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**THE EFFECTS OF THE RELATIONSHIP BETWEEN RACIAL IDENTITY  
AND THE NATURE AND FREQUENCY OF INTERRACIAL CONTACT ON  
RACIAL PREJUDICE AND SOCIAL DISTANCE**

By

Lucena Muianga: MINGLUC001

Supervisors: Associate Professor Colin Tredoux and Professor Gillian Finchilescu

A dissertation submitted in partial fulfilment of the degree of Master of Arts in  
Psychological Research  
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**DECLARATION**

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

Signature: signature removed

Date : 04.07.06

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## ABSTRACT

In the light of social identity theory and contact theory, this study looked at the effects of racial identity on contact and prejudice. The sample consisted of 826 UCT students who belonged to the White and African population groups. Their mean age was 20.50 and they were 52.54% females and 47.46% males. A pilot study using 42 participants answered questions concerning the face validity of the scales and questions aimed at testing the on-line system for data collection.

The data was gathered by means of a questionnaire accessed by the participants on-line. The interval scales measuring racial identity, nature and frequency of contact and prejudice/social distance were all found to have Cronbach's coefficient alphas bigger than .73. Another variable measured the proportion of cross-race friendships as a percentage. Two statistical techniques were used to analyse the data: path analysis and simultaneous multiple regressions. Some information was added by the theme analysis of the comments of the participants concerning the study.

The results of the study revealed total mean values above the mid-point for all variables that are: in-group identity, nature and frequency of contact, positive feelings of the participants towards each other and desire for interracial contact. Two things are salient in the results of the present study: a) interracial contact did not allow cross-race friendships forming at a moderate or high percentage and; b) in the African population group racial identity (social identity) did not have statistically significant effects on prejudice and social distance. It did have them when the group was split by gender. Two research hypotheses were confirmed and the other two were partially confirmed. Racial identity had a direct negative causal effect on nature of contact for the entire sample and for the White population group. It also had an indirect negative causal effect on prejudice and social distance via nature of contact for the entire sample and the White population group. For this group, racial identity also had direct negative causal effects on prejudice/social distance. Racial identity had direct

causal effects on prejudice for the African males and females separately. Nature of contact had the strongest direct positive causal effects on prejudice/social distance. The variance in prejudice/social distance is explained by racial identity, nature and frequency of contact acting together, with the nature of contact being the strongest contributor. The results show positive effects of inter-racial contact on prejudice/social distance on UCT campus. This trend was also found by some previous studies. Some limitations linked to the research methodology inhibited the generalisation of the results.

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## Chapter 1

### 1. Introduction

This study focuses on the experiences of both African and White students concerning inter-group contact which is actual face-to-face interaction between members of the groups involved in contact (Pettigrew & Tropp, 2000). The categories White and African are taken from the 1996 population census to designate population groups (race) (Khalfani & Zuberi, 2001). Race is a socially constructed term that serves certain purposes under the politico-social system of any country (Erasmus, 2001 as cited in Maré, 2005; Miles, 1989). Within the politico-historical context of South Africa, interracial contact has deserved special attention during the apartheid era as well as in the post-apartheid period. This introduction provides an overview of the present study on the students' experience of interracial contact and prejudice reduction in the context of the University of Cape Town. The introduction outlines the background, the aims and the rationale of the study as well as the content of the subsequent chapters.

#### 1.1 Background to the research

The background discusses interracial contact both during the apartheid and post-apartheid contexts in South Africa.

##### 1.1.1 Interracial contact during the apartheid era

Interracial contact is an issue which has been discussed for decades in South Africa. The official establishment of the apartheid regime was preceded by thorough studies and conceptualizations of "race". The subsequent victory of apartheid in 1948 (Foster, 1991) demonstrated the dominance of the ideology of racism. It is a representation of the "other" in terms of both negative evaluation and attributions of negatively evaluated characteristics. Racism is also the representation of the "self" and in-group members in terms of being the best evaluated. The holders of the racist ideology provide theological and

biological justifications for racism (Dubow, 1995, 1992; Nkomo, Mkwanazi-Twala & Carrim, 1995).

The master idea of apartheid was conveyed by expressions such as cultural pluralism and separate development. The outcome of racism was segregation along racial lines over all spheres of South African society such as residential areas, schools, work places and hospitals. Many documents such as the Indians Education Act No. 61 of 1965, the Coloured Persons Education Act No 47 of 1963, the Bantu Education Act No. 47 of 1953 and the National Education Policy Act No 39 of 1967 were created by the apartheid government to preserve segregation. Segregation is the official practice of keeping people of different population groups (races) separately (Murphy, Murphy, Potter and Rammell, 1995). As Dubow (1992) explains, race, language and culture were conceptualized in order to justify the arguments of Apartheid in South Africa. Segregation was stated as a tool which was supposed to give opportunities to the Africans to develop in accordance to their culture.

As a consequence of the Population Registration Act No 30 of 1950 people were classified and registered as being a White, Indian, Coloured or Native. Education was then provided separately under the above acts. Residential areas were also occupied in accordance with Group Areas Act No 41 of 1950 and No 77 of 1957. The population groups were isolated from each other although they were supposed to be citizens living in the same country. It was under these circumstances which gave a pre-eminent role of race that people were socialised and brought up.

### *Non-contact society*

Non-contact between population groups was aimed at avoiding conflict and prejudice as explained by the apartheid ideology. However, real everyday life was disconfirming the statements of the apartheid. Inter-group tensions in the South African society were evident. The many studies brought up findings that revealed deterioration of interracial relationships. For example, the White

Afrikaans speakers showed the most prejudiced attitude towards the non-White people while the White English speakers and the Jewish groups were less prejudiced (MacCrone, 1949 as cited in Louw & Foster, 1992). Similar results were found by Pettigrew (1960). In his study about social distance he found different degrees of willingness to interracial contact. Jewish participants were the least distant towards non-White people, Afrikaner participants were the most distant and the English were less distant than the Afrikaners towards non-White people. Likewise, African people did not want more than a moderate amount of contact with other population groups in the Baumannville community (Mann, 1955). Afrikaners and Coloureds had negative attitudes towards each other (Bornman & Mynhardt, 1991). Another study showed that, when differentiation on the basis of class (high, middle and lower class) is taken into consideration, the findings show that White participants display least social distance towards the high (elite) classes who belong to non-White population group (Heaven & Bezuidenhout, 1978).

In general, there were ill feelings among people showing the incorrectness of the social norms of the apartheid regime. For example, a study by Mann (1957) (as cited in Louw and Foster, 1992) disconfirms the statements of the marginality of the so called Coloured people by the Apartheid regime. This may have suggested that more work was needed to disconfirm statements of the racist ideology.

In short, the apartheid regime developed a non-contact society (Foster & Finchilescu, 1986). The different population groups (races) may have experienced realistic threats (e. g. threats to health and material well-being) and symbolic threats (e. g threats to moral and values) as well as inter-group anxiety which seem to be linked to prejudice (Stephan & Stephan, 1996, 2000). In addition, as Nkomo, Mkwanazi-Twala & Carrim (1995) explain, the segregationist procedures at the country level led to the isolation of the apartheid regime at the international level. South Africa as a country was expelled from some international organisations such as Commonwealth of Nations, World Health Organisation, United Nations General Assembly and

the United Nations Educational, Scientific, and Cultural Organization (UNESCO).

However, interracial contact was evident. An exception is the finding of a study by Russell (1961) (as cited in Foster, 1984). It revealed that residential proximity was associated with increased contact and friendship between the residents (White, Coloured and Indian). Friendship was an essential and desirable contact condition for them. Good interracial contact may have suffered the effects of the Group Areas Act created by the South African government that restricted the occupation of areas by groups specified for that area. Some studies have shown that the workplace was an area of greater interracial contact based on economic relationships while each group kept its own racial identity (Bornman & Mynhardt, 1991). Racial identity is a feeling of group or collective identity founded on one's perceptions of sharing a racial heritage with a specific racial group (Helms, 1990 as cited in Kazdin, 2000; Lemon & Waehler, 1996).

Racial identity, cultural diversity and separate development were the manipulated variables which had effects on peoples' relationships. Tensions and conflicts between population groups were evident. The uprising of June 1976 in Soweto was but one of the indicators of the deterioration of race relations. In response to these social troubles the apartheid government introduced some reforms such as the Lange Report of October 1981 calling for fundamental changes in the education system of South Africa (Christie, 1990). Unfortunately, the reforms were accompanied by repression and restriction measures. The crisis within South African society evolved concomitantly with actions addressed against the apartheid regime. Interracial contact also improved. For example a study by Foster & Finchilescu (1986) points out some good effects of inter-group contact. It reduced in-group bias among the high-status White group and led to greater awareness of the social identity of the lower-status African group. The same study also pointed out support for integrated training of nurses and stated a need for examination of the differences between the high-status and the low-status groups concerning their perceptions of the effects of interracial contact.

As we can see, the evolution of the events in the South African society during apartheid led to changes in people and in the system. Announcements were made on 2 February 1990 implying drastic changes (Mynhardt & Toit, 1991). These changes for example could be related to integration (mixing) in some social spheres and improvement of amenities at other social levels. For example in 1990, white state schools started enrolling African students. This fact emerged as an opportunity for interracial contact which also had been occurring in open schools of Churches since 1976 (Christie, 1990). The open schools were the racially mixed church schools which emerged following the Soweto uprising event. The schools won legal recognition in 1986 after ten years of having unclear legal statuses. Interracial contact may be related to the positive effects of education. For example, Jackman & Muha (1984) (as cited in Durrheim, 2003) found negative correlation between racism and education. This suggests that more systematic research is needed to encourage development of the positive trends and get insight to counter the negative effects of the racist ideology.

Ten years later, a study on the experience of interracial contact and friendship forming in the open schools showed that liking and mutual acceptance of the students could occur without close friendships forming (Lits, 1991). Again, clusters around race were found in this study. Another study revealed little impact of interracial contact on race attitudes as well as evidence of significant changes in the patterns of racial attitudes at least in one part of South Africa (Bradnum, Nieuwoudt and Tredoux, 1993). The various results show how continuing investigations of race relations are needed over time.

Mynhardt & Toit (1991) examined attitudes and behavioural intentions of participants concerning the contentious nature of contact occurring in the process of the desegregation of residential areas. The "contentious nature of the contact situation means the extent to which contact entails actual social change" (Mynhardt & Toit, 1991, p. 284). The results reveal that fears in respect of the negative consequences of contact were determinant of attitudes towards desegregation. Desegregation refers to integration (mixing)

in terms of social status and the population groups (races) of participants (Murphy et al, 1995).

Within integrated areas, more contact is expected to occur between people who belong to different social groups. The studies on inter-group contact show that the experience of contact is a significant aspect than contact per se (Mynhardt & du Toit, 1991). Additionally, as Bornman & Mynhardt (1991) argue, a) the effects of contact experiences are strong; b) perceptions of relations between groups and experience of inter-group contact are important and are related to positive attitudes. Consequently, inter-group relations can be improved by means of the promotion of positive inter-group contact. Various studies taking this line of thinking are in progress. The common finding has been that of tensions between people categorised by race, language and culture. The tensions have effects which require a lot of work for everyone over time to be cut back completely because changes in attitudes and behaviour do not happen overnight. More research is needed to maintain the positive aspects and to predict factors that improve inter-group harmony during the post-apartheid period to which now we turn.

### **1.1.2 Interracial contact in the post-apartheid period**

In the “new” South Africa, (Dixon, 2001; Sparks, 2003; Walt, Franchi & Stevens, 2003) contact between people of different population groups (African, White, Coloured and Indian) is increasing (Mynhardt & du Toit, 1991). The integration of residential areas is an ongoing task, for instance in Hout Bay (Dixon & Reicher, 1997) and Delft South (Oldfield, 2004) and desegregation of schooling is in progress. The “new” South Africa refers to the period of fundamental changes within various spheres of the society which started after the formal end of the socio-political system called Apartheid in 1994. The changes are emerging from dynamic social processes in progress which started within the apartheid system as mentioned above.

The changes are occurring but they still carry symptoms of the effects of racism. A study by Durrheim (2003) demonstrates that old-fashioned racism

exerts effects on post-apartheid South Africa in terms of race relations in public life. Old-fashioned racism is expressed by blatant racist beliefs, overt negative feelings towards out-groups, open segregation and discrimination. This study shows that the effects of discrimination and segregation in terms of race superiority versus inferiority are still salient. Furthermore, clusters around race are a recurring event revealed by many studies (Erasmus & de Wet, 2003; Steyn & Zyl, 2001). Through the studies participants claim that there is no antagonism among them. It just happens that they join together on the basis of population groups (race). Moreover, there is hierarchy among African students. The term 'coconut' is used to name some South African students who attended model C (a semiprivate-semistate model) schools and speak English with the same accents as Whites. The other African students join together as they identify themselves as being students from the state schools in townships. Then are the other African students from abroad who also gather in their group because they do not speak Xhosa for instance. That is, language barriers play a role despite absence of conflict. Some students categorise themselves and categorise others. In this instance, hierarchy of groups among students gives rise to social comparison and vice versa.

Another study explains how racial identities are constructed through a discourse concerning differences. Local material (such as cars) and global popular culture (such as certain types of clothes and sports) were used by the participants in that study to generate differences which led to racial conflict among them (Dolby, 2000). Clearly, the research findings show a need for a systematic understanding of the complexity of race and the meaning attached to it by the holders. In this process, cultural diversity can be explored for mutual enrichment maybe to influence happiness of people while handling a variety of activities such as being a UCT student. Like other work situations, the UCT environment is fruitful for positive effects of interracial contact outlined next.

The good news in terms of the findings is that young adults are making changes at the personal level because they are internalizing the anti-racist messages for a "rainbow South African nation". For this reason, the study

suggests the need for its replication with larger samples (Smith, Stones & Naidoo, 2003). This finding is important because the degree of acceptance of messages about integration and reconciliation by the young people may have multiplicative effects. Hopefully, the future South Africa will mirror the positive experiences of dealing with the transitional period in peace and harmony. As Seidman (1999) explains, South Africa appears as unique in the world because the patterns of race relations seem to be changing due to the non-racial democracy in harmony. It seems that the transition towards a “new” South Africa is a process which requires a lot of work to deal with race relations in a society riddled with the racial hierarchies of apartheid which were recently abolished.

Specifically, issues of racial identities and racial transformations deserve additional research because all the post-apartheid studies concerning the experience of interracial contact of the participants point out a common fact of clustering around race within the multiracial context (Erasmus & de Wet, 2003; Steyn & van Zyl, 2001). Forms of subtle prejudice and subtle racism named as modern racism, symbolic racism and aversive racism are revealed by the ongoing studies (Devine et al, 2001; Durrheim, 2003). For example, through these forms some people reject racism and prejudice overtly and at the same time they adopt it in a very covert way under cultural or legal principles. This behaviour may be influenced by some events of the socialisation processes in which in-group biases occurred.

Given the above evidence, researchers are discussing ways in which social psychologists should tackle race issues, the subtle forms of prejudice and racism in accordance with the specific social context (Durrheim, 2003, 2005; Durrheim & Mokeki, 1997; Gaertner & Dovidio, 1986). During this process the instruments to measure psychological social distance as well as subtle racism are also updated (Duckitt, 1991, 1993). In addition, racism disavowal is another issue to be dealt with. As Hook (2005) explains, racist disavowal is a kind of contradiction-management so that irreconcilable ideas (e.g. being tolerant to race pre-eminence versus to opt to act as a racist every once in a while) co-exist. Agreeing with Hook (2005) racism disavowal ought to be

confronted concomitantly with racial transformation via inter-group processes as outlined in next section.

## **1.2 Inter-group contact and prejudice reduction**

Interracial contact in this study is conceived as inter-group contact. This is an issue that has raised strong debates among scientists because social contact can have effects on prejudice and social distance (Cover, 1995). Prejudice is a positive or negative evaluation of a social group and its members'. Within inter-group interactions various processes such as cognitive and social (peoples' beliefs about characteristics of the out-group) are assumed to be the sources of prejudice (Smith & Mackie, 2000). As Brown (1995) explains the origins of prejudice are assumed to emanate from group processes. For this reason, group processes are also assumed to be the tools to counter prejudice.

Following the above line of thinking, contact hypothesis emerged to counter group bias and prejudice (Allport, 1954; Pettigrew, 1998). It argues that people are likely to lessen in-group bias and reduce prejudice towards each other when they engage in inter-group contact under certain contact situations. Chapter three in this report looks at this hypothesis in some detail. Additionally, the cross-cut categories strategy came forward (Brown, 1995). It states that participants in inter-group contact who share at least two category memberships are likely to lessen in-group bias. This may occur due to the cancelling-out effect of both perceived similarity on one category and perceived differences on another category. For this to occur, the categories held by the participants must be of equivalent psychological importance for them. This means no category must be dominant as perceived by the participants. Furthermore, some models of inter-group contact derived from social identity theory also came out to discuss the generalisation of benefits from inter-group contact (Brewer & Miller, 1984; Gaertner, Dovidio, Anastasio, Bachman & Rust, 1993; Hewstone & Brown, 1986). Some details of these models are given latter in chapter two.

