en vriendskaps gehegtheid. Die studie het tweedens die strukturele verhoudings tussen hierdie interpersoonlike veranderlikes vir elke vriendskapskondisie bestudeer en vergelyk. Die studie het derdens bestudeer tot watter mate positiewe houdings teenoor die spesifieke kruis-groep vriend veralgemeen tot positiewe houdings teenoor die buitegroep as 'n geheel. Die studie het, ten slotte, bestudeer tot watter mate kontak met die spesifieke kruis-groep vriend die binne-groep (ingroup) deelnemers blootstel tot 'n breek netwerk van buitegroep lede. Deursnee opname data is ingesamel met behulp van elektoniese vraelyste onder 468 Blanke Suid-Afrikaanse eerstejaar studente wat studeer aan die Universiteit van Stellenbosch. Die finale steekproef het bestaan uit 235 deelnemers in die selfde-groep vriendskap kondisie (wat vroeë beantwoord het met betrekking tot hul naaste, selfde-geslag, selfde-groep vriend) en 233 deelnemers in die kruis-groep vriendskaps kondisie (wat vroeë beantwoord het met betrekking tot hul naaste, selfde-geslag, Kleurling Suid-Afrikaanse vriend). Die resultate het aangedui dat selfde groep vriendskappe kwalitatief meer intiem is as kruis-groep vriendskappe, en word gekenmerk deur beduidend hoër tellings op al die interpersoonlike veranderlikes. Pad-ontledings analyses het aangedui dat daar 'n paar verskille in die strukturele verhoudings tussen die twee vriendskapskondisies is, sowel as 'n aantal belangrike bemiddeling (mediation) effekte vir beide selfde-groep vriendskappe en kruis-groep vriendskappe. Die resultate het verder aangedui dat kruis-groep vriendskaps gehegtheid beduidend geassosieer is met meer positiewe houdings teenoor die buitegroep in die algemeen, selfs wanneer die invloed van vroeëre kontak met die buitegroep gekontroleer word. Ten slotte, kontak met die kruis-groep vriend is geassosieer met meer kontak met die kruis-groep vriend se vriende (wat van dieselfde groep is), wat op die beurt geassosieer is met meer buitegroep vriendskappe. Gesamentlik werp hierdie resultate nie net lig op die gemiddelde-vlak en strukturele ooreenkomste en verskille tussen selfde-groep vriendskappe en kruis-groep vriendskappe met betrekking tot die interpersoonlike veranderlikes nie, maar dit maak ook 'n waardevolle bydrae tot die kontak literatuur. Dit voorsien 'n aantal bydraes vir die verbetering van gestruktureerde intergroep kontak ingrypings wat daarop gemik is om die ontwikkeling van kruis-groep vriendskappe en die verbetering van buitegroep houdings te fasiliteer.

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## CHAPTER ONE

### Introduction

South Africa is one of the most diverse societies in the world, with many different ethnicities, cultures, and eleven official languages. Within any given community, differences in the population regarding aspects such as ethnicity, class, nationality, and status complicate relations between different groups, often leading to prejudice, stereotyping and discrimination. South Africa's history of apartheid, segregation, discrimination and oppression is a perfect example of this negative aspect of categorization.

Three centuries of prejudiced racial attitudes and tense intergroup relations have shaped the socio-political history of South Africa, culminating in a forty-year period of legislated prejudice and discrimination known as apartheid. Apartheid came into being in 1948 under the National Party and the leadership of prime minister Daniel Francois (D.F.) Malan (Beck, 2000). The force behind this drastic segregation was a fear of inter-marrying between South Africans of different ethnicities, and the resultant loss of the Afrikaner identity. To limit the amount and nature of the contacts White South Africans had with Black, Coloured, and Indian South Africans, laws were put in place to keep the various ethnic groups separated from one another. Whereas Allport (1954) was beginning to argue in the United States of America (then at the beginning of its own Civil Rights movement) that increased positive intergroup contact would lead to improved intergroup relations between White Americans and African-Americans, the ideology of apartheid had as its departure point the notion that less intergroup contact would be best for avoiding intergroup conflict and improving intergroup relations in South Africa (Foster & Finchilescu, 1986).

Different strategies were employed over the next forty years to reduce intergroup contact between South Africans from different ethnic backgrounds. The most important of these was the law creating different racial classifications, the Population Registration Act of 1950, which provided the framework for all the other laws. Within the framework of this legal categorization of South Africans into one of four primary ethnic groups (White South African, Black South African, Coloured South African, and Indian South African), a range of other laws were created, each aimed at limiting the amount and the nature of intergroup contact between South Africans. The most noteworthy laws aimed at increasing interpersonal segregation included: The Group Areas Act of 1950/1957, which involved the segregation of the four ethnic groups into homogeneous residential areas, and in the process creating greater distance from one another (Beck, 2000); the Reservation of Separate Amenities Act of 1953 and the Prohibition of Marriages Act of 1949/1968, and Immorality Act of 1950/1957, both of which prohibited social intergroup contact and the development of intimate interpersonal relationships across ethnic boundaries. These laws, and many others, criminalized intimate intergroup contact, greatly limited social contact between groups, and strained existing relationships between individuals from different ethnic groups. Married couples, families, and friendships were torn apart when classification differences occurred within these groups. Since contact between different groups were either against the law, or socially inappropriate, individuals found it impossible to maintain these relationships.

Instead of improving intergroup relations, the segregation and prejudice against Black, Coloured, and Indian South Africans enforced under apartheid eventually led to large-scale protests and violence. Two noteworthy and infamous examples include the ‘Sharpeville massacre’ of 1960 and the ‘Soweto uprising’ of 1976 (Thompson, 2001). By the late 1980s and early 1990s, South Africa was on the brink of civil war. The then president of South Africa, Frederik Wilhelm (F.W.) de Klerk, unbanned the African National Congress (ANC), released Nelson Mandela from prison after 27 years of

incarceration (together with most of the political prisoners), and repealed the apartheid legislation. Four years later, in 1994, South Africa held its first democratic elections, where all South Africans were for the first time allowed to participate.

It has been sixteen years now that South Africans of all ethnicities have been living in Democracy, equal in the eyes of the law. Although the racial categories of White, Black, Coloured, and Indian are no longer legally enforced, these categories remain salient in the minds of everyday South Africans (Gibson, 2004), while they are also used by the Government and by employers as a guideline for the implementation of employment equity and affirmative action policies. For sixteen years South Africans have been free to choose where they live, work and go to school, and whom they wish to associate with. Yet, in spite of the fact that the opportunities to engage in intergroup contact have greatly increased, actual direct, face-to-face interactions between South Africans from different ethnic backgrounds remain limited. Although there is evidence to suggest that the majority of South Africans from all ethnic backgrounds oppose segregated schools and neighbourhoods (Macdonald & Gibson, 2000), suggesting a greater desire towards social integration, there is other evidence suggesting that this increased integration and positive intergroup contacts is not necessarily taking place (see Clack, Dixon, & Tredoux, 2005; Dixon & Durrheim, 2003; Schrieff, Tredoux, Dixon, & Finchilescu, 2005; Tredoux & Dixon, 2009). For example, Tredoux and Dixon (2009) and Dixon and Durrheim (2003) explored intergroup interactions between South Africans in Capetonian nightclubs and South African beaches, respectively. Although these settings were often characterized by ethnic diversity, closer inspection revealed that within these diverse settings there remained evidence of informal group boundaries being maintained through seating arrangements.

A national survey amongst a representative sample of South Africans of various ethnic backgrounds, undertaken by Gibson (2004), showed that White, Coloured and Indian South Africans

reported significantly more intergroup contact with Black South Africans at work (and to a lesser extent in social settings) than Black South Africans reporting on their intergroup contact with White South Africans. What is concerning, is that a large proportion of the respondents reported no intergroup contact at work (Whites = 13.8%, Coloureds = 28.6%, Indians = 35.9%, Blacks = 54.3%) or in social settings (Indians = 10.6%, Whites = 13.5%, Coloureds = 29.4%, Blacks = 60.2%). This lack of intergroup contact amongst the different ethnic groups suggests that individuals are not engaging in intergroup contact in those social contexts that might best promote cross-group acquaintances and cross-group friendships, and improve intergroup relations and understanding. This is clearly seen in the fact that Gibson (2004) found that a large number of Indian (15.5%), Coloured (32%), and White (37.7%) South Africans reported having no Black South African friends. The majority of the Black South African respondents (56.4%) reported having no White South African friends. Furthermore, about 20% of all Indian, Coloured, and White South Africans found it hard to imagine *ever* being friends with a Black South African, while about half of all the Black South African respondents found it hard to imagine *ever* being friends with a White South African. Finchilescu (2010) suggests that intergroup anxiety and negative meta-perceptions relating to the consequences of future intergroup contact are important contributors to the tendency towards self-segregation evident in many South African studies.

Although regular intergroup contact between South Africans from different ethnic groups remains limited, studies have shown that where positive intergroup contact does occur (particularly in the form of cross-group friendships), such contact experiences are associated with reduced prejudice (Dixon et al, 2010; Loxton, 2009; Swart, Hewstone, Christ, & Voci, 2010a; Tredoux & Finchilescu, 2010). Gordon Allport's (1954) contact hypothesis predicts that outgroup prejudice will be reduced when members of different groups are brought into contact with one another under certain optimal conditions. Being one of the most renowned social theories on prejudice reduction (Finchilescu,

Tredoux, Mynhardt, Pillay, & Muianga, 2007), it has been widely tested in many countries, across various settings, amongst countless samples and has received robust support in the literature (Brown & Hewstone, 2005; Pettigrew & Tropp, 2006). Cross-group friendships in particular have been shown to be especially powerful as a form of intergroup contact, as they are usually characterized by repeated positive contacts, over a long period of time, and between individuals with common interests (Pettigrew, 1998; Pettigrew & Tropp, 2006; Turner, Hewstone, & Voci, 2007).

Although we now know that cross-group friendships are a powerful form of direct, face-to-face intergroup contact, we still do not know how the processes underlying the operation of cross-group friendships compare to those underlying the operation of same-group friendships. Furthermore, the contact literature has to date not focused on exploring intergroup relations by exploring specific friendship dyads (generally cross-group friendship has been measured as an aggregate score), and so it is unclear whether there is a relationship between attitudes towards a specific outgroup exemplar (the outgroup friend) and attitudes towards the outgroup as a whole (despite the fact that we know that positive attitudes towards outgroup exemplars in general do generalize towards the outgroup as a whole). The contact literature also has not explored the extent to which having an outgroup friend exposes the ingroup member to social networks of other outgroup members. These questions were explored in the current study. As such this study, and its findings, makes an important contribution towards the contact literature in general, and its findings may be of particular importance to those involved in the development of structured intergroup contact experiences in post-conflict societies.

Chapter two provides an overview of the development of (and support for) the contact hypothesis. The generalization of positive effects that is associated with intergroup contact, and the benefits of extended contact in prejudice reduction will also be briefly discussed to illustrate the potentially far-reaching impact of positive intergroup contact experiences on outgroup prejudice. The

influence and benefits of cross-group friendships in the intergroup contact setting is also reviewed in this chapter, as well as the different processes involved in the contact-prejudice relationship, such as the underlying mechanisms responsible for the positive effects of contact on prejudice (i.e., the mediators of the contact-prejudice relationship), paying special attention to those specific mediators involved in intergroup friendships.

Chapter three considers interpersonal friendships in general and cross-group friendships in particular. It begins with a closer look at the benefits of interpersonal friendships and how these friendships develop over time, before going on to consider interpersonal cross-group friendships and how the development of cross-group friendships compares to that of friendships in general. Chapter three concludes with a brief overview of the emerging (and as yet unpublished) literature on the comparison of same-group and cross-group friendships.

An overview of the present study, comparing same-group and cross-group friendships amongst White South African students studying at Stellenbosch University, is provided in Chapter four, including an explanation of the rationale behind the study as well as a presentation of the research hypotheses. After providing a description of the materials and methods employed in the collection and the analyses of the data, a detailed description of the results of the present study is provided.

Finally, in Chapter five, the results of the present study are discussed by placing the findings of the present study within the context of the existing intergroup contact literature and within the context of recent findings relating to the comparison of same-group and cross-group friendships. Chapter five concludes with a discussion of the contributions made by the present study, along with the limitations associated with the study and suggestions for future research.

## **CHAPTER TWO**

### **The Contact Hypothesis**

Within an ethnically and culturally diverse country like South Africa, and especially given the Country's long history of segregation and oppression, contact between the different ethnicities and cultures may be one of the greatest challenges with regards to social reconciliation within the post-conflict South African social context. Although this intergroup contact may be difficult to initiate, perhaps as a result of the experience of intergroup anxiety associated with intergroup interactions (Stephan & Stephan, 1985), the literature on the benefits of intergroup contact for the improvement of intergroup relations within post-conflict societies (e.g., Brown & Hewstone, 2005; Pettigrew & Tropp, 2006) suggests that positive intergroup contact may be an important (though certainly not the only, or the most important) component of the social reconciliation process in South Africa.

Intergroup contact may be a particularly effective way of improving intergroup relations and intergroup attitudes, primarily through cross-group friendships. This chapter provides an overview of the (intergroup) contact hypothesis and the literature on the empirical relationship between intergroup contact and prejudice that has been published over the last six decades. The role of cross-group friendships as a particularly powerful form of intergroup contact, and its prejudice-reducing benefits, will be given particular attention.

#### **Early Development and Contemporary Support for the Contact Hypothesis**

During the 1950's Gordon Allport (1954) formulated a hypothesis regarding intergroup interactions that became known as the 'contact hypothesis'. The contact hypothesis suggests that social distance and prejudice can be reduced between ingroup and outgroup members when repeated and

favourable contact between them occurs. The ingroup can be defined as the group with which an individual identifies and belongs to, while the outgroup is defined as a group towards which an individual feels no sense of belonging (Brown & Hewstone, 2005). For intergroup contact to reduce prejudice towards the outgroup, Allport (1954) specified that four optimal conditions must be satisfied within the contact setting. These conditions include a sense of equal status between the in- and outgroup members that are in contact, cooperation on common goals, and the support of institutional authorities for such intergroup contact (Allport, 1954).

Since the development of Allport's (1954) contact hypothesis, many studies have explored the relationship between contact and prejudice across many settings and among different target groups, including the elderly (e.g. Schwartz & Simmons, 2001), the homeless (e.g. Lee, Farrell, & Link, 2004), immigrants (e.g. Leong, 2008), homosexuals (e.g. Vonofakou, Hewstone, & Voci, 2007), refugees (e.g. Turner & Brown, 2008), the mentally ill (e.g. Desforges et al., 1991), people with HIV/AIDS (e.g. Werth & Lord, 1992), people with disabilities (e.g. Cameron & Rutland, 2006), the Amish (e.g. McGuigan & Scholl, 2007), computer programmers (e.g. McGinnis, 1990), and migrants (e.g. McLaren, 2003). Most of these have reported unequivocal support for the benefits of positive intergroup contacts for intergroup relations. The strongest support for the hypothesis that positive intergroup contact experiences are able to reduce prejudice is provided by the ambitious meta-analytic study undertaken by Pettigrew and Tropp (2006).

Pettigrew and Tropp's (2006) meta-analysis included 515 studies (and 713 independent samples) on intergroup contact from a range of settings and amongst a variety of target groups, which were selected on the basis of strict inclusion criteria. Firstly, studies were only included when intergroup contact acted as the independent variable and group-level prejudice as the dependent variable. Secondly, only studies with contact between distinctive groups were included to ensure that

the *intergroup* (as opposed to interpersonal) effects of contact on prejudice were examined. A third inclusion criteria was that studies needed to report on direct, face-to-face intergroup contact, such as from direct observations, participant responses, or long-term situations in which direct contact is inevitable. Finally, studies were only included in the meta-analysis when the dependent variables were collected from individuals, rather than from a total aggregate outcome, to ensure that the direct relationship between individuals and experiences can be examined, rather than examining an aggregated, or collective outcome.

The meta-analytic results reported by Pettigrew and Tropp (2006) provide unequivocal support for the contact hypothesis. Across all 515 studies it was found that intergroup contact was reliably associated with reduced prejudice (mean  $r = -.21$ ,  $p < .001$ ), irrespective of the settings in which the studies were undertaken or the target groups that the studies focused on (see Table 1). This effect was even stronger in those studies where Allport's (1954) conditions were present (mean  $r = -.29$ ,  $p < .001$ ). However, Pettigrew and Tropp (2006) also found a significant relationship between contact and prejudice in those studies where Allport's conditions were not explicitly included in the contact setting (mean  $r = -.20$ ,  $p < .001$ ), suggesting that although Allport's conditions may encourage prejudice reduction as a result of intergroup contact, these conditions may be considered facilitating, as opposed to essential. The meta-analytic evidence further suggests that while intergroup contact is significantly associated with reduced prejudice for both minority- and majority-status group members, the negative relationship between intergroup contact and prejudice is significantly stronger for majority-status group members than for minority-status group members (see Tropp & Pettigrew, 2005).

Table 1

*Intergroup Contact Effects (mean Pearson's Product-Moment Coefficient) for Different Participant Groups, Target Groups and Geographical Areas (taken from Pettigrew & Tropp, 2006, pp. 764-765)*

Participants	r	Target groups	r	Geographical area	r
Children	-.24	Sexual orientation	-.27	United States	-.22
Adolescents	-.21	Physically disabled	-.24	Europe	-.22
College students	-.23	Race, ethnicity	-.21	Israel	-.20
Adults	-.20	Mentally disabled	-.21	Canada	-.23
Females	-.21	Mentally ill	-.18	Australia and New Zealand	-.26
Males	-.19	Elderly	-.18	Africa, Asia, Latin America	-.21
		Other	-.19		

*Note: all ps < .001*

Of special relevance to the South African, post-apartheid context, the intergroup contact literature has shown robust support for the inverse relationship between positive intergroup contact and outgroup prejudice within post-conflict societies. Miles Hewstone and his colleagues at the Oxford Centre for the Study of Intergroup Conflict have undertaken numerous studies in Northern Ireland, a social context marked by sectarian violence between Protestants and Catholics for a number of decades. In these studies, positive intergroup contact between Protestants and Catholics have been reliably associated with, amongst others, reduced prejudice towards the outgroup, increased intergroup trust, a greater willingness to forgive the outgroup, and increased empathy and perspective-taking towards the outgroup (Hewstone, Cairns, Voci, Hamberger, & Niens, 2006; Paolini, Hewstone, Cairns, & Voci, 2004; Tausch, Tam, Hewstone, Kenworthy, & Cairns, 2007).

Similar results have been found within the post-conflict South African context where a substantial body of South African research exploring the relationship between contact and prejudice has begun to emerge. A striking feature of the South African findings is that numerous studies have shown that the opportunity for engaging in intergroup contact (i.e., in settings where South Africans from different groups are in close proximity to one another, such as university dining halls, beaches, and nightclubs) is not always associated with actual direct, face-to-face interactions (e.g., Clack et al., 2005; Dixon & Durrheim, 2003; Schrieff et al., 2005; Tredoux & Dixon, 2009). Factors that have been associated with contact avoidance within the South African context in particular include intergroup anxiety (e.g., Finchilescu, 2010; Swart et al., 2010a, Swart, Hewstone, Christ, & Voci, 2010b; Tredoux & Finchilescu, 2010) and meta-perceptions (Finchilescu, 2005). Intergroup anxiety refers to the unease feelings individuals experience when they anticipate, or actually engage in contact with another group, and is an important contributor to the avoidance of contact with outgroups (Stephan & Stephan, 1985). Meta-stereotypes contribute to intergroup anxiety in that they refer to the stereotypes ingroup members believe the outgroup hold of them (Finchilescu, 2005).

Encouragingly, however, a number of South African studies have shown that there were direct, face-to-face intergroup interactions are reported to occur (e.g., as part of cross-group friendships), these contact experiences are significantly associated with more positive outgroup attitudes. Two cross-sectional survey studies undertaken by Swart et al. (2010a) amongst White and Coloured South African high-school students (Study 1:  $N = 186$  White South African respondents,  $N = 196$  Coloured South African respondents; Study 2:  $N = 171$  White South African respondents,  $N = 191$  Coloured South African respondents) showed that, for both groups of respondents, cross-group friendships with Black South Africans had a direct, significant positive relationship with positive attitudes towards the Black South African outgroup (White sample:  $b = .30$ ,  $p < .05$ ; Coloured sample:  $b = .25$ ,  $p < .01$ ), even after controlling for the effects of other variables on outgroup attitudes. The results of the second study

matched the first, with cross-group friendships with Coloured (for the White respondents) or White (for the Coloured respondents) South Africans having a direct, significant relationship with outgroup attitudes (White sample:  $b = .23, p < .05$ ; Coloured sample:  $b = .11, p < .01$ ). Dixon et al. (2010) found similar results amongst Black South African adults ( $N = 596$ ), recruited through a random telephone survey. Dixon and colleagues found that contact with the White South African outgroup was negatively, and significantly associated both with prejudice towards the White South African outgroup ( $\beta = -.36, p < .01$ ) as well as the respondents' experience of personal discrimination from the White South African outgroup ( $\beta = -.31, p < .01$ ).

Results from a study by Holtman, Louw, Tredoux, and Carney (2005) indicated that self-rated contact at school amongst White English- and Afrikaans-speaking South African high-school students ( $N = 484$ ) with Black South Africans was a significant predictor of positive attitudes towards Black South Africans in general; contact with Black South African students was a significant predictor of lower anti-Black sentiments, reduced social distance, and more positive outgroup attitudes for both White Afrikaans- and White English-speaking respondents. In the same study, self-reported contact with White Afrikaans-speaking South African students was a significant predictor of lower anti-White sentiment ( $\beta = -0.30, p < .05$ ), reduced social distance ( $\beta = -.37, p < .01$ ), and positive race attitudes ( $\beta = .39, p < .001$ ) amongst the Black South African respondents ( $N = 93$ ). Similar results were reported by Moholola and Finchilescu (2006), who found that Black South African learners who attended multiracial schools were significantly less prejudiced towards White South Africans than Black South African learners from an all-Black school. Together, the findings from each of these studies suggest that intergroup contact is an important predictor of positive outgroup attitudes.

A potential issue with these cross-sectional findings in the contact literature in general, and the South African context in particular, is that of causality; does increased contact with outgroup members

lead to improved attitudes towards them, or do these individuals simply engage in more intergroup contact because they already have favourable attitudes towards the outgroup? The causal path from prejudice to contact is known as the selection bias hypothesis. Emerging longitudinal contact literature, and the meta-analysis by Pettigrew and Tropp (2006) show strong support for the causal relationship between contact and prejudice, and not as much for the prejudice-contact relationship. Once such study to support the contact-prejudice relationship is Swart et al.'s (2010b) longitudinal study amongst Coloured South African high school students (N = 319) regarding their intergroup contact with the White South African outgroup. Their longitudinal study consisted of three waves of data collected six months apart. Cross-group friendships with White South Africans at the first wave was significantly associated with reduced intergroup anxiety and greater empathy towards White South Africans in general at the second wave, which were in turn associated with more positive outgroup attitudes at wave three. The 'reverse' causal path (from prejudice at the first wave to contact at the third wave) did not receive the same support as the contact-prejudice path, suggesting that the causal path between increased contact and positive outgroup attitudes are therefore much stronger than that between reduced prejudice and increased contact. Another longitudinal study by Levin, van Laar, and Sidanius (2003) provide further support for the contact-prejudice causal relationship. Levin et al. (2003) conducted a five-wave longitudinal study amongst American university students (N = 311 White Americans; N = 389 Asian Americans; N = 252 Latin Americans; N = 67 African Americans). They found that, across all ethnic groups, a greater amount of outgroup friendships at the second and third year of university was significantly associated with reduced bias ( $\beta = -.11, p = .001$ ) and intergroup anxiety ( $\beta = -.14, p < .001$ ) at the end of the fourth year at university, even when controlling for the ethnic attitudes in the first year, pre-university cross-group friendships, and various background variables.