The perspectives mentioned above have been applied by the respective authors and by other social psychologists in a variety of settings of inter-group contact. The results provide evidence of prejudice reduction or elimination (Brown, Vivian & Hewstone, 1999; Brewer & Gaertner, 2001; Eller & Abrams, 2004; Sherif, 1966). This is because people and authorities want to eradicate prejudice. Racial prejudice has been the main question addressed by diverse theories which discuss the origins as well as the means required in prejudice-eradicating processes.

The analysis of prejudiced behaviour in a dialectical way is important. It helps the understanding of the effects of the process of contact between the different population groups considered as races in the population census. In South Africa documents such as the UCT mission statement, the Higher Education Act 101 of 1997 and the Constitution of the Republic of South Africa condemn all kinds of discrimination. Prejudice eradication or reduction appears as an ongoing urgent task. The diversity of race (population groups) and cultures ought to be explored for mutual enrichment.

### **1.3 The aim of the research**

The present study aims at examining the predictors of prejudice/social distance as well as the respective causal effects. The study tests the following research hypotheses:

1. Inter-group contact is negatively related to prejudice/social distance.
2. Stronger in-group identity (racial identity) is negatively related to inter-group contact.
3. Stronger in-group identity (racial identity) is positively related to prejudice/social distance.
4. Nature of contact is positively related to frequency of contact.

These hypotheses were derived from both social identity and contact theories which inform this study.

## **1.4 Research design and rationale**

### **1.4.1 Design**

The research is a cross-sectional survey which approached the sample of participants once only. The design allowed the researcher: a) to get data in a short period of time; b) to compare two subgroups of the sample (White and African population groups) and c) to interpret the relationships between the variables. A non-probability sampling (Judd, Smith and Kidder, 1991) permitted the researcher to get a convenience sample (N=826) drawn from the UCT student population. The study uses statistical analysis to analyse the data: Basic statistics, path analysis (Hoyle, 1995; Kaplan, 2000; Loehlin, 1992) and simultaneous multiple regression (Allison, 1999; Cohen & Cohen, 1975; Howell, 2002; Tredoux & Durrheim, 2002).

A pilot study was developed on a test sample representative of the university population at UCT. The information captured by the pilot study was used to improve the questionnaire and to solve some technical problems in the on-line system set up for data collection for this study. The data collection was computer based. Questionnaires were completed by the participants on the computer.

### **1.4.2 The Rationale**

This study appears relevant since the interracial relationships in South Africa are influenced by the country's history in terms of the impact of racial segregation at different levels of the community during the Apartheid era. Before 1994 scientists were faced with a situation which appeared to be the reversed contact hypothesis in terms of legislation. Inter-group contact was strictly restricted or avoided. Since the announcements of the second of February 1990, inter-group contact has been increasing. The five essential conditions stated by Allport (1954), Amir (1969) and Pettigrew (1998) appear to be available since the formal end of the apartheid regime. For these reasons, it is important to continue the research of relevant themes in light of

the reformulated contact theory in interplay with other theories of inter-group relations such as social identity theory and self categorisation theory. Thus, this study looks at the linkage between racial identity, contact and prejudice/social distance on the university campus. It appears important to compare the findings of this study with the findings of previous research.

### **1.5 Chapter outline**

This study is summarised in six chapters. Chapter 1 is the introduction. Chapter 2 presents the concepts of race, racial identity and race transformation. It also outlines social identity theory. Chapter 3 provides the perspectives for prejudice reduction. Some key concepts of the study are defined in both chapters 2 and chapter 3. Chapter 4 explains the research design and methodology of the study. It presents the key variables, the hypotheses of the study derived from social identity and contact theories, the instruments used in the measurement of the key variables, the sample and the sampling procedure, the process of data collection, the procedures for capturing and editing data and quantitative data analysis by means of path analysis and simultaneous multiple regression. Thematic analysis is also outlined. Chapter 5 presents and interprets the results of the study. Chapter 6 provides discussion, conclusions and recommendations.

## **Chapter 2: Race, racial identity, race transformation and Social identity theory**

### **2 Introduction**

This chapter outlines the concept of race, racial identity as well as race transformation given the race relations in the South African transitional period. Social identity theory proposed by Tajfel and his colleagues (1978) is also outlined briefly.

#### **2.1 Race and racial identity**

Race is a social category which appears to be discussed from two opposite perspectives: essentialist and non-essentialist (Stubblefield, 1995). The former argues that the characteristics of physical appearance (considered as race) such as skin colour contribute for deep positive or negative characteristics of personality, cognitive abilities and culture. These in turn determine racial identity. Members of a certain race share all the race characteristics. This point of view seems similar to the idea of superior versus inferior human races which was the ideology that supported oppression, submission and exploitation of people. As mentioned before, the foundations of the racist ideology argument were theological and biological.

Conversely, the non-essentialist view of race states that race is a socially constructed category to divide up human beings and label them as White, Black, Coloured, and so on. Some labels have been changing over time for instance, Negroe changed to Black to Afro-American and to African-American. In South Africa there are four labels: African, Indian, Coloured and White created during the apartheid era and kept in the 1996 population census (Khalfani & Zuberi, 2001). Racial classification was purposeful. It was used by some governments for various purposes such as control, oppression and or marginalisation of the populations, distributions of benefits, tracking health data for epidemiological purposes, the provision of information on population

trends such as birth rate and death rate (Erasmus, 2001 as cited in Maré, 2005).

In other words, physical appearance is not responsible for important characteristics of human beings. Taking this point of view, researchers agree that the concept of race is a social category constructed by means of a discourse. In the “Revised UNESCO Statement on Race” in 1995 (E. V.)<sup>1</sup> leading scientists explain that race is a concept which is not scientific, not valid and has no utility as applied to human beings. Erasmus (2001) (as cited in Maré, 2005) analyses the use of the terms “mixture”, “bi-racialism”, “coloured”, “mulatto”, “cross-racial”, “hybridity” or “mixing of blood”. Her argument is similar to the statement of UNESCO on race in 1995. She argues that what is called population groups in the language of population censuses like White, African, Coloured and Indian are cultural, historical and political identities. She claims: there is no such thing as “race”.

Despite having no biological basis, ‘race’ appears real in everyday social life due to the past history of oppression, colonisation and marginalisation. In addition, as Schneider (2004) explains race is likely to be accompanied by a cultural overlay. And the distinction between in-group and out-group seems to have powerful influence on emotion and affect in people as co-members of a race. This point of view seems important. It helps to understand why is there the trend of physical grouping such as that of clustering around race recurring all over the studies on inter-group contact reviewed for this study. This suggests that more research and educational practices are needed to deal with the issue of race and racial identity to which we now turn.

### *Racial identity*

Scientists have been discussing racial identity from various points of view. Fatimilehin (1999), Lemon & Waehler (1996), Worrell, Cross & Vandiver, (2001) discuss racial identity as a developmental phenomenon but by

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<sup>1</sup> Electronic version.

population groups. For this reason, they developed measures of levels of racial identification over time for African and White people. These are: Black Racial Identity Attitude Scale (RIAS-B) which measures four stages of racial identity: pre-encounter, encounter, immersion/emersion and internalization and White Racial Identity Attitude Scale (WRIAS) that measures five stages: contact, disintegration, reintegration, pseudo-independence and autonomy. There are studies which used these scales. In a study by Pillay (2005) racial identity was the strongest contributor to the explained variance in psychological health of African American. Another study also used the above scales. The findings showed that counsellors must be at the higher stage of racial identity and ego development because it will allow them to be multiculturally competent (Watt, Robinson & Lupton-Smith, 2002). Stubblefield (1995), from non-essentialist point of view of race, suggests that racial identity must be taken into account to counter problematic aspects of social environment that affect the holders of the identity if necessary. Otherwise racial identity has no utility.

The concept of racial identity may be understood within a social context in which the holders of the identity interact. As the proponents of social identity theory argue, psychological phenomena must be examined taking into account the respective social context (Tajfel, 1972; Tajfel & Fraser, 1978). This is because there is reciprocal influence between the social actors (the individuals) and the social context. Taking this point of view into consideration, particularly, racial identification is a psychological phenomenon which may be informed by unequal power relations between races (population groups) in the transitional period in South Africa. This country had tumultuous history of race relations. Racial identity was a variable which dictated access to and opportunities for all kind of facilities. At present days race still remains as feature in everyday life. However, as mentioned before there are signs of changes in race relations revealed in recent studies. Institutions and legislation support transformation of race relation in harmony as outlined below.

## **2.2 Support of norms and authorities and Educational practice towards racial transformation**

### *Support of norms and authorities*

Support of norms and authorities means institutional support. We turn to this point further in the discussion about prejudice reduction. It is found that social norms and the authorities of the apartheid regime were not supportive towards racial transformation. However, as mentioned before, a sequence of events triggered the process of racial transformation. This process is further supported by norms and authorities during the transitional period of post-apartheid.

Racial transformations may refer to changes of the relationships between population groups (races) towards prejudice reduction or eradication. The institutions and legislation ensure equity for all population groups in South Africa. This is an indication of the move forward from low race relations to higher social relations. Recent studies show that scientists in their respective institutions are working hard to deal with race transformation. For example psychologists are documenting and describing ways in which all kinds of racism come about and ways in which informal segregation takes place. Sociologists are suggesting some tasks to be done in order to help young adults to deal with race transformation. This last seems to be a tenable task and is in progress as shown by recent empirical finding in South Africa.

Some previous studies also showed positive steps towards race transformations. For example, in some desegregated schools interracial contact had positive effects. Cohen (1984) argues that irrespective of academic and racial status of the students, desegregation in schools aims at constructing equal status conditions in which occurs equal-status behaviour of teachers towards the students and vice-versa. This process may occur when both teachers and students are willing to lessen the psychological social distance between them. Findings show that the effects of inter-group contact lessen social distance among the participants - university students (Cover,

1995). Therefore, it seems useful to increase educational activities at institutions such as university, schools and other study/work environment to improve levels of race transformation. Some of those activities are listed next.

### *Educational practice*

As mentioned above race is a social category which appears to have an influence in people's emotions. This in turn, seems to give raise to physical groupings by race as shown by the reviewed literature. Reasoning about this fact the participants find factors such as differences in upbringing, experience of being socialized in a context of the same race (due to the power of the group areas act) and cultural differences (Erasmus & de Wet, 2003; Smith, Stones and Naidoo, 2003; Steyn & van Zyl, 2001). The argument of the participants is similar to the argument of Schneider (2004). He explains that "social categories form the basis of physical groupings due to cultural factors", p 79). Taking these factors into account, educators are called to act in creative and innovative ways to offer tenable opportunities for interracial contact to students and other young people as well. As Noguera (2003) suggests, educators are called upon to make sure that students are not segregating themselves. Academic and sporting activities can be used as means for systematic interracial interaction.

Research has been suggested to investigate the ways in which race evolves as a meaningful concept for young people (Dolby, 2000). As Giroux (1997) and Erasmus & de Wet (2003) suggest, in debates students can have opportunities to discuss representations of themselves and the others as well as their racialised inner constructs of reality. In this way the educators will be helping the students to deconstruct mental frames of themselves and of others towards spontaneous and frequent interracial interactions. Educators will be having active roles in helping students and young people to deal with racial identities and racial transformation. In this study the concept of racial identity is taken as social identity. For this reason social identity theory as well as self-categorisation theory, to which we now turn for a brief review, seem to be of utmost value to this study.

## **2.3 Social Identity Theory**

Presented below is the definition of both, social identity theory and self-categorisation theory as well as some studies concerning types, functions and motives of social identity.

### **2.3.1 Definition of social identity theory and self categorisation theory**

Social identity theory (Tajfel, 1978, 1982) is about group processes which are: the formation of the psychological groups, comparisons between the groups, the personal and social identities of group members, and relationships between the groups (Brown, 2000; Hogg, 1996; Tajfel, 1978; Turner, 1996;). A group is a collection of individuals who locate themselves in the same social category (Hogg, 1996). Social identity theory is a psychological perspective informed by both, social categorisation research and social comparison theory which was later revised by Tajfel (Doise, 1978 as cited in Brewer & Gaertner, 2001; Festinger, 1954 as cited in Taylor & Moghaddann, 1987; Turner, Hogg, Oakes, Reicher & Wetherell, 1987). Social identity theory integrates individual and group factors in explaining inter-group relations.

Social identity refers to aspects of an individual's self-concept emotionally, positively or negatively valued, based upon his or her social group or category memberships (Tajfel, 1978; Turner, et al., 1987). Individuals as group members tend to have positive affection and evaluation concerning the group they belong to in comparison to other groups (Turner, et al. 1987; Turner 1996). In light of social identity theory the present study explains the relationships between social identity which is racial identity in this study and inter-group contact and their effects on prejudice/social distance. The more socio-cognitive side of social identity theory is the Self-Categorisation Theory developed by Turner and colleagues (Brown, 2000).

Self categorisation theory focuses on explanation of the ways in which individuals are able to act as a group (Turner, et al., 1987). For this reason, the theory is a set of related assumptions and hypothesis about the

performance of the social self-concept in specific situations. Self-concept is the set of cognitive representations of selves available to a person. The self is a cognitive element in the information-processing system. Self-categorisation concerns “cognitive grouping of oneself and some class of stimuli as the same” (Turner, et al. 1987, p.44). Together social identity theory and self categorisation theory explain the psychological processes within and between individuals from group perspective taking social identity as a key concept.

That is, based on their belief system about the permeability of group boundaries, individuals engage in social mobility or social change. If the group boundaries are permeable, people who are unhappy with their group identity engage in social mobility to become members of other groups which they value positively. Otherwise they may be involved in social competition by means of direct confrontation to the social group seen as superior. Sometimes direct confrontation leads to changes within the socio-political system. For instance changes occurring due to the transition from the apartheid regime to the democratic “new South Africa” mean a new socio-political system. Within this people may (re)negotiate their social identities as citizens of a racially integrated country. Now we turn to the state of affairs concerning the concept of social identity.

#### **2.4.2 The concept of social identity in the light of social identity theory**

In this study the concept of racial identity is considered as social identity. For this reason we look at the state of debates concerning this variable. Presented below are some types, meanings, motives and functions of the variable of social identity in the light of social identity theory. Some studies examine the parameters of social identity (Deaux, Reid, Mizrahi & Ethier, 1995 as cited in Abrams, 1996). The findings reveal five types of social identity which are: personal relationships, vocations/avocations, political affiliations, ethnic/religious groups and stigmatized groups. Ethnic, religious, stigmatized and political identities are classified as collective whereas, occupational identities are perceived as individualistic. These results support the idea of the respective researchers who state that a) all social identities are

not the same in contrast to the idea of social identity theory which conceives all social identities as collective and relational; b) interchangeability of identities seems to depend on their proximity in relation to the defined dimension. The findings show how central social identity is in real life. Individuals acknowledge their various identities through the diverse societal contexts in which they have roles to play. The diverse types of identity may have different meanings perceived by the holders.

Identity is presented in a context of meaning which has individual and social sources. A study by Deaux & Ethier (1998) (as cited in Deaux, 2000) shows variations of the meaning of identity as perceived by different holders. Some people may describe, for instance, their national identity in terms of pride, loyalty and cultural values. Conversely, others may feel anger and loss of opportunities. Furthermore, group membership can affect shared meanings in three ways by: a) increasing the consensus of members concerning the meaning of the identity; b) group pressure for uniformity and; c) group activities directed in terms of shared meaning of the identity to the participants. That is, social identity seems to be influenced by the experiences and expectations of the participants concerning the group to which they belong. The meaning of identity as perceived by the holders can act as an incentive of current and future behaviour in relation to the specific social identity. The perceived meaning is useful for attitudes and behavioural intention.

Cinnirella (1998) (as cited in Deaux, 2000) suggests the variable of "possible social identities" which is related to aspects of past experience and the anticipated future. That is, based on the past experience and looking forward, motives and functions of social identity play their role because social identity deals with individual and group related needs. A study gives six motives that people may have to choose certain identities namely: ego protection and enhancement, self-understanding, altruistic and humanistic values, career-related benefits and social relations (Clary et al, 1998 as cited in Deaux, 2000). For example, the identity of being a student can be motivated by career-related benefits and social relations. Seven functions of social identity

are given by another study which are: self-insight and understanding, social comparison, collective self-esteem, in-group cooperation, social competition, social interaction and intimate/romantic involvement (Deaux, Reid, Mizrahi and Cotting, 1999 as cited in Deaux, 2000). For example, systematic professional training may function for in-group cooperation and social interaction. Meanings, motives and functions of social identity seem intrinsically linked within the dialectical process of inter-influence while the holders perform their multiple identities in accordance with the social context.

Another important finding is the role of personal identity which seems neglected in social identity theory (Worchel, Iuzzini, Coutant & Ivaldi, 2000). Personal identity has a direct impact on in-group identification and inter-group behaviour. It also has an indirect impact on inter-group behaviour via in-group identification. This dialectical process is important. It seems to be linked to the idea of super-ordinate identity which appears important to reach super-ordinate goals. These goals are only tenable by means of interaction of all groups. That is why Brewer (2000) claims that super-ordinate identity is a necessary condition for inter-group harmony. It seems that in real life people take advantage of the various groups to which they belong by means of super-ordinate identity. This concept is discussed later in dual identity hypothesis.