From the above it should be clear that contact is reliably associated with reduced prejudice, even in post-conflict social contexts. Although it is not possible to say for sure what the causal relationship is between contact and prejudice, given that most of the research is cross-sectional, meta-analytic and longitudinal research suggests that it is positive intergroup contact that is driving the reduction in prejudice, over-and-above any effects that lowered prejudice may have on increasing intergroup contact. Pettigrew and Tropp's (2006) meta-analytic findings show that the prejudice-reducing benefits of the positive intergroup contact are capable of extending well beyond the contact setting or the outgroup members that were being engaged with in the contact setting – a phenomenon known as the generalization of contact effects.

### **The Generalization of Intergroup Contact Effects**

It has been shown that positive intergroup contact is reliably associated with reduced prejudice towards the outgroup exemplar. However, the usefulness of intergroup contact, as a component in the strategy for bringing about social change, would be limited if the positive effects of intergroup contact on attitudes towards the outgroup were limited to the particular contact setting and did not generalize beyond the contact setting. In other words, contact would be a lot more attractive as an intervention if the positive attitudes towards the outgroup exemplar in the contact setting could generalize (a) *across situations*, (b) *from the outgroup exemplar to the outgroup as a whole*, and (c) *from the immediate outgroup being encountered to other (possibly as yet unencountered) outgroups* (also known as contact's *secondary transfer effect*; Pettigrew, 1998, 2009).

The meta-analysis undertaken by Pettigrew and Tropp (2006) provided substantial support for the generalization of contact effects. They found that positive contact effects (a) generalized significantly across outgroup exemplars within the same contact setting (mean  $r = .23$ ), (b) generalized

significantly across situations for the same outgroup exemplar (mean  $r = .24$ ), (c) generalized significantly from the outgroup exemplar to the outgroup as a whole (mean  $r = .21$ ), and (d) generalized from positive attitudes towards the outgroup that was engaged with to other outgroups not engaged with in the immediate contact setting (mean  $r = .19$ , all  $ps < .001$ ). These findings suggest that direct, face-to-face positive intergroup contact experiences are capable of achieving more than generating positive attitudes towards the outgroup exemplar within the particular contact setting, emphasizing the potential of positive intergroup contact for contributing towards broader improvements in intergroup relations beyond the contact setting. The generalization of positive attitudes held towards the outgroup exemplar to the outgroup as a whole is particularly relevant within the context of the present study. As mentioned in the introduction (and as will be discussed in more detail later on), there exists no research in the contact literature that has explored whether the positive attitudes towards a *specific outgroup friend* is significantly associated with (or generalizes to) more positive attitudes towards the outgroup as a whole. The majority of the contemporary contact literature has focused on how attitudes towards an aggregate of outgroup friends are associated with the outgroup as a whole (see Brown & Hewstone, 2005; Turner et al., 2007). The present study aimed, amongst others, to address this particular gap in the literature.

### **Extended Contact and Prejudice Reduction**

Recent evidence has also emerged suggesting that positive intergroup contact experiences are also capable of influencing the attitudes of other ingroup members who are not directly involved in having intergroup contact with the outgroup, but instead have become aware of a fellow ingroup member (perhaps an ingroup friend) who has experienced positive intergroup contact with members of the outgroup. The hypothesis describing this phenomenon, also known as extended contact, was first developed by Wright, Aron, McLaughlin-Volpe, and Ropp (1997). This extended contact effect has

been supported both experimentally and in cross-sectional and longitudinal survey studies (see Cameron & Rutland, 2006; Cameron, Rutland, Brown, & Douch, 2006; Christ et al., 2010; Ortiz & Harwood, 2007; Turner et al., 2007; Wright et al., 1997).

From the above it should be clear that not only are positive direct, face-to-face intergroup contact experiences reliably associated with reduced outgroup prejudice, but these positive effects are capable of generalizing well beyond the initial contact setting. Furthermore, these positive intergroup contact experiences are also able to influence the attitudes of fellow ingroup members who were not directly involved in the contact setting, via the extended contact effect. Beyond establishing the robust nature of the link between positive intergroup contact and reduced prejudice, the contemporary contact literature has also focused on identifying the *types* of intergroup contact associated with reduced prejudice (of which direct and extended contact have featured most prominently), as well as the processes that potentially *mediate* the contact-prejudice relationship. Each of these two foci is discussed below.

### **Cross-Group Friendships**

In considering Allport's (1954) 'optimal' conditions for contact, Pettigrew (1997, 1998) suggested that an additional condition should be added to Allport's four facilitating conditions in the contact situation to improve intergroup relations. Pettigrew (1997, 1998) suggested that the contact situation should encourage the development of cross-group acquaintances and friendships. According to Pettigrew (1997, 1998), friendship has the potential to comply with at least three of Allport's (1954) facilitating conditions for contact (namely, equal status contact, common goals/interests, and cooperation), suggesting that the positive intergroup contact between cross-group friends relates more

to long-term, high-quality, or intimate interactions (Fehr, 1996; Robinson & Preston, 1976), than to initial, superficial, or casual contact (Hamberger & Hewstone, 1997; Pettigrew, 1997).

Casual contact alone has been shown to be insufficient to change attitudes and promote interracial friendliness (Dovidio, Gaertner, & Kawakami, 2003; Pettigrew, 1998; Robinson, & Preston, 1976), while contact that is high in quality has regularly been associated with improved intergroup attitudes. For example, Islam and Hewstone (1993) undertook a study amongst 65 Hindu and 66 Muslim students from the University of Bangladesh to examine how different dimensions of contact (quantitative versus qualitative) relate to intergroup anxiety and outgroup attitudes. Both contact quantity and contact quality were significantly related to reduced intergroup anxiety and attitudes towards the outgroup. High-quality contact, however predicted reduced prejudice ( $\beta = .48, p < .001$ ) and anxiety ( $\beta = -.52, p < .001$ ) much better than did high-quantity contact (prejudice:  $\beta = .12, p < .05$ ; anxiety:  $\beta = -.23, p < .001$ ). A more recent correlational study by McGuigan and Scholl (2007) reported similar results amongst non-Amish adults ( $N = 89$ ). Amongst these participants, attitudes towards the Amish correlated significantly with high-quality contact with the Amish ( $r = .39, p < .01$ ), knowledge of the Amish ( $r = .23, p < .01$ ), belief in equality ( $r = .23, p < .05$ ), and age ( $r = .33, p < .33$ ). Standardized regression coefficients indicated that high-quality contact was the strongest predictor of attitudes towards the Amish ( $\beta = .25, p < .05$ ), whereas superficial contact was non-significant.

Taking this research on high-quality intergroup contact a step further, there now exists a substantial body of literature showing that contact in the form of cross-group friendships are associated with reduced prejudice and more positive intergroup attitudes (see Brown & Hewstone, 2005; Dovidio et al., 2003; Hewstone et al., 2006; Odell, Korgen, & Wang, 2005; Pettigrew, 1997; Pettigrew & Tropp, 2006; Tropp & Prenovost, 2008). Arguably the strongest support in favour of the importance of cross-group friendships as a dimension of contact was reported in the comprehensive meta-analysis

undertaken by Pettigrew and Tropp (2006). They compared the strength of the contact-prejudice relationship between those studies that used cross-group friendship as their measure of contact ( $N = 154$  tests) and those studies that did not ( $N = 1,211$  tests). Those studies that used cross-group friendship as a measure of intergroup contact reported a significantly stronger relationship between contact and prejudice (mean  $r = -.25$ ,  $p < .001$ ) than those that did not (mean  $r = -.21$ ,  $p < .001$ ,  $Q_B(1) = 4.42$ ,  $p < .05$ ). These findings were complimented by further findings in their meta-analysis, that quality of contact (mean  $r = -.29$ ,  $p < .001$ ) was a significantly better predictor of reduced prejudice than quantity of contact (mean  $r = -.20$ ,  $p < .001$ ;  $Q_B(1) = 20.19$ ,  $p < .001$ ).

As illustrated in chapter one, very few South Africans report having cross-group friendships, while a significant proportion of South Africans find it hard to imagine ever being friends with an outgroup member (Gibson, 2004). However, despite the general lack of cross-group friendships in South Africa, where these friendships do occur they have been associated with reduced outgroup prejudice. A nationwide South African survey by the Southern African Migration Project in 1999 (Crush, 2000) provided support for the influence of intergroup contact and cross-group friendships on outgroup attitudes. South Africans were asked about their contact with foreigners and migrant workers in South Africa, as well as their attitudes towards them and their opinions about foreigner policies and rights. Results from the survey indicated that South Africans across all population groups (Black, White, Coloured, and Indian South Africans) who did not have contact with foreign citizens had more negative opinions about foreigners and migrant workers. Conversely, the more contact South Africans reported having with foreigners, the more tolerant they were regarding migrant workers (Crush, 2000). Furthermore, those South Africans who reported having foreign friends were more likely to have positive attitudes and views towards foreigners than those who only had foreign neighbours, work colleagues, or only interacted with foreigners when buying things from them (in other words, only had very casual and/or superficial interactions with foreigners; Crush, 2000). An important question is *why*

cross-group friendships are such a strong predictor of reduced prejudice. To better answer this question it is necessary to first consider those factors that mediate (or underlie) the relationship between positive intergroup contact and prejudice reduction, to which I now turn.

### ***Mediators of the Contact-Prejudice Relationship***

Social psychologists undertaking research on the contact hypothesis have over the past decade or so become interested in better understanding *how* or *why* positive intergroup contact results in reduced prejudice. To this end, contemporary contact research has paid special attention to the mediators of the contact-prejudice relationship. Baron and Kenny (1986) describe mediators as addressing the ‘how’ or ‘why’ questions relating to the relationship between two variables (as opposed to moderator variables, which focus on addressing the conditions that influence the strength of the relationship between two variables).

Many potential mediators of the contact-prejudice relationship have been identified so far (see Brown & Hewstone, 2005). It is not my intention to discuss each and every potential mediator variable in this thesis, but rather only to focus on those mediators that have previously been given the most research attention and those that are relevant to the present study.

Arguably the most important cognitive mediator of the contact-prejudice relationship is that of outgroup knowledge. In his earliest formulation of the contact hypothesis, Allport (1954) indirectly highlighted increased knowledge about the outgroup as an important mediator of the contact-prejudice relationship. He suggested that increased positive intergroup contact would result in the acquisition of more accurate knowledge about the outgroup (i.e., that positive intergroup contact would assist in dispelling inaccurate stereotypes about the outgroup) and that this new, more accurate knowledge about the outgroup would lead to more positive outgroup attitudes. Outgroup knowledge has been one of the

most commonly explored cognitive mediators of the contact-prejudice relationship. Pettigrew and Tropp (2008) conducted a meta-analysis of those intergroup contact studies that explored the three most commonly researched mediators of the contact-prejudice relationship, namely outgroup knowledge, intergroup anxiety, and empathy/perspective-taking. A Sobel test (Baron & Kenny, 1986) of mediation effect revealed that outgroup knowledge significantly mediated the relationship between contact and prejudice ( $z = -3.87, p < .001$ ). These findings show that, as predicted by Allport (1954), positive intergroup contact is significantly associated with more knowledge about the outgroup, which in turn is significantly associated with lower outgroup prejudice.

The two affective mediators of the contact-prejudice relationship that have enjoyed the most research attention in the contact literature are intergroup anxiety and empathy/perspective-taking. Intergroup anxiety may be defined as the arousal that occurs when individuals have negative expectations about anticipated intergroup interactions, such as rejection or discrimination from the outgroup, or that they themselves may act in an inappropriate or offensive manner (Stephan & Stephan, 1985). Intergroup anxiety may therefore lead to avoidance of such interactions and increased outgroup prejudice. A substantial body of research has since demonstrated that positive intergroup contact is reliably associated with reduced intergroup anxiety (see Page-Gould, Mendoza-Denton, & Tropp, 2008; Paolini et al., 2004; Pettigrew, 1998; Stephan & Stephan, 1992; Turner et al., 2007; Voci & Hewstone, 2003). In the meta-analysis undertaken by Pettigrew and Tropp (2008), intergroup anxiety significantly mediated the contact prejudice relationship (in fact it showed the strongest mediation effects when compared with outgroup knowledge and empathy/perspective-taking;  $z = -26.60, p < .001$ ). Positive intergroup contact was therefore significantly associated with reduced intergroup anxiety, which in turn was significantly associated with reduced outgroup prejudice.

Recent evidence in the contact literature has emerged that shows support for the role of empathy/perspective-taking as an important mediator of the contact-prejudice relationship (e.g., Batson et al., 1997; Pettigrew & Meertens, 1995; Swart et al., 2010a, 2010b; Tam et al., 2003; Voci & Hewstone, 2003). This research suggests that positive intergroup contact experiences are associated with increased empathic responding towards the outgroup exemplar and the outgroup as a whole, which is in turn associated with improved attitudes towards the outgroup as a whole.

Empathy can be understood as the affective and cognitive response to the emotional state of another individual (Davis, 1994). Affective empathy involves feelings of genuine concern and emotional understanding of another's emotional state and situation (e.g. Batson et al., 1997). Cognitive empathy involves the ability to take on the perspective of another (e.g. Galinsky & Moskowitz, 2000). In Pettigrew and Tropp's (2008) meta-analysis, the Sobel test for mediation illustrated that empathy/perspective-taking was a strong mediator of intergroup contact effects ( $z = -12.43, p < .001$ ). In other words, positive intergroup contact was significantly associated with greater empathy/perspective-taking, which in turn was associated with reduced outgroup prejudice. Although the size of the mediation effect of empathy/perspective-taking was significantly smaller than that of the mediation effect of intergroup anxiety, the mediation effect of empathy/perspective-taking was significantly larger than that of outgroup knowledge (Pettigrew & Tropp, 2008). These findings suggest that affective variables are more important (and stronger) mediators of the contact-prejudice relationship than are cognitive variables.

Two South African cross-sectional studies undertaken by Swart et al. (2010a) explored the effect of affective mediators in the relationship between cross-group friendships and outgroups attitudes amongst White and Coloured South African high school students. In Study 1, mediation analyses provided support for the importance of intergroup anxiety as a mediator between contact and

attitudes; intergroup anxiety partially mediated the relationship between cross-group friendships and outgroup attitudes for both White ( $N = 186$ ) and Coloured ( $N = 196$ ) South African students. Cross-group friendships with Black South Africans significantly predicted reduced intergroup anxiety (White:  $b = -.71, p < .001$ ; Coloured:  $b = -.38, p < .001$ ), which in turn was significantly associated with positive outgroup attitudes towards Black South Africans (White:  $b = -.47, p < .001$ ; Coloured:  $b = -.20, p < .05$ ). A Sobel test indicated that this mediation effect was significant (White:  $z = 3.76, p < .001$ ; Coloured:  $z = 2.14, p < .05$ ). In their second study Swart et al. (2010a, Study 2) explored the role of affective empathy and intergroup anxiety as simultaneous mediators of the contact-prejudice relationship. Pettigrew (1998) suggests that cross-group friendships are a powerful form of intergroup contact because they simultaneously promote the reduction of negative affect (such as intergroup anxiety) and the increase of positive affect (such as empathy). A mediation analysis indicated that affective empathy significantly mediated the relationship between cross-group friendships with Coloured (for the White participants) and White (for the Coloured participants) South Africans and attitudes towards the respective outgroups for both White ( $N = 171$ ) and Coloured ( $N = 191$ ) respondents. In other words, cross-group friendships significantly predicted greater affective empathy (White:  $b = .54, p < .001$ ; Coloured:  $b = .20, p < .05$ ), which in turn predicted more positive outgroup attitudes (White:  $b = .26, p < .01$ ; Coloured:  $b = .15, p < .05$ ). A Sobel test indicated that this mediation effect was significant for both groups (White:  $z = 2.44, p < .05$ ; Coloured:  $z = 1.70, p < .09$ ). The mediation test for intergroup anxiety indicated that anxiety significantly mediated the relationship between cross-group friendships and attitudes towards the outgroup for the White sample only ( $z = 2.68, p < .01$ ). In other words, cross-group friendships with the Coloured outgroup was significantly associated with reduced anxiety ( $b = -.65, p < .001$ ), which in turn was associated with more positive attitudes towards the Coloured outgroup ( $b = -.25, p < .01$ ).

### *Mediators of the Relationship between Cross-Group Friendship and Prejudice*

To return to the original question of why cross-group friendships are such a strong predictor of reduced prejudice, cross-group friendships (given the high quality of intergroup contact that they are associated with) offer several advantages over more casual, superficial intergroup contact experiences (as highlighted earlier). While the mediators described above have each also been shown to mediate the relationship between cross-group friendships and reduced prejudice (e.g. Eller & Abrams, 2004; Paolini et al., 2004; Swart et al., 2010a, 2010b; Turner et al., 2007), I will now discuss two particular mechanisms that operate within cross-group friendships that encourage the reduction of outgroup prejudice (the mechanisms particular to the development of interpersonal relationships in general are discussed in greater detail in chapter three). These include greater positive and negative reciprocal self-disclosure, and a heightened sense of closeness (or self-other overlap) between the in- and outgroup friend.

Pettigrew (1998) suggested that self-disclosure may be one particular reason why cross-group friendships are more effective in reducing prejudice than other forms of intergroup contact. Reciprocal self-disclosure involves the sharing of significant aspects of oneself with another person (Brown & Hewstone, 2005; Miller, 2002). It is important in the development of interpersonal relationships and contributes to the improvement of attitudes in intergroup contact by generating more interpersonal attraction, intimacy, and positive affect towards outgroup members, and reducing the negative outgroup stereotypes (Brewer & Gaertner, 2001; Laurenceau et al., 1998; Reis & Shaver, 1988, Worthy, Gary, & Kahn, 1969). Studies have shown that when people disclose personal information they not only feel greater attraction to one another, but are also more likely to disclose more in return (e.g., Laurenceau et al., 1998), leading to mutual interpersonal attraction (Berg & Wright-Buckley, 1988; Worthy et al., 1969).

Self-disclosure appears to mediate the relationship between cross-group friendships and prejudice in three particular ways. Firstly, it has been suggested that self-disclosure should lead to more positive evaluations of the outgroup by generating greater empathy and perspective-taking towards the outgroup exemplar and the outgroup as a whole (Stephan & Finlay, 1999). It should similarly increase the intimacy between the in- and outgroup friends, but only when the listener communicates that he or she understood, accepted, and appreciated the disclosing information and responds appropriately (Reis & Shaver, 1988). Secondly, self-disclosure should be associated with a reduction in prejudice because it increases the perceived importance of the intergroup friendship, allowing the individuals involved to achieve common goals (Van Dick et al., 2004) and enhance their potential efficacy (Aron, Aron, & Norman, 2001). Finally, it has been suggested that self-disclosure should reduce prejudice via the promotion of reciprocal trust (Miller, 2002).

Four recent cross-sectional survey studies by Turner et al. (2007) considered the mediation effects of self-disclosure and anxiety. In study 1, research was conducted amongst 60 White British primary school children regarding the Asian outgroup. Study 2 were conducted amongst both White (N = 48) and Asian (N = 48) British secondary school children, asked about the Asian outgroup (for White participants) and the White outgroup (for the Asian participants). Studies 3 and 4 employed 164 White British secondary school children, and 142 White British undergraduate students, respectively. Both these groups were asked to report on cross-group friendships with, and attitudes towards the Asian outgroup. In the first three studies, self-disclosure and intergroup anxiety mediated the relationship between cross-group friendships with Asians (and the White outgroup for the Asian ingroup in Study 2) and positive explicit outgroup attitudes towards the Asian outgroup (and the White outgroup for the Asian ingroup in Study 2). In other words, cross-group friendships with Asians (and the White outgroup for the Asian ingroup) were associated with greater self-disclosure and reduced intergroup anxiety, which in turn were associated with positive explicit outgroup attitudes towards the

Asian outgroup ( and the White outgroup for the Asian ingroup). They replicated these findings in their fourth study, and also found that the relationship between self-disclosure and explicit outgroup attitudes was further mediated by empathy, the importance attached to the contact, and intergroup trust. In other words, self-disclosure was associated with greater empathy, greater perceived importance of the contact, and more intergroup trust. Each of these in turn was associated with more positive explicit outgroup attitudes. This fourth study by Turner et al. (2007) was the first to provide evidence that self-disclosure is related to more favourable explicit outgroup attitudes through the generation of empathy. As such, reciprocal self-disclosure is an important component of cross-group friendships as it builds trust, facilitates empathy, and increases friendship intimacy. An additional outcome of greater reciprocal sharing of personal information between in- and outgroup friends is that it increases the extent to which ‘the other’ is ‘included in the self’ (Aron, Aron, & Smollan, 1992).

Including the other in the self has been shown to be an important feature of close interpersonal relationships (Aron et al., 1992), and is associated with greater intimacy and interpersonal closeness amongst friends, both of which are key expectations within friendships (Clark & Ayers, 1993; Fehr, 1996; 2000; La Gaipa, 1979; Parks & Floyd, 1996). As individuals become closer to one another and perceive ever more similarities in interests, opinions, and goals between each other, the extent to which ‘the other’ becomes psychologically ‘included in the self’ increases.

According to Page-Gould, Mendoza-Denton, Alegre and Siy (2010) interpersonal closeness with an outgroup friend predicts an increased positive association between the outgroup as a whole and the self, increasing closeness towards the outgroup as a whole (see also Aron, Aron, Tudor, & Nelson, 1991). Therefore, when the ingroup member includes their outgroup friend into their sense of self, they also begin to perceive a greater overlap between their own ingroup identity and the identity of the outgroup (Wright et al., 1997). This has important implications for intergroup contact; ingroup

members often have greater empathy for the ingroup as a whole, have a better understanding of the problems of fellow ingroup members, and tend to view fellow ingroup members and the ingroup as a whole in a positive light (Page-Gould et al., 2010). The psychological connection between the ingroup member and his fellow ingroup members (and the ingroup as a whole) develops as a result of self-categorization.

Self-categorization refers to the process where individuals include the characteristics of their ingroup into their own sense of self when they begin to identify with the ingroup (Smith & Henry, 1996). Therefore, when the outgroup becomes included in the self during the development of greater self-other overlap between in- and outgroup friends, then the outgroup friend is given the same advantages by the ingroup member as would be given to fellow ingroup members, which (if the outgroup friend is considered sufficiently typical of the outgroup in general; Brown & Hewstone, 2005) ultimately contributes to a reduction in prejudice towards the outgroup as a whole (see Aron et al., 1991; Page-Gould et al., 2010; Turner, Hewstone, Voci, & Vonofakou, 2008).

Turner and colleagues (2008) explored the mediation effects of inclusion of the other in the self in the relationship between cross-group friendships between British and Asian students and outgroup attitudes towards Asians in general. The sample consisted of 120 White high school students from a school in Northern England. They found that the relationship between cross-group friendship and positive outgroup attitudes was significantly mediated by an increase in the inclusion of the other in the self. In other words, cross-group friendships with Asians was significantly associated with greater inclusion of the self ( $\beta = .54, p < .001$ ), which was in turn significantly associated with more positive outgroup attitudes towards the Asian outgroup as a whole ( $\beta = .33, p < .001$ ).

Support for the positive effects of intergroup contact in the reduction of prejudice is robust (see Brown & Hewstone, 2005, Pettigrew & Tropp, 2006, Swart et al., 2010a, 2010b). Cross-group friendships in particular are especially important for prejudice reduction; since it involves high-quality and repeated contact with outgroup members. Two important mediators of the friendship-prejudice relationship are reciprocal self-disclosure and the inclusion of the other in the self. These mediators provide us with a deeper understanding of the nature of the contact-prejudice relationship in general, and the relationship between cross-group friendships and reduced prejudice in particular, by describing how and why positive intergroup contact reduces prejudice. Although the contact literature has established that cross-group friendships are an especially important predictor of reduced prejudice (more so than causal, superficial intergroup encounters), what is less clear is exactly how the nature of cross-group friendships compares to that of same-group friendships. Does it really matter if one's friends are fellow ingroup members or outgroup members? Do cross-group and same-group friendships operate in a comparable way (in other words, do they share the same underlying mechanisms)? These questions, and others like them, are important for social scientists to explore in order to better understand how cross-group friendships compare to same-group friendships. To this end it is especially important that we compare how same-group and cross-group friendships operate on the friendship-developing variables (such inclusion of other in the self, reciprocal self-disclosure, and friendship affection). In the following chapter I take a closer look at the interpersonal friendship literature, considering the general benefits of friendships, and how they form and operate. I follow this with a brief consideration of the emerging (and as yet unpublished) literature on the comparison of same-group and cross-group friendships.

## CHAPTER THREE

### Interpersonal Friendships

Cross-group friendships, as an optimal form of direct contact, have proven to be a particularly strong predictor of reduced outgroup prejudice (e.g., Pettigrew & Tropp, 2006). Such friendships are generally characterized with many of the conditions associated with optimal, high quality intergroup contact (e.g., equal status, common goals and interests, and cooperation; Pettigrew, 1998). Despite these recent advances in the intergroup contact literature, a number of questions relating to cross-group friendships remain. Of these, the most important question is whether cross-group friendships are in any way comparable to same-group friendships along dimensions such as friendship intimacy and closeness, reciprocal self-disclosure, friendship functions, and friendship affection. The present research not only aimed to address these questions above, but also aimed to explore other pertinent questions, such as how the structural relationships between the important mechanisms in cross-group and same-group friendships compare to one another; whether the attitudes towards a very particular outgroup friend is associated with improved attitudes towards the outgroup as a whole (until now, most of the contact research has only focused on measuring cross-group friendships on the aggregate level, and has not focused on the respondent's relationship with a specific outgroup friend); and whether contact with a specific outgroup friend provides the ingroup member with greater access to social networks that include other outgroup members.

I will begin this chapter by discussing the important role that interpersonal friendships play in peoples' lives, and will consider those factors that influence the development of interpersonal friendships. I will then discuss some of the factors shown to promote the development of cross-group friendships, before concluding with an overview of the most recent (and as yet unpublished) research

comparing same-group and cross-group friendships, recently undertaken in Northern Ireland, England, Serbia, and South Africa.

### **The Importance of Interpersonal Friendships**

Interpersonal friendship may be defined as the “voluntary interdependence between two persons over time, which is intended to facilitate socio-emotional goals of the participants, and may involve varying types and degrees of companionship, intimacy, affection, and mutual assistance” (Hays, 1988, p.395). Friendships play an important role in the development of social skills and personal competence, the development of a sense of self, and provide a means for increasing independence, all of which are important for childhood, adolescent, and adulthood functioning (Dusek, 1991; Ingersoll, 1989). Interpersonal friendships often function as a stress-buffering mechanism insofar as they are associated with reduced social anxiety (Cohen, Sherrod, & Clark, 1986). They also serve as an important source of social support (La Greca & Lopez, 1998), intimacy (Clark & Ayers, 1993; Fehr, 1996; 2000; La Gaipa, 1979; Parks & Floyd, 1996), companionship, and provide a means of expressing emotions and resolving conflict (Berndt, 1982). Generally speaking, interpersonal friendships amongst adolescents and young adults have been consistently linked with greater happiness (Demir & Weitekamp, 2007; Diener & Seligman, 2002; Gladow & Ray, 1986) and general psychological well-being (see Gauze, Bukowski, Aquan-Assee, & Sippola, 1996; Keefe & Berndt, 1996; Wentzel & McNamara, 1999).

Aron and Aron’s (1986) self-expansion model suggests that people form and maintain individual relationships because they have a basic motive to expand the self. This self-expansion stems from the desire to enhance one’s potential self-efficacy by gaining or increasing one’s access to social resources, perspectives and identities (Aron & McLaughlin-Volpe, 2001). As such, interpersonal

friendships have the important benefits of giving individuals access to their friends' resources and skills, and of allowing them to see the world through their friends' eyes.

Friendships will invariably differ in terms of the amount of intimacy between friends. So, for example, a 'friend' could in actual fact be better characterized as an acquaintance if the friendship intimacy between the friends is generally low, or a 'friend' could in fact be considered as a 'very best friend' if the friendship intimacy between the friends is generally high. Intimacy has been regarded as a central feature and key expectation of friendships (Clark & Ayers, 1993; Fehr, 1996; 2000; La Gaipa, 1979; Parks & Floyd, 1996). As interpersonal relationships and friendships become more intimate in nature, each friend in the dyadic relationship begins to see the other as more similar to the self, a process known as the inclusion of the other in the self (Aron et al., 1991). The extent to which individuals consider there to be an overlap between themselves and their friend can therefore be considered as proportional to the degree of intimacy of the dyadic relationship. Not only is a greater self-other overlap associated with stronger, more intimate relationships between individuals, but it is also associated with increased interpersonal empathy and perspective-taking (Galinsky, Ku, & Wang, 2005).

The quality of friendships can be assessed by the roles friends play in each other's lives. In particular, as friends meet each other's expectations and demands associated with the friendship, their friendship will generally improve in quality and intimacy. One way to assess this friendship quality is to determine what functions friends play in each others' lives. Mendelson and Aboud (1999) developed a friendship function scale (McGill Friendship Questionnaire – Friend's Functions) consisting of 30 items that measure six different functions of friendships, namely stimulating companionship, help (such as providing assistance and guidance), intimacy, reliable alliance (such as loyalty), self-validation, and emotional security. The higher individuals score on this scale, the more functions they perceive their

friend to fulfil in their life, which would be associated with higher perceived friendship quality. This argument is supported by Mendelson and Aboud's (1999) study amongst Canadian college students ( $N = 227$ ). They found that long-standing friendships scored higher on friendship functions (except for the emotional security subscale,  $r_s = .14$  to  $.17$ ,  $p < .05$ ), and were rated as more positively ( $r = .16$ ,  $p < .05$ ) and were perceived as more satisfying ( $r = .21$ ,  $p < .01$ ) than recent, and less intimate friendships. Mendelson and Aboud (1999) also developed a scale to assess the affection felt towards a particular friend, known as the McGill Friendship Questionnaire – Respondent's Affection scale. This scale uses 18 items to assess positive feelings towards a friend and friendship satisfaction, and the higher the affection rating towards the friend, the closer the friendship. A study by Koh, Mendelson, and Rhee (2003) amongst 132 Korean and 132 Canadian undergraduate students showed that friendship functions were strongly and significantly associated with friendship affection. Students who perceived their friends to fulfil greater friendship functions had significantly more positive feelings towards their friends (all  $ps < .001$ ). In addition, friendship affection was also significantly associated with friendship intimacy ( $F(1, 260) = 16.31$ ,  $p < .001$ ), help ( $F(1, 260) = 8.96$ ,  $p < .01$ ), and reliable alliance ( $F(1, 260) = 38.90$ ,  $p < .01$ ) within the friendship dyads.

Research suggests that there are a number of gender differences when it comes to interpersonal friendships. Women's friendships are generally focused on talking and sharing personal or intimate feelings and emotions, and can be described as '*face-to-face*' (Wright, 1982). In contrast, men's friendships are generally more often activity orientated, where conversational topics include sport, work, and vehicles, and can be described as '*side-by-side*' (Bell, 1981; Cauldwell & Peplau, 1982; Johnson & Aries, 1983a, 1983b; Oliner, 1989; Rubin, 1985; Swain, 1989; Wellman, 1992; Wright, 1982). According to Reis, Senchak, and Solomon (1985), while men and women have similar perceptions of friendship intimacy, men simply choose not to engage in intimate self-disclosure in same-sex friendships (also see Dindia & Allen, 1992). Others have argued that for men, engaging in

activities with a friend is just as intimate and personal as self-disclosure is for women, and that although the friendships of women and men are equally intimate, they often have different paths to intimacy (Fehr, 2004; Floyd, 1997a, 1997b; Walker, 1995; Wood, 1997, 2000; Wood & Inman, 1993). Although there remains some debate on just how similar the perceptions of friendship intimacy are for men and for women, it is clear that both still gain from having close, personal friendships. Having looked at the importance of interpersonal friendships and the psychological benefits they hold for the individuals in those friendships, I now consider those factors that encourage or promote the development of such friendships.

### **Factors Influencing the Development of Interpersonal Friendships**

Several factors have been identified that influence the attractiveness of potential friends. These factors include proximity, similarity and complementarity, status, and reciprocity (Hallinan & Williams, 1989). Each of these factors is now discussed in turn.

Arguably one of the most important criteria for the development of interpersonal friendships, characterized by direct, face-to-face interactions, is that of proximity. People usually make friends with others who are available to be friends, which generally consist of people close in proximity such as neighbours, work colleagues (Vander Zanden, 1984), or classmates. Thus, individuals are more likely to establish friendships with people whom they have the most opportunity to interact with (Blau, 1977). Formal arrangements and organizational structures, such as work places, voluntary organizations and neighbourhoods, and open (or racially mixed) classrooms and schools, have the common effect of bringing different types of individuals together in frequent interactions (Feld & Carter, 1998; Hallinan, 1976). These frequent opportunities for contact and interactions increase the likelihood of both same- and cross-group friendships (Feld & Carter, 1998) by increasing the proximity between different

individuals and groups. Greater proximity, however, does not automatically mean that face-to-face interactions between individuals will take place, but it increases the likelihood of these face-to-face interactions. Over time and numerous interactions, these interactions encourage greater self-disclosure, greater interpersonal empathy and perspective-taking and greater inclusion of the other in the self, each of which facilitates the development of interpersonal friendships (see Aron et al., 1991).

Observed similarities are an important component of friendship formation since it creates interpersonal attraction between individuals (Hallinan & Williams, 1989; Vinacke, Shannon, Palazzo, Balsavage, & Cooney, 1988). Complementarity, on the other hand, relates to the idea that people seek out others with different personality characteristics that complement their own (Dryer & Horowitz, 1997). For example, a person who is very submissive might prefer a friend or partner who is more assertive, complementing their own personality type. While similarity is important in the early stages of friendship formation, complementarity is important to ensure the continued development of the friendship over time (Vinacke et al., 1988).

Personal status influences the development of interpersonal friendships insofar as higher status is often associated with heightened interpersonal attraction (thereby increasing the likelihood of friendship formation), while lower status is generally associated with weaker interpersonal attraction (thereby decreasing the likelihood of friendship formation; Hallinan & Teixeira, 1987; Hallinan & Williams, 1989). This finding can be explained by Aron and Aron's (1986) self-expansion model, in that individuals continuously aspire to expand themselves by trying to gain additional or improved resources, perspectives and identities. Selecting potential friends who are associated with a higher personal and/or group status may provide an opportunity for this self improvement to occur. The idea that friendship development is influenced by social status is supported by Tajfel's social identity theory.

The social identity theory by Tajfel and Turner (1979) offers an explanation of individual prejudice in intergroup contexts. According to Tajfel and Turner (1979) all individuals have the need to develop a sense of social identity over-and-above their personal identity, and that this social identity is closely related to group membership. Individuals, in an attempt to develop their social identity, seek out group memberships that will serve to bolster their sense of self and their self-esteem. All people have an inherent need for a positive self-concept, and they continuously view the groups to which they belong (i.e., their ingroups) as superior to those groups to which they do not belong (i.e., their relative outgroups). The consequences of this collective group identity is that individuals develop a bias in favour of their group, resulting in prejudice towards the outgroup (Tajfel & Turner, 1979). From the social identity theory perspective, individuals will be more attracted to individuals from a higher social status, since they provide them with the opportunity to increase their social sense of self and their self-esteem, and would therefore be more likely to select them as friends.

The concept of reciprocity, as a friendship-developing mechanism, maintains that an individual is more likely to select another as a friend when that person considers them as a friend. In other words, when an individual perceives that another considers them a friend, they will start to consider that person as a friend too, even when they have nothing else in common. This positive effect of reciprocity is likely to occur, regardless of the characteristics of the individuals involved (Gouldner, 1960) and is a particularly effective mechanism in friendship formation (see Vaquera & Kao, 2008).

### **The Development of Cross-Group Friendships**

Proximity, similarity and complementarity, status, and reciprocity play an equally important role in the development of cross-group friendships as they do in the development of interpersonal friendships in general. Research within a school setting, undertaken by Hallinan (1976), found that

desegregated classrooms at school were associated with more mixed peer-group interactions and were less susceptible to the establishment of friendship choices influenced by racial hierarchy than segregated classes. Furthermore, Patchen (1982) found that living in an integrated neighbourhood was generally associated with more friendly contact with other-ethnic peers in the neighbourhood, and a greater number of interracial friendships with school peers amongst White-American students. Descriptive information from Patchen's (1982) study indicated that White-Americans had more friendly interracial contact as the percentage of African-Americans in their classes increased. It has generally been shown that adolescents are more likely to have interracial peers in schools that have a diverse student body (Hansell & Slavin, 1981; Joyner & Kao, 2000; Quillian & Campbell, 2003). Sigelman, Bledsoe, Welch, and Combs' (1996) analysis of the Detroit Area Study data amongst 1,224 residents of the Detroit metropolitan area indicated that early life school composition was a significant predictor of close interracial friendships with African-Americans for White-American individuals (Maximum Likelihood Estimate (MLE) = .07,  $p < .05$ ). For White-American individuals the percentage of African Americans in the neighbourhood (MLE = .02), church attendance (MLE = -.13), early life school composition (MLE = .08), and age (MLE = .04) was significant predictors of close interracial friendships with African Americans (all  $ps < .05$ ). A recent study by Turner, Hewstone, and Voci (2007) also provided support that opportunities for contact predict cross-group friendship development. Amongst 164 White, British high school students, opportunities for contact with the Asian outgroup were significantly associated with cross-group friendships with Asian outgroup members in school ( $r = .28, p < .001$ ) and outside of school ( $r = .31, p < .001$ ).

Intergroup proximity within the South African context, it seems, does not necessarily lead to direct contact and friendship formation between South Africans of different ethnic backgrounds. Three recent studies by Dixon and Durrheim (2003) regarding interracial mixing on South African beaches, Tredoux and Dixon (2009) regarding interracial mixing in Capetonian nightclubs, and Schrieff et al.

(2005) regarding university dining halls showed that, while intergroup mixing does take place between South Africans of different ethnicities, direct intergroup contact was limited, suggesting that mere spatial proximity and opportunity for contact may not be enough to bring about actual direct, face-to-face intergroup contact.

In summary, opportunities for contact and close proximity with outgroup members, whether in neighbourhoods, schools, work, or church, increases the chance that individuals will get to know these outgroup members and eventually befriend them. The contradictory findings from the South African studies by Dixon and Durrheim (2003) and Tredoux and Dixon (2009) may reflect the continued legacy that South Africa's apartheid past has on intergroup relations and intergroup contact today. It may be that the lack of direct contact found between members of different groups in these South African studies was because of a lack of a history of contact opportunities at primary and high school and a history of heavily segregated neighbourhoods in South Africa, each potentially contributing towards increased intergroup anxiety.

As discussed previously, similarity is an important mechanism in the early stages of friendship formation (Hays, 1988), especially similarities regarding attitudes and values (Hill & Stull, 1981). Individuals perceived to be dissimilar to the self may therefore be excluded as potential friends. This mechanism, which enables the development of same-group friendships, may however hinder the formation of cross-group friendships, since the outgroup is often perceived as dissimilar to the ingroup along multiple dimensions such as language, ethnicity, and values (Brewer, 2009). Developing friendships with outgroup members may therefore be difficult. Common interests and cooperation along common goals between individuals from different groups may increase the perceived similarity between them, which might promote the development of cross-group friendships (Pettigrew, 1998). Contact settings that promote this, and encourage more reciprocal self-disclosure, may help to

overcome the almost inherent sense of difference between ingroup and outgroup members and may promote a greater sense of similarity. Also, to overcome this, the contact setting should perhaps minimize the salience of category membership and focus more on interpersonal contact between ingroup and outgroup members during the initial (early) stages of intergroup contact.

Perceived differences in status may also hinder the development of cross-group friendships, since the ingroup and the outgroup often differ regarding group status. Ingroup members might choose to avoid choosing an outgroup member as a friend when the outgroup is perceived to be lower in status. Conversely, outgroup members may strive towards friendship formation with ingroup members whom they perceive to belong to a higher status group. This idea is supported by Tajfel and Turner's (1986) social identity theory, which posits that people aspire more to high-status groups and individuals as opposed to low-status groups and individuals. Lowering the category salience of groups and focusing on interpersonal contact between ingroup and outgroup members during the initial stages of contact interventions, instead of intergroup contact, may help to lower the salience of perceived group status differences long enough to establish a sense of common interests or similarity between the ingroup and outgroup individuals. This might allow the ingroup and outgroup members the opportunity to become acquaintances and then possibly even friends (see Brown & Hewstone, 2005; Pettigrew, 1998).

People are more likely to select friends who also consider them as friends. Cooperation between different group members may be one of the mechanisms that influence this positive effect of reciprocity and the resulting cross-group friendship formation. Sharan (1980) and Slavin (1980) have found consistent evidence of positive ethnic relations amongst school children who engage in cooperative tasks. This can be explained by the increased group cohesiveness and mutual friendliness interpersonal cooperation generates (Lott & Lott, 1965); people generally become friendlier towards those that help facilitate their rewards (Johnson & Johnson, 1972). Becoming friendlier with others

increases the interpersonal attraction between individuals, increasing the chance to select friends based on reciprocity. An experimental study by Hansell and Slavin (1981) also provides support that cooperative learning contributes to the development of cross-group friendships. White-American high school students from Baltimore ( $N = 402$ ) were asked about their friendship choices with African-American students. Students in the experimental condition ( $N = 129$ ) were randomly assigned to different groups without references to any pre-existing friendships, in which they worked together to solve problems and studied together for twice-weekly quizzes. These groups met twice a week. At the post-test, the experimental group scored higher on cross-group friendship choices ( $M = 3.78$  friends,  $SD = 3.60$ ) than the control group ( $M = 2.37$  friends,  $SD = 2.76$ ,  $N = 133$ ) who did not work in groups that had African-American participants, illustrating the powerful effect of cooperation between individuals, and the resulting interpersonal attraction and friendship reciprocity.

While the same important factors operate in cross-group friendships, the development of cross-group friendships face some challenges related to the intergroup nature of the contact (in terms of heightened category salience). Ideally, therefore, the intergroup contact context should be characterized by opportunities for ingroup and outgroup members to identify common interests and goals between them, and have the opportunity to work together on an interpersonal level (where category salience is minimized) to achieve these goals. This might increase the interpersonal attraction and perceived similarity between the individuals from different groups. Researchers should therefore aim to reduce the category salience of the different groups at the beginning of the contact, so that the perceptions of existing group differences are reduced (see Miller & Brewer, 1984; Pettigrew, 1998) as this may contribute towards increased perceived similarities between the ingroup and the outgroup individuals and encourage the development of cross-group acquaintances and friendships.

Very little research has been undertaken to date on the comparison of same-group and cross-group friendships. We have a fair understanding of the important characteristics associated with the development of interpersonal friendships, and we know cross-group friendships are important for the reduction of outgroup prejudice, but we don't know how cross-group friendships compare to same-group friendships. The following section provides an overview of very recent (and as yet unpublished) studies that have compared same-group and cross-group friendships.

### **Comparing Same-Group and Cross-Group Friendships**

The contact literature has rarely explored the similarities and/or the differences between those important variables that characterize both same-group friendships and cross-group friendships. Research regarding the comparison between same-group and cross-group friendship will not only address the gap in the literature, but may contribute to the tailored development of more successful intergroup contact interventions aimed at developing cross-group friendships and prejudice reduction.

The limited research exploring the similarities and/or differences between same-group and cross-group friendships amongst school children suggests that same-group friendships differ significantly from cross-group friendships regarding quantity of friendships and the stability of such friendships (Aboud, Mendelson, & Purdy, 2003; also see Graham & Cohen, 1997; Kao & Joyner, 2004). Aboud et al. (2003) undertook an experimental study amongst Canadian high school students. Data were collected during two interviews, two weeks apart. They found that both their White-Canadian participants ( $N = 164$ ) and their Black-Canadian participants ( $N = 76$ ) reported significantly more same-group friends ( $M = 1.10$  friends) than cross-group friends ( $M = 0.70$  friends;  $F(1, 228) = 5.75, p < .05$ ). They furthermore found that mutual cross-group friendships were significantly less stable during the course of the school year ( $M = 0.18$ ) than mutual same-group

friendships ( $M = 0.30$ ;  $F(1, 113) = 4.06$ ,  $p < .05$ ). The stability means were calculated as a proportion of the number of a particular type of friend (*stable*, i.e. friend identified at both interviews; *dropped*, i.e. friend identified at first interview, but not at second; and *added*, i.e. friend identified at second interview, but not at first) divided by the total number of friends for each individual, and separately for same-group and cross-group friends. As such, a high mean proportion indicate that participants were more likely to identify a cross-group friend at both interviews (i.e. the friendship was considered stable), whereas a low mean proportion score indicate that participants either reported a cross-group friend during the first interview and not the second (i.e. the friendship was dropped) or participants reported a cross-group friendship during the second interview, and did not mention the friendship during the first interview (i.e. the friendship was added).

Kao and Joyner (2004) compared same-group and cross-group friendships regarding shared friendship activities using the data from a National Longitudinal Study of Adolescent Health. They compared same-gender friendship choices amongst 30,193 adolescents from 134 schools ( $N = 20,642$  White Americans,  $N = 4,630$  African Americans,  $N = 3,676$  Hispanic Americans,  $N = 1,245$  Asian Americans). Students were asked to identify five of their closest friends from a list of all the students in the school, and report on the number and kind of activities they engaged in with each of their friends. The results revealed that cross-group friendships (where the cross-group friend was different with regard to both race and ethnicity) were the exception, rather than the norm. When cross-group friendships were reported, they were characterized by fewer shared activities per week compared to same-group friendships. Cross-group friendships were also less likely to occur amongst best friends (i.e. first listed friends) and more likely to be reported amongst higher order friends (i.e. friends listed further down the list).