Concerning social identification, Moosa, Moonsamy and Fridjhon (1997) did a study in South Africa to test the “dialectical theory of reactive identification and cultural in-betweenity” proposed by Bulhan, 1977 (as cited in Moosa et al 1997), the Somali psychologist. This theory presents three identification patterns among African students which may overlap. These patterns are: capitulation to the dominant culture and ideology, revitalisation of traditional culture and radicalisation of both to achieve a new higher synthesis. The results support the hypotheses of the study. There is a high positive correlation between radicalisation and revitalisation and a greater tendency towards radicalisation than towards revitalisation. The researchers argue that there is a shortage of written findings concerning the active efforts of African students to face the impact of the oppressive past based on racial

classification which implies racial identification in some way. The impact may appear in form of conflicting attitudes stemming from the socialisation processes of people.

As Deaux (2000) points out, social identification is a variable which plays a key role in understanding social processes because it can be used at various levels of analysis to: a) explain the self-structure of the individual in accordance with group membership; b) describe the character of inter-group relations and; c) explain the relationships between the individual and social structure. In real life this understanding can be linked to the idea of possible social identity mentioned before to deal with the past experience, the present and anticipate the future. Taking into account the various levels mentioned above social identity theory is also useful for generalisation of the benefits of inter-group contact.

#### **2.4.3 Contribution of social identity theory to generalisation of the positive effects of inter-group contact**

Taking social identity as a key concept, some researchers derived contact models from social identity theory aimed at generalizing the positive effects of contact between individuals to the whole group. Three of the models are outlined below. The De-categorized contact Model - DCM (Brewer, 1996; Brewer & Miller, 1984) suggests two aspects: a) to structure inter-group contact which will reduce salience of group categorization and so decrease inter-group bias and; b) to create opportunities in which out-group members will know each other as individuals and in that way augment the potential for group stereotype disconfirmation. There are studies which support this analysis for instance inter-group bias is reduced because de-categorisation decreases the attractiveness of former in-group members while the distance between the self and former out-group member remain unchanged (Gaertner, Mann, Murrell & Dovidio, 1989). A study by Bornman & Mynhardt (1991) confirms the role of personalized relations (contact as friends) in attitude change.

The Mutual Inter-group Differentiation Model (MIDM) proposed by Hewstone & Brown (1986) argues that equal status interaction can reduce inter-group bias whilst maintaining the original group identities salient, not threatened by the contact. An example is when groups have differential areas of know-how. This approach argues that the salience of group boundaries and group membership during contact play an important role for generalisation of attitude beyond the contact situation (Hewstone, 2003). Nevertheless, improved group salience may correlate with increased inter-group anxiety that can lead to negative attitudes towards out-group members (Islam & Hewstone, 1993). For this reason, it is advisable to uphold simultaneously both interpersonal and inter-group interactions to lessen anxiety (Hewstone, 2003). Differentiation refers to the uniqueness of individual category members within that category; it is the perception of intra-category differences while keeping category boundaries that differentiate in-group from out-group (Brewer & Miller, 1984).

Common In-group Identity Model (Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993) is a perspective which claims that strategies must re-categorize inter-group contact situations and change members' perceptions of group boundaries. As a result, out-group members will be perceived as belonging to a common in-group. In this way, in- and out-group(s) can be classified in an inclusive super-ordinate category. Consequently, the reduction of bias will occur. Applications of this model have not shown generalization of reduction in bias beyond the contact situation (González & Brown, 2003). For this reason, the Dual Identity Hypothesis is proposed to complement the CIIM model (Dovidio, Gaertner and Validzic, 1998 as cited in González & Brown 2003).

The Dual Identity Hypothesis seems important for inter-group bias reduction because of three reasons which are: its foundation, its role for generalization of contact effects and reduction of prejudice (González & Brown, 2003). The Dual identity hypothesis is founded upon:

- a) equal status condition within the situation proposed by Contact Hypothesis (Allport, 1954; Pettigrew, 1998);

- b) the necessity to achieve and maintain a positive group identity in light of social identity theory (Tajfel, 1978);
- c) the benefit of re-categorization processes to promote positive inter-group relations in an inclusive common identity (Gaertner, et al., 1989).

That is, dual identity refers to super-ordinate identity which emerges from the re-categorisation processes as a result of inter-group contact processes in which participants have equal status. In this way the positive group identity is achieved and kept. Dual identity permits “trade-off” between attitude change in contact process and its generalisation beyond the contact situation.

The levels of categorisation treated in common in-group identity model and dual identity are mediators in the relation between contact and prejudice (Eller & Abrams, 2004). Participants re-categorise themselves during the contact process therefore in-group and out-group members identify themselves as members of a common in-group. In this way, prejudice is reduced while keeping the initial group identity. Generalization of positive inter-group attitudes beyond the contact situation should happen in the light of the dual identity idea. The dual identity accommodates group differences and may supply cognitive mechanisms to reduce the exclusion of disadvantaged groups (Eller & Abrams, 2004). For instance, minority groups can prefer to re-categorize themselves as members of an inclusive category such as being an African-American.

As can be seen, the dual identity hypothesis augments the common in-group identity model into a comprehensive model which includes the level of categorization in Pettigrew's (1998) reformulated contact theory (presented later on) plus dual identity which reflects a context of super-ordinate identity. In dual identity hypothesis, there is salient categorization and re-categorisation while keeping the original group identity (González & Brown, 2003). The variable 'group boundaries' mentioned in common in-group identity model is important and implies reflexive attitudes of the researchers. Boundary processes may exert influence on the salience of social categories created by participants in a certain social context during the process of inter-group relations. Through these categories, the participants may reflect the

meaning that inter-group contact has for them (Dixon, 2001). The models discussed above are strategies that can all contribute to a better understanding of some aspects of inter-group interaction. Potentially, the models can lead to the development of techniques that can be implemented within inter-group contact situations.

The three models above can be reconciled, if inter-group contact is treated as an evolving process, which has three stages (Pettigrew, 1998). That is to say de-categorization may occur in the first stage to allow friendship to form and at the same time to break perceptions of out-group homogeneity. At the intermediate stage, mutual differentiation may occur – salient categorisation - to permit generalization of attitude and stereotype change. In the final instance, participants may gradually see themselves as being in stable relationships and assume a common identity which is re-categorisation at a super-ordinate level of categorisation. At this stage, there is maximum reduction of prejudice (Eller & Abrams, 2004). Bornman & Mynhardt (1991) confirm the role of personalized relations (contact as friends) in attitude change as stated by Brewer & Miller (1984). The experience of contact is an individual experiential aspect which may lie in the de-categorization level while perceptions of the effects of inter-group contact may be seen in the re-categorization stage (group level). The two factors, experience and perceptions of contact were found to be determinants of attitude change in a review of studies by Mynhardt & du Toit (1991).

The cross-cut category is another way that can be used to reduce prejudice. The participants need to be members of both the in-group and the out-group on at least two dimensions. The dimensions (categories) selected must be of equivalent psychological importance to the participants (Johnston & Hewstone, 1990). In the cross-cut category situation two hypotheses can be tested: the cognitive (Doise, 1978 as cited in Johnston & Hewstone, 1990) and additive hypothesis (Brown and Turner, 1979 as cited in Johnston & Hewstone, 1990). The former is related to the cancelling-out effect of accentuation of both perceived similarity on one category and perceived differences on another category in the cross-cut category situation. As a result

discrimination between the participants is lessened. Otherwise, as explained by the additive hypothesis, in-group bias prevails in cross-cut category situation due to motivational factors.

Thus far, the studies mentioned above seem to reveal elements that show the utility of the social identity theory as well as self categorisation theory. Nonetheless, the process of the application of these theories deserves criticisms coming out from preceding research.

#### **2.4.4 A comment on social identity theory and reflection on its limitations**

The abundant studies enlightened by the social identity theory and self categorisation theory reveal the explanatory power of the two theories. Some studies reveal that the two theories are also developed in interplay with other theories such as contact theory as we will see below.

Deep reflection is concerned with some limitations of social identity theory. It did not take into account the role of ideology. Investigations are needed in order to clarify the linkage between subjective-psychological and objective-social levels of analysis such as the question of perceived status and the reality of power differences (Brown, 2000). Billig (1976) (as cited in Worchel, 1998) explains that categories (such as race, gender, ethnic group) are products of social activity in specific historical contexts. This statement shows the inadequacy of the definition of social categorisation given by Tajfel (1982) in which social categories are expressions of individual perception. Additionally, social identity theory does not specify the priorities of individuals in the inter-group context concerning strategies to improve their social identity (Brown, 2000; Taylor & Moghaddam, 1987). The criticisms addressed to social identity theory suggest that there is no perfect theory over time for the scientific arena. Therefore, the criticisms are welcomed to allow the research to continue at a more integrated level of analyses.

Hitherto, the studies show that the research has been using the theoretical explanations of both social identity theory as well as self categorisation theory. As mentioned before social identity theory deals with group processes. Within these processes prejudice is generated (Brown, 1995). Prejudice is the dependent variable of this study therefore it is outlined in the following chapter three.

## **2.5 Conclusion**

Race, racial identity and racial transformation are concepts that appear deeply related. The concept of race has no utility as applied to human beings. And racial identity is not justifiable if the social environment is not problematic. However, at present days race and racial identity are still significant sources of quality of relationships between people. Evidently, the link between the meaning, functions and motives of racial identity for the holders may influence the nature of race relations. In South African, the dynamic of race relations appears as influenced by both the experience of the apartheid era and the experience in progress of the post-apartheid transitional period. The changes occurring all over the spheres of the society claim for positive race relations and integration. The social identity theory appears as a powerful tool to explain the inter-group processes such as that of racial transformation taking into account the social context.

## **Chapter 3 Prejudice reduction or elimination**

For purposes of this study, prejudice is defined from a social psychological point of view taking into account group processes. Contact theory as proposed by Allport (1954) in the form of the classic contact hypothesis to reduce prejudice is also outlined.

### **3.1 Definition of prejudice**

The definition of prejudice has changed over time in accordance with historical events. Prejudice is a positive or negative evaluation of a social group and its members'. Within inter-group interactions various processes such as cognitive and social (peoples' beliefs about characteristics of the out-group) are assumed to be the sources of prejudice (Smith & Mackie, 2000). Prejudice is of inter-group nature because it originates in group processes. Thus, it is assumed that via group processes prejudice can be reduced or eliminated. That is why contact theory and other inter-group theories emerged to counter it.

### **3.2 The reduction or elimination of prejudice**

Prejudice can be reduced or eliminated in the light of different means available such as contact hypothesis, the models derived from social identity theory mentioned above and cross-cut categories. The latter model implies that participants may share at least one category membership. The laboratory studies (Deschamps & Doise, 1978 as cited in Brown, 1995; Vanbeselaere, 1991 as cited in Brown, 1995) confirm the importance of sharing categories to reduce prejudice or bias. In contrast, some field studies give opposite trends (Brewer and colleagues, 1987 as cited in Brown, 1995; Hewstone and colleagues, 1993 also cited in Brown, 1995). These contrasting results show that we need to be cautious about the arrangements of cross-cut categories for reducing or eliminating prejudice because some dimensions of categories are pre-eminent in accordance with particular local social contexts. Additional

work has been added to enlighten possible strategies for the long-term task of prejudice reduction.

Psychologists have been working systematically. For example the refinement of measures of prejudice is an ongoing task. Through the literature reviewed the social distance scale has been used to measure prejudiced attitudes. This study, however, used separate scales to measure prejudiced attitudes and social distance (desire or not for interracial contact). As Duckitt (1991, 1993) explains the social distance scale is a measure of behavioural intention, strictly speaking. The measurement instruments are rebuilt and validated to measure prejudice in its diverse forms. The social distance scale has been adapted and used to measure attitudes and behavioural intention for interracial contact. Lee, Sapp & Ray (1996) created the reverse social distance scale to assess perceptions of the minority groups concerning the way in which other groups accept them. The variable of behavioural intention to accept or not accept equal-status contact is also investigated (Duckitt, 1991, 1993). All this work concerning measurement of prejudice is helpful to document and describe its trends. Then, good selection of strategies to reduce or eradicate prejudice can follow. Contact theory to which we turn now is but one of the strategies selected to explain variance in prejudice in the present study.

### **3.3 Contact Hypothesis**

Contact theory (Pettigrew, 1998) is the contact hypothesis (Allport, 1954) reformulated as a consequence of research findings.

#### **3.3.1 Definition**

The central premise of the contact hypothesis is that contact between groups will lead to the reduction of tension, hostility and prejudice between groups involved in interaction under five essential conditions (Allport, 1954; Cook, 1962, 1978 as cited in Brown, 1995; Pettigrew 1986;). Contact hypothesis emerged as a response to eradicate segregation in USA after World War II

(Dixon & Reicher, 1997; Pettigrew, 1986;). Various studies tested the contact hypothesis in different contact settings. As a result, it appears improved as we can see the updated version of it in the reformulated contact theory later in this text.

Allport (1954) emphasizes that the nature of contact (pleasant or rewarding) is extremely important. He suggests four conditions under which contact may reduce prejudice and inter-group tension among participants, which are: a) equal status of participants in contact; b) common goals of the participants; c) cooperation and interdependence among participants; and d) support from authorities and social norms. To these conditions is added a fifth one namely, friendship (Hewstone, 2003; Pettigrew, 1997, 1998;). Friendship is an informal and affective social relationship based on choice, sharing and voluntariness for mutual interests. People who are friends are loyal and trust each other (Smelser & Baltes, 2001). These conditions are outlined in details later. Through studies presented in the literature, friendship appears as an important predictor of prejudice. The conditions were approved as essential by means of research concerning prejudice reduction. Some findings are outlined below.

### **3.3.2 Experience of prejudice reduction**

Widely, prejudice reduction has been dealt with in the light of contact hypothesis in interplay with other theoretical approaches. This interplay allows tasks such as: applying (testing) the contact hypothesis, criticising it (showing its strength and weakness) and enriching it with more elaborated levels of analysis concerning its concepts and its whole content as a theory. Recent studies have proved contact theory as a theory and also a tool for intervention in society to reduce prejudice/social distance (Hewstone, 2003). Many laboratory and field studies have enriched it. The studies are developed in both less contentious (laboratory studies, contact in work situation and contact on university campuses) and more contentious (schools, residential areas and armed force) contact areas.

The experience of prejudice reduction is revealed by diverse results which have been coming out. Schofield (1979) demonstrated that the way in which inter-group relations evolve is significantly influenced by the way in which the contact is structured. In contrast, another study by Schrieff (2002) found that inter-group relations (friendship) may be influenced by the degree of contact. It seems that in this study factors such as the amount of contact and perhaps emotions and affect involved in contact influence friendship forming. The degree of contact may be linked to the meaning of contact perceived by the participants in contact processes.

Some studies have shown that inter-group contact does not reduce inter-group tension and prejudice (Amir, 1969). For example a study by Poore, Gagne, Barlow, Lydon, Taylor & Wright (2002) brought out findings that counter the arguments of contact hypothesis. Their study of an Inuit community reveals two things: 1) the effects of non-contact (isolation, lack of out-group contact and low level of perceived group prejudice) is lower level of inter-group hostility; and 2) face-to-face contact causes greater awareness and higher experience of prejudice at the group level. These contrasting findings begged further investigation and analysis of the contact theory. The aim is to get some insights to understand why for instance in some studies (Erasmus and de Wet, 2003; Steyn & Zyl, 2001), under optimal essential contact conditions (UCT campus), cross-race friendships do not influence in-group bias while other research demonstrates important role of direct and indirect friendship (Hewstone 2003).

Therefore, the interplay between some theories of inter-group relations such as realistic group conflict theory, common in-group identity model and social identity theory mentioned before have informed some studies about inter-group contact (Brown, Condor, Mathews, Wade & Williams, 1986; Brown, Maras, Masser, Vivian & Hewstone, 2001). Emerson, Kimbro & Yancey (2002) suggest that contact theory may be extended to focus on social ties and integrate contributions derived from other theories and empirical viewpoints. In this way more alternatives will be available to mitigate

prejudice. Moreover, scientists are developing deep analysis concerning the essential contact conditions.

The findings have shed light on contact conditions in contrast to the negative idea of Pettigrew (1986). He called the growing list of contact conditions suggested by the many studies in different social contexts as a "laundry list". This may be a list which includes essential as well as not so essential conditions to get positive effects of inter-group contact. He stressed that "contact theory would in time fall of its own weight" (Pettigrew, 1986, p.180). Mynhardt & du Toit (1991) agree that "the broader theory of inter-group contact is needed" (Pettigrew, 1986, p.180) but they also claim that "it is important to stipulate basic preconditions for favourable contact" (Mynhardt & du Toit 1991, p.288) as well as to pay attention to factors that enhance the generalisation of positive contact experience to out-group as a whole (Wilder & Thompson, 1980). The dialectical point of view concerning the essential contact situations appears important because their meaning perceived by the participants may be influenced by historical or cultural factors, to name but two of them, over time.