To address the gap in the existing contact literature on the comparison between same-group and cross-group friendships, a multi-study, multi-site collaborative research project was launched (of which the South African study presented as part of this thesis is a part) to explore the similarities and/or differences between same-group and cross-group friendships in diverse contexts, amongst diverse in- and outgroup friend dyads. This project was launched by Professor Miles Hewstone at Oxford University, in collaboration with Dr Hermann Swart (Stellenbosch University), and Dr Rhiannon Turner (Leeds University, England). Research was undertaken in Northern Ireland, comparing same-group and cross-group friends amongst Protestants and Catholics (Brewer, 2009; Motley, 2008), in England, comparing these friendships amongst White British students and South Asians (Paterson, 2010), in Serbia, comparing the same-group and cross-group friendships between Serbians and both Bosniaks and Croatians (Lukovic, 2010), and in South Africa, comparing same-group and cross-group friendships between White South African students and Coloured South Africans (Loxton, 2009). A second South African study, comparing same-group and cross-group friendships amongst White South African first-year students and Coloured South Africans is the focus of this thesis. Each of these studies is now discussed below.

In the first study undertaken in Northern Ireland, Motley (2008) investigated the relationship qualities of same-group and cross-group friendships amongst Northern Ireland university students ( $N = 89$  Protestants;  $N = 88$  Catholics). She found that same-group and cross-group friends differed significantly regarding the length of friendship, where same-group friendships ( $M = 8.08$  years,  $SD = 5.50$  years) were significantly longer than cross-group friendships ( $M = 5.54$  years,  $SD = 4.50$  years). Same-group friendships were also found to be closer/more intimate ( $M = 3.69$ ,  $SD = 1.30$ ) than cross-group friendships ( $M = 3.02$ ,  $SD = 1.36$ ;  $F(1, 172) = 5.99$ ,  $p < 0.05$ ). Overall, Motley's (2008) research, despite the relatively small sample sizes, provided strong support for the presence of significant qualitative differences between same-group friendships and cross-group friendships.

The second Northern Irish study was undertaken by Brewer (2009) amongst Protestant ( $N = 86$ ) and Catholic ( $N = 95$ ) university students. Same-group and cross-group friendships were again compared to one another (see Table 2). Similar to the findings reported by Motley (2008), Brewer (2009) found that same-group friendships were significantly longer ( $M = 8.56$  years,  $SD = 6.79$ ) than cross-group friendships ( $M = 5.54$  years,  $SD = 5.58$ ;  $F(1, 173) = 5.30$ ,  $p < .05$ ). Furthermore, respondents in the same-group friendship condition rated their friends higher on a friendship affection scale ( $M = 7.20$ ,  $SD = 0.99$ ) than did respondents in the cross-group friendship condition ( $M = 6.62$ ,  $SD = 1.51$ ;  $F(1, 171) = 6.87$ ,  $p = .01$ ), while participants reporting on their same-group friendships reported engaging in significantly more negative reciprocal self-disclosure ( $M = 5.34$ ,  $SD = 1.25$ ) than did participants reporting on their cross-group friendships ( $M = 4.92$ ,  $SD = 1.52$ ;  $F(1, 172) = 4.26$ ,  $p < .05$ ). These effects persisted even after controlling for the possible influence of friendship length on outcomes. No significant interaction effects were found between friendship condition, gender, and religion. One moderation effect was also found in the Brewer (2009) study. High ratings of friendship affect towards the outgroup friend were only associated with positive attitudes towards the outgroup as a whole for those respondents who rated their friend as being highly typical of the outgroup in general.

A similar study was undertaken in England by Paterson (2010) amongst 101 White British university students (the outgroup in this study was the South Asian outgroup). She found that same-group and cross-group friendships differed significantly along seven interpersonal friendship variables. The means of each friendship variable for each group can be found in Table 3. Paterson (2010) found that friendship length was significantly longer in the same-group condition than in the cross-group condition. Same-group friendships were also characterized by greater intimacy, more contact, greater positive and negative self-disclosure, more positive friendship functions, and more positive friendship affection. As with the previous study, these effects persisted even after controlling for the possible influence of friendship length.

Table 2

*Mean Differences and Standard Deviations between Same-group and Cross-group Friendships amongst White Irish University Students (from Brewer, 2009).*

	Group Means (SD)		Significance
	Same-group Friendships	Cross-group Friendships	p
Friendship Length	8.56 (6.79)	5.54 (5.58)	$p < .01$
Friendship Type	3.17 (1.01)	2.08 (1.12)	$p < .001$
Friendship Contact	3.85 (1.10)	3.55 (1.30)	$p = .10$
Positive Self-Disclosure	5.77 (1.08)	5.43 (1.34)	$p = .06$
Negative Self-Disclosure	5.34 (1.25)	4.92 (1.52)	$p < .05$
Friendship Functions	6.97 (1.00)	6.16 (1.75)	$p < .001$
Friendship Affection	7.20 (0.99)	6.62 (1.51)	$p < .01$

*Note:* Scales of measurement for each construct appears in brackets after the construct label: Friendship Length (years); Friendship Type (1-4); Friendship Contact (1-5); Positive Self-Disclosure (1-7); Negative Self-Disclosure (1-7); Friendship Functions (1-9); Friendship Affection (1-9).

Ivana Lukovic (2010) undertook a study within the post-conflict society of Serbia, where she explored the same-group and cross-group friendships that Serbian university students reported having with both Bosniak ( $N = 200$ ) and Croatian ( $N = 200$ ) outgroup friends. Once again, the results from her study were remarkably similar to those reported in Northern Ireland and England. Friendship length amongst same-group friends was significantly longer ( $M = 4.97$  years) than those amongst cross-group friends ( $M = 3.37$  years;  $F(1, 396) = 63.59, p < .001$ ). Further analyses revealed that the same-group friendships and cross-group friendships differed significantly on all friendship variables (time spent with friend, nature of friendship, friendship closeness, friend affection, friendship functions, and positive and negative reciprocal self-disclosure). Specifically, participants in same-group friendships

reported spending significantly more time with their same-group friend, reported having significantly more intimate and closer friendships, reported significantly more friendship functions, and reported engaging in significantly more negative and positive reciprocal self-disclosure than did participants in cross-group friendships (irrespective of whether these outgroup friends were Bosniak or Croatian). These results can be found in Table 4. The significant differences persisted after controlling for the influence of gender and friendship length on the dependent variables.

Table 3

*Mean Differences and Standard Deviations between Same-group and Cross-group Friendships amongst White British University Students (from Paterson, 2010).*

	Group Means (SD)		Significance
	Same-group Friendships	Cross-group Friendships	p
Friendship Length	7.39 (6.84)	4.74 (4.28)	$p < .05$
Friendship Type	3.28 (0.75)	1.67 (0.72)	$p < .001$
Friendship Contact	17.53 (28.83)	5.84 (7.49)	$p < .01$
Positive Self-Disclosure	5.79 (1.19)	4.58 (1.72)	$p < .001$
Negative Self-Disclosure	4.70 (1.44)	4.74 (4.28)	$p < .01$
Friendship Functions	7.04 (0.78)	5.56 (1.47)	$p < .001$
Friendship Affection	3.44 (0.71)	2.10 (1.25)	$p < .001$

*Note:* Scales of measurement for each construct appears in brackets after the construct label: Friendship Length (years); Friendship Type (1-4); Friendship Contact (1-50); Positive Self-Disclosure (0-6); Negative Self Disclosure (0-6); Friendship Functions (0-8); Friendship Affection (0-8).

Lukovic's (2010) study furthermore produced some moderator effects. Among respondents who reported that nationality was highly salient in their relationship with the outgroup friend, there was a

significant positive relationship between time spent with the friend and both positive outgroup attitudes and outgroup trust. This relationship between friendship contact and group-level attitudes was not significant when nationality salience was low. This particular finding, along with those reported by Brewer (2009), illustrates the importance of the moderation effect of category salience in promoting the generalization of interpersonal-level variables towards intergroup-level outcomes.

Table 4

*Mean Differences and Standard Deviations between Same-group and Cross-group Friendships amongst Serbian University Students (from Lukovic, 2010).*

	Group Means (SD)		Significance
	Same-group Friendships	Cross-group Friendships	p
Friendship Length	4.97 (4.70)	3.37 (3.78)	$p < .001$
Friendship Type	3.94 (0.96)	2.19 (0.96)	$p < .001$
Friendship Contact	7.50 (2.81)	3.77 (2.85)	$p < .001$
Positive Self-Disclosure	5.64 (1.25)	4.18 (1.74)	$p < .001$
Negative Self-Disclosure	4.64 (1.43)	3.38 (1.80)	$p < .001$
Friendship Functions	6.43 (1.20)	4.75 (1.71)	$p < .001$
Friendship Affection	7.79 (1.35)	6.11 (1.85)	$p < .001$

*Note:* Scales of measurement for each construct appears in brackets after the construct label: Friendship Length (years); Friendship Type (1-5); Friendship Contact (1-5); Positive Self-Disclosure (0-6); Negative Self-Disclosure (0-6); Friendship Functions (0-8); Friendship Affection (0-8).

Finally, Loxton (2009) collected survey data in South Africa amongst White South African students studying at Stellenbosch University (N = 302), to compare the same-group and cross-group friendships (with Coloured South Africans). Loxton (2009) found that same-group and cross-group

friends differed significantly regarding friendship intimacy, friendship length, friendship function, friendship affection, interpersonal affective empathy and positive reciprocal self-disclosure. The group means of this study can be found in Table 5. As in each of the previous studies, same-group friendships scored higher among all dependent friendship variables than cross-group friendships. Once again, the effects persisted after controlling for the possible influence of friendship length on the friendship variables. An exploration for potential gender differences revealed that females reported greater levels of positive and negative reciprocal self-disclosure and greater friendship affection than males, and also rated their friends as serving greater friendship functions (irrespective of the friendship condition).

Across the many different studies, the results are very consistent, even though they were conducted in diverse contexts and among diverse target groups. Same-group friendships were consistently longer in duration, more intimate, involved more reciprocal self-disclosure, and were rated higher on friendship functions and friendship affection, even when controlling for the influence of friendships length. From this research we can conclude that there is a strong suggestion that qualitative differences exist between same-group and cross-group friendships. More research is needed, however, to understand what underlying processes drive each of these friendships, how the structural relationships between the interpersonal friendship variables compare for same-group and cross-group variables, whether outgroup friendship with a particular outgroup member improve outgroup attitudes in general, and whether contact with a specific outgroup friend provides the ingroup member with greater access to social networks that include other outgroup members. The present study aimed to build on the findings of these earlier studies by exploring these questions. The rationale for the present study, as well as the findings of the study, is described in the following chapter.

Table 5

*Mean Differences and Standard Deviations between Same-group and Cross-group Friendships amongst White South African University Students (from Loxton, 2009).*

	Group Means (SD)		Significance
	Same-group Friendships	Cross-group Friendships	p
Friendship Length	62.82 (58.33)	42.76 (42.76)	$p < .001$
Friendship Type	3.95 (0.93)	2.23 (1.05)	$p < .001$
Positive Self-Disclosure	5.66 (1.14)	4.27 (1.71)	$p < .001$
Friendship Functions	6.44 (1.14)	4.67 (1.78)	$p < .001$
Friendship Affection	7.95 (1.10)	6.36 (1.67)	$p < .001$

*Note:* Scales of measurement for each construct appears in brackets after the construct label: Friendship Length (months); Friendship Type (1-5); Positive Self-Disclosure (1-7); Friendship Functions (0-8); Friendship Affection (1-9).

## **CHAPTER FOUR**

### **Comparing Same-group and Cross-group Friendships**

#### **at Stellenbosch University**

Research on intergroup contact has indicated that cross-group friendships are a particularly important dimension of contact for the successful reduction of prejudice (see Brown & Hewstone, 2005; Pettigrew & Tropp, 2006). Research on cross-group friendships has almost exclusively focused on aggregate measures of cross-group friendships (i.e., without focusing on the relationships ingroup members have with a specific outgroup friend). Moreover, it is still unclear exactly how cross-group friendships compare to same-group friendships in terms of their interpersonal friendship mechanisms. The rationale for the current study (as well as the broader multi-study, multi-site project of which it is a part) was to address this gap in the contact and friendship literature by generating more knowledge regarding how these two types of friendships compare to one another along a number of variables. Furthermore, the present study aimed to compare the structural relationships between the various variables of interest for same-group and cross-group friends, adding to and extending the consistent research findings generated in Northern Ireland, England, Serbia, and South Africa that collectively suggest that qualitative differences exist between same-group and cross-group friendships. Understanding how same-group and cross-group friendships compare to one another may help with the tailored development of more successful intergroup contact interventions aimed at stimulating the formation of acquaintances and the development of cross-group friendships.

## The Present Study

The present study aimed to explore four specific research questions. Firstly, it aimed to compare the mean scores of respondents in the same-group and the cross-group friendship conditions along various variables considered important for understanding interpersonal friendships. To this end, I measured various interpersonal-level friendship variables, including friendship length, nature of friendship (friendship type), friendship closeness (via inclusion of the other in the self), reciprocal positive and negative self-disclosure, friendship functions, and friendship affection in both conditions. Secondly, the present study aimed to explore the structural relationships between these interpersonal-level friendship variables across the two conditions. Thirdly, I aimed to explore how aspects relating to a *specific* outgroup friend influence attitudes towards the outgroup as a whole amongst respondents in the cross-group friendship condition. As mentioned earlier, contact research has almost exclusively focused on the relationship between aggregate-level measures of cross-group friendship and outgroup attitudes. Fourthly, I aimed to explore to what extent interactions with a specific outgroup friend are associated with access to a broader social network of outgroup peers. Each of these questions was explored amongst White South African first-year students at the University of Stellenbosch. The target group in the cross-group friendship condition were Coloured South Africans.

### ***Predictions***

The predictions that were tested are (1) that same-group friendships will be characterised by significantly greater interpersonal closeness, greater quality of friendship (as measured via the nature/type of the friendship), more friendship functions, more positive affective feelings, and greater positive and negative reciprocal self-disclosure than cross-group friendships; (2) Female respondents will rate their friendships higher and more favourably than males regarding all the interpersonal-level

variables, irrespective of the friendship condition; (3) Positive and negative reciprocal self-disclosure, friendship functions and interpersonal closeness will mediate the relationship between friendship contact and attitudes towards the friend (friendship affection) for both same-group and cross-group friendships. More specifically, friendship contact will be significantly positively associated with positive and negative reciprocal self-disclosure, both of which will in turn be significantly associated with greater friendship functions, greater friendship closeness, and greater friendship affection for both friendship conditions. Furthermore, friendship contact will be significantly associated with more friendship functions and greater friendship closeness, both of which will in turn be significantly associated with greater friendship affection. (4) Friendship affection in the cross-group friendship condition will be significantly associated with more positive outgroup attitudes, even after controlling for prior general quantity and quality of contact with the outgroup; and (5) Contact with the particular outgroup friend will be significantly associated with more contact with the outgroup friend's same-group friends, which will in turn be significantly associated with more friendships with the outgroup friend's same-group friends.

### ***Method***

**Procedure.** Data-collection took place during the third quarter of the 2010 academic year at Stellenbosch University. After consent from the Research Ethics Committee was obtained and all White South African first-year student email addresses were received from the University Registrar, prospective respondents were randomly assigned to two groups based on their student numbers (those student numbers that ended with an even number were assigned to the same-group friendship condition while those student numbers that ended with an odd number were assigned to the cross-group friendship condition). Respondents in each condition were asked to answer questions about either their

best same-gender, same-group (White South African) friend or their best same-gender, outgroup (Coloured South African) friend.

Electronic invitations (Appendix B) were sent out via e-mail to 3,647 White first-year students studying at Stellenbosch University (N = 1,820 invitations were sent for the same-group condition, N = 1,827 invitations were sent for the cross-group condition). Each invitation contained a Uniform Resource Locator (URL) that directed prospective respondents to one of the two electronic surveys. After the URL was accessed, respondents were then presented with an electronic consent form (Appendix C). The consent form briefly outlined the study, explained the confidentiality and anonymity considerations for students participating in the study, and explained the student's right to quit the study at any time. Respondents who indicated that they agreed to take part in the study were then presented with biographical and demographical questions (Appendix D), followed by the condition-specific electronic survey (or questionnaire; Appendices E1 and E2). The first question in the survey required participants to think of the closest 'friendship' (where this friendship could be defined along a continuum ranging from 'a best friend' to 'an acquaintance') they had with a same-gender, same- or cross-group member (depending on the condition the participant had been randomly assigned to), and to then indicate the initials of this same- or cross-group member. Participants who indicated that they had no such 'friendship' were prompted with a question to confirm that they had no such friend or acquaintance. Participants who indicated here that they indeed did not have any such friend<sup>1</sup> were then automatically routed in the electronic survey to the group-level questions (pertaining to

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<sup>1</sup>The data from the participants who indicated no friendships (same-group condition: N = 1, cross-group condition: N = 11) were excluded from all further analyses as the sample sizes were too small to allow for any meaningful comparisons of their scores on the group-level measures relating towards the Coloured South African outgroup with those participants who did report having a cross-group friendship.

contact with, and attitudes towards, the Coloured South African outgroup), skipping all the questions relating to any specific interpersonal relationship. All participants who indicated either at the first opportunity, or subsequent to being prompted, that they did have a same- or cross-group ‘friend’ answered both interpersonal-level questions relating to this ‘friendship’ (or in some instances ‘acquaintanceship’) and the group-level questions relating the Coloured South African outgroup (see Appendix A). The presentation of these two broad sets of questions (interpersonal-level versus group-level) was counterbalanced for these participants so as to minimize the impact of potential response sets.

A “Quit” button on every page of the survey enabled respondents to withdraw their participation from the study at any time. Respondents were only allowed to submit one completed survey. Upon submission, their responses were submitted to a central database. At the completion of the data collection the data was exported from this database to the Statistical Package for the Social Sciences (SPSS) for further analyses. A single cash prize draw of R1,500.00 was offered as an incentive to encourage students to participate in this study.

**Questionnaire.** Prior to accessing the survey questionnaire (Appendices E1 and E2), respondents were requested to provide biographical information about themselves, including a series of biographical and demographical questions (Appendix D) about themselves to determine their age, gender, and home language. Upon completion, the respondents accessed and completed the survey questionnaire.

The survey questionnaire comprised of two parts for both friendship conditions. The first part focused on interpersonal-level variables regarding either the respondents’ closest same-gender, same-group friend, or a same-gender, cross-group friend, depending upon the friendship condition the

respondent was randomly assigned to. Respondents in the same-group condition were asked to answer each of the interpersonal-level questions in relation to their closest same-gender, same-group (i.e., White South African) friend. Respondents in the cross-group friendship condition were asked to answer each interpersonal-level question in relation to their closest same-gender, cross-group (i.e., Coloured South African) friend. The different interpersonal-level constructs that were measured included friendship length, the nature of the friendship (friendship type), quantity of contact with the specific friend, positive and negative reciprocal self-disclosure, perceived friendship functions, friendship closeness, and affect felt towards the particular friend.

**Friendship length:** Friendship length was assessed with one item. Respondents had to select the approximate year and month they became friends. The data from this scale was then transformed to represent the total length of friendship in months. This item was measured on a continuous scale.

**Friendship type:** Friendship type was assessed by one item for which respondents had to indicate the nature of their friendship. The answer-options provided were ‘an acquaintance’, ‘just a friend’, ‘a very close friend’, ‘one of my closest friends’, ‘my best friend’, and ‘I am in a romantic relationship with this person’. These items were scaled from 1 (*an acquaintance*) to 6 (*I am in a romantic relationship with this person*). Respondents who indicated that they were in a romantic relationship with the friend (N = 6 in the same-group condition, N = 8 in the cross-group condition) they were answering the survey questions about were excluded from the final analyses of the data.

**Friendship contact:** Three items were used to measure this variable. The items were ‘How many hours per week do you spend with this friend at your house?’; ‘How many hours per week do you spend with this friend at their house?’ and ‘How many hours per week do you spend with this

friend in total'? These items were scaled from 1 (*none*), 2 (*1-2 hours*), 3 (*2-5 hours*), 4 (*5-10 hours*), to 5 (*more than 10 hours*).

***Positive reciprocal self-disclosure:*** Positive reciprocal self-disclosure was measured with six items from the reciprocal self-disclosure scale by Laurenceau, Barrett, and Pietromonaco (1998). Respondents were asked to think about their most recent positive and enjoyable conversation they had with their friend, and then asked to answer the following questions: 'How much did you express your feelings?'; 'How much personal information did you share?'; 'How personal was the information you shared?'; 'How much did this friend express his/her feelings?'; 'How much personal information did this friend share with you?'; and 'How personal was the information this friend shared?' The items were scaled from 1 (*very little*) to 5 (*a great deal*).

***Negative reciprocal self-disclosure:*** The same questions from the positive reciprocal self-disclosure scale were rephrased and presented to respondents who had to answer the questions in relation to their most recent negative or unpleasant conversation they had had with their friend. Again, the items were scaled from 1 (*very little*) to 5 (*a great deal*).

***Friendship functions:*** Friendship functions were measured using 18 items from the original McGill Friendship Questionnaire - Friends' Functions (MFQ-FF) scale developed by Mendelson and Aboud (1999). These 18 items were chosen to represent the scale of 30 items in order to reduce the chances of possible respondent fatigue (and dropout) during the completion of the survey. Respondents were asked to indicate the extent to which they agreed or disagreed with a series of 18 statements relating to their particular friendship. Some of the statements included: 'This friend helps me when I need it'; 'This friend is someone whom I can tell private things to'; 'This friend makes me feel smart'; and 'This friend makes me laugh'. All the items were scaled from 1 (*never*) to 5 (*always*).

**Friendship closeness:** This scale was measured by only one item from Aron et al.'s (1991) Inclusion of the Other in the Self (IOS) scale. Respondents were asked to rate their friendship closeness based on one of seven pairs of circles. These circles ranged from 1 (*not touching each other*), to 7 (*sharing most of their area with each other*, see Appendices E1 and E2).

**Friendship affection:** A shortened (8-item) version of Mendelson and Aboud's (1999) McGill Friendship Questionnaire - Respondent's Affection (MFQ-RA) scale was used to measure friendship affection. Respondents were asked to indicate the extent to which they agreed or disagreed with a series of eight statements relating to how they feel about their particular friend and the friendship. Some of the statements included: 'I am happy with our friendship'; 'I care about this friend'; and 'I like this friend a lot'. Items were scaled from 1 (*disagree completely*) to 5 (*agree completely*).

**Contact with outgroup friend's same-group friends:** In the cross-group friendship condition, respondents were asked to answer a series of questions relating to the amount of contact they experienced with their Coloured South African friend's Coloured South African friends. The questions comprising this scale were included to explore the extent to which having an outgroup friend exposes ingroup members to an even broader network of outgroup members. The items used were: 'How many of your friend's Coloured South African friends do you know?', which were scaled from 1 (*none*), 2 (*hardly any*), 3 (*a few*), 4 (*quite a few*), to 5 (*many - more than 10*); 'How often do you spend time with your friend's Coloured South African friends at your house/flat/residency?'; 'How often do you spend time with your friend's Coloured South African friends at your friend's house/flat/residency?'; and 'How often do you spend time with your friend's Coloured South African friends at their houses/flats/residency?', which were scaled from 1 (*never*) to 5 (*all the time*).

***Friendships with outgroup friend's same-group friends:*** A single item measure was included to determine to what extent the respondents in the cross-group friendship condition were friends with their Coloured South African friend's Coloured South African friends. The item used to measure these friendships was 'How many of your friend's Coloured South African friends are also your friends?' This item was scaled from 1 (*none*), 2 (*hardly any*), 3 (*a few*), 4 (*quite a few*), to 5 (*more than 10*).

The second part of the survey focused on group-level constructs relating to prior intergroup contact with, and attitudes towards the Coloured South African outgroup in general. The constructs measured here included quantity and quality of contact with the outgroup in general and general attitudes towards the outgroup.

***Quantity of contact with the outgroup in general:*** Three items were created for this measure, including 'How regularly do you have direct, face-to-face interactions in social settings with Coloured South Africans in general?'; 'How regularly do you have direct, face-to-face interactions with Coloured South Africans in general as part of the same sports team/social club/campus society?'; and 'How regularly do you have direct, face-to-face interactions with Coloured South Africans in general during lectures, practicals, and/or tutorials?'. All three items were scaled from 1 (*never*) to 5 (*all the time*).

***Quality of contact with the outgroup in general:*** The quality of outgroup contact was measured with two items measured on a bipolar scale. The first item, 'In general, when you interact with Coloured South Africans, do you find this interaction to be pleasant or unpleasant?', was scaled from 1 (*very unpleasant*) to 5 (*very pleasant*). The second item, 'In general, when you interact with Coloured South Africans, do you find this interaction to be positive or negative?', was scaled from 1 (*very negative*) to 5 (*very positive*).

*Attitudes towards the outgroup in general:* Outgroup attitudes were measured using a scale adapted from Wright et al.'s (1997) attitude scale. Respondents were asked to indicate the extent to which they agreed or disagreed with a series of five statements, including 'I feel negative towards the Coloured South Africans in general' (reverse scored); 'I feel hostile towards Coloured South Africans in general' (reverse scored); 'I trust Coloured South Africans in general'; 'I respect Coloured South Africans in general'; and 'I admire Coloured South Africans in general'. All these items were scaled from 1 (*disagree completely*) to 5 (*agree completely*).

**Respondents.** The final sample comprised of 468 respondents (a 12.8% total response rate), of which 235 respondents participated in the same-group condition (a 13.1% response rate of 1791 invitations) and 233 respondents participated in the cross-group condition (a 12.55% response rate of 1856 invitations). The ages of respondents ranged between 18 and 32 years of age, with an average of 19.05 years ( $SD = 1.41$  years). Of the 468 respondents, 61.8% ( $N = 289$ ) indicated Afrikaans as their first language and 38.2% ( $N = 179$ ) indicated English as their first language. In the same-group friendship condition, 58.3% ( $N = 137$ ) of the respondents were female, and 41.7% ( $N = 98$ ) were male. In the cross-group friendship condition 51.9% ( $N = 121$ ) of the respondents were female, and 48.1% ( $N = 112$ ) were male. Overall 14 respondents ( $N = 6$  in the same-group condition,  $N = 8$  in the same group condition) were excluded from the final analyses of the data because they reported on romantic relationships instead of friendships. Another 26 respondents ( $N = 8$  in the same-group condition;  $N = 18$  in the cross-group condition) who did not report on same-gender friendships were also excluded from the final analyses of the data.

## Results

### *Preliminary Data Analyses*

Exploratory factor analyses with a maximum likelihood (ML) estimator and direct oblimin rotation were conducted on each scale to explore whether each construct was unidimensional. These analyses showed that all the scales were unidimensional with the exception of Friendship Functions. For both the same-group and cross-group respondents the individual factors loaded onto three different factors. The original friendship functions scale used in the study consisted of 18 items. Six of these items (items 11, 12, 14, 15, 16, and 17) were dropped from this scale in order to achieve comparable factor solutions for both friendship conditions. Only the 12 remaining items were therefore used in further analyses. Each of the scales had relatively high percentages of variance explained, indicating that the items measure the constructs well. Reliability analyses (using Cronbach's alpha) on each of the separate constructs were undertaken next. Each of the scales across both conditions showed good to acceptable reliability. Finally, the mean of each scale was computed to create a new (mean-level) composite construct. The means, standard deviations (*SD*), reliability coefficients, and explained variances for each of the constructs are summarized in Table 6. The bivariate correlations (Pearson's product-moment correlation) between these mean-level composite measures for each friendship condition are summarized in Table 7.

The bivariate correlations of the composite means provide tentative support for the literature regarding interpersonal friendship, and also provide tentative support for some of the *a priori* predictions of this study. In the same-group friendship condition, friendship length was significantly negatively correlated with friendship contact ( $r = -.20, p < .01$ ) and significantly positively correlated with friendship closeness ( $r = .16, p < .05$ ). Friendship contact and friendship functions were each

significantly positively correlated with positive (Friendship contact:  $r = .18, p < .01$ ; Friendship functions:  $r = .50, p < .01$ ) and negative reciprocal self-disclosure (Friendship contact:  $r = .14, p < .05$ ; Friendship functions:  $r = .36, p < .01$ ) and friendship closeness (Friendship contact:  $r = .26, p < .01$ ; Friendship functions:  $r = .41, p < .01$ ). Friendship closeness was significantly positively correlated with positive- ( $r = .31, p < .01$ ) and negative ( $r = .23, p < .01$ ) reciprocal self-disclosure, while friendship affection was significantly positively correlated with friendship functions ( $r = .64, p < .01$ ), friendship closeness ( $r = .38, p < .01$ ), and negative reciprocal self-disclosure ( $r = .26, p < .01$ ).

Amongst the cross-group friendship condition friendship contact was significantly and positively correlated with negative self-disclosure ( $r = .25$ ), friendship functions ( $r = .30$ ), friendship closeness ( $r = .42$ ), and friendship affection ( $r = .30$ ). Positive and negative reciprocal self-disclosure was each significantly, and positively correlated with friendship functions (Positive reciprocal self-disclosure:  $r = .71$ ; Negative reciprocal self-disclosure:  $r = .58$ ), friendship closeness (Positive reciprocal self-disclosure:  $r = .49$ ; Negative reciprocal self-disclosure:  $r = .47$ ) and friendship affection (Positive reciprocal self-disclosure:  $r = .65$ ; Negative reciprocal self-disclosure:  $r = .46$ ). Friendship functions was significantly correlated with friendship closeness ( $r = .58$ ) and friendship affection ( $r = .77$ ), and friendship closeness was in turn significantly correlated with friendship affection ( $r = .63$ , all  $ps < .01$ ).

### ***Mean-Level Comparisons between Same-Group and Cross-Group Friendships***

An independent samples  $t$ -test was run to determine whether friendship length differed between same-group and cross-group friendships. The analysis indicated that respondents in the same-group condition had been friends with their closest same-group friend ( $M = 63.75$  months,  $SD = 51.93$ ) for a significantly longer period of time than the respondents in the cross-group friendship condition had

Table 6

*Composite Measure Group Means, Standard Deviations (SD), and Construct Reliability (Cronbach's Alpha).*

	Same-group Condition (N = 235)				Cross-group Condition (N = 233)			
	Mean	SD	Reliability ( $\alpha$ )	Variance explained	Mean	SD	Reliability ( $\alpha$ )	Variance explained
Friendship Length (Months; 1 item)	46.66	45.71	-	-	63.75	51.93	-	-
Friendship Contact (3 items)	1.17	1.01	.82	73.42%	2.09	1.04	.84	77.05%
Positive Reciprocal Self-Disclosure (6 items)	3.47	0.92	.86	59.38%	4.14	0.65	.93	74.37%
Negative Reciprocal Self-Disclosure (6 items)	2.80	1.06	.91	68.05%	3.28	0.95	.94	77.44%
Friendship Functions (12 items)	2.48	0.85	.91	49.44%	3.17	0.59	.93	56.92%
Friendship Closeness (1 item)	3.00	1.49	-	-	4.57	1.55	-	-
Friendship Affection (8 items)	4.12	0.70	.90	60.66%	4.66	0.47	.91	62.96%
Outgroup Contact Quantity (3 items)	2.54	0.88	.71	63.73%	2.38	0.85	.70	63.42%
Outgroup Contact Quality <sup>a</sup> (2 items)	3.96	0.87	.69**	84.47%	4.00	0.82	.70**	85.17%
Contact with Outgroup Friend's Same-Group Friends (4 items)	2.28	0.93	.96	88.26%	2.55	1.78	.85	70.51%
Friendships with Outgroup Friend's Same-Group Friends (1 item)	2.70	1.21	-	-	2.99	1.84	-	-
Outgroup attitudes (5 items)	3.95	0.73	.79	54.69%	3.82	0.68	.81	56.88%

*Note:* Scales are calibrated such that higher mean values denote higher levels of particular construct (including more positive outgroup attitudes). Scales of measurement for each construct appears in brackets after the construct label: Friendship Length (months); Friendship Contact (1-5); Positive Reciprocal Self-Disclosure (1-5); Negative Reciprocal Self Disclosure (1-5); Friendship Functions (1-5); Friendship Closeness (1-7); Friendship Affection (1-5); Outgroup Contact Quantity (1-5); Outgroup Contact Quality (1-5); Contact with Outgroup Friend's Same-Group Friends (1-5); Friendships with Outgroup Friend's Same-Group Friends (1-5); Outgroup Attitudes (1-5).

<sup>a</sup> Pearson correlation coefficients were used to determine the internal consistency for two item measures; \*\*  $p < .01$

Table 7

*Pearson Product-Moment Correlations between Composite Interpersonal-level Variables for the Same-group (reported below the diagonal) and the Cross-group Friendship Conditions (reported above the diagonal).*

	1	2	3	4	5	6	7	8	9	10	11	12
Friendship Length	-	.06	-.01	-.02	.03	.02	.06	.04	.00	.02	-.01	-.02
Friendship Contact	-.20**	-	.28	.25**	.30**	.42**	.30**	.11	.04	.28**	.10	-.02
Positive Reciprocal Self-Disclosure	-.06	.18**	-	.64**	.71**	.49**	.65**	.16*	.22**	.34**	.34**	.25**
Negative Reciprocal Self-Disclosure	.07	.14*	.45**	-	.58**	.47**	.46**	.14*	.16*	.36**	.31**	.17**
Friendship Functions	.06	.03	.50**	.36**	-	.58**	.77**	.21**	.33**	.31**	.35**	.30**
Friendship Closeness	.16*	.26**	.31**	.23**	.41**	-	.63**	.07	.12	.31**	.28**	.14*
Friendship Affection	.10	.06	.06	.26**	.64**	.38**	-	.21**	.34**	.30**	.37**	.33**
Outgroup Contact Quantity	-.06	-.01	.11	.08	.14*	.03	.12	-	.42**	.29**	.36**	.41**
Outgroup Contact Quality	-.06	-.05	.14*	.08	.16*	.05	.08	.44**	-	.14*	.22**	.54**
Contact with friend's friends	.06	.08	.16*	.17**	.08	.09	.16*	.03	-.02	-	.70**	.19**
Friendships with friends' friends	.07	.05	.13	.18**	.10	.12	.19**	.10	.06	.85**	-	.25**
Outgroup attitudes	.00	-.10	.18**	.16*	.22**	.13*	.22**	.40**	.54**	.06	.11	-

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

been friends with their closest cross-group friend ( $M = 46.66$  months,  $SD = 45.71$ ;  $t(466) = 3.78$ ,  $p < .001$ ). To ensure that any potential differences across the two conditions would truly reflect differences as a function of same- versus cross-group friendship, and not any differences as a function of friendship length, the multivariate comparisons that were undertaken in the next step were undertaken while controlling for the possible influence of friendship length.

A multivariate analysis of covariance (MANCOVA) was conducted to compare the mean-level scores for friendship type, friendship contact, positive and negative reciprocal self-disclosure, friendship functions, friendship closeness, and friendship affection across the two conditions, while controlling for friendship length (which was added as a covariate). Even after controlling for the possible influence of friendship length, significant differences between the two friendship conditions emerged. In the same-group condition, respondents rated their same-group friendship ( $M = 4.16$ ) as being of a closer, intimate type (e.g., as close, or best friends, as opposed to acquaintances or ‘just a friend’) significantly more so than the respondents in the cross-group friendship rated their cross-group friendship ( $M = 2.62$ ;  $F(1, 463) = 338.25$ ,  $p < .001$ , partial  $\eta^2 = .42$ ). Furthermore, respondents in the same-group friendship condition reported being significantly closer to their same-group friend (as measured in terms of self-other overlap) than did those respondents in the cross-group friendship condition in relation to their cross-group friend ( $M_{\text{same-group}} = 4.52$ ,  $M_{\text{cross-group}} = 3.03$ ;  $F(1, 463) = 106.81$ ,  $p < .001$ , partial  $\eta^2 = .19$ ). Respondents in the same-group condition spent significantly more time having contact with their same-group friend ( $M = 2.11$ ) than was reported by the respondents in the cross-group condition and the time they spent in contact with their cross-group friend ( $M = 1.54$ ;  $F(1, 463) = 97.03$ ,  $p < .001$ , partial  $\eta^2 = .17$ ). Respondents in the same-group friendship condition engaged in significantly more positive- and negative reciprocal self-disclosure with their same-group friend ( $M_{\text{positive}} = 4.11$ ,  $M_{\text{negative}} = 3.25$ ) than did respondents in the cross-group

friendship condition with their cross-group friend ( $M_{\text{positive}} = 3.47$ ,  $M_{\text{negative}} = 2.80$ ;  $F_{\text{positive}}(1, 463) = 77.41$ ,  $p < .001$ , partial  $\eta^2 = .14$ ;  $F_{\text{negative}}(1, 463) = 22.76$ ,  $p < .001$ , partial  $\eta^2 = .05$ ). Respondents in the same-group friendship condition rated their same-group friend ( $M = 3.13$ ) significantly higher in friendship functions than did the respondents in the cross-group friendship condition in relation to their cross-group friend ( $M = 2.46$ ;  $F(1, 463) = 89.92$ ,  $p < .001$ , partial  $\eta^2 = .16$ ). Finally, respondents in the same-group friendship condition reported significantly higher levels of affection towards their same-group friend ( $M = 4.64$ ) as compared to respondents in the cross-group condition reporting on their affection towards their cross-group friend ( $M = 4.13$ ;  $F(1, 463) = 82.78$ ,  $p < .001$ , partial  $\eta^2 = .15$ ).

### ***Gender Differences across Friendship Conditions***

To explore whether the differences across the two friendship conditions described above might not be a function of possible gender differences (as found in the interpersonal friendship literature), the previous MANCOVA was re-run, this time controlling for both friendship length and gender as covariates. The pattern of multivariate differences across the two conditions remained unchanged, suggesting that there were no ConditionXGender interaction effects. However, this analysis did yield significant differences between male and female respondents (irrespective of friendship condition). Female friendship dyads were characterized by significantly more positive reciprocal self-disclosure ( $M = 3.97$ ) than those of male friendships ( $M = 3.61$ ;  $F(1, 463) = 24.98$ ,  $p < .001$ , partial  $\eta^2 = .05$ ). Female friendship dyads were also characterized by significantly more negative reciprocal self-disclosure ( $M_{\text{females}} = 3.14$ ,  $M_{\text{males}} = 2.92$ ;  $F(1, 463) = 5.29$ ,  $p < .01$ , partial  $\eta^2 = .01$ ). Female respondents rated their friends higher in friendship functions ( $M = 2.97$ ) than did their male counterparts ( $M = 2.64$ ;  $F(1, 463) = 23.99$ ,  $p < .001$ , partial  $\eta^2 = .05$ ). Finally, friendship affection differed as a function of gender; female respondents expressed significantly greater levels of affection

towards their friends ( $M = 4.45$ ) than did male respondents ( $M = 4.32$ ;  $F(1, 463) = 5.02$ ,  $p < .01$ , partial  $\eta^2 = .01$ ). Together, these findings strongly support the main effect of friendship condition (i.e., a qualitative difference between same-group and cross-group friendships), and rule out the possible influence of friendship length and/or gender in producing these differences.

### ***Exploring the Structural Relationships between Construct Means***

The structural relationships between construct means were investigated for each sample using path analysis (Mplus v6.0; Muthén & Muthén, 2010). Path Analysis, using a dedicated Structural Equation Modeling (SEM) program such as Mplus, was preferred over multiple regressions because these dedicated programs allow for the estimation of more complex models that simultaneously include multiple potential predictors, mediators, and outcomes in a single model, and also allow for the testing for potential mediation effects (Norman & Streiner, 2003). Furthermore, these programs also allow for the comparison of models estimated for different groups (conditions) to explore the extent to which the strength of the structural relationships between the variables in each model are comparable (or invariant) to one another (allowing for the detection of possible group/condition differences in the structural relations between variables; Byrne, 2004). All of these advantages were especially valuable to the present study, particularly for pursuing the aims of (a) comparing the structural relationships between the interpersonal-level constructs as a function of friendship condition, (b) investigating whether the affect generated towards a specific outgroup friend is associated with more positive attitudes towards the outgroup as a whole (after controlling for prior quantity and quality of contact with the outgroup in general), and (c) investigating whether having an outgroup friend is associated with a greater exposure to a broader social network of outgroup members. The data analyses (by way of path analysis) undertaken for each of these three aims are described below.

*Comparing the Structural Relationships between Interpersonal-level Constructs as a Function of Friendship Condition*

A path model was fit for both friendship conditions to test the predictions relating to the structural relations between the interpersonal-level constructs. Contact with the friend served as the proximal predictor variable and friendship affect was the distal outcome variable. Positive and negative reciprocal self-disclosure were entered into the model as the proximal mediator variables, while friendship functions and friendship closeness were entered as the distal mediator variables. Friendship length and quantity and quality of general outgroup contact were entered as control variables. Figure 1 summarizes the path model for both the same-group friendship (reported in bold) and the cross-group friendship (reported in italics) conditions. Multiple goodness-of-fit indices were used to interpret overall model fit, including the Chi-square ( $\chi^2$ ) index, the Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR). The criteria for acceptable model fit for these goodness-of-fit indices can be defined by  $CFI \geq .90$ ,  $RMSEA < .08$ , and  $SRMR < .08$ , while excellent model fit for these goodness-of-fit indices can be defined by  $CFI \geq .95$ ,  $RMSEA < .05$ , and  $SRMR < .05$  (Hu & Bentler, 1999). This path model showed excellent model fit overall for both the same-group ( $\chi^2(8) = 9.38, p = .31, CFI = .99; RMSEA = .03; SRMR = .05$ ) and the cross-group friendship conditions ( $\chi^2(7) = 12.74, p = .08, CFI = .99; RMSEA = .06; SRMR = .06$ ). The combined model (as depicted in Figure 1) that was estimated for same-group and cross-group condition respondents simultaneously also showed excellent model fit ( $\chi^2(14) = 20.35, p = .12, CFI = .99; RMSEA = .04; SRMR = .05$ ).

For respondents in the same-group condition, friendship contact was positively and significantly associated with positive reciprocal self-disclosure ( $b = .11, p < .01$ ), negative reciprocal self-disclosure ( $b = .14, p < .01$ ), and friendship closeness ( $b = .38, p < .001$ ). Positive reciprocal self-disclosure was

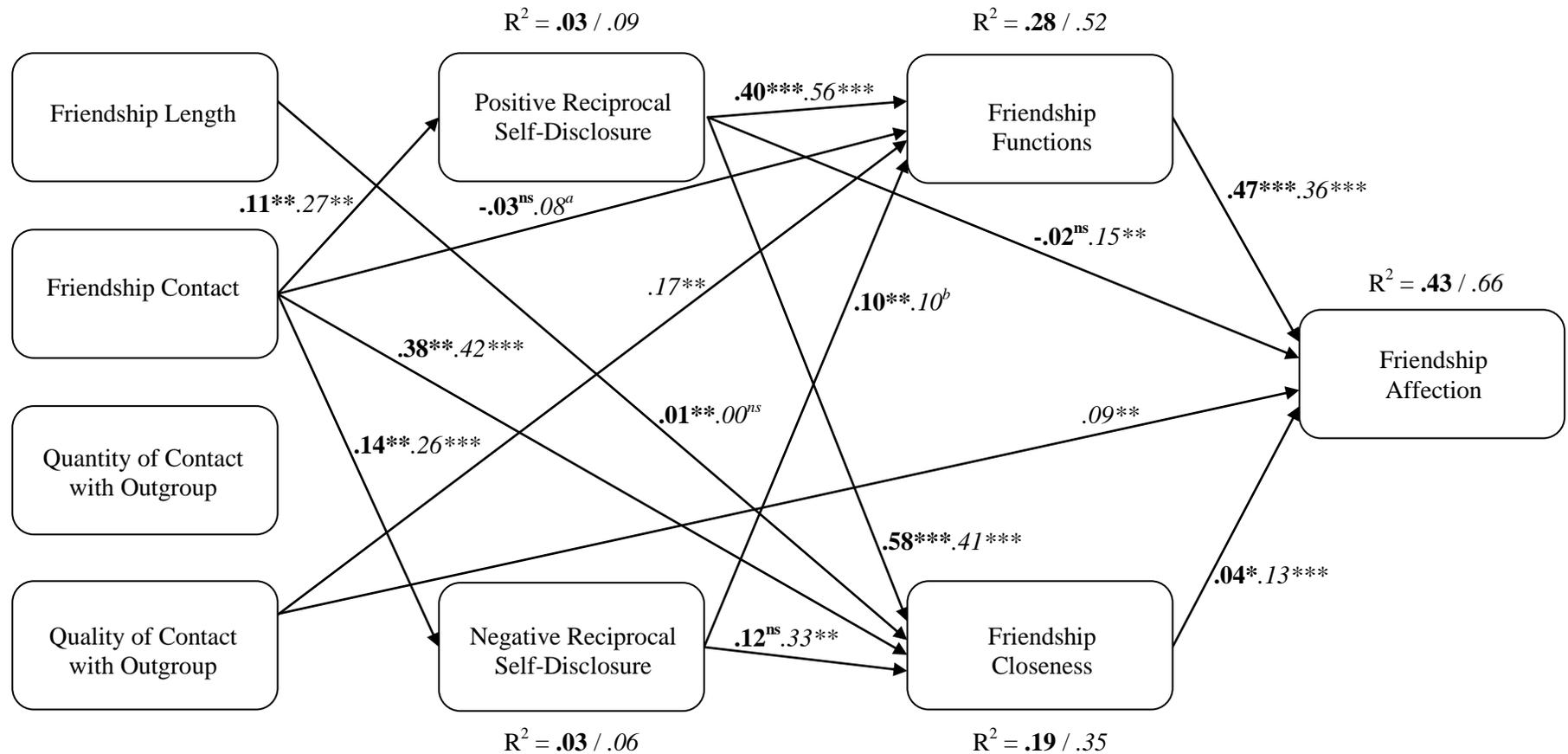


Figure 1. Path analytic model comparing the structural relationships between the interpersonal-level friendship variables for the same-group versus cross-group friendship conditions amongst White South African first-year students at Stellenbosch University (cross-group friendship coefficients in italics).

$\chi^2(14) = 20.35, p = .12, CFI = .99; RMSEA = .04; SRMR = .05$

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , <sup>a</sup>  $p = .05$ , <sup>b</sup>  $p = .07$ ; Unstandardized regression coefficients; only significant paths are shown.