Following this line of thinking, Brewer & Miller (1984) added personal factors to the list of contact conditions such as individual openness to information about the out-group and the ability to integrate that information. Again this point of view highlights that researchers need to consider specific factors in a certain societal context for inter-group contact. Thus, the list of conditions may vary from study to study and from setting to setting in which research takes place. In addition, as Dixon & Reicher (1997) argue, studies on contact must take into account the interrelations between identity of the participants, space and ideology because the participants in contact build social categories in diverse ways concerning the meaning of contact and integration.

Thus, in continuation, many studies have been taking place in many settings to examine ways to reduce prejudice. Contact per se as a tool for inter-group relations, for instance, through tourism allows direct interplay between cognitive aspects and peoples' experiences in contact situations. For this

reason, simple techniques can be developed to improve inter-group contact (Amir & Ben-Ari, 1985). A study by Barnard & Benn (1987) concerning belief congruence and prejudice reduction shows that belief congruity among participants is not necessary. The same study shows that it is important to develop discussions in small groups within the contact conditions to reduce prejudice. These findings contrast the results of the studies by Rokeach (1960) (as cited in Brown, 1995). Belief congruence emerged as a basis for prejudice. Belief similarity was a factor which led people to mutual attraction. The contrasting results may be deeply linked to the sample and the social context of the studies.

Contact hypothesis appears confirmed in some studies. For example, some research shows that participants hold tolerant attitudes towards the out-group when equal-status contact is intimate and occurs in non-institutional settings (Tsukashima & Montero, 1976). Friendship potential in a contact situation is essential (Pettigrew, 1997) and it plays a special role for optimal inter-group contact (Eller & Abrams, 2004). Indirect friendship enhances the potential impact of cross-group friends and has direct positive effects on perceived variability of the out-group (Hewstone, 2003). The cumulative effects of inter-group contact appears to play an important role. Contact between groups can lessen, increase or keep the status quo of discrimination (Amir, 1969). Van Dyk (1988) (as cited in Mynhardt & du Toit, 1991) found a high positive correlation between people's experience of contact and their attitudes. As the contact theory recommends all the studies mentioned thus far occurred under some or all essential contact conditions to which we now turn.

### **3.3.3 Essential conditions for inter-group contact**

Essential conditions are the ones in which inter-group contact may have positive effects to reduce prejudice (Allport, 1954; Amir, 1969; Pettigrew, 1998). The essential social conditions proposed by Allport (1954) and his followers are: support from authorities, common goals and cooperation, friendship and equal status. These essential contact situations have been established for the present study.

- *Support from authorities and social norms*

Support from authorities and social norms means institutional support. It means that people (such as scientists, professors, parents) or organisations (for example, government, directorate of institutions) who have power to make decisions agree with or help to get inter-group contact experience. Inter-group contact is also facilitated when social norms are supportive. Social norms are ways of behaving that are usual and expected in a certain social context (Murphy et al, 1995). Both, authorities and social norms may do three things: a) sanction and reward actions which hinder or promote the achievement of things that are desired; b) lead participants to change their attitude and; c) help to create social climate in which tolerant norms can emerge to reach positive effects of contact (Allport, 1954; Amir, 1969; Brown, 1995). The Constitution of the Republic of South Africa, Act 108 of 1996, chapter 2 concerning the bill of rights, s 9 as well as the UCT mission statement support inter-group (interracial) contact, desegregation and integration. This suggests that the contact experience of the UCT students occurs under one of the optimal contact conditions proposed by the contact theory.

There is agreement among researchers on inter-group contact concerning the role of support from authorities and social norms on inter-group contact. This fact is revealed in all studies covered for this literature review. However, it seems that there is a shortage of published research findings which show the impact of institutional support. Methodologically it seems not easy to have comparable control groups against which to measure the effects of institutional support (Brown, 1995). Nevertheless, some studies document the importance of institutional support.

Studies of integrated housing and schools show that people comment on social expectations in favour of tolerance and integration (Amir, 1969; Brown, 1995). These comments may exert positive effects on contact experience. The influence of social norms is useful. For example, observation of group norms is important for friendship forming (Wright, Aron, McLaughlin-Volpe &

Ropp, 1997). A study by Sherif (1966) demonstrates the role of authorities (experimenters) who achieved inter-group cooperation via progressive stages of relationships to reach super-ordinate goals. The stages are: spontaneous interpersonal friendship choice; group formation; inter-group conflict; inter-group cooperation and reduction of inter-group conflict to achieve super-ordinate goals. These goals can only be achieved by means of inter-group cooperation whereas common goals can also be reached by means of cooperation within a single group.

- *Common goals and cooperation*

When participants in contact have common goals, they are more likely to cooperate to achieve the goals. Cooperation refers to people's behaviour vis-à-vis the group (Tyler & Blader, 2000). Many factors such as nature and frequency of contact, norms, general social climate and numerical relation between groups can influence common goals and cooperation in different contact situations (Mynhardt & du Toit, 1991). Sherif (1966) suggests super-ordinate goals for effective contact to overcome individual factors (for instance fears or anxiety in inter-group interaction) and increase cooperation to reduce group tension and prejudice.

Some studies show that a structured cooperative contact is important to reduce prejudice (Maoz, 2000; Schild, 1962 and Sherif, 1966 both cited in Amir, 1969). Structured cooperative contact means that groups in contact interact in a cooperative way to solve tasks given to them. The results of other study (Desforges et al, 1991) point out the reduction of prejudice towards a typical former mental patient after interaction by means of two forms of structured cooperative contact: jigsaw cooperative learning and scripted cooperative learning and study in the same classroom. In the jigsaw technique each student teaches to the group a portion of material that s/he received. In scripted cooperative learning the students are placed in dyads to read and learn the material provided. These two techniques show that cooperation during the learning process exerts influence on the effects of contact. Hansell (2000) reveals successfully results such as caring

connections and reduced prejudice among the participants in the cooperative activities developed by “The Partners Program Model”. The activities are enlightened by both contact theory and intercultural competence theory.

Another contribution concerning inter-group cooperation to reduce prejudice is from the common in-group identity model mentioned above. Studies show that inter-group cooperation lessens salience of inter-group boundary (Gaertner, et al, 1993). Cooperation is an opportunity for participants to strengthen interpersonal relationship which can lead to formation of friendship.

- *Friendship*

Friendship interactions are an example of intimate contact (Hamberger & Hewstone, 1997). There exist direct and indirect friendships. Direct cross-group friendship has a direct negative effect on prejudice and affects perceived out-group variability (differences within out-group) indirectly with inter-group anxiety as mediator (Hewstone, 2003). That is, the emergence of friendship in different contact situations can be influenced by various psychological and social factors such as individual attributes, nature of initial attitude, personality factors, language skills, socio-economic status, age, sex and scholastic achievement (Mynhardt & du Toit, 1991). For this reason, application of “extended contact effects” as well as “extended contact hypothesis” appears helpful as explained below.

“Extended contact effects” concern indirect positive contact effects (indirect friendship) on attitudes of people not involved in contact. Indirect contact can counteract some factors that may interfere in contact process given that there is association of knowledge of cross-group friendship with less prejudice (Wright, et al. 1997). Indirect cross-group friendship is less likely to trigger inter-group anxiety and it also has a significant effect on prejudice indirectly mediated by inter-group anxiety (Hewstone, 2003). “Extended contact hypothesis” argues that positive inter-group attitudes can stem from knowledge concerning friendship of in-group and out-group members. Application of this hypothesis shows that for instance interracial contact that

occurs early in life leads to interracial friendship and other further social ties when participants are adults (Ellison & Powers, 1994 as cited in Emerson, Kimbro & Yancey, 2002).

Friendship forming is also influenced by other factors such as level of education. A study by Hamberger & Hewstone (1997) showed that education is a stronger predictor of contact as friendship occurs in inter-ethnic contact. That is, participants with higher level of education may be flexible in the process of friendship forming. The same study reveals that prediction is significantly improved by the inclusion of “contact – as – friends” variable, which has a significant negative effect on blatant prejudice. A research by Spangenberg & Nel (1983) states that inter-group friendship in the work (University) environment is significant and positively correlated with ethnic attitude.

- *Equal-status*

Status defines who an individual is in a social or professional position (Murphy et al, 1995; Sills, 1972). Equal-status in contact situation may mean that participants treat themselves or are treated the same regardless of their differences.

There are contrasting results concerning the effects of contact in equal status situations. On one hand, some studies reveal a positive experience. Brophy (1945) (as cited in Amir, 1969) found a positive experience of White and Negro [*sic*] sailors in equal status interaction. Similarly, positive contact experience is reported by Mann (1959) (as cited in Amir, 1969) in a study with scholars, Mackenzie (1948) in a research with war veterans (as cited in Amir, 1969) and Yarrow, Campbell and Yarrow (1958) (as cited in Amir, 1969) in a study concerning an inter-group integration at a summer camp. The positive effects of contact in equal status conditions were similarly found in housing projects (Freedman, 1966 as cited in Amir, 1969). There was also the encouraging practice of contact with high-status representatives of a minority group (James, 1955 as cited in Amir, 1969; Mannheim & Williams, 1949 as

cited in Amir, 1969). The positive effects of equal-status conditions are replicated in different social contexts when changes of relationships between populations groups occur.

On the other hand, some results of other research demonstrated that the equal-status variable is not perceived by the participants in the same way. For this reason, equal status conceived at the structural level may not correspond to equal status at the psychological level due to many reasons (Brewer & Miller, 1984, 1988; Robison & Preston, 1976). Kramer (1950) (as cited in Amir, 1969) suggests the term “relative status” of participants in a contact situation because it is not easy to bring to the inter-group contact situation group members who are of, for instance, equal socioeconomic or educational status. In some way the participants in inter-group contact may have differences concerning different statuses they may have for example socioeconomic, professional or educational status.

The effects of status differences outside the contact situations have a tendency to carry over into the integrated situation in which all participants are given equal status (Cohen, 1982, 1984 as cited in Brewer & Miller, 1988). For example, this may be the reason for differences between high-status and low-status groups concerning perceptions of the effects of contact stated in Foster & Finchilescu (1986). Consequently, many models, three of which (derived from social identity theory) are mentioned above, have been developed to understand the mediation process involved in contact practice to reduce prejudice. Deep reflection is also concerned with generalization of the effects of inter-group contact as we can see below.

### **3.3.4 Generalization of attitudes beyond the contact situation**

Generalisation of the effects of inter-group contact means that the participants have a tendency to produce attitudes towards the out-group similar to the attitudes that had previously been reinforced or changed during the process of inter-group contact (Cardwell, 1996). Pettigrew (1998) considers generalisation of the positive experience of contact at three levels: with the

same person in other new contact environments, with someone who belongs to the group of the individual met before and with members of other out-groups. This dynamic seems difficult to occur systematically for some contact experience.

Various studies reveal contrasting results concerning generalization of attitude change in specific contact situations to the out-group as a whole. Some findings demonstrate generalization of effects of contact on new environment beyond the contact situation (Wilner & Price, 1952 as well as Eaton & Clore, 1975 as cited in Mynhardt & du Toit, 1991). The results of a study by Mackenzie (1948) (as cited in Mynhardt & du Toit, 1991) shows that a desire for contact between majority and minority group members in one contact situation was correlated with a desire for contact with them in other situations as well. Moreover, a study by Nieuwoudt, 1973 (as cited in Mynhardt & du Toit, 1991) found that attitude change (both improvement and deterioration) between the two groups of participants (servicemen) towards each other (Afrikaans and English speakers) generalized to the language groups.

Studies also show the role of a typical out-group member in the generalisation process (Brown, Vivian & Hewstone, 1999; Wilder, 1984). S/he is a member who is representative of the group (Deforges, Lord, Pugh, Sia, Scarberry & Ratcliff, 1997). S/he displays a salient group membership (Hewstone & Brown, 1986) which plays a key role in contact process for generalisation to the out-group as a whole. Typical (in/out) group member is an individual who has appearances that the perceiver stereotypically assumes to be characteristic of the (in/out) group to which s/he belongs (Miller, 2002). Salient group membership is one which has current psychological role that is significant to increase the influence of one's membership in that group on perception and behaviour. It may also increase the influence of another person's identity as a group member on one's impression of and behaviour towards that person (Turner et al, 1987). This means generalisation of attitudes to the whole out-group occurs whenever a typical out-group member is perceived positively.

Conversely, a study by Wilder and Thompson (1980) as well as the results of the study by Weigel (1975) (as cited in Miller, 2002) show no generalization of attitude change. A study by Minard (1952) (as cited in Hamburger, 1994) shows no generalisation of positive experience of contact between African and White workers inside the mine to interactions outside it. Similarly, acceptance of atypical member at an interpersonal level did not generalise to inter-group level (Hewstone and Brown, 1986 as cited in Hamburger, 1994). Concerning generalisation, Hamburger (1994) suggests that researchers may use complex model for stereotypes because some stereotypes change in such a way that they are not easily detected. As a result, in continuation of studies contact hypothesis appears reformulated and enriched to provide some answers to pending questions.

Scientists are also currently discussing the general ways (the directions) in which the effects of inter-group contact are progressing. Some studies suggest that inter-group contact may influence attitudes (Amir, 1969; Hamberger & Hewstone, 1997). Hewstone (2003) as well as Herek & Capitanio (1996) (as cited in Hewstone, 2003) argue that both directions are believable: contact leads to attitude change and vice versa. In contrast, Eller & Abrams (2004), argue that the direction of change is reciprocal within a contact process which is fluid.

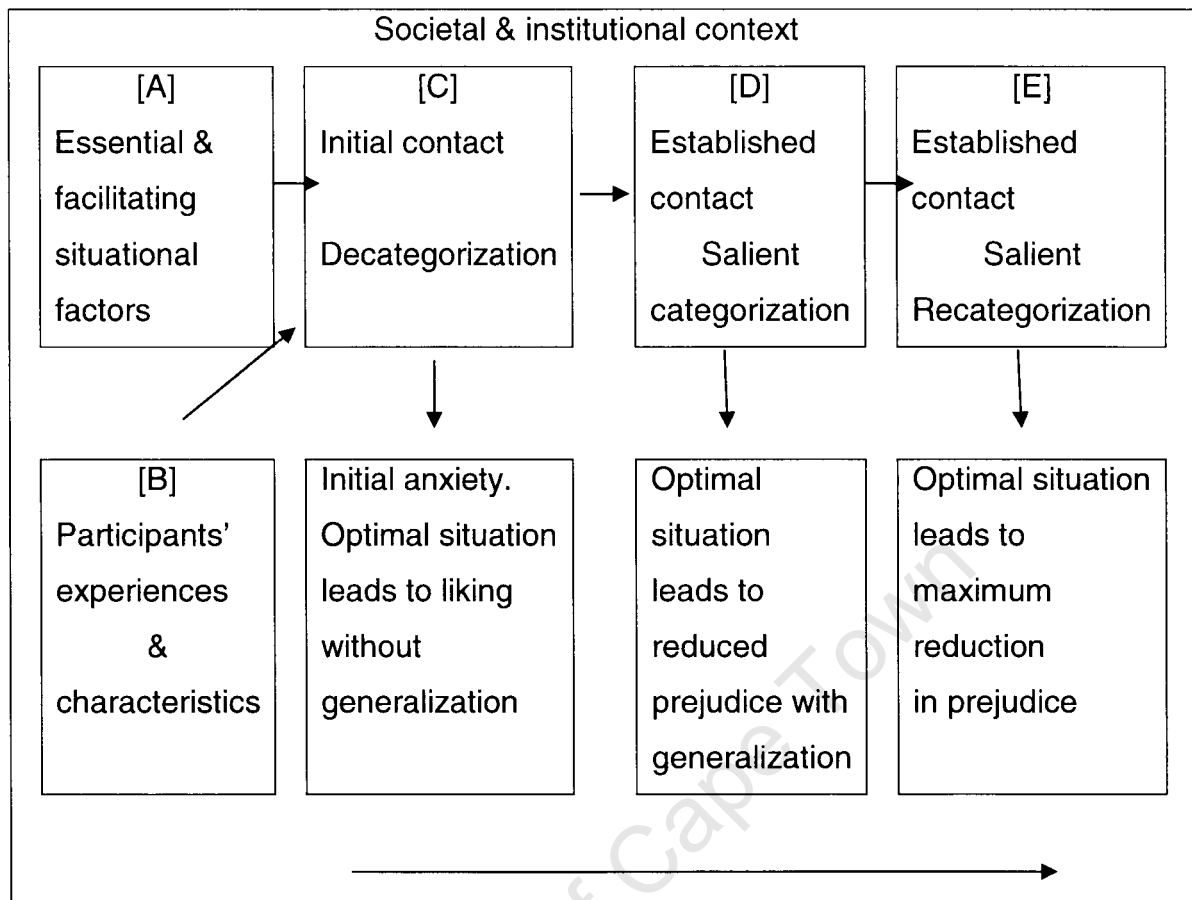
So far, much research work is taking place in order to deal with the issue of the reduction or elimination of tension, hostility and prejudice occurring in inter-group processes such as interracial interactions. The generalisation of benefit of inter-group contact is the issue which attract additional attention. Much more work is required to address some questions derived from the contrasting results of the studies given through the literature review. For this reason, other step concerning contact theory emerged which is its reformulation.