Covariances: Outgroup Contact Quantity-Outgroup Contact Quality:  $.30^{***} / .32^{***}$ ; Positive Self-Disclosure-Negative Self-Disclosure:  $.27^{***} / .55^{***}$ ; Friendship Functions – Friendship Closeness:  $.22^{***} / .25^{***}$ .

positively and significantly associated with friendship functions ( $b = .40, p < .001$ ) and friendship closeness ( $b = .58, p < .001$ ). Negative reciprocal self-disclosure was significantly positively associated with friendship functions ( $b = .10, p < .01$ ). Friendship functions ( $b = .47, p < .001$ ) and friendship closeness ( $b = .04, p < .001$ ) were each significantly positively associated with friendship affection.

Sobel tests (Baron & Kenny, 1986) were conducted to test for the presence of significant indirect (mediation) effects amongst these variables for the same-group condition. These tests confirmed the following mediation effects: (1) that positive reciprocal self disclosure significantly mediated the relationships between friendship contact and friendship functions ( $z = 2.44, p < .05$ ), and between friendship contact and friendship closeness ( $z = 2.13, p < .05$ ); (2) that the mediation effect by negative reciprocal self-disclosure in the relationship between friendship contact and friendship functions approached significance ( $z = 1.69, p = .09$ ); (3) that friendship closeness significantly mediated the relationship between friendship contact and friendship affection ( $z = 1.99, p < .05$ ); (4) that friendship functions ( $z = 4.77, p < .001$ ) and friendship closeness ( $z = 1.95, p = .051$ ) significantly mediated the relationship between positive reciprocal self-disclosure and friendship affection; and (5) that friendship functions significantly mediated the relationship between negative reciprocal self-disclosure and friendship affection ( $z = 2.22, p < .05$ ). This model explained 3% of the variance ( $R^2$ ) in positive reciprocal self-disclosure, 3% of the variance in negative reciprocal self-disclosure, 28% of the variance in friendship functions, 19% of the variance in friendship closeness, and 43% of the variance in friendship affection.

For respondents in the cross-group condition friendship contact was positively and significantly associated with positive reciprocal self-disclosure ( $b = .27, p < .001$ ), negative reciprocal self disclosure ( $b = .26, p < .001$ ), friendship functions ( $b = .08, p = .05$ ), and friendship closeness ( $b = .42, p < .001$ ). Positive reciprocal self-disclosure was positively and significantly associated with friendship

functions ( $b = .56, p < .001$ ), friendship closeness ( $b = .41, p < .001$ ), and friendship affection ( $b = .15, p < .01$ ). Negative reciprocal self-disclosure was positively associated with friendship functions ( $b = .10, p = .07$ ) and friendship closeness ( $b = .33, p < .01$ ). Again, friendship functions ( $b = .36, p < .001$ ) and friendship closeness ( $b = .13, p < .001$ ) were each associated with friendship affection.

Sobel tests (Baron & Kenny, 1986) confirmed the following significant mediation effects in the cross-group friendship conditions: (1) positive reciprocal self-disclosure significantly mediated the relationships between friendship contact and friendship functions ( $z = 3.99, p < .001$ ), between friendship contact and friendship closeness ( $z = 2.85, p < .01$ ), and between friendship contact and friendship affection ( $z = 2.43, p < .05$ ); (2) the mediation effect of negative reciprocal self-disclosure in the relationship between friendship contact and friendship functions approached significance ( $z = 1.61, p = .10$ ), while it significantly mediated the relationship between friendship contact and friendship closeness ( $z = 2.41, p < .05$ ); (3) friendship closeness significantly mediated the relationship between friendship contact and friendship affect ( $z = 3.53, p < .001$ ); (4) friendship functions ( $z = 5.73, p < .001$ ) and friendship closeness ( $z = 3.22, p < .01$ ) significantly mediated the relationship between positive reciprocal self-disclosure and friendship affection; (5) the mediation effect of friendship functions in the relationship between negative reciprocal self-disclosure and friendship affection approached significance ( $z = 1.74, p = .08$ ); and (6) friendship closeness significantly mediated the relationship between negative reciprocal self-disclosure and friendship affection ( $z = 2.87, p < .01$ ). This model explained 9% of the variance ( $R^2$ ) in positive reciprocal self-disclosure, 6% of the variance in negative reciprocal self-disclosure, 52% of the variance in friendship functions, 35% of the variance in friendship closeness, and 66% of the variance in friendship affection.

To explore the extent to which these structural relationships described above are comparable (or invariant) across friendship conditions, tests for structural invariance were undertaken by comparing

the change in chi-square (by calculating the corrected chi-square value; Satorra & Bentler, 1999) between various path models with different levels of equality constraints and the baseline model with freely estimated parameters (i.e., with no equality constraints; Figure 1). In the first of these tests, all the paths between the same pairs of constructs were constrained to equality across the two friendship conditions. This first model, testing for structural invariance, had the strictest parameter constraints, and did not produce good model fit ( $\chi^2(39) = 104.33$ ,  $p < .001$ , CFI = .93; RMSEA = .09; SRMR = .21), indicating that such a strict model did not represent the data sufficiently well and that there were in fact significant differences between some of the structural paths across the two conditions. Equality constraints were released in sequential models (beginning with those paths where the range of the unstandardized beta coefficient differed the most across the two friendship conditions) until a path model was found that did not differ significantly from the freely estimated baseline model (i.e., yielding a non-significant change in the corrected chi-square value).

These analyses indicated that there were significant differences in the structural relationships between the following paths across the two conditions: the path between friendship length and friendship closeness (which was significantly stronger for the same-group condition than the cross-group condition), between positive reciprocal self-disclosure and friendship functions, between positive reciprocal self-disclosure and friendship affection, and between friendship closeness and friendship affection (the latter three relationships all being significantly stronger in the cross-group condition than the same-group condition). All the remaining paths did not differ significantly across the two friendship conditions and can be considered equivalent. This model, indicating partial structural invariance, fit the data well ( $\chi^2(31) = 39.04$ ,  $p = .15$ , CFI = .99; RMSEA = .03; SRMR = .07) and did not differ significantly from the freely estimated baseline model depicted in Figure 1 ( $\Delta \chi^2(17) = 18.02$ ,  $p > .05$ ).

### *Exploring the Generalization of Friendship Affection to Positive Outgroup Attitudes*

The variable of positive outgroup attitudes was added as a new distal outcome variable, predicted by friendship affect (and controlling for quantity and quality of contact with the outgroup in general), to the same path model of structural relationships between the interpersonal-level constructs for the cross-group friendship condition. This path model fit the data well ( $\chi^2(13) = 18.10, p = .15$ , CFI = .99; RMSEA = .04; SRMR = .06; see Figure 2).

Over-and-above the relationships between the interpersonal-level variables in the cross-group friendship condition described earlier, friendship affect was significantly positively associated with positive attitudes towards the outgroup ( $b = .15, p < .05$ ) even after controlling for the relationship between prior quantity ( $b = .18, p < .001$ ) and quality ( $b = .34, p < .001$ ) of contact with the outgroup in general and positive attitudes towards the outgroup. Furthermore, Sobel tests (Baron & Kenny, 1986) confirmed that friendship affect significantly mediated the relationship between friendship function and outgroup attitudes ( $z = 2.33, p < .05$ ) and between friendship closeness and outgroup attitudes ( $z = 2.29, p < .05$ ), while its mediation effect in the relationship between positive reciprocal self-disclosure and outgroup attitudes approached significance ( $z = 1.89, p = .06$ ). These findings not only support the prediction that positive attitudes towards a specific outgroup exemplar are capable of generalizing to positive attitudes towards the outgroup as a whole, but suggest that specifically positive reciprocal self-disclosure and friendship closeness improve attitudes towards the outgroup as a whole because they improve the attitudes towards the particular outgroup exemplar. This model explained 33% of the variance in outgroup attitudes.

### *Cross-Group Friendships and Exposure to Broader Social Networks*

Finally, to explore whether spending time with a specific outgroup friend was associated with greater exposure to a broader social network of outgroup members, a path model was estimated for the cross-group friendship condition exploring the relationships between friendship contact (as the proximal predictor), friendship closeness (as the proximal mediator), contact with the Coloured South African friend's Coloured South African friends (as the distal mediator), and friendship with the Coloured South African friend's Coloured South African friends (as the distal outcome variable). Friendship length and quantity and quality of prior contact with the outgroup in general were included in this model as control variables. This path model fit the data well ( $\chi^2(14) = 34.91, p < .002, CFI = .96; RMSEA = .08; SRMR = .05$ ).

As can be seen in Figure 3, friendship contact with the particular outgroup friend was significantly positively associated with both greater perceived friendship closeness ( $b = .62, p < .001$ ) and more contact with the Coloured South African outgroup friend's Coloured South African friends ( $b = .17, p < .05$ ). Perceived friendship closeness was also significantly positively associated with more contact with the Coloured South African outgroup friend's Coloured South African friends ( $b = .15, p < .01$ ). This increased contact with the Coloured South African outgroup friend's Coloured South African friends in turn significantly predicted whether or not the ingroup respondent was friends with the Coloured South African outgroup friend's Coloured South African friends ( $b = .84, p < .001$ ), even after controlling for the influence of prior quantity and quality of contact with the outgroup in general. Sobel tests (Baron & Kenny, 1986) confirmed that friendship closeness significantly mediated the direct relationship between friendship contact and contact with the Coloured South African friend's Coloured South African friends ( $z = 3.03, p < .01$ ). Furthermore, this contact with the Coloured South African friend's Coloured South African friends significantly mediated the relationship between

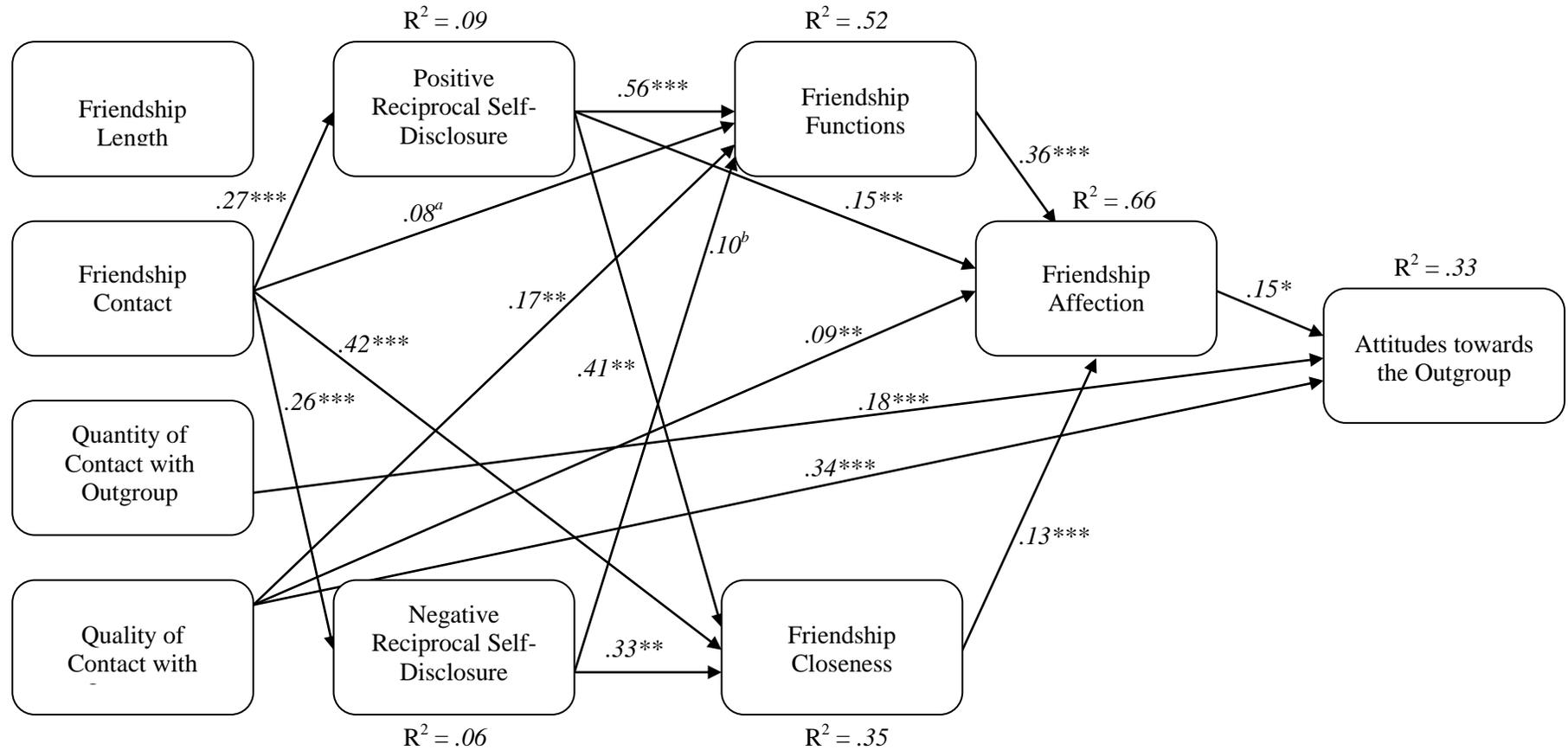


Figure 2. Path analytic model illustrating the generalization of positive attitudes towards a specific Coloured South African friend to positive attitudes towards the Coloured South African outgroup as a whole amongst White South African first-year students at Stellenbosch University.

$\chi^2(13) = 18.10, p = .15, CFI = .99; RMSEA = .04; SRMR = .06$

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , <sup>a</sup>  $p = .05$ , <sup>b</sup>  $p = .07$ ; Unstandardized regression coefficients; only significant paths are shown.

Covariances: Outgroup Contact Quantity-Outgroup Contact Quality: .32\*\*\*; Positive Self-Disclosure-Negative Self-Disclosure: .55\*\*\*;

Friendship Functions – Friendship Closeness: .25\*\*\*

friendship contact and being friends with the Coloured South African friend's Coloured South African friends ( $z = 2.32, p < .05$ ), and it also significantly mediated the relationship between friendship closeness and friendship with the Coloured South African friend's Coloured South African friends ( $z = 2.85, p < .01$ ). This model explained 18% of the variance ( $R^2$ ) in friendship closeness, 12% of the variance in contact with the outgroup friend's same-group friends, and 49% of the variance in friendships with outgroup friend's same-group friends.

In terms of the original *a priori* predictions made, the first prediction received full support; same-group friendships were characterized by significantly greater interpersonal closeness, greater quality of friendships, more friendship functions, more friendship affection, and greater positive and negative reciprocal self-disclosure than cross-group friendships, even while controlling for the possible influence of friendship length on these interpersonal variables. The second prediction, that female respondents rate their friendships more favourably on all the interpersonal level variables, were partially supported; while controlling for friendship length, female respondents reported significantly greater positive and negative reciprocal self-disclosure, more positive friendship functions, and more positive friendship affection than male respondents, irrespective of friendship condition.

Prediction three also received partial support, with a number of significant mediation effects observed in the relationships between the interpersonal friendship constructs in both friendship conditions. Prediction four received strong support; friendship affection for the particular outgroup friend was positively and significantly associated with more positive outgroup attitudes, even after controlling for the influence of prior general outgroup contact. Furthermore, friendship affection significantly mediated the relationships between friendship functions and outgroup attitudes, and between friendship closeness and outgroup attitudes. Finally, prediction five received strong support; friendship contact with a specific outgroup friend was significantly associated (both directly and

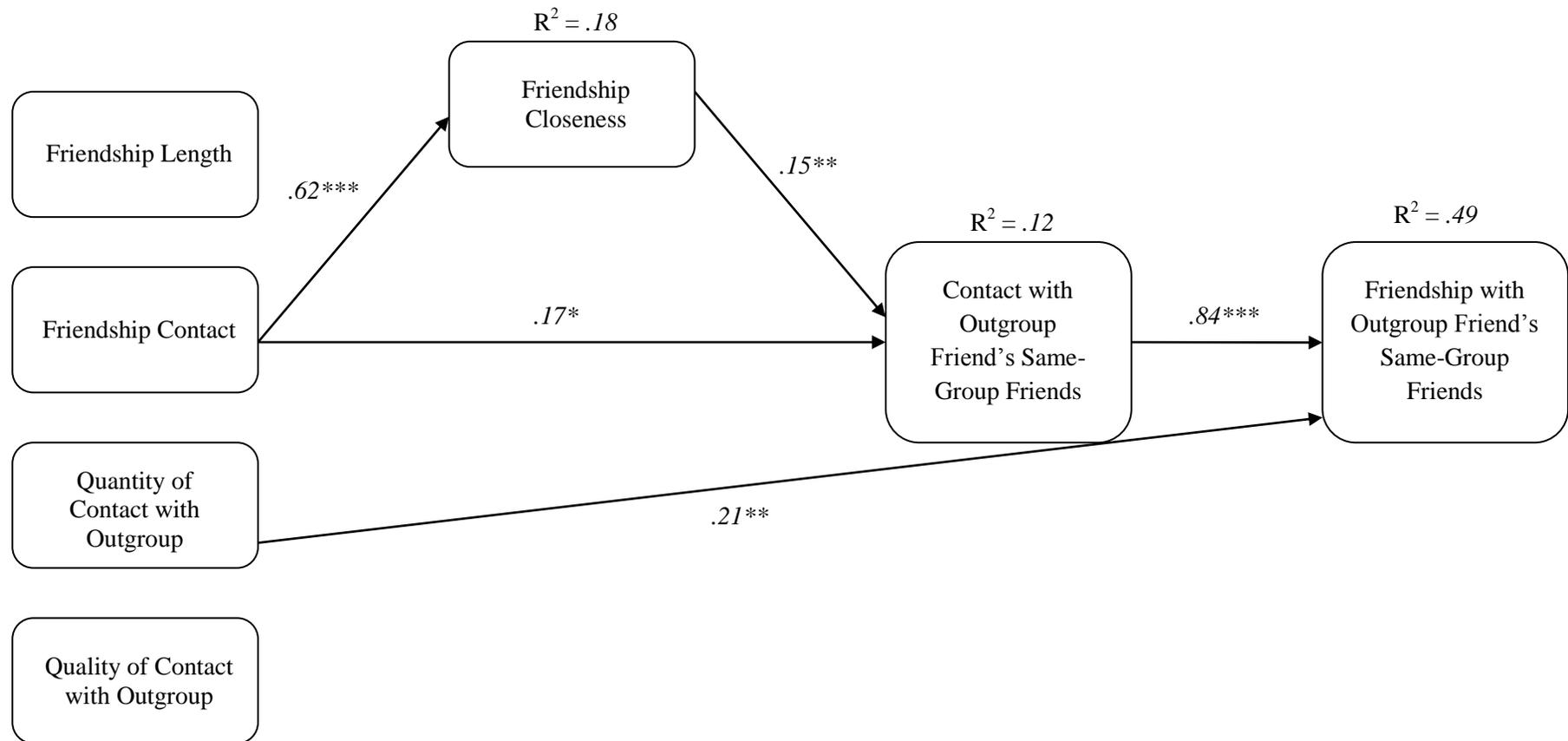


Figure 3. Path analytic model illustrating how a single outgroup friendship is associated with greater exposure to broader social networks of outgroup members and the development of further outgroup friendships amongst White South African first-year students at Stellenbosch University.

$\chi^2(14) = 34.91, p = .002, CFI = .96; RMSEA = .08; SRMR = .05$

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ; Unstandardized regression coefficients; only significant paths are shown.

Covariances: Outgroup Contact Quantity-Outgroup Contact Quality: .32\*\*\*

indirectly) with increased contact with the outgroup friend's same-group friends, even after controlling for prior general outgroup contact. The relationship between friendship contact and contact with the outgroup friend's same-group friends was also partially, and significantly mediated by friendship closeness. In turn contact with the outgroup friend's same-group friends was positively, and significantly associated with increased friendships with the outgroup friend's same-group friends (after controlling for the influence of prior general outgroup contact).

## CHAPTER FIVE

### Discussion

The present study aimed to compare same-group and cross-group friendships along a range of interpersonal-level friendship characteristics amongst White South African first-year students studying at Stellenbosch University. The rationale behind this study was that a better understanding of the differences and similarities between these types of friendships could potentially contribute towards the development of improved intergroup contact interventions aimed at promoting and facilitating friendship-formation and improved outgroup attitudes. Pettigrew (1997, 1998) has repeatedly argued that friendship is an important and valuable component in the improvement of intergroup relations, and this has been firmly supported in the contact literature (e.g., Brown & Hewstone, 2005; Pettigrew & Tropp, 2006). As shown in the contemporary contact and friendship literature, cross-group friendships have the potential to bring about meaningful intergroup interactions, intimacy, and the development of greater affective ties within the contact setting (Pettigrew, 1998). This is because friendships typically involve long term, high-quality contact between individuals, and are generally associated with many of Allport's (1954) optimal conditions for contact, and therefore have the potential to maximize the positive outcomes associated with intergroup contact (Brown & Hewstone, 2005; Pettigrew, 1997, 1998; Pettigrew & Tropp, 2006).

Five predictions were tested in the current study, namely that (1) same-group friendships are closer and more intimate than cross-group friendships; (2) that female respondents rate their friendships more favourable and closer than male respondents; (3) that positive and negative reciprocal self disclosure mediates the relationships between friendship contact and friendship functions, and between friendship contact and friendship closeness, and that both friendship functions and friendship closeness,

in turn mediate the relationships between positive and negative reciprocal self-disclosure and friendship affection; (4) that friendship affection is significantly associated with more positive outgroup attitudes; and (5) that contact with the outgroup friend will be associated with more contact with the friend's friends, which will be associated with more friendships with the outgroup friend's same-group friends. Overall, the results of the present study were in favour of each of these five predictions.

These results are discussed below in four different sections, each focusing on a particular aspect of the research questions explored in the present study. I begin with a discussion of the findings relating to the mean-level comparison of same-group and cross-group friendships. I then discuss the comparison of the structural relationships between the interpersonal-level variables for same-group and cross-group friendships. This is followed by a discussion of the present study's findings that attitudes towards a particular outgroup friend were associated with more positive attitudes towards the outgroup in general. Finally, I discuss the findings of the present study relating to the exposure to a broader social network of outgroup peers offered by outgroup friendships. I conclude my discussion with a consideration of the limitations of the present study, and a discussion of avenues for future research.

### **Comparing Same-Group and Cross-Group Friendships**

Group comparisons revealed that respondents in the same-group friendship condition viewed their same-group friendships as more significant or important than did respondents in the cross-group friendship condition. When asked about the nature of their closest relationship, 37.4% of the respondents in the same-group friendship condition answered "one of my closest friends" and 43.8% answered "my best friend". In comparison, 49.4% of the respondents in the cross-group friendship condition answered "just a friend", and only 23.3% answered "a close friend". These results indicate that respondents in the same-group conditions rated their same-group friendships as being of a more

intimate nature than the respondents in the cross-group conditions rated their cross-group friendships. Respondents in the same-group condition also spent significantly more time with their same-group friends, and shared more positive and negative reciprocal self-disclosure than did respondents in the cross-group condition. As discussed in previous chapters, reciprocal self-disclosure brings about greater affective feelings towards others by increasing the perception of interpersonal closeness (Fehr, 2004; Reis & Shaver, 1988).