### 3.3.5 Reformulated contact theory

Pettigrew (1986, 1997, 1998, 2000) made efforts to reformulate inter-group contact theory into a longitudinal model. His studies added the “friendship potential” situation to the four contact situations already mentioned. He presents four issues of the contact hypothesis that researchers need to address during the process of inter-group contact: causal sequence, specification of independent variable, specification of processes and generalisation of effects. He also states four interrelated processes of attitude change through inter-group contact, namely learning about the out-group, changing behaviour, generating affective ties and in-group reappraisal.

Figure 1 represents the revised version of inter-group contact theory by Pettigrew (1998). This version of contact theory reflects interplay between it and the social identity theory to understand the dynamic processes of inter-group contact in the short- and long-term. Within certain situations (stage [A]), participants' experiences and characteristics may influence the nature of contact (pleasant or rewarding) (stage [B]). Long-term pleasant inter-group contact is important for development of friendships between the groups involved. This process of interrelation may disconfirm stereotypes of the out-group (de-categorization stage [C]). In the state of established acquaintance between groups, salient categorization may be related to reduced prejudice (stage [D]). At stage [E], the participants may be at the level of super-ordinate identity (dual identity) (see figure1).

Figure 1. Reformulated contact theory taken from Pettigrew, T. F. (1998)



Studies by Eller & Abrams (2004) tested the above reformulated model. The results reveal two aspects: a) empirically, the essential conditions proposed by Allport (1954) as well as friendship (Hewstone, 2003; Pettigrew, 1997, 1998) are multi-collinear (highly correlated) and; b) inter-group friendship plays a central role. Furthermore, the link between contact, mediators and prejudice should be considered as reciprocal and fluid processes. These findings reveal that longitudinal studies are needed to detect patterns which can remain unclear in cross-sectional analysis which approach the participants in the study once only by means of short-term data collection.

Through debates, scientists acknowledge the role of knowledge, perceptions of differences and similarities between groups, in reducing prejudice, as stated by the contact hypothesis. They point out that contact can actually change out-group attitudes, increase perceived variability of the out-group, increase out-group forgiveness for past actions and atrocities and increase out-group trust (Hewstone, 2003).

Moreover, it is important to know that some factors such as conflict of interests, social categorization, alteration of status relations and power relations may trigger inter-group discrimination and hostility (Hewstone & Brown, 1986). For this reason, whenever necessary, caution must be taken when dealing with inter-group contact. Inter-group anxiety and fears can also constrain the positive effects of contact (Hewstone, 2003; Islam & Hewstone, 1993; Wright, et al., 1997). But, inter-group anxiety and fears can be decreased or avoided by means of indirect friendship (Hewstone, 2003). Thus far, contact theory appears dynamic and enriched over time. However, this process has also attracted some criticism emerging from the foregoing studies.

### **3.3.6 A comment on contact theory and reflection concerning its criticism**

Contact theory has been applied by means of many studies aimed at reducing prejudice. Fortunately, together social identity theory and contact theory theories appear as helpful tools for interracial contact. This is shown in the reformulated contact theory which uses variables given by social identity theory. That is, strong racial (in-group) identity is supposed to trigger high in-group bias which can lead to racial prejudice. However, the positive effects of interracial contact lessen in-group bias. As a result racial prejudice is reduced.

Criticism refers to a serious judgement of aspects of variables of the contact theory which seem analysed superficially or not examined (Murphy, et al., 1995). It is useful to know the weaknesses of the theories which inform the study in hand. These allow the researcher to become more acquainted with the state of debates about the theory. S/he also can be more cautious when interpreting and discussing the findings. Listed below are some issues raised through the preceding studies.

It seems that a critical weakness of contact theory is its failure to generalise positive attitudes to out-group members (Eller & Abrams, 2004; Hewstone and Brown, 1986). In addition, contact researchers are criticised because they

ignore changes in the interactions within the in-group participants triggered by the contact experience (Wilder & Thompson, 1980). Dixon (2001) brings up two aspects of contact theory which are neglected by the researchers: the role of the spatial dimension of inter-group contact and the participants' point of view concerning contact.

The limitations are reflected in the content of some research reports which do not disseminate the meaning and the impact of the structured arrangement of the situation (the material environment of contact) upon the social relations under examination. The social space in which inter-group contact occurs appears as a passive element playing roles such as being a container of contextual and psychological factors (Dixon, 2001). As Pettigrew (1986) explains contact situations have history and interpretation which must not be ignored. The lesson from these criticisms is that there are some tenable tasks to be considered immediately. That is, each element (of the arranged material environment) or participant in the contact process ought to be given an active role. The role must be reported and disseminated in all its details. In this way future investigation will take advantage of the previous studies in fully.

Furthermore, previous research minimizes the situational, cultural and historical specificity of contact. These studies reduce contact into a numeric index through quantitative methods (Dixon & Reicher 1997). Connolly (2000) argues that quantitative methods may allow sampling bias. Instead, he suggests qualitative ethnographic methods which permit the researcher to examine beliefs and different interracial processes that can potentially reduce levels of prejudice. Likewise, Eller & Abrams (2004) criticise three points: a) the causal direction of reduced inter-group bias in contact theory seems equivocal; b) there is no clear explanation of roles of the levels of categorisation in contact theory; c) attitude change elicited in a short time may not prevail over time because other interfering factors can mitigate the effects. Therefore, longitudinal studies seem appropriate to provide more reliable measures of contact theory (Eller & Abrams, 2004; Powers & Ellison, 1995). It is evident that longitudinal studies bring more information about the effects of

inter-group contact. The reformulated contact theory is also a longitudinal model.

It seems that both quantitative and qualitative methods have active roles to play. There is a need for research findings in social issues to be translated into numeric figures such as mean, standard deviation, *beta* value, coefficient of multiple determination and path coefficients to name but some of them. These figures show the trend of the relationships between the variables under examination in a very quick way via a numeric index. The readers need to learn the meaning of the numeric indexes. But also the researchers and the readers of the findings need a fully account of the studies which provide psychological, cultural, ideological and political understanding of the participants involved in contact. This is possible via qualitative methods such as longitudinal studies. In addition, time and funding may influence the choice of the researchers over the type of the study to handle at a time.

Lastly, with the contact theory, it is not clear how co-operation reduces bias (Gaertner, et al., 1993). For example, when requested some UCT students handle cooperative task very well in terms of interracial contact. But at free time they prefer in-group bias. For instance on Jameson steps they prefer to seat near someone who belongs to the same population group. This event shows that co-operation has no effect on in-group bias for the case of being seated on the Jameson steps. Tajfel (1982) (as cited in Bornman & Mynhardt, 1991) argues that contradictory results of many contact studies arise because some researchers do not take into account the social environment that includes the structure of social divisions and power or status differentials. As a consequence, inter-group contact has often been studied in isolation.

In sum, the criticisms of contact theory emerged within the dialectical processes of its application and improvement. Contact theory became a theoretical framework and also a tool for intervention which has positive effects (Hewstone, 2003). Therefore, studies in more or less “contentious contact areas” are in fact an ongoing task based on this theoretical framework that reflects interplay between the various theories. For instance, in light of

reformulated contact theory which states phases of identification and categorization taken from social identity theory and self-categorization theory, students at UCT may categorize themselves as future professionals (skilled people) whose face-to-face interactions may raise opportunities to: a) cross racial attributions; b) learn about each others; c) change behaviour; d) generate affective ties (friendship) and; e) think carefully about prejudice because race may be assumed as social construction (Stephan and Stephan, 2000). In this line of thinking, contact theory and social identity theory with its more cognitive approach self categorisation theory are used as theoretical framework of the present study.

### **3.4 Contact theory and social identity theory as reflected in the reformulated contact theory constitute the theoretical framework for the present study**

The present research is developed in the light of the two theoretical approaches: the contact theory and the social identity theory with its cognitive approach self categorisation theory. It is assumed that there are relationships between in-group identity (racial identity) contact and prejudice which are explained by the findings from this research.

Social identity theory is relevant to this study because it stresses identity as the key issue in the examination of inter-group relations from a group perspective. As explained before, prejudice is generated within group processes. For this reason, group processes may counter prejudice. It is assumed that the reduction of prejudice towards a target group is influenced by: a) subjective perceptions of group membership (racial identity) of the participants of the study; and b) the importance of the value-laden nature of group membership. As mentioned before, the essential contact situations proposed by contact theory for positive relations between groups are available on UCT campus. The students' experiences of being members of a variety of groups are related to their contact attitude. Thus, the investigation brings out findings which show the state of contact, the relationships between racial identity, contact process and prejudice. The research hypotheses of this study

listed next in the method section (chapter 4) were derived from social identity theory and contact theory.

### **3.5 Conclusion**

Social identity theory, contact theory as well as models concerned with the generalisation of the positive effects of interracial contact beyond the contact situation appear as powerful means to counter racial prejudice. Gaps in each theory are filled in by the contributions from other theories of group processes such as realistic conflict theory. The contrasting research findings suggest that more studies are needed. Longitudinal as well as other research designs are useful. In accordance with Pettigrew (1986, 1997, 1998, 2000) researchers need to look at causal sequences, specification of independent variables, specification of processes and generalisation effects. The research report must also show the active role of the special arrangement in which inter-group contact occurred. In this study the effects of the relationships between racial identity and the nature and frequency of contact on prejudice/social distance are understood in light of both social identity theory and contact theory. The independent variables are racial identity, interracial contact (both nature of contact and frequency of contact) and the dependent variable is prejudice/social distance. The causal sequence is revealed by the path analysis through a unidirectional process.

## Chapter 4 Method

### 4 Introduction

The method section presents the methodology, the design of the study and the method of analysis used to analyse the data collected. That is, it provides the sample, the respective sampling method as well as the definitions and measurement of the key variables of the study. The interval scales measuring the variables are borrowed from other empirical studies. The hypotheses tested are derived from the social identity, self categorisation and the reformulated contact theories. The statements of the hypotheses are also presented in the form of a conceptual path diagram as used in path analysis. Path analysis and simultaneous multiple regression are the techniques selected to analyse the data. This chapter also explains the process of data collection, data capturing and data editing.

#### 4.1 Participants

Participants were drawn from the University of Cape Town (UCT) student population by means of a non-probability sampling procedure (Judd, Smith & Kidder, 1991). They constituted a convenience sample because the participants were any individuals who volunteered to take part. All students attending studies in the different faculties of the UCT were invited to participate in the study as volunteers. The participants completed the web-based questionnaire administered through the internet. Each participant completed it only once. Forty-two (42) subjects completed the questionnaire of the pilot study and 1344 filled in the questionnaire of the main study. Respondents who left out items were excluded. As a result, the data file had 1119 participants. They were 369 Africans, 457 Whites, 91 Indians, 163 Coloured and 39 participants who belong to other population groups. For training purposes of the student (the author of this study) it seemed prudent to compare two groups only. Therefore, the responses of only African and White participants were analysed. These two categories were chosen because they made up a good sample size. The categories White and African were taken

from the 1996 population census to designate population groups (race) (Khalfani & Zuberi, 2001). The final size of the sample came down to 826 participants. The study has no missing values.

### *Demographic information*

Table 1 below presents demographic information on the participants who constituted the final sample. More females than males took part in this study. The participants consisted of 392 (47.46%) males and 434 (52.54%) females. In the White population group, there were 229 (27.72%) males and 228 (27.60%) females. In the African population group there were 206 (24.94%) and 163 (19.73%) females and males respectively. Their ages ranged between 17 and 46 years with a mean age of 20.51 years and a standard deviation of 2.60. Most of the students 780 (94.43%) of the sample were attending undergraduate courses whereas, only 46 (5.57%) were studying at the postgraduate level. There were 457 (55.33%) subjects in the category of White and 369 (44.67%) in the category of African. Most participants 494 (59.81%) used English as their home language while 120 (14.53%) used other languages which are not listed in the table 1. Most subjects 682 (82.57%) were Christians while 125 (15.13%) belonged to other religions not included in table 1 given below.

Table 1: Demographic information on the UCT participants

		N	%
Age		20.50 <sup>2</sup>	
Sex	Male	392	47.46
	Female	434	52.54
University Education level	Undergraduate	780	94.43
	Postgraduate	46	5.57
Population groups	African	369	44.67
	Female	206	24.94
	Male	163	19.73
	White	457	55.33
	Male	229	27.72
	female	228	27.60
	Afrikaans	23	2.78
Home language	English <sup>3</sup>	494	59.81
	Xhosa	61	7.38
	Zulu	44	5.33
	Sotho	35	4.24
	Tswana	49	5.93
	Other	120	14.52
	Religion	Christian	682
Muslim		1	0.12
Jewish		18	2.18
Other		125	15.13

<sup>2</sup>Mean age<sup>3</sup>Language in which the questionnaire was completed

Ethical considerations, outlined next, needed to be observed in order to ensure that the participants fully understood the significance of their participation.

#### **4.2 Ethical considerations**

Ethical considerations were addressed in four ways. Firstly, a cover letter put as the first page of the questionnaire explained the purpose of the study and asked for the cooperation of the participants. Secondly, the same request for cooperation was made in a form of poster which advertised the study in the Monday paper and on notice boards in different places accessible to the students on campus and in UCT residences. In this way, the informed consent and freedom of choice of the participants were observed and they participated as volunteers. Thirdly, the participants would be debriefed in three ways: via on-line debriefing, through publication of the results of the study on the Monday paper (which is an academic newspaper) and through making the results of the study available in the library. Fourthly, these considerations allowed the participants to have a positive experience of the process of give-and-take which is characteristic of psychological research.

A financial reward of R1000 to one lucky participant was also used as an incentive to increase the response rate. This procedure was considered in the light of ethical considerations. As mentioned before, the participants were recruited by open, written invitation. In this way, prospective participants could realize that their participation was actually voluntary. The participants were also informed about the chance of winning the prize of R1000 if they participated. The participants who wanted to be enrolled in the competition gave their details such as e-mail address and telephone numbers on the demographic section of the questionnaire.

#### **4.3 Measures**

Three important tasks had to be undertaken in the process of constructing the instrument of data collection: a) consideration of theoretical debates (for

example concerning the essential conditions for the positive effects of contact); b) checking the recent usage of the measurements of the key variables of the main study (for example this study used the interval scales adapted by the scientists at UCT to measure the interval scale variable); c) analysis of the ways in which the instruments (scales) are validated in accordance with the issue in question in specific social contexts (for instance the scales were adapted in accordance with the findings of the previous studies concerning the content of the questions and in accordance with the actual social context of South Africa). Consequently, the questionnaire was selected as an adequate method to collect the data of this study. Its specific content consisted of measures of in-group identity, the different dimensions of contact and prejudice/social distance as outlined below.

The questionnaire included a) questions concerning age, sex, population group, home language, religion and education; b) questions about the percentage of cross-race friends and; c) interval scales for racial identity, contact and prejudice/social distance variables. The items (manifest variables) for interval scales used were adapted from previous research in South Africa on reformulated contact theory, social identity theory and prejudice/social distance (Gaibie, 2003; Parker, 2003 and Schrieff, 2002). The scores of some items of the variables being measured were reversed. The Cronbach's coefficient alpha was obtained for the assessment of each scale. The following section presents detailed information concerning the interval scale variables.

#### *Racial identification with the in-group*

Racial identity is related to group or collective identity which is based on one's perceptions that s/he shares a cultural racial heritage with a particular population group (race) (Helms, 1990 as cited in Kazdin, 2000; Lemon & Waehler, 1996). Identification with the race group was measured by means of an adapted 10-item inventory answered on 5-point scales from Never to Very often. There are five items affirming group identification and five items denying it. In the analysis some scores were reversed so that the higher

scores of the scale indicate strong in-group identity while the lower scores indicate weak in-group identity. This scale had a Cronbach's alpha of 0.71 for the study by Brown, Condor, Mathews, Wade and Williams (1986) to explain inter-group differentiation in an industrial organization. That figure of Cronbach's alpha shows the reliability of the measurement of inter-item correlation.

### *Contact*

Inter-group contact was measured through different dimensions of contact such as the nature and frequency of contact and friendship. Nature refers to quality and frequency is the amount of contact. Six-items answered on 5-point scales measured the nature of contact. In the analysis, some scores were reversed so that the higher scores of the scale indicated the positive quality of contact and the lower scores indicated the negative nature of contact. Eight-items answered on 5-point scales measured the frequency of contact. Friendship refers to the intimate and informal relationship of participants involved in contact processes. The variable of friendship was measured by means of a ratio scale to point out the percentage of friends within four population groups (African, White, Coloured and Indian).

### *Prejudice*

Prejudice is the holding of derogatory social attitudes, the expression of negative feelings or beliefs. It is the manifestation of hostile or prejudiced behaviour towards members of a certain out-group (Brown, 1995; Manstead & Hewstone, 1995). The out-group is the group which someone does not belong to. This variable was measured by means of an adapted set of six-items answered on a 7-point bipolar semantic differential scale (Zanna, 1994). In the analysis some scores were reversed so that the higher scores of the scale indicated positive feelings towards the out-group and the lower score indicated negative feelings. The item analysis of this scale in previous study by Gaibie (2003) had a Cronbach's alpha of 0.85 which showed a good measure of inter-item correlation.

### *Social distance*

Social distance is a measure of prejudice. Psychological social distance among the participants was measured by means of Social Distance Scales (SDS) adapted from the modified Bogardus SDS used by other researchers in South Africa (Gaibie, 2003; Parker, 2003 and Schrieff, 2002). SDS is used as a tool to find out degrees of feelings of acceptance or rejection of members of other population groups. The questionnaire contained six progressive degrees of acceptance of members of the other group. The six social categories used were: University fellowship (6); one's neighbours (5); one's guests at home (4); friendship (3); one's co-worker (2); one's family member through marriage (1). The respondents used a 5-point scale to indicate the degree of social distance between them and the other population group (African and White). The score of 1 showed complete acceptance and the score of 5 indicated complete rejection (greater social distance). In the analysis, all scores were reversed so that the higher scores indicated stronger desire for contact (small psychological social distance) and the lower scores indicated no desire for contact (greater psychological social distance).

Finally, the questionnaire asked for comments from the participants concerning the research. As can be seen in the results of theme analysis some comments pointed out the need for open-ended questions to counter perceived disadvantages of the questionnaire, some of which are outlined in the next section.

#### **4.4 A brief consideration of the general advantages and disadvantages of the method**

The outline that follows presents the advantages and disadvantages of the questionnaire as well as the on-line system of data collection.

#### **4.4.1 Advantages of the questionnaire and the on-line system of data collection**

The questionnaire has the following advantages:

- a) By means of the questionnaire it is possible to replicate the study;
- b) The use of questionnaire is cost and time effective. Written questionnaires are the least expensive. Low costs means that responses can be obtained from more people, reaching the desired sample size (Judd, Smith and Kidder, 1991);
- c) It does not permit bias (in contrast to potential interviewer bias);
- d) It puts less pressure for immediate responses on the subject. The responses to the questions are more likely to be well-considered if the subject takes ample time to consider each question carefully rather than giving the responses that come immediately to mind;
- e) The questionnaire gives the respondent feelings of anonymity and therefore encourages open responses to sensitive questions.

The on-line system is cost and time effective. Many people can give responses to the questionnaire since this does not demand too much time (10 to 20 minutes). Furthermore, the use of the on-line system enriches the training of the researcher (the student) involved. The researcher practiced the application of a combination of computer packages such as Excel, Statistica and Word for Windows for data analysis. This procedure made the data analysis process quicker.

#### **4.4.2 Disadvantages of the questionnaire and the on-line system of data collection**

There is no way to control question order. Some participants can prefer to read the whole questionnaire first and then start writing the responses. Moreover, it is not possible to control the context of question answering. Subjects can get help from friends or from members of their families to write the self-report responses. Similarly, there is no way to control the context of question answering of the on-line questionnaire.

In sum, it is important for the researcher to know and to accept the advantages and the disadvantages of the method used. Then, steps can be developed to deal with the response rate. For instance, the on-line system for data collection for pilot study and also for the main study requests the participant to complete the questionnaire; otherwise the incomplete questionnaire would not be stored as part of the data.

#### **4.5 Research design and analysis**

The research is a cross-sectional survey which approached the sample of participants once only. This design allows: a) to get data in a short period of time; b) to compare two subgroups of the sample (White and African population groups) and c) to interpret the relationships between the variables. The data collection was computer-based and the questionnaires were available via the internet ([www.uct.ac.za/depts/psychology](http://www.uct.ac.za/depts/psychology)).

The study used statistical analysis to analyse data: Basic statistics, multiple regression, (Allison, 1999; Howell, 2002; Tredoux & Durrheim, 2002;) and path analysis (<http://www2.chass.ncsu.edu/garson/pa765/path.htm>) (<http://www.exeter.ac.uk>).

The variable of cross race friends (Xracefriends) was not included in the path analysis as well as in simultaneous multiple regression for two reasons. Firstly, it was not suitable to be treated as a latent variable. It did not have enough manifest variables which measure it. Secondly, as explained by Johnston & Hewstone (1990) in the cross-cutting category situation no category can be pre-eminent. The categories must be of equivalent psychological importance to the participants. In this study, the categories racial identity, being a UCT student and being a friend of someone who belongs to the out-group (other population group) seemed to be of different psychological importance to the holders. It seems that the in-group bias prevailed in the cross-race friendships as explained by the additive hypothesis (Brown & Turner, 1979 as cited in Johnston & Hewstone, 1990). Next is the outline of both path analysis and simultaneous multiple regression analysis.

Path analysis is a method developed by Wright in the 1910s and 1920s (Arminger, Clogg & Sobel, 1995; Heise 1975; Loehlin, 1992; Wright, 1921). In this method path models are discussed. Model is a term which refers to a system of relationships among variables and path is a link between the variables (Hoyle, 1995). The goal of the path model is two-fold: 1) to explain the relationships between the variables and 2) to interpret the structural coefficients so as to be able to utilize the model to address specific substantive recommendations.

Path analysis is also referred to as a simultaneous equation modeling in the field of econometrics. It is an approach used to test a set of hypothesized paths with regard to relationships amongst the variables. This approach allows the researcher(s) to structure the set of relationships between variables in terms of systems of equations (Kline, 1998). The approach is a method included in structural equation modeling which is a general multivariate modeling perspective that can also be used to develop confirmatory factor analysis and hybrid models. Structural equation modeling looks for descriptions of means, variances and covariances (degree to which two variables vary together) of a set of variables in terms of a smaller number of structural parameters (paths). The structural parameters represent the hypothesized relationships among a set of variables (Kaplan, 2000). Factor analysis, path analysis and structural equation analysis are all methods of latent variable analysis (Bentler, 1980; Bentler & Weeks, 1980; Loehlin, 1992). In the present study, the latent variables are: racial identity, nature of contact, frequency of contact, prejudice and social distance. The multiple items of the scales are the measured variables. Path analysis can be done with variables in their original scale units as well as with standardized variables under certain requirements as outlined next.

#### **4.5.3 Requirements for path analysis**

There are three requirements which are important for path analysis:

- All the measurements used must be of interval scale variables. In the interval ratio scale the numbers represent magnitude, the intervals

between the numbers have a constant value and there is a true zero. This requirement is accomplished for this study because all variables were measured by means of interval scale.

- The assumptions concerning the normal distribution of each variable may be observed. However, sometimes the violation of normality for each variable is apparent but there are no serious consequences due to the quality of the method of estimation called Maximum Likelihood (ML) which is robust enough against the violation of the normality. The variables of this study are not normally distributed.
- The path model must be specified and identified. The outline of these concepts is presented below.

#### **4.5.4 Specification and identification of the path model**

Kline (1998) and Pedhazur (1982) explain that the *specification* of the path model ought to occur in the light of a theory or theories which guide the study. Specification is an essential condition for the analysis. It means to state the hypothesized directions of the relationships between variables to get the path model. This model (represented by means of the input path diagram) is the conceptual model which provides a framework within which information is processed. The analysis provides the strength of the direct, indirect and total effects of one variable on another. The direct effects (observable paths) are the causal effects which are represented by straight lines with single arrowheads that point to the endogenous (dependent) variables (see figures 2a and 2b below). The causal effects are the free parameters to be estimated in the path model.

In order to run the path analysis, the model must be identified. Hoyle (1995), Kaplan (2000) and Kline (1998) clarify that identification refers to whether the parameters of the model can be uniquely determined by the sample data. If the parameters of the model are not identified, estimation of the parameters is not possible. The model identification occurs when the parameters are estimated. In the path model the parameters are the variances and

covariances of the exogenous (independent) variables and the direct and indirect effects of the exogenous on endogenous (dependent) variables. The path analysis permits the researcher to get and also to separate the parts which make up the total effects (direct effect + indirect effects) of the exogenous on the endogenous variables. The parameters estimation is done via Maximum Likelihood that is, Generalized Least Square followed by Maximum Likelihood (GLS->ML). ML estimation assumes that the distributions of variables are multivariate normal and ML estimates are good and robust to the violation of normality.

For this study the conceptual model (the input diagram) is specified in the light of contact and social identity theories and it represents the following hypotheses concerning the relationships amongst the variables (see figures 2a and 2b):

1. Inter-group contact is positively related to positive feelings in the participants towards the out-group and desire for interracial contact (in other words, inter-group contact is negatively related to prejudice/social distance) (paths 1 and 2);
2. Stronger in-group identity (racial identity) is negatively related to inter-group contact (path 3);
3. Stronger in-group identity (racial identity) is negatively related to positive feelings in the participants towards the out-group and desire for interracial contact (in other words stronger in-group identity is positively related to prejudice/social distance (path 4);
4. Nature of contact is positively related to frequency of contact (path 5).

Figure 2a: Conceptual model for the study of the effects of racial identity on contact and prejudice

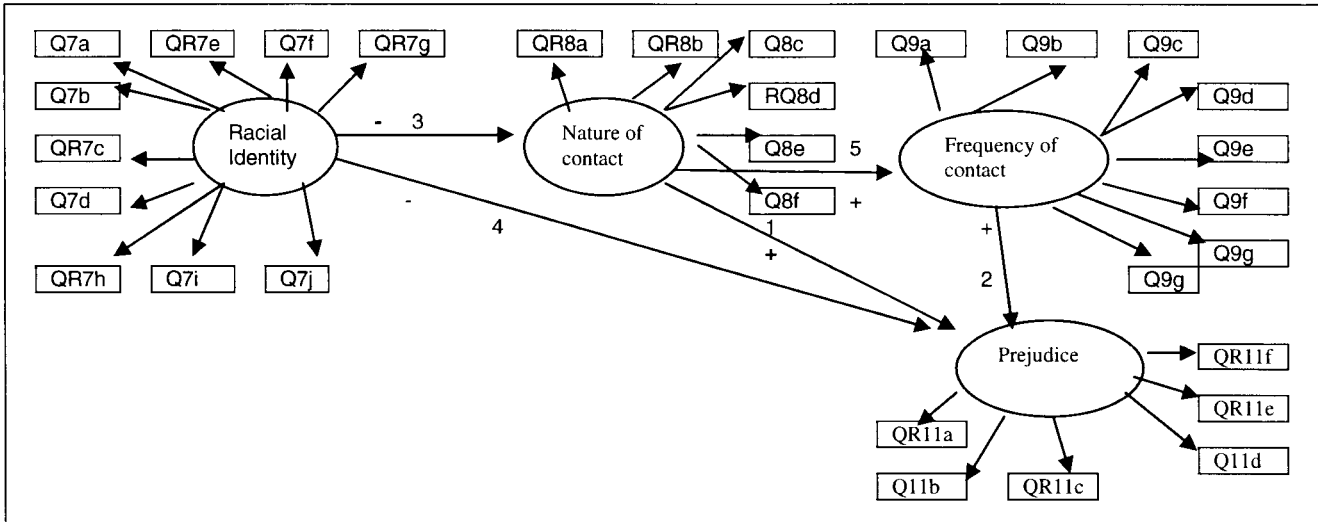
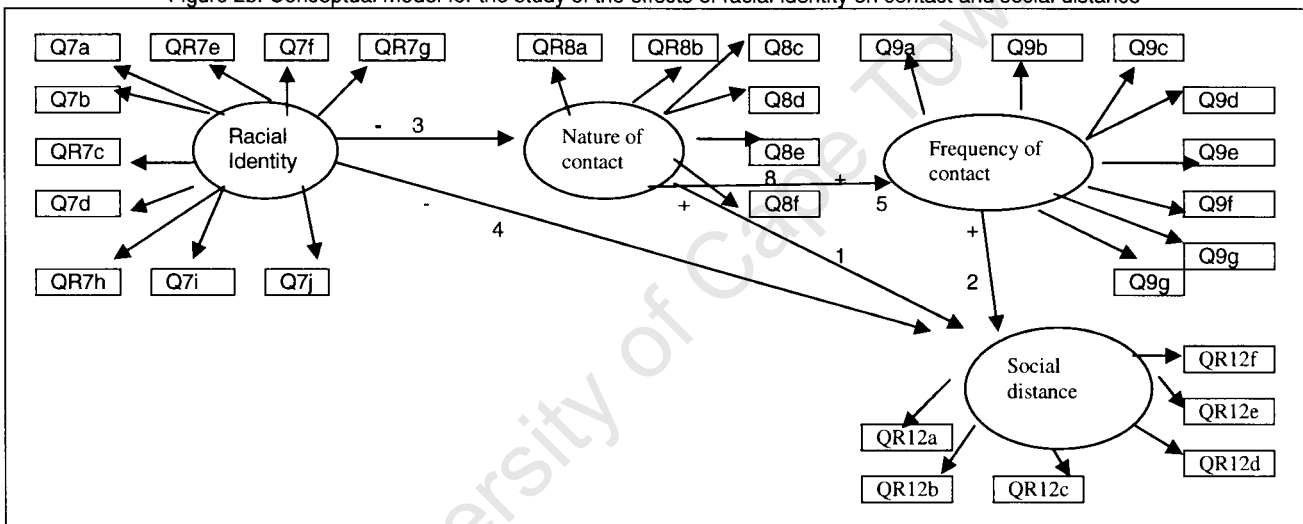


Figure 2b: Conceptual model for the study of the effects of racial identity on contact and social distance



The diagrams (figures 2a and 2b) show that there is one exogenous variable that is racial identification because its origin is not presented in the input diagrams. And there are four endogenous variables which are nature of contact, frequency of contact, prejudice and social distance which are caused by variables presented in the diagram. There are direct causal effects of one variable on another presented by means of five unidirectional paths (unidirectional arrowheads) towards the endogenous variables. In detail the direct effects of one variable on another hypothesized in figures 2a and 2b are:

- i. Racial identity on three variables: Nature of contact, prejudice and social distance;

- ii. Nature of contact on three variables: Frequency of contact, prejudice and social distance;
- iii. Frequency of contact on two variables prejudice and social distance.

And there are indirect effects of:

- iv. Racial identity via nature of contact on frequency of contact;
- v. Nature of contact via frequency of contact on prejudice;
- vi. Nature of contact via frequency of contact on social distance.

The path model displayed in figure 2a is specified in the following way:

[Racial identity]-1->[Nature of contact]  
 [Racial identity]-2->[Prejudice]  
 [Nature of contact]-3->[Frequency of contact]  
 [Nature of contact]-4->[Prejudice]  
 [Frequency of contact]-5->[Prejudice]

And the path model displayed in figure 2b is specified in this way:

[Racial identity]-1->[Nature of contact]  
 [Racial identity]-2->[Social distance]  
 [Nature of contact]-3->[Frequency of contact]  
 [Nature of contact]-4->[Social distance]  
 [Frequency of contact]-5->[Social distance]

It is important to bear in mind that in the present study the higher scores of the variable of prejudice and social distance mean positive feelings in the participants towards the out-group and strong desire for interracial contact respectively.

The two figures 2a and 2b display recursive models. The models are recursive because they have no loops or mutual effects depicted in them (Kline, 1998). Moreover, the following assumptions referred to as Wright's rules (Loehlin, 1992) are observed: a) linearity - the one-way directional relationships (revealed in the two figures) represent hypothesized linear directional influences of one variable on another; b) endogenous variables do not cause the exogenous variables (shown in the same figures) and c) exogenous variables are measured without error or unknown sources of effects (also illustrated in the two figures).

Path analysis is considered as an extension of the simultaneous multiple regression analysis because in it, simultaneous regression equations are developed and the path coefficients are the standardised beta weights. Simultaneous regression means that all the variables were entered into the analysis at the same time. In this study, path analysis is completed by the simultaneous multiple regression analysis outlined next. That is, the former provides the direction of causal relationships and the strengths of the relationships between variables. The later shows the best predictor of prejudice/social distance. It also gives the percentage variation of prejudice/social distance (by means of the coefficient of multiple determination called  $R^2$ ) explained by the predictors acting together. The simultaneous multiple regression analysis also gives the value called *beta* weight which shows the relative contribution of racial identity, nature of contact and frequency of contact in the prediction of the dependent variable of prejudice/social distance. All the predictors (racial identity, nature of contact and frequency of contact) were tested at once by the entire sample, by population groups and by gender in this study.

The simultaneous regression analysis is presented in two instances that is, one analysis for each dependent variable - prejudice and social distance. The questions to be answered by the analysis are:

- What is the best predictor of prejudice/social distance?
- How much percentage of variance in the dependent variable of prejudice/social distance is explained collectively by racial identity, nature of contact and frequency of contact?