Cross-group friendships were characterized by significantly lower scores of friendship functions, friendship closeness, and friendship affection than same-group friendships. These three variables measure friendship quality, friendship intimacy, and affective feelings towards the friend respectively. Group comparisons revealed that same-group friendships are typically characterized by greater quality, intimacy, and affection. These patterns of results are entirely consistent with similar studies undertaken in Northern Ireland (Brewer, 2009), England (Paterson, 2010), Serbia (Lukovic, 2010), and South Africa (Loxton, 2009). It is therefore very likely that the differences found between same-group and cross-group friendships in these varied contexts reflect real differences between same-group and cross-group friendships in general. It may be possible to explain these differences between same-group and cross-group friendships using the theoretical framework provided by Social Identity Theory and Self-Categorization Theory (see Tajfel & Turner, 1986).

According to the social identity theory and self-categorization theory (Tajfel & Turner, 1979), individuals develop their sense of social identity through the groups they consider themselves to be a part of. The inherent need of individuals to improve their self-esteem drives them to strive towards a positive self-concept, which includes their social identity and group membership. This pressure and need for a positive self-concept causes individuals to distinguish themselves, as part of their social group, from other outgroups. This distinction results in ingroup bias, which is characterized by more

favourable attitudes towards the ingroup. It is therefore not surprising that same-group friendships in each of the studies described previously, and in this study in particular, were characterized by greater closeness, self-disclosure, friendship functions and friendship affection. From the perspective of social identity theory, these trends may be as a result of the fact that both friends in the same-group friendship dyad share the same group membership (i.e., are fellow ingroup members). The friends within the cross-group friendship dyad, however, do not share the same group membership, and therefore, according to the predictions made by social identity theory, would not automatically experience the same degree of closeness, self-disclosure, or affection as same-group friends. This may have several implications for the development and maintenance of cross-group friendships.

Dindia and Emmers-Sommer (2006) suggest that friendship closeness plays an important role in determining friendship maintenance. The closer the friendship, the more effort individuals will put in to ensure its continuation. The lower closeness scores in cross-group friendships suggest that these types of friendships are less likely to last as long as same-group friendships. In order to maintain friendships, it is essential to spend time with them. Respondents in the same-group condition spent significantly more time with their friends than respondents in the cross-group condition spent with their friends. Same-group friendships were also characterized by greater friendship closeness. Cross-group friendships may therefore be less stable than same-group friendships regarding their maintenance. However, it is important to note that these differences between same-group and cross-group friendships remained even after controlling for the significant differences in friendship length between same-group and cross-group friendships. Together, these differences may also imply that ingroup individuals in cross-group friendships that are not characterized by high levels of friendship closeness (e.g., acquaintances) may not consider their cross-group friend as an equal, which could complicate the generalization of positive attitudes towards the outgroup friend (or, in this example, the outgroup acquaintance) to the outgroup as a whole. However, although the data indicates that same-group

friendship closeness was significantly higher than cross-group friendship closeness, it does not mean that the cross-group friendships showed a complete lack of closeness; the mean rating for cross-group friendship closeness was 3.03 out of a maximum of 7, which suggests that there was some sort of closeness between these cross-group friends.

Group comparisons on gender differences also support the existing literature on interpersonal friendships, which indicates that females' friendships are generally characterized by greater self-disclosure and intimacy than the friendships between males. In the present study the results showed that female respondents rated their friendships higher on four of the interpersonal-level friendship variables, including positive and negative reciprocal self-disclosure, friendship functions, and friendship affection, than did males. These differences were significant for respondents in both the same-group and cross-group friendship conditions. As the literature suggests, female friendships tend to involve more conversation and self-disclosure (Cauldwell & Peplau, 1982), specifically related to personal issues (Johnson & Aries, 1983b; Jones, 2009). The intimacy that results from self-disclosure might explain the positive affection of females towards their friends. At least four of the six subscales of the friendship function scale involves either affective intimacy or companionship (stimulating companionship, intimacy, self-validation, and emotional security), which may also explain why female respondents rated their friends higher on friendship functions than did males. Males typically choose not to engage in intimate self-disclosure in same-sex friendships (Reis et al., 1985), and their friendship will therefore not be characterized by the same levels of intimacy, reciprocal self-disclosure, or friendship functions as would the friendships formed by females.

### **The Structural Relationships between Interpersonal-Level Friendship Variables**

None of the four previous studies on the comparisons of same-group and cross-group friendships went beyond exploring the mean-level differences between these two friendship conditions. The present study aimed to extend the emerging literature by comparing the structural relationships between the various constructs across the two friendship conditions.

Path analyses confirmed the predictions made by the literature regarding interpersonal friendship processes and the relationships between the variables describing these processes. Contact with the friend was associated with more positive and negative reciprocal self-disclosure, which were both in turn associated with more friendship functions (for both same-group and cross-group friendship) and greater friendship closeness (for the cross-group friendship condition only). These, in turn, were associated with greater friendship affection. The group-level variables of general outgroup contact quantity and general outgroup contact quality were added in the path analysis to control for their effects on the friendship variables, and therefore the observed effects found in the path analysis reveal only interpersonal-level friendship effects. Furthermore, by adding friendship length as a control variable it was possible to illustrate that the positive effects of friendship contact were in fact the result of the contact with the friend itself, and not an artefact of friendship length.

Mediation tests revealed a number of mediation effects amongst the underlying processes between friendship contact and friendship affection. Positive and negative reciprocal self-disclosure mediated the relationship between friendship contact and friendship functions for both types of friendships. This suggests that disclosing personal information about oneself contributes to the perceived quality of friendships. Furthermore, positive reciprocal self-disclosure also mediated the relationship between friendship contact and friendship closeness for both friendship groups. Together,

these findings are in line with the existing literature that suggests that disclosing personal information about oneself leads to increased closeness or intimacy between individuals (Reis & Shaver, 1988). Negative reciprocal self-disclosure also mediated the relationship between friendship contact and friendship closeness, and positive reciprocal self-disclosure mediated the relationship between friendship contact and friendship affection, but only for cross-group friendships. This reflects the importance of reciprocal self-disclosure in cross-groups friendships; both positive and negative reciprocal self-disclosure was associated with greater friendship closeness in the cross-group friendship condition (as predicted by Pettigrew, 1998).

Friendship functions mediated the relationships between positive and negative reciprocal self-disclosure and friendship affection for both same-group and cross-group friendships. Higher quality friendships (which is implicated in higher friendship functions) leads to more affection towards the friend (Mendelson & Aboud, 1999), and the present findings suggest that reciprocal self-disclosure increases friendship affection because it increases the perceived value or quality of the friendship.

The relationship between positive and negative reciprocal self-disclosure and friendship affection, and between friendship contact and friendship affection, was significantly mediated by friendship closeness for both friendship groups. Greater positive and negative reciprocal self-disclosure was associated with greater friendship closeness, which in turn was associated with greater friendship affection. Increased contact was also associated with greater friendship closeness, which was in turn associated with greater friendship affection. These findings, once again, demonstrate that positive and negative reciprocal self-disclosure (each associated with greater friendship contact) increases friendship affect because it increases the perceived intimacy (or closeness) between friends. Greater self-disclosure (whether positive or negative) with an individual increases the perceived self-other overlap with that individual (Aron et al., 1991). This may be because greater reciprocal self-disclosure

encourages greater empathy and perspective taking (putting yourself in your friend's shoes or seeing the world through their eyes), which then serves to increase the sense of similarity or self-other overlap between the two friends.

The path analyses revealed an important fact about intergroup contact, namely that contact alone may not necessarily improve attitudes towards an individual or a group and that the role played by mediators such as reciprocal self-disclosure, friendship functions, and friendship closeness, is extremely important in the relationship between friendship contact and the generation of friendship affection. This can be clearly seen in Figure 1 where neither friendship contact nor friendship length had a direct relationship with friendship affection. Contact interventions therefore need to go beyond merely creating an environment where in- and outgroup members come together in contact, and need to ensure that they are structured in a manner that promotes and facilitates reciprocal self-disclosure and a sense of interpersonal closeness.

The relative importance of the mediators in the model appears to differ as a function of friendship type. For example, the role of friendship closeness and negative reciprocal self-disclosure seem particularly important in cross-group friendships, but less so for same-group friendships. These findings are not too surprising when considered from the perspective of social identity theory. In the same-group condition respondents seem to rate their friends much more favourably on all the friendship variables, simply because these friends are members of the ingroup (see Tajfel & Turner, 1986), reducing, but not completely eliminating, the need for mediators such as negative reciprocal self-disclosure or friendship closeness to facilitate the relationship between friendship contact and friendship affection. Cross-group friendships, on the other hand, seem to rely greatly on these mediators to facilitate increased friendship affection. From the perspective of the social identity theory this, too, is to be expected. Being friends with members of the outgroup, the ingroup-outgroup

friendship needs more facilitating mechanisms to increase the closeness and intimacy between the in- and outgroup individuals. These outgroup friendships have to overcome the ingroup bias in order for the outgroup friend to be rated just as positive as same-group friends. Naturally, same-group friendships are not faced with this challenge, and this is shown in the fact that the relationship between friendship length and friendship closeness was significantly stronger amongst same-group friendships than cross-group friendships. Once again, social identity theory could offer an explanation for this difference. Respondents in the same-group friendship condition reported significantly longer friendships than respondents in the cross-group friendship condition. In addition to this, same-group friendships were also characterized by greater closeness than cross-group friendships. Being a part of the same ingroup increases the intimacy and closeness between same-group friends, and this type of friendship is also likely to be longer in length due to this favouritism, which may explain why the relationship between friendship length and friendship closeness is significantly stronger for same-group friendships.

There were three other paths that were significantly different across same-group and cross-group friendships. The paths between positive reciprocal self-disclosure and friendship functions, between positive reciprocal self-disclosure and friendship affection, and between friendship closeness and friendship affection were significantly stronger in the cross-group friendship condition. These differences highlight the importance of these mediators (specifically positive reciprocal self-disclosure, friendship functions, and friendship closeness) to improve interpersonal affection, especially in cross-group friendships. As mentioned earlier, the ingroup generally rate their same-group friends more favourably, which possibly reduces the importance of these mediators for facilitating positive friendship affection (which may already be quite high given the fact that the friend is a fellow ingroup member). These mediators appear to be much more important in cross-group friendships for improving

the affection felt towards the outgroup friend, since these friendships are not necessarily characterized by the inherent benefits of ingroup favouritism within same-group friendships.

Understanding these same-group and cross-group friendship differences could potentially make an important contribution, not only to the contact literature, but also to the development of future contact interventions aimed at promoting the development of cross-group friendships. Cross-group friendships undoubtedly promote improved attitudes towards the outgroup friend. However, it is important that certain mechanisms are put in place within the structured contact setting to help facilitate these positive effects. Participants in such interventions should be given the opportunity to develop a sense of closeness between them. Intimacy and closeness can be promoted through, for example, positive and negative reciprocal self-disclosure. The present findings also indicate that being a part of the ingroup automatically increases the interpersonal attraction towards fellow ingroup members. Pettigrew (1998) suggests a longitudinal model for contact that may help overcome the initial ingroup bias in the early stages of structured intergroup contact experiences. He suggests that the initial contact between in- and outgroup members should be in a setting where their respective group memberships are de-emphasized in order to encourage the development of positive interpersonal-level feelings without activating the potential negative influences of group-based bias. By minimizing the salience of group membership during the early stages of the interactions between in- and outgroup members, it maximizes the prospects that the friendship-developing activities within the structured contact settings (such as cooperation on common goals and reciprocal self-disclosures) will encourage the establishment of interpersonal acquaintances between in- and outgroup members. How, or when, such structured contacts can, or should, incorporate activities that promote the generalization of these positive interpersonal attitudes towards the outgroup exemplar is the focus of the following section.

### **The Generalization of Positive Attitudes from the Outgroup Friend to the Outgroup as a Whole**

The fourth prediction that was tested relates to this attitude generalization from a specific outgroup exemplar to the outgroup as a whole. More specifically, it was predicted that positive friendship affection in the cross-group friendship condition would be associated with more positive outgroup attitudes, while controlling for the possible influence of prior general outgroup contact quantity and quality. The findings clearly illustrate that interacting with a specific outgroup friend not only encourages more positive attitudes towards the outgroup friend, but also encourages more positive attitudes towards the outgroup as a whole, over-and-above the effects of prior contact quantity and quality with the outgroup in general, providing support for Pettigrew's (1997) generalization hypothesis. What makes these findings so unique is that in the present study the focus was on the relationship with a *specific* outgroup friend, and how this influences attitudes towards the outgroup as a whole, as opposed to using an aggregate measure of cross-group friendships (as is most common in the contemporary intergroup contact literature; e.g., Brown & Hewstone, 2005; Swart et al., 2010a, 2010b; Turner et al., 2007).

When ingroup members include their outgroup friend into their sense of self (as a consequence of increased closeness between them), they also begin to include the entire outgroup identity into their sense of self. Through this mechanism, the outgroup becomes perceived as more positive, since there is now a greater perceived overlap between the ingroup member's sense of self and that of the outgroup member (and, by extension, the outgroup as a whole). Evidence in support of this mechanism comes from research with adults whom have spontaneously perceived an overlap in characteristics with outgroup members when in close contact situations (Aron et al., 1992; Sedikides, Olsen, & Reis, 1993; Smith & Henry, 1996). Brown and Hewstone (2005) have illustrated that this type of generalization, from the outgroup exemplar to the outgroup as a whole, is more likely to occur when the outgroup

exemplar is considered as a sufficiently ‘typical’ representative of the outgroup as a whole (i.e., when the category membership of the outgroup member is more salient). With this in mind, it is therefore important that structured contact interventions focus on making the category memberships of the in- and outgroup members engaging in the contact sufficiently salient in order to facilitate this generalization effect. However, the timing of this heightened category salience is important because, if introduced too early in intervention, emphasizing group memberships may contribute towards greater ingroup bias and intergroup anxiety, which may result in a more negative recollection of the contact experience and may entrench outgroup prejudice (Brown & Hewstone, 2005). Pettigrew’s (1998) longitudinal model of contact addresses this issue. He suggests that while category membership should be de-emphasized during the early stages of the contact intervention, it should be introduced into the intervention after a number of successful, positive contacts once sufficient interpersonal bonds have been established between the in- and outgroup members. This will allow for the development of sufficient interpersonal liking and interpersonal trust between the in- and outgroup member over a number of successful contact experiences within a structured setting so that the elements that heighten category salience (e.g., sharing personal information about cultural/ethnic experiences) do not create too much intergroup anxiety and tension. Not only will such contact interventions then be successful in the development of interpersonal relationships between in- and outgroup members but, over time, the interpersonal affection that develops through these contact experiences are encouraged to generalize to include more positive attitudes towards the outgroup as a whole.

### **The Benefits of Cross-Group Friendships: Access to Broader Social Networks**

The final question that was explored in the present study was whether having an outgroup friend would expose ingroup members towards a broader social network of outgroup members. The path analyses showed that this is indeed the case. Mediation analyses confirmed that friendship

closeness was a significant mediator of the relationship between friendship contact and contact with the outgroup friend's same group friends, while contact with the outgroup friend's same-group friends significantly mediated the relationship between friendship contact and friendships with the outgroup friend's same-group friends, and between friendship closeness and friendships with the outgroup friend's same-group friends. What is encouraging is that these effects were found even after controlling for prior quantity and quality of contact with the outgroup in general.

Together, these results suggest that having even a single outgroup friend exposes ingroup members to a broader social network of outgroup peers, which in turn increases the chances that they will develop further friendships with outgroup members. This is because more time spent with the outgroup friend increases the chances of some of these interactions occurring in the company of fellow outgroup members. This increased exposure to, and friendships with the outgroup may lead to even more favourable attitudes towards the outgroup.

It should be noted that no alternative path models were tested in the various analyses of the present study. The reason for this is that, given the nature of the constructs being explored, no plausible alternative theoretical models were identified. The relationships in each of the path models presented in this thesis were specified a priori after careful consideration of the relevant literature, making the good model fit of these models all the more encouraging.

The findings of the current study make potentially important contributions to the contact literature. Understanding the differences between same-group and cross-group friendships contributes to the scarce amount of literature regarding the nature of intergroup friendships. Understanding these differences and the mechanisms involved in same-group and cross-group friendships also contribute to the development of future intergroup contact settings aimed at promoting cross-group friendships and

improving intergroup relations and outgroup attitudes. The findings illustrate that a single cross-group friendship not only leads to a broader outgroup social network, and ultimately to more cross-group friendships, but is also capable of improving attitudes towards the outgroup as a whole. This offers important advantages within societies characterized by large-scale segregation, such as South Africa as it suggests that it is not necessary to have a large number of outgroup friends in order to improve attitudes towards the outgroup. Not only do cross-group friendships encourage more contact with the outgroup, but it also leads to improved attitudes towards them.

### **Limitations**

Despite the contributions made to the friendship and contact literature by the present findings, it is important to acknowledge four important limitations associated with the present research. The first limitation relates to the design of the study. The design used in the present study was a between-subjects design. This type of design limits the inferences one can make regarding group differences. Different respondents participated in each condition, so the responses given by participants in the two conditions cannot be directly compared. Data from a within-subjects design would be much more reliable for comparing condition-specific differences, since the respondents would then participate in both conditions, and their responses could then be compared. A within-subjects design may, however, lead to other difficulties, especially within the framework of the present study. Response bias resulting from respondents correctly guessing the nature of the research question might influence the validity of the data. A further limitation associated with the research design of the present study is that it is cross-sectional in nature. This means that it is not possible to make truly causal inferences from the findings in the various path models. To undertake research where it is possible to make more accurate causal inferences from the data, it is necessary to undertake experimental research, where third variable effects

can be properly controlled for. Alternatively, longitudinal research could be undertaken where alternative causal explanations can be directly tested against one another (e.g., Swart et al., 2010b).

The second limitation of the present study is that it only focused on White South African same-group friendships and White South African cross-group friendships with Coloured South Africans. Given the ethnic diversity within South Africa, and the large number of possible ingroup-outgroup friendship combinations, it is difficult to know to what extent the present findings can be generalized beyond the current sample. However, it is important to note that the findings reported in the present study almost perfectly replicate those findings reported in a diverse range of contact settings (e.g., Brewer, 2009; Loxton, 2009; Lukovic, 2010; Motley, 2008; Paterson, 2010). Although further South African research amongst a range of ingroup-outgroup friendship combinations to try and replicate the current findings might provide further support, the fact that these findings are consistent with the emerging literature on same-group versus cross-group friendship comparisons serves as a source of confidence in the current findings.

The third limitation is that the respondents in both friendship conditions belonged to a (arguably) South African majority-status ethnic group (on the Stellenbosch University campus). Research has shown that the relationship between contact and prejudice may be significantly different for minority- and majority-status groups. Tropp and Pettigrew (2005) undertook a meta-analysis of 515 contact studies conducted between 1940 to 2000 to determine whether the contact-prejudice relationship differs significantly as a function of group status. Their results showed that, across all the samples, the contact-prejudice relationship was significant for both minority- and majority-status groups. This relationship was, however, significantly weaker ( $p < .01$ ) for the members of the minority-status groups (mean  $r = -.18$ ) than for members of the majority-status groups (mean  $r = -.23$ ). Given

these differences it is particularly important that further research is undertaken comparing same-group and cross-group friendships amongst minority-status group members.

Finally, a fourth limitation of the present study relates to the fact that the data is unable to shed much light on the rate of cross-group friendship development (versus same-group friendship development) amongst White South African students at Stellenbosch University, nor is it able to shed much light on how the interpersonal friendships explored in the present study influence intergroup relations at Stellenbosch University in the broader sense. To this end it would have been useful to have also collected data from participants relating to the overall number of cross-group friendships they had (in both conditions). However, the present data does suggest that greater general quantity and quality of contact with Coloured South Africans at Stellenbosch University is positively associated with more positive attitudes towards Coloured South Africans in general, for both same-group and cross-group condition participants. This is illustrated by the significant positive correlations between quantity and quality of general contact with Coloured South Africans and positive attitudes towards Coloured South Africans (see Table 7). However, this correlational data cannot inform us about the causal direction of this relationship. It may well be that existing positive attitudes towards Coloured South Africans in general is driving the greater quantity and perceived quality of contact with Coloured South Africans amongst the White South African participants (i.e., selection bias). Having said this, the primary focus of the present study was not to explore the state of intergroup relations at Stellenbosch University in general, but to primarily focus on the qualitative similarities and/or differences of same-group versus cross-group friendships.

### **Directions for Future Research**

As described above, a between-subjects research design is limited regarding the inferences that can be drawn from group differences. Future research on group comparisons regarding intergroup friendships should aim to include either a within-subjects design, or a longitudinal design. Researchers should, however, take notice of one of the difficulties regarding within-group designs, namely response bias. To overcome this difficulty, participants could be deceived about the nature of the study to prevent them from guessing the research questions, although this may be ethically questionable. Another limitation of the present study is the cross-sectional design. A longitudinal design, as alternative, offers the advantage of testing multiple causal models against one another. This might provide more substantial support for the causal paths suggested in the present study. Future research should also aim to include minority status group members, since the literature (Tropp & Pettigrew, 2005) suggests significant differences between minority and majority group members regarding outgroup attitudes in intergroup interactions.

To obtain more information on the prevalence of cross-group friendship formation and the intergroup climate at Stellenbosch University (in particular, and in South Africa in general), future research comparing same-group versus cross-group friendships should also include items that measure the total number of cross-group friendships amongst participants. Given that South African research (e.g., Clack et al., 2005; Dixon & Durrheim, 2003; Gibson, 2004; Schrieff et al., 2005; Tredoux & Dixon, 2009) suggests that South Africans in general tend to self-segregate, and that intergroup contact and cross-group friendships are minimal, future research should focus more on social contexts (schools, universities, or the work-place) that may be characterized by a higher than expected amount of intergroup contact and cross-group friendship formation, so as to better understand the factors within

these (arguably exceptional) South African contexts that are stimulating positive intergroup relations within the post-conflict South African society.

Other directions for future research should include exploring the role of affective empathy and perspective-taking in promoting greater inclusion of the other in the self. It would be predicted that these variables are positively and significantly associated with greater inclusion of the other in the self, which might promote greater friendship affection and, consequently, more positive attitudes towards the outgroup as a whole.