In order to do simultaneous multiple regression analysis, the measurement scales required have to be met. That is, the outcome (criterion) variables called 'prejudice'/'social distance' are interval-ratio scales and all the predictor variables - RI (racial identification), NC (nature of contact) and FC (frequency of contact) are interval-ratio scales. The assumptions of the simultaneous multiple regression are also met which are: normal distribution and uniform variance of the residuals and linear relationships between the dependent and predictor variables. Both histograms (one for prediction of prejudice and the

other for prediction of social distance) show the required bell shape. And both figures which display the normal probability plot of residuals show that the observations are clustered on the regression line. This means that the residuals are normally distributed and they have uniform variance (see figures 1a; 1b; 1c and 1d in appendix D). There also appears from the scatterplots that there are linear relationships between the criterion variables of prejudice and social distance and the predictor variables as shown in figures 2a, 2b, 2c, 2d, 2e and 2f (also in appendix D). As we can see, the assumptions of multiple regression are met therefore the significance test can be considered valid and the regression equation believable.

The results of the statistical analyses and the findings are treated in general (anonymously) to protect the respondents' confidentiality. Student numbers were used only for quality control to avoid duplication of participants during the process of data collection. Mentioned below are the many activities developed to get the data.

#### **4.6 Procedure**

Procedure refers to the course of actions performed such as activities related to the method of data collection, the pilot study and activities to reach the participants. Procedure is necessary to get the study done.

##### **4.6.1 Method of data collection**

As mentioned above the data for this study was gathered by means of a questionnaire that was accessed by the participants on-line. The first page of the questionnaire was a short cover letter which explained the essence of the study, asked for cooperation and invited the participants to give answers to questions (see appendix Aa and Ab). The rationale for choosing this method of data collection is linked to the design of the study which is a survey. The on-line system permitted four main goals as follows:

- a) to get participants in a short period of two months since the participants filled in the questionnaire when they were available in a short time of fifteen to twenty minutes;
- b) to allow the participants to have opportunities to experience a sense of freedom to deal with sensitive issues such as interracial contact in their own time;
- c) to respect freedom of choice of the participants;
- d) to use a cost-effective way of getting subjects involved in this study. To give answers to on-line questionnaire saves time and avoids printing and photocopying expenses.

#### **4.6.2 Two 'forms of questionnaire'**

The questionnaire was installed on the UCT website system to capture the experiences of contact of participants of one population group with participants who belonged to another population group. That is, after entering the demographic information, the system automatically browsed the population group towards which the experience of contact of the participant was related and captured by means of self reports. The appendix Aa aims at capturing the experiences of contact of participants belonging to the African population group with those who belong to White population group and appendix Ab aims at capturing the experiences of contact of participants included in the White population group with those who are included in the African population group. The questions in the two 'forms of questionnaire' are actually the same.

#### **4.6.3 Constructing the questionnaire**

The unique version of the questionnaire was constructed and refined over a period of two months. During this time the researcher did three tasks mainly: a) reading the literature to review the state of debates concerning the measurement instruments of variables of the reformulated contact theory and social identity theory included in this study; b) discuss with the supervisors the preliminary drafts of the questionnaire and; c) edit the final version of the

questionnaire that was installed on website by the respective expert. The questionnaire was built and installed on-line in the English language.

#### **4.7 The pilot study**

Actually, the pilot study answered questions concerning the face validity of the scales and questions aimed at testing the on-line system for data collection. For this reason, the pilot study used the on-line questionnaire to collect the data. The convenience sample of the UCT students was selected in accordance with the population and the type of sample for the main study. Functioning of the on-line system was checked at 10 different computer laboratories at UCT.

During the process of collecting data for the pilot study, two things were found: 1) the system could be accessed from the different computer labs; b) some technical details were identified. After that some corrections were made (for example for one item of question 9 the system was not capturing the information as designed) and fixed by the website expert of this study. In the end, the on-line system proved to be responding as planned: it was recording correctly and storing the data as designed. The system was also requesting the participant to complete any questions left out before final submission of the questionnaire for storage. In this way missing values were avoided. After the results of the pilot study and after the corrections made by the website expert, different ways were used to call for participants in the study.

#### **4.8 Poster**

In order to reach the participants, many copies of a poster were prepared and placed in visible places such as notice boards at faculties, departments and restaurants on campus (N= 23) and in university residences (N=19) (see appendix B1 and B3). An advert was also placed in the UCT Monday paper (see Appendix B2). The poster called for participants and announced the incentive of an only one prize of R1000 in cash for one randomly selected participant as a winner. For this reason, the participants were also asked to

fill in their contact details (such as e-mail address and phone number) in the demographic section if they wanted to be enrolled in the competition for the prize. Later, the winner of the prize was contacted. The supervisor of this study and the website expert informed the winner to collect the money. Both, the cover letter inviting participation and the monetary incentive are documented as good devices which increased the response rates (Bailey, 1994).

#### **4.9 Debriefing**

After the data collection, the on-line debriefing of the participants was conducted by the researcher. The debriefing matched one of the ethical considerations of the study. Most comments by the participants (45%, N=161) pointed out the relevance of the study, the positive results (presented next in chapter 5) expected from it and the opportunities they had to think about interracial contact which could have been influenced by differences that occurred in their up-bringing.

## Chapter 5 The results

### 5 Introduction

The results in this chapter are presented in five parts. Part 4.1 provides: a) the Cronbach reliability results; b) the descriptive statistics of each variable broken down by the two population groups and gender and; c) the inter-correlations between the racial identity, nature of contact, frequency of contact and cross-race friends variables. Part 4.2 is concerned with causal models of prejudice and social distance. Here, the results of the causal models for the whole sample and for the two population groups are compared. Part 4.3 deals with the prediction of prejudice/social distance. Likewise, the results from the multiple regression models are compared with those from causal models. Part 4.4 provides the thematic analysis of the comments given by the participants concerning this research. Finally, part 4.5 sums up the findings of this study.

#### **5.1 Results of the Cronbach reliability, descriptive statistics and inter-correlations between the latent variables**

The Cronbach reliability test is concerned with the measurement instruments while descriptive statistics and inter-correlations explore the data in preparation for path analysis and simultaneous multiple regression.

##### **5.1.1 Results of Cronbach reliability**

The Cronbach reliability test provides an index (called Cronbach's alpha coefficient) of reliability of the measurement. Reliability refers to the extent to which the variables have been measured consistently. The higher the Cronbach's alpha coefficient, the higher the internal consistency of the multiple-item scale is. The Cronbach's alpha coefficient for each measure of the variables of this study is presented by the entire sample, the two population groups and by gender. The variables are: racial identity, nature of contact, frequency of contact, prejudice/social distance. There was no single poor item in the different measures as can be seen in the details.

The Cronbach test applied to all the multiple-item scales yielded alpha coefficients greater than .70. Therefore, the multiple-item scales were found to be reliable (Nunnally, 1978 as cited in Yu, 2001). The Cronbach's alpha coefficient of the scale that measured racial identity was high for both the whole sample (.80) and the population groups (White: .78 and African: .73). It was also high by gender (White males: .78; White females: .78 and African females: .77). An exception is the Cronbach's alpha coefficient for the African males which was .69, (very close to .70). All other coefficients are higher than .70. This means racial identity was measured consistently.

Likewise, the Cronbach's alpha coefficient of the scale measuring the variable nature of contact was high for the entire sample (.79) as well as for the two population groups (White: .80 and African: .77). It was also high for the participants split by gender (White males: .77; African males: .77; White females: .81 and African females: .77). The meaning of this is that nature of contact was measured consistently. Frequency of contact was measured consistently as well. The scale had a high Cronbach's alpha coefficient of .74 for the entire sample; .76 for the White population group and .76 for the African population group. The same coefficient was also high for the participants split by gender (White males: .77; African males: .76; White females: .73 and African females: .74).

Similarly, the variable of prejudice was measured consistently. The Cronbach's alpha coefficient was high for the entire sample (.88) as well as by the population groups (White: .89 and African: .87). The same coefficient was also high for the participants split by gender (white males: .88; African males: .88; White females: .89 and African females: .87). This means the measurement was reliable. Likewise, the scale measuring social distance proved to be reliable. The Cronbach's alpha coefficient was high for the whole sample (.86) and for the population groups (White: .85 and African: .88). The Cronbach's alpha coefficient by gender was equally high (White males: .87; African males: .89; White females: .82 and African females: .87). All the multiple-item scales used were reliable in previous studies in South Africa

(Gaibie, 2003; Parker, 2003 and Schrieff, 2002). Table 2 below summarizes the results of the Cronbach reliability test.

Table 2: Summary of Cronbach's alpha coefficient

Participants	Variables				
	Racial identity	Nature of contact	Frequency of contact	Lack of prejudice	Social distance
Entire sample	.80	.79	.74	.88	.86
White population group	.78	.80	.76	.89	.85
African population group	.73	.77	.76	.87	.88
White males	.78	.77	.77	.88	.87
African males	.69	.77	.76	.88	.89
White females	.78	.81	.73	.89	.82
African females	.77	.77	.74	.87	.87

In the table we can see variation of the Cronbach's alpha coefficient for the scales across the subgroups of participants. As mentioned before, the higher the Cronbach's alpha coefficient, the higher the internal consistency of the scale. The next section presents additional results of descriptive statistics broken down by population groups and gender.

### 5.1.2 Descriptive statistics of each variable broken down by population groups and by gender

The descriptive statistics broken down by the two population groups and by gender are means and standard deviations of the variables of this study. As mentioned before, the high score indicates a stronger racial identity in the 5-point scale of the 10-item inventory. In this scale the value of 3 indicates undecided (neither/nor); the value of 4 shows quite strong and the value of 5 indicates extremely strong racial identity. The value smaller than 3 indicates weak racial identity.

The value of total mean of racial identity of 4.01 is above the mid-point value of 3. The standard deviation value is 0.94. The mean value of 3.74 and 4.30 for the White and the African population group respectively, is also above the mid-point of 3. The respective value of standard deviation is 1 and 0.89. An inspection of the strength of racial identity by gender shows similar trend. All the means appear to be above the mid-point of 3 for all participants. There is variation of mean values of 4.34, 4.26, 3.78 and 3.69 for African females, African males, White males and White females respectively. The mean value of standard deviation ranges between 0.82 and 1 (see table 3).

Table 3: Breakdown table of descriptive statistics of the variables of the study by population group and gender

	Racial identity	Nature of contact	Frequency of contact	% Cross-race friends			Prejudice	Social distance
White (N=457)	3.74 (1.00)	4.03 (0.84)	3.19 (1.02)	14.23 (13.46)	6.22 (8.78)	9.50 (8.63)	5.18 (1.20)	3.91 (0.94)
				African	Indian	Coloured		
African (N=369)	4.30 (0.89)	3.79 (0.96)	3.19 (1.07)	12.60 (14.18)	5.36 (8.08)	9.80 (12.86)	4.88 (1.40)	4 (1.12)
				White	Indian	Coloured		
White males (N=229)	3.78 (1.00)	3.90 (0.82)	3.03 (1.00)	12.97 (12.51)	6.43 (7.15)	8.52 (7.63)	4.95 (1.16)	3.79 (0.99)
				African	Indian	Coloured		
White females (N=228)	3.69 (0.97)	4.16 (0.82)	3.33 (1.02)	15.20 (12.54)	5.94 (10.13)	10.51 (9.46)	5.40 (1.19)	4.03 (0.87)
				African	Indian	Coloured		
African males (N=163)	4.26 (1.00)	3.74 (0.97)	3.07 (1.10)	11.18 (11.85)	5.80 (7.34)	8.88 (8.35)	4.84 (1.49)	3.95 (1.11)
				White	Indian	Coloured		
African females (N=206)	4.34 (0.82)	3.83 (0.96)	3.28 (1.04)	13.12 (13.60)	5.03 (8.64)	9.96 (13.24)	4.91 (1.31)	4.03 (1.12)
				White	Indian	Coloured		
Total	4.01 (0.94)	3.90 (0.89)	3.18 (1.04)	-			5.02 (1.29)	3.91 (1.02)

Note: entries are means (standard deviations in brackets).

In the table 3 above, one can see that the total mean value for nature of contact is 3.90 which is above the mid-point value of 3. The variability is shown by the mean value of 0.89 of the standard deviation. The simple 1-way

ANOVA test by population groups shows that the means differ significantly ( $F= 28.85$ ;  $p= 0.00$ ;  $df= 1, 824$  and  $MS_{Error}= 0.40$ ). The mean value of 4.03 and 3.79 for the White and African population groups respectively is above the mid-point value of 3. The respective standard deviation value is 0.84 and 0.96. Likewise, the mean value of 3.90 and 4.16 for White males and females respectively with the standard deviation values of 0.82 is above the mid-point value of 3. The mean value of 3.74 and 3.83 for African males and females respectively, is also above the mid-point value of 3. The standard deviation values are 0.97 and 0.96 respectively.

The total mean value of 3.18 of the frequency of interracial communication and interaction is also above the mid-point value of 3. The respective standard deviation value is 1.04. There is no difference between the means of the frequency of contact variable by population group ( $F=0.02$ ;  $p= 0.86$ ;  $df= 1, 824$  and  $MS_{Error}= 0.42$ ). Both the White and African population groups have a mean value of 3.19. The White males and White females have mean values of 3.03 and 3.33 respectively. The standard deviation values are 1 and 1.02 respectively. The African males and females have mean values of 3.07 and 3.28 respectively. The corresponding standard deviation values are 1.10 and 1.04. See table 3 above.

The percentage of cross-race friends is very low. The White population group has 14.23% of friends who belong to the African group, 9.50% of friends who belong to the Coloured group and 6.22% who belong to the Indian population group. The African population group has 16.60% of friends who belong to the White group, 9.80% of friends who belong to the Coloured group and 5.36% who belong to the Indian population group. The White males have 12.97% of friends who belong to the African group, 8.52% who belong to the Coloured group and 6.43% who belong to the Indian population group. The White females have 15.20% of friends who belong to the African population group, 10.51% of friends who belong to the Coloured group and 5.94% who belong to the Indian population group. The African males have 11.10% of friends who belong to the White population group, 8.88% who belong to the Coloured group and 5.80% who belong to the Indian population group. And the African

females have 13.12% of friends who belong to the White population group, 9.96% of friends who belong to the Coloured group and 5.03% of friends who belong to the Indian population group. In general the participants in this study seem to prefer to have as friends people who are in-group members belonging to their population groups.

The table 3 above also shows the descriptive statistics of positive feelings towards the out-group (named prejudice in the table 3). In the 7-point scale measuring prejudice the value of four means undecided, the value of five means slightly, the value of six means quite positive and the value seven means extremely positive feelings towards the out-group. The total mean value of 5.02 is above the mid-point of 4 with a standard deviation value of 1.29. The mean value of 5.18 for the White population group is above the mid-point of 4 with a standard deviation value of 1.20. The mean value of 4.88 for the African population group is also above the mid-point of 4. The standard deviation value is 1.40. The means of the variable of prejudice differ significantly by population group ( $F= 16.41$ ;  $p= 0.00$ ;  $df=1, 824$  and  $MS_{Error}= 1.08$ ). The mean value of 4.95 and 5.40 for both the White males and females is above the mid-point of 4. The respective standard deviation values are 1.16 and 1.19. The mean values of 4.84 and 4.91 for the African males and females respectively are above the mid-point of 4. The standard deviation values are 1.49 and 1.31 respectively.

The total mean value of desire for interracial contact (named social distance in the table 3) of 3.91 is above the mid-point value of 3. The standard deviation value is 1.02. The mean value of 3.91 and 4 for both White and African population groups respectively is above the mid-point value of 3. The corresponding standard deviation values are 0.94 and 1.12. The difference between means is statistically insignificant in the two population groups ( $F= 2.43$ ;  $p= 0.11$ ;  $df= 1, 824$  and  $MS_{Error}= 0.66$ ). The mean values of 3.79 and 4.03 for the White males and females respectively are also above the mid-point value of 3. The corresponding values of standard deviation are 1.11 and 1.12. Likewise, the mean values of 3.95 and 4.03 for the African males and

females respectively are above the mid-point value of 3. The corresponding standard deviation values are 1.11 and 1.12.

In sum, the descriptive statistics in the table 3 show the scores of in-group identity and nature of contact above the mid-point of 3. The scores of the frequency of contact are also above the mid-point. The means of cross-race friends are very low. The mean scores of desire for interracial contact are above the mid-point value of 3. All means of the positive feelings towards the out-group are above the mid-point value of 4. Now we turn to look at the relationships between the variables described above.

#### **5.1.4 Inter-correlations between the variables and respective descriptive statistics**

This section presents the correlation coefficients, means and standard deviations of the variables RI (racial identity), NC (nature of contact), FC (frequency of contact), Xracefriends (cross-race friendship), P (prejudice) and SD (social distance) which are used in path analysis and simultaneous multiple regression analysis. Correlation is a measure of the relationship between two or more variables. In this study all correlation coefficients are significant at a probability level of less than 0.05 ( $p < 0.05$ ). As mentioned before, significant levels of the correlations are a primary indication of the reliability of the correlation.

The variable racial identity (RI) is negatively and weakly correlated with all variables which are nature of contact (NC) ( $r = -0.17$ ), frequency of contact (FC) ( $r = -0.10$ ), cross-race friendship (Xracefriends) ( $r = -0.31$ ), prejudice (P) ( $r = -0.19$ ) and with social distance (SD) ( $r = -0.15$ ). The negative correlations of RI with all other variables means that the stronger the identification of the participants with their in-group (population group) the lower the quality of contact, the lower the frequency of contact, the lower the percentage of cross-race friends, the less positive feelings towards the out-group and the lower the desire for contact.