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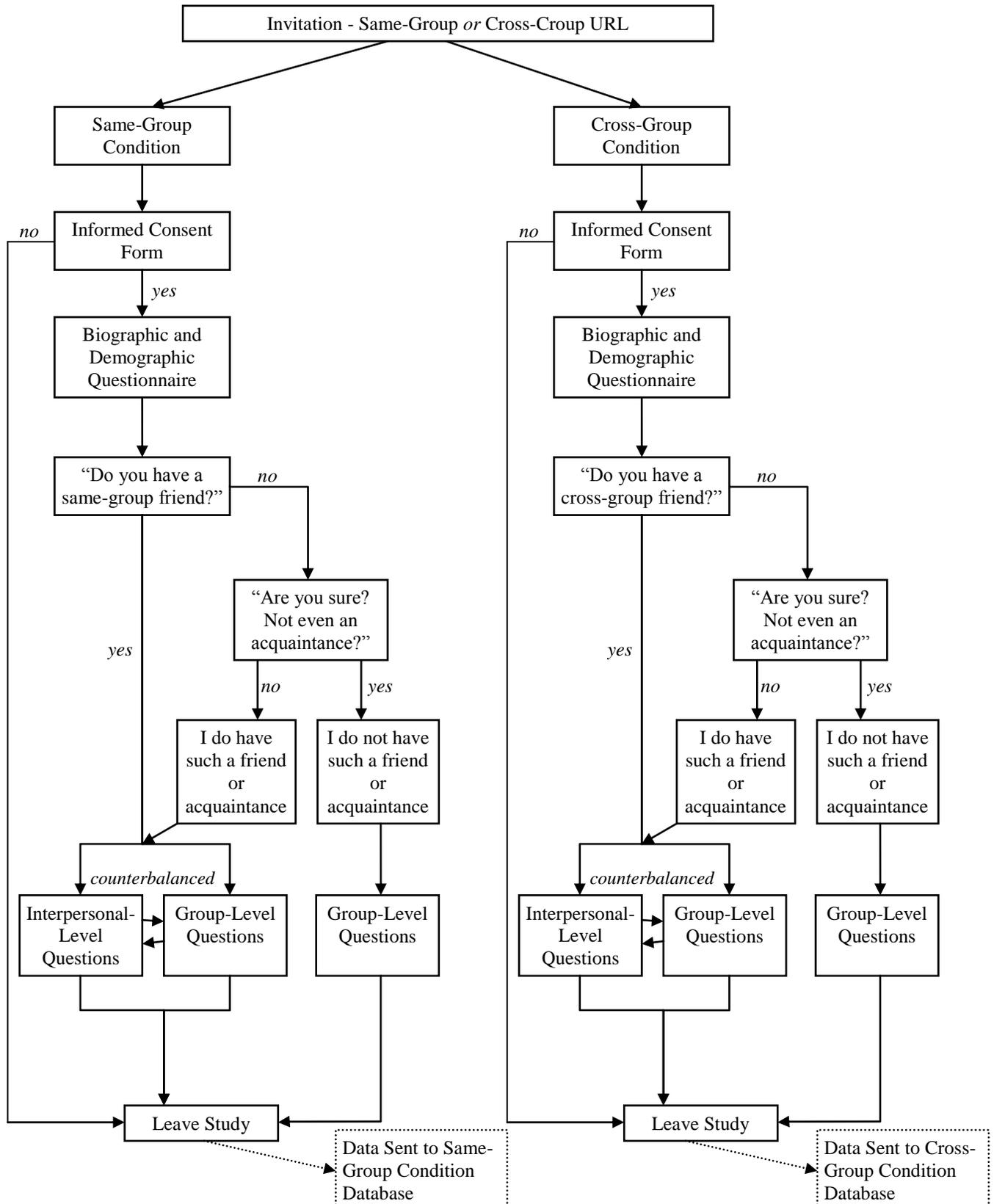
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APPENDIX A

The Data Collection Flowchart



**APPENDIX B****Electronic Survey Invitation**

Dear Student

You are invited to participate in the following online survey, student friendships at Stellenbosch University (ethical clearance ref. no. 284/2010), being undertaken by Ms Anneke Goosen (under the supervision of Dr Hermann Swart and Dr Desmond Painter) as part of her Master's thesis in Psychology.

Participants who submit a completed survey will be entered into a cash prize draw for R1500.

Click on the link below for further details and to access the online survey.

With thanks and best wishes

Anneke Goosen, Dr Hermann Swart, & Dr Desmond Painter

Dept. Psychology

Stellenbosch University

Dr. Hermann Swart, Tel (office): 021-808-9061

## APPENDIX C

### Informed Consent Form

Dear student

You have asked to participate in this survey on social relationships and opinions of South African students, conducted by Anneke Goosen, Dr. Hermann Swart and Mr Desmond Painter. Permission to undertake this research has been granted by the Stellenbosch University Ethics Committee (ref: 284/2010).

The purpose of this study is to gather information from South African students about some of their social relationships in their everyday life and specific opinions about such relationships.

This survey forms part of the fulfilment of a Masters degree in Psychology that aims to study and compare the social relationships and opinions of students in South Africa. Your participation in this survey will make a valuable contribution to our understanding of the nature of social relationships in general and your opinions in particular, within the South African context.

Should you agree to participate in this survey, you will be asked to read through and answer a range of questions relating to particular social relationships, experiences and opinions.

In order to submit the survey, all the questions that are posed to the participants require an answer. Should you feel that there is a question that you do not wish to answer, you are free to withdraw your participation (see below).

It should not take you longer than fifteen minutes to complete the survey, and you can complete this survey anywhere and at any time so long as you have access to a computer and the Stellenbosch student network.

Before proceeding to the survey, a number of important points should be made regarding the terms and conditions of this survey. Please read through each point carefully.

Should you agree with these terms and conditions, please select the 'I Agree' icon below. In doing so, you will be giving your consent to participate in this study, and you will then be directed to the survey.

Should you not agree with the terms and conditions, please select the 'I do not Agree' icon below, and you will be exited from this portal.

Please note the following:

*YOUR PARTICIPATION IS COMPLETELY CONFIDENTIAL.* No other student or staff member at the University will have access to your responses, other than the researchers.

*YOUR PARTICIPATION IS COMPLETELY ANONYMOUS.* No personal or identifying information will be attached to your survey. Each survey will be assigned with a unique identifier that will not be traceable to the personal identity of any one participant. Please feel free, therefore, to be completely honest and candid in your responses.

*YOU MAY WITHDRAW YOUR CONSENT AND PARTICIPATION AT ANY TIME DURING THE SURVEY WITHOUT PENALTY.* You are not waiving any legal claims, rights or remedies because of your participation in this research study. There is a 'Quit' button on each page that will allow you to exit the survey at any point during the survey. If you have questions regarding your rights as a research subject, contact Maléne Fouché (mfouche@sun.ac.za; 021-808 4622) at the Division for Research Development.

Once you have completed the survey, you will have the opportunity to be entered into a CASH PRIZE DRAW to the value of R1500.

If you wish to be entered into this draw you will be requested to supply a valid cellphone number where you might be contacted in the event that you are the winner of the cash prize. Once the draw is completed all cellphone numbers will be immediately deleted.

The investigators may withdraw you from this research if circumstances arise which warrant doing so.

Should you have any questions regarding this study, feel free to contact Anneke Goosen (14554070@sun.ac.za) or Dr. Hermann Swart (hswart@sun.ac.za / 0218089061) who will gladly assist you as far as possible.

Once the results of the study are ready, it will be made available on the Psychology Department's webpage ([www.sun.ac.za/psychology](http://www.sun.ac.za/psychology)) for all interested students.

Having read the terms and conditions above, please select one of the two options at the bottom of the page to indicate whether you wish to give your consent to participate or not.

Best Wishes,

Anneke Goosen

Dr. Hermann Swart and Dr Desmond Painter (Co-supervisors)

**APPENDIX D****Biographic and Demographic Questions**

**Please complete the following questions regarding your personal biographic and demographic details.**

\* Please indicate your age in years

\* Please indicate your gender

Male

Female

\* Please indicate your home language

Afrikaans

English

Other

## APPENDIX E1

### Same-Group Survey Questionnaire

#### *Friendship biographic and demographic questions*

Please think of your best/closest **SAME GENDER** friend who belongs to the **SAME RACIAL GROUP** as yourself. In the space provided below, please type in the initials of their first name and surname only to help you think about your feelings for them and keep them in mind (i.e., if your friend's name is John Peter Smith, only type in JS). **All questions that follow must be answered with this particular friend in mind and no one else.**

I do not have such a friend

*Please note: When respondents indicated that they had no same-group friend they were prompted with the following question:*

\*Are you sure you have no friendship (not even an acquaintance) with someone of the same gender and racial group as yourself?

I have no such friendship

I do have such a friendship

*Please note: When respondents confirmed that they had no such friendship they were directed to the group-level questions, (see p131), and skipped all the interpersonal-level questions. When respondents indicated that they did have a same-group friend or acquaintance they were directed either to the interpersonal-level questions or to the group-level questions in a counterbalanced fashion. After completing the first broad set of questions (e.g., interpersonal-level questions) they were then directed to the second broad set of questions (e.g., the group-level questions), and vice versa.*

\* Approximately how old is this friend in years?

\* What is this friend's gender?

Male

Female

\* What is the PRIMARY reason for spending time with this friend?

Educational (e.g. classes)

Work (e.g. colleagues)

Common activity

Common friendship group

Choice

*Friendship length*

\* Approximately how long have you been friends? Please enter the year and month you became friends in the space provided below.

*Friendship type*

\* What is the nature of your friendship?

An acquaintance

Just a friend

A very close friend

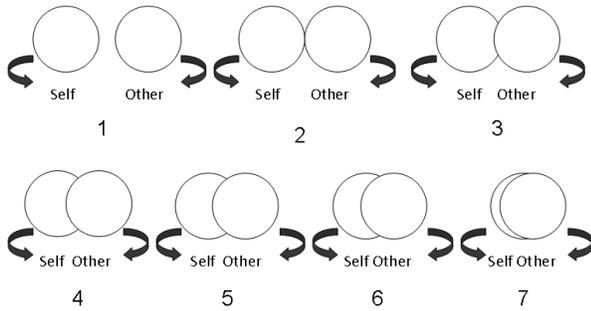
One of my closest friends

My best friend

I am in a romantic relationship with this person

*Friendship closeness*

The picture below contains seven images that represent your relationship with this friend. The closer the circles are to one another and the more they overlap with each other, the closer the relationship between you and your friend is. Please look at the picture and choose that image that best represents your relationship with your friend.



\* Please indicate which image best represents your relationship with this friend

Image 1

Image 2

Image 3

Image 4

Image 5

Image 6

Image 7

*Friendship contact*

\* How many hours per week do you spend with this friend at YOUR house?

None

1 - 2 hours

2 - 5 hours

5 - 10 hours

More than 10 hours

\* How many hours per week do you spend with this friend at THEIR house?

None

1 - 2 hours

2 - 5 hours

5 - 10 hours

More than 10 hours

\* How many hours per week do you spend with this friend in total?

None

1 - 2 hours

2 - 5 hours

5 - 10 hours

More than 10 hours

*Friendship functions*

**Please answer the following questions regarding this friend. Indicate how often this friend is or does what the item says.**

\* This friend helps me when I need it

Never

Rarely

Sometimes

Often

Always

\* This friend is someone whom I can tell private things to

Never

Rarely

Sometimes

Often

Always

\* This friend makes me feel smart

Never

Rarely

Sometimes

Often

Always

\* This friend makes me laugh

Never

Rarely

Sometimes

Often

Always

\* This friend knows when I'm upset

Never

Rarely

Sometimes

Often

Always

\* This friend points out things that I'm good at

Never

Rarely

Sometimes

Often

Always

\* This friend would be good to have around if I were frightened

Never

Rarely

Sometimes

Often

Always

\* This friend lends me things that I need

Never

Rarely

Sometimes

Often

Always

\* This friend would make me feel better if I were worried

Never

Rarely

Sometimes

Often

Always

\* This friend is someone I can tell secrets to

Never

Rarely

Sometimes

Often

Always

\* This friend would stay my friend even if other people criticized me

Never

Rarely

Sometimes

Often

Always

\* This friend is exciting to talk to

Never

Rarely

Sometimes

Often

Always

\* This friend makes me feel special

Never

Rarely

Sometimes

Often

Always

\* This friend would stay my friend even if other people did not like me

Never

Rarely

Sometimes

Often

Always

\* This friend is exciting to be with

Never

Rarely

Sometimes

Often

Always

\* This friend would still want to be my friend even if we argued

Never

Rarely

Sometimes

Often

Always

\* This friend shows me how to do things better

Never

Rarely

Sometimes

Often

Always

\* This friend makes me feel better when I'm upset

Never

Rarely

Sometimes

Often

Always

*Friendship affection*

**Indicate how much you agree or disagree to the following statements regarding your feelings towards this friend.**

\* I am happy with our friendship

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I care about this friend

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I like this friend a lot

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I feel our friendship is a great one

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I am satisfied with our friendship

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I feel close to this friend

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I feel our friendship is strong

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I enjoy having this friend as a friend

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

*Positive reciprocal self-disclosure*

**Please think about the most POSITIVE and ENJOYABLE conversation you had in the past year with this friend. During this conversation:**

\* How much did YOU express your feelings?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How much personal information did YOU share?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How personal was the information you shared?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How much did THIS FRIEND express HIS/HER feelings?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How much personal information did THIS FRIEND share with you?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How personal was the information THIS FRIEND shared?

Very little

Only a bit

Some

Quite a bit

A great deal

*Negative reciprocal self-disclosure*

**Please think about the most NEGATIVE and UNPLEASANT conversation you had in the past year with this friend. During this conversation:**

\* How much did YOU express your feelings?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How much personal information did YOU share?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How personal was the information you shared?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How much did THIS FRIEND express HIS/HER feelings?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How much personal information did YOUR FRIEND share with you?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How personal was the information HE/SHE shared?

Very little

Only a bit

Some

Quite a bit

A great deal

*Contact with outgroup friend's same-group friends*

\* How many of your friend's Coloured South African friends do you know?

None

Hardly any

A few

Quite a few

Many (more than 10)

\* How often do you spend time with your friend's Coloured South African friends at your house/flat/res.?

None

Hardly any

A few

Quite a few

Many (more than 10)

\* How often do you spend time with your friend's Coloured South African friends at your friend's house/flat/res.?

None

Hardly any

A few

Quite a few

Many (more than 10)

\* How often do you spend time with your friend's Coloured South African friends at their houses/flats/res's.?

None

Hardly any

A few

Quite a few

Many (more than 10)

*Friendships with outgroup friend's same-group friends*

\* How many of your friend's Coloured South African friends are also your friends?

None

Hardly any

A few

Quite a few

Many (more than 10)

*General outgroup contact quantity*

**The following set of questions relate to your interactions with Coloured South Africans in general.**

\* How regularly do you have direct, face-to-face interactions in SOCIAL SETTINGS with Coloured South Africans in general?

Never

Rarely

Every now and then

Very often

All the time

\* How regularly do you have direct, face-to-face interactions with Coloured South Africans in general as part of the same SPORTS TEAM/SOCIAL CLUB/CAMPUS SOCIETY?

Never

Rarely

Every now and then

Very often

All the time

\* How regularly do you have direct, face-to-face interactions with Coloured South Africans in general during LECTURES, PRACTICALS, and/or TUTORIALS?

Never

Rarely

Every now and then

Very often

All the time

*General outgroup contact quality*

\* In general, when you interact with Coloured South Africans, do you find this interaction to be pleasant or unpleasant?

Never

Rarely

Every now and then

Very often

All the time

\* In general, when you interact with Coloured South Africans, do you find this interaction to be positive or negative?

Never

Rarely

Every now and then

Very often

All the time

*Outgroup attitudes*

**Please indicate how much you agree or disagree to the following statements. There are no right or wrong answers. We are only interested in YOUR honest opinion.**

\* I feel negative towards the Coloured South Africans in general.

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I feel hostile towards Coloured South Africans in general.

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I trust Coloured South Africans in general.

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I respect Coloured South Africans in general.

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I admire Coloured South Africans in general.

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

## APPENDIX E2

### Cross-Group Survey Questionnaire

#### *Friendship biographic and demographic questions*

Please think of your best/closest friend with a **COLOURED SOUTH AFRICAN** of the **SAME GENDER** as yourself. In the space provided below, please type in the initials of their first name and surname only to help you think about your feelings for them and keep them in mind (i.e., if your friend's name is John Peter Smith, only type in JS). **All questions that follow must be answered with this particular friend in mind and no one else.**

I do not have such a friend

*Please note: When respondents indicated that they had no cross-group friend they were prompted with the following question:*

\*Are you sure you have no friendship (not even an acquaintance) with a Coloured South African of the same gender as yourself?

I have no such friendship

I do have such a friendship

*Please note: When respondents confirmed that they had no such friendship they were directed to the group-level questions, (see p150), and skipped all the interpersonal-level questions. When respondents indicated that they did have a same-group friend or acquaintance they were directed either to the interpersonal-level questions or to the group-level questions in a counterbalanced fashion. After completing the first broad set of questions (e.g., interpersonal-level questions) they were then directed to the second broad set of questions (e.g., the group-level questions), and vice versa.*

\* Approximately how old is this friend in years?

\* What is this friend's gender?

Male

Female

\* What is the PRIMARY reason for spending time with this friend?

Educational (e.g. classes)

Work (e.g. colleagues)

Common activity

Common friendship group

Choice

*Friendship length*

\* Approximately how long have you been friends? Please enter the year and month you became friends in the space provided below.

*Friendship type*

\* What is the nature of your friendship?

An acquaintance

Just a friend

A very close friend

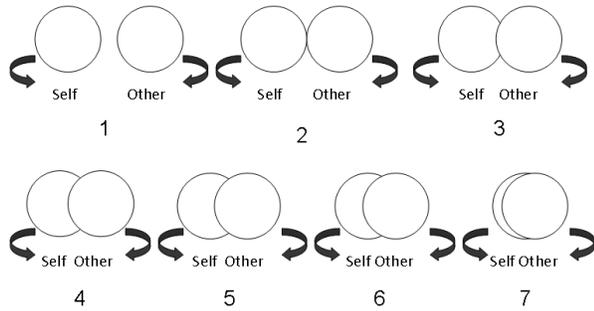
One of my closest friends

My best friend

I am in a romantic relationship with this person

*Friendship closeness*

The picture below contains seven images that represent your relationship with this friend. The closer the circles are to one another and the more they overlap with each other, the closer the relationship between you and your friend is. Please look at the picture and choose that image that best represents your relationship with your friend.



\* Please indicate which image best represents your relationship with this friend

Image 1

Image 2

Image 3

Image 4

Image 5

Image 6

Image 7

*Friendship contact*

\* How many hours per week do you spend with this friend at YOUR house?

None

1 - 2 hours

2 - 5 hours

5 - 10 hours

More than 10 hours

\* How many hours per week do you spend with this friend at THEIR house?

None

1 - 2 hours

2 - 5 hours

5 - 10 hours

More than 10 hours

\* How many hours per week do you spend with this friend in total?

None

1 - 2 hours

2 - 5 hours

5 - 10 hours

More than 10 hours

*Friendship functions*

**Please answer the following questions regarding this friend. Indicate how often this friend is or does what the item says.**

\* This friend helps me when I need it

Never

Rarely

Sometimes

Often

Always

\* This friend is someone whom I can tell private things to

Never

Rarely

Sometimes

Often

Always

\* This friend makes me feel smart

Never

Rarely

Sometimes

Often

Always

\* This friend makes me laugh

Never

Rarely

Sometimes

Often

Always

\* This friend knows when I'm upset

Never

Rarely

Sometimes

Often

Always

\* This friend points out things that I'm good at

Never

Rarely

Sometimes

Often

Always

\* This friend would be good to have around if I were frightened

Never

Rarely

Sometimes

Often

Always

\* This friend lends me things that I need

Never

Rarely

Sometimes

Often

Always

\* This friend would make me feel better if I were worried

Never

Rarely

Sometimes

Often

Always

\* This friend is someone I can tell secrets to

Never

Rarely

Sometimes

Often

Always

\* This friend would stay my friend even if other people criticized me

Never

Rarely

Sometimes

Often

Always

\* This friend is exciting to talk to

Never

Rarely

Sometimes

Often

Always

\* This friend makes me feel special

Never

Rarely

Sometimes

Often

Always

\* This friend would stay my friend even if other people did not like me

Never

Rarely

Sometimes

Often

Always

\* This friend is exciting to be with

Never

Rarely

Sometimes

Often

Always

\* This friend would still want to be my friend even if we argued

Never

Rarely

Sometimes

Often

Always

\* This friend shows me how to do things better

Never

Rarely

Sometimes

Often

Always

\* This friend makes me feel better when I'm upset

Never

Rarely

Sometimes

Often

Always

*Friendship affection*

**Indicate how much you agree or disagree to the following statements regarding your feelings towards this friend.**

\* I am happy with our friendship

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I care about this friend

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I like this friend a lot

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I feel our friendship is a great one

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I am satisfied with our friendship

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I feel close to this friend

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I feel our friendship is strong

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I enjoy having this friend as a friend

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

*Positive reciprocal self-disclosure*

**Please think about the most POSITIVE and ENJOYABLE conversation you had in the past year with this friend. During this conversation:**

\* How much did YOU express your feelings?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How much personal information did YOU share?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How personal was the information you shared?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How much did THIS FRIEND express HIS/HER feelings?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How much personal information did THIS FRIEND share with you?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How personal was the information THIS FRIEND shared?

Very little

Only a bit

Some

Quite a bit

A great deal

*Negative reciprocal self-disclosure*

**Please think about the most NEGATIVE and UNPLEASANT conversation you had in the past year with this friend. During this conversation:**

\* How much did YOU express your feelings?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How much personal information did YOU share?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How personal was the information you shared?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How much did THIS FRIEND express HIS/HER feelings?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How much personal information did YOUR FRIEND share with you?

Very little

Only a bit

Some

Quite a bit

A great deal

\* How personal was the information HE/SHE shared?

Very little

Only a bit

Some

Quite a bit

A great deal

*Contact with outgroup friend's same-group friends*

\* How many of your friend's Coloured South African friends do you know?

None

Hardly any

A few

Quite a few

Many (more than 10)

\* How often do you spend time with your friend's Coloured South African friends at your house/flat/res.?

None

Hardly any

A few

Quite a few

Many (more than 10)

\* How often do you spend time with your friend's Coloured South African friends at your friend's house/flat/res.?

None

Hardly any

A few

Quite a few

Many (more than 10)

\* How often do you spend time with your friend's Coloured South African friends at their houses/flats/res's.?

None

Hardly any

A few

Quite a few

Many (more than 10)

*Friendships with outgroup friend's same-group friends*

\* How many of your friend's Coloured South African friends are also your friends?

None

Hardly any

A few

Quite a few

Many (more than 10)

*General outgroup contact quantity*

**The following set of questions relate to your interactions with Coloured South Africans in general.**

\* How regularly do you have direct, face-to-face interactions in SOCIAL SETTINGS with Coloured South Africans in general?

Never

Rarely

Every now and then

Very often

All the time

\* How regularly do you have direct, face-to-face interactions with Coloured South Africans in general as part of the same SPORTS TEAM/SOCIAL CLUB/CAMPUS SOCIETY?

Never

Rarely

Every now and then

Very often

All the time

\* How regularly do you have direct, face-to-face interactions with Coloured South Africans in general during LECTURES, PRACTICALS, and/or TUTORIALS?

Never

Rarely

Every now and then

Very often

All the time

*General outgroup contact quality*

\* In general, when you interact with Coloured South Africans, do you find this interaction to be pleasant or unpleasant?

Never

Rarely

Every now and then

Very often

All the time

\* In general, when you interact with Coloured South Africans, do you find this interaction to be positive or negative?

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*Outgroup attitudes*

**Please indicate how much you agree or disagree to the following statements. There are no right or wrong answers. We are only interested in YOUR honest opinion.**

\* I feel negative towards the Coloured South Africans in general.

Disagree completely

Disagree somewhat

Unsure

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Agree completely

\* I feel hostile towards Coloured South Africans in general.

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I trust Coloured South Africans in general.

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I respect Coloured South Africans in general.

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely

\* I admire Coloured South Africans in general.

Disagree completely

Disagree somewhat

Unsure

Agree somewhat

Agree completely