There is moderate positive correlation between NC and FC ( $r=0.45$ ); there is moderate to strong positive correlation between NC and P ( $r=0.65$ ). The correlation between FC and SD ( $r=0.31$ ) is low and positive. The correlation between NC and Xracefriends is also low and positive ( $r=0.24$ ). The correlation between FC and Xracefriends is moderate and positive ( $r=0.45$ ). Similarly, the correlation between FC and P is positive ( $r=0.39$ ). There is low and positive correlation between Xracefriends and P ( $r=0.19$ ). There is also low and positive correlation between Xracefriends and SD ( $r=0.16$ ). See table 4 below.

Table 4: Inter-correlations between the latent variables and descriptive statistics

Measure	RI	NC	FC	Xracefriends	P	Mean	SD
RI	---					3.99	0.62
NC	-0.17*	---				3.94	0.65
FC	-0.10*	0.45*	---			3.19	0.66
Xracefriends	-0.31*	0.24*	0.45*	---		13.23	12.64
P	-0.19*	0.65*	0.39*	0.19*	---	5.05	1.05
					Social distance		
RI	---					3.99	0.62
NC	-0.17*	---				3.94	0.65
FC	-0.10*	0.45*	---			3.19	0.66
Xracefriends	-0.31*	0.24*	0.45*	---		13.23	12.64
Social distance	-0.15*	0.35*	0.31*	0.16*	---	3.95	0.81

\*: statistically significant at probability level less than 0.05 ( $p < 0.05$ ).

The positive correlation between NC and FC means that the higher the quality of contact the more the frequency of contact between population groups. The positive association between Xracefriends and NC means that the higher the quality of contact, the more friends who belong to different races. The positive association of P/SD with NC means that the higher the quality of contact the more positive feelings towards the out-group and the more desire for interracial contact. The positive correlation between Xracefriends and FC

means that the more the frequency of contact the more the cross-race friendships. The positive association between FC and P/SD means that the more the frequency of contact, the more positive feelings towards the out-group and the more the desire for interracial contact. The positive correlation between Xracefriends and P/SD means that the more cross-race friendships the more positive feelings towards the out-group and the more the desire for interracial contact.

The mean values of 3.99 and 3.94 show that in-group identity and nature of contact are above the mid-point value of 3 as perceived by the participants. The variability is revealed by the respective standard deviation value of 0.62 and 0.65. The frequency of interracial contact with a mean value of 3.19 is also above the mid-point value of 3 which means undecided. The corresponding standard deviation value is 0.66. The positive feelings in the participants towards each other with a mean value of 5.05 are also above the mid-point of 5. The variability is shown by the standard deviation value of 1.05. The desire in the participants for interracial contact with a mean value of 3.95 is above the mid-point of 3 as well. The corresponding standard deviation value is 0.81. The variable of cross-race friends has a very low mean of 13.23% which shows that the participants prefer to have as friends most people who belong to the same population group as themselves. The respective standard deviation is 12.64. (see table 4 above). The information given by the correlation matrix is taken further by the results of path analysis and simultaneous multiple regression analysis in the parts 4.2 that follows.

The results of the path analysis are presented first. The results of the simultaneous regression analysis are presented last.

## **5.2 Results of path analysis**

The results of path analysis show the causal models presented separately for prejudice and social distance variables. The same conceptual model presented in the method section is shown below (showing the latent variables

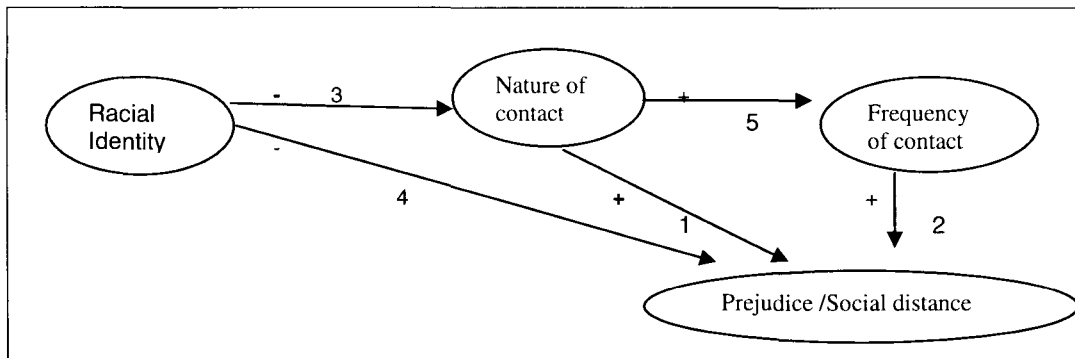
of the study only) for easy comparison of the input and the output models. The output models reflect the results of the path analysis concerned with the entire sample of participants and by population groups. All causal models (by the whole sample and by population groups) in this study are just-identified because for each free parameter a value was obtained through one, and only one, manipulation of the observed data. The results of the possible causal relations of prejudice and social distance add evidence and possible insight into the issue of the relationships between racial identity, contact and prejudice/social distance.

#### *The parameter estimates from the path analysis*

Standardized solution was used for parameter estimates. Then, computation provided path coefficients which are standardized regression coefficients - *beta* weights (Arminger, Clogg & Sobel, 1995; Heise 1975; Hoyle, 1995; Loehlin, 1992). The magnitudes of the *beta* weight are therefore comparable. For this reason, one can draw conclusions about which explanatory variables play an important role.

The results of the path analysis present indices of the test for normality and model fit. Across the analysis, the values of the test show violation of normality assumption because all values of normalized multivariate kurtosis are bigger than 1.96. As Raykov (1998) observes, the real-life data is not often normally distributed. However, the maximum likelihood estimates are good and robust to the violation of normality. Likewise, across the analysis the *p* value for chi-square shows that the model does not fit the data. But, the Steiger-Lind *RMSEA* point estimate shows that the model reproduces the data of this study with accuracy within an interval of approximation (Raykov, 1997; Steiger, 1990). The conceptual model is of good fit and the trimmed model is of fair fit. The following model estimates are also provided in the results of path analysis: parameter estimate (path coefficients), probability level (*p*-value), direct and indirect effects of exogenous on endogenous variables. The unity of analysis in the path analysis is covariance. The conceptual model is depicted in the figure 2 below.

Figure 2: Conceptual causal model for prejudice/social distance



Figures 2: Conceptual model for the study of the effects of racial identity on contact and prejudice (P)/ social distance (SD). The hypothesized paths are numbered (1, 2, 3, 4 and 5). The signs + and - indicate the hypothesised direction of the effects of one variable on another.

The positive and negative effects are given by positive and negative path coefficients.

### 5.3.1 Causal model of prejudice

First are the results for the whole sample. The results by population groups and by gender follow.

- *Causal model of prejudice by the entire sample (N=826)*

The *RMSEA* test of this analysis gives the point estimate value of 0.06. It indicates a good fit of the model to the data. For this reason, the model estimates are interpreted as follows.

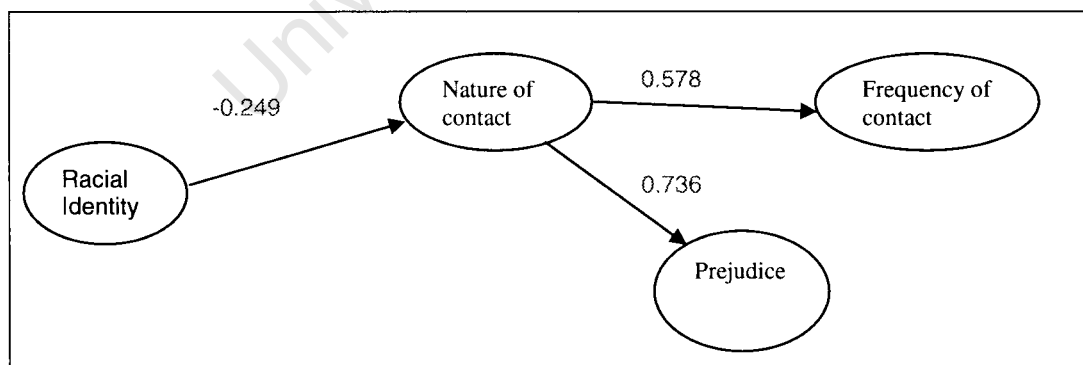
Racial identity has negative and significant effects on the nature of contact and it has negative but statistically insignificant effects on prejudice. The nature of contact has positive and statistically significant effects on the frequency of contact and on prejudice. The frequency of contact has positive but statistically insignificant effects on prejudice. The strongest effect is that exerted by nature of contact on frequency of contact and on prejudice. Table 5 summarises the results of the causal model.

Table 5: Parameter estimate of the causal model of prejudice for the entire sample and the two population groups

	Whole sample (N=826)		Population groups			
	Parameter estimate	P-level	White (N=457) Parameter estimate	P-level	African (N=369) Parameter estimate	P-level
Racial identity ----> Nature of contact	-0.249	0.0004	-0.271	0.0004	-0.022	0.729
Racial identity ----> Prejudice	-0.041	0.180	-0.085	0.039	-0.026	0.580
Nature of contact ----> Frequency of contact	0.578	0.0004	0.588	0.0004	0.542	0.0004
Nature of contact -->Prejudice	0.736	0.0004	0.670	0.0004	0.788	0.0004
Frequency of contact -----> Prejudice	0.055	0.206	0.108	0.067	-0.013	
Steiger-Lind RMSEA point estimate	0.0656		0.0595		0.0693	
Normalised multivariate kurtosis	52.635		18.356		46.121	
Chi-square p-level= 0.0004						

The output path diagram for the entire sample is shown as figure 3 which shows the significant effects of one variable on another. Statistically insignificant effects are not included in the figure.

Figure 3: Causal model of prejudice for the entire sample (N=826)



Racial identity exerts indirect negative effects via nature of contact on frequency of contact. The corresponding coefficient is -0.144 ( $=-0.249 \times 0.578$ ). It also has indirect negative effects via nature of contact on prejudice. The respective coefficient is -0.183 ( $=-0.249 \times 0.736$ ). Next presented are the

results of path analysis by the two population groups. As mentioned before the study deals with two population groups, White and African. The aim is to compare the results and point out the patterns in the light of social identity and the reformulated contact theories.

- *Causal model of prejudice for the two population groups*

The Steiger-Lind *RMSEA* point estimate of 0.05 and 0.06 for the White and African population group respectively indicates that the model is of good fit. The parameter estimates are presented in table 5 above. Figure 4 below illustrates the significant paths by the two population groups.

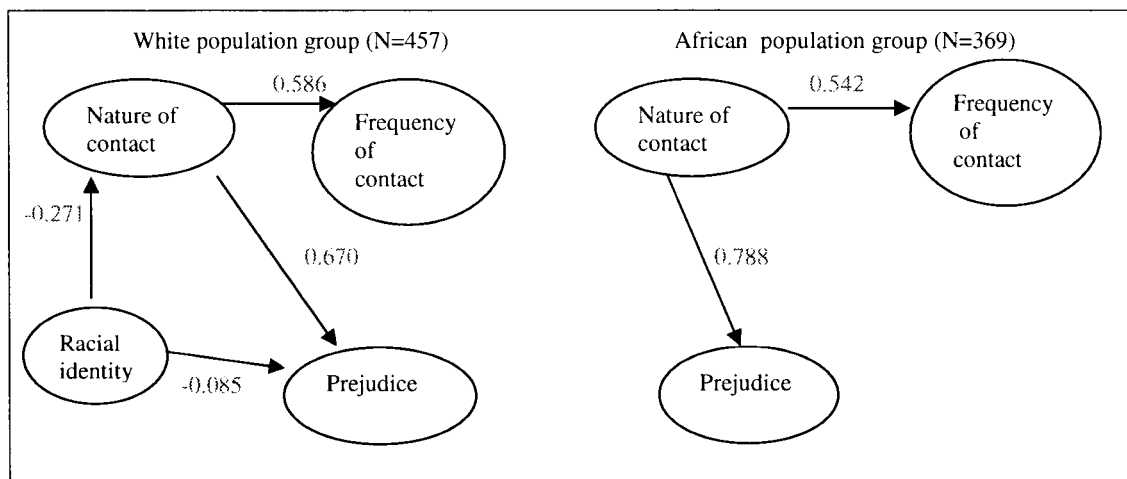
*In the White population group (N=457)*

Racial identity has negative and significant effects on the nature of contact and on prejudice. The nature of contact has positive significant effects on the frequency of contact and on prejudice. The effect of frequency of contact on prejudice is positive but statistically insignificant. Racial identity exerts indirect effects via nature of contact on frequency of contact. The respective coefficient is -0.159 ( $= -0.271 \times 0.588$ ). It also has indirect effect via nature of contact on prejudice. The corresponding coefficient is -0.182 ( $= -0.271 \times 0.670$ ). The respective coefficient of total effect is -0.267 ( $= -0.182 - 0.085$ ).

*In the African population group (N=369)*

Racial identity exerts negative but statistically insignificant effects on the nature of contact and on prejudice. The nature of contact has positive and statistically significant effects on the frequency of contact and on prejudice. The frequency of contact has negative but statistically insignificant effects on prejudice (see figure 4 below).

Figure 4: Causal model of prejudice for the two population groups



The parameter estimate shows that racial identity has negative but statistically insignificant effects on prejudice for the entire sample and for the African population group. It also has negative but statistically insignificant effects on nature of contact for the African population group only while for the whole sample and the White population group its effects are negative and significant. Moreover, the frequency of contact has statistically insignificant effects across the three models (by the entire sample, White and African population groups). As revealed by the descriptive statistics, interracial contact does not occur frequently. Taking this fact into account, next presented is the trimmed causal model of prejudice which left out the frequency of contact variable. Consequently, some paths were deleted. The deletion of some paths led to changes in the magnitude of the  $\beta$  values (path coefficients) as well as changes in the results of their  $t$  statistics and the corresponding  $p$ -level values (Kaplan, 2000).

- *Trimmed causal model of prejudice - the frequency of contact variable left out for the entire sample (N=826)*

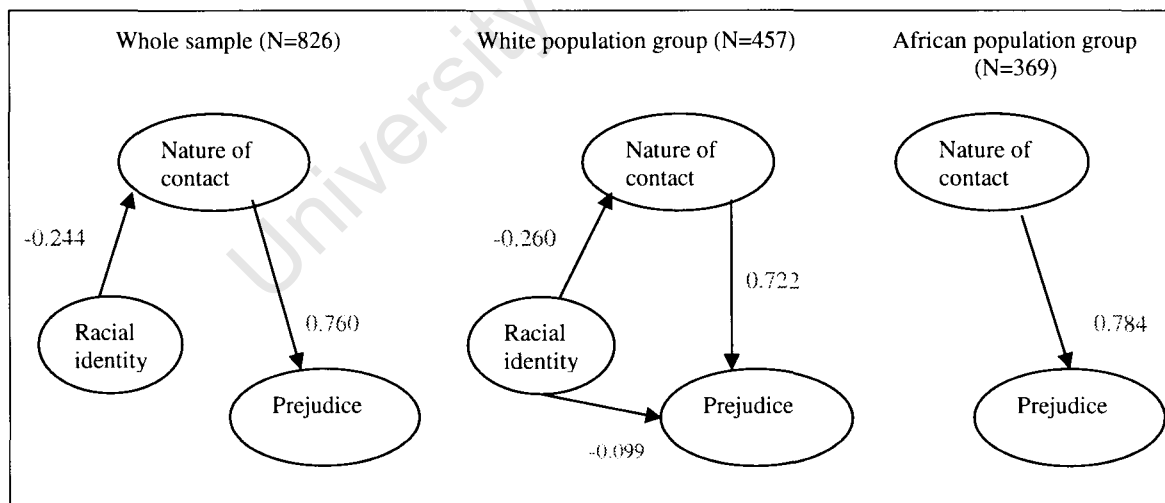
The results of the path analysis for the entire sample show the Steiger-Lind *RMSEA* point estimate of 0.0752 which is an indication of fair fit of the model to the data. The estimates are shown in table 6 below. Racial identity has significant negative effects on the nature of contact. The later has positive significant effects on prejudice.

Table 6: Parameter estimate of the trimmed causal model of prejudice for the entire sample and the two population groups

	Whole sample (N=826)		Population groups			
		<i>P</i> -level	White (N=457) Parameter estimate	<i>P</i> -level	African (N=369) Parameter estimate	<i>P</i> -level
Racial identity ----->Nature of contact	-0.244	0.0004	-0.260	0.0004	-0.012	0.853
Racial identity ----->Prejudice	-0.047	0.119	-0.099	0.0004	-0.034	0.481
Nature of contact --->Prejudice	0.760	0.0004	0.722	0.0004	0.784	0.0004
Steiger-Lind RMSEA point estimate	0.0752		0.0748		0.0786	
Normalised multivariate kurtosis	57.347		20.003		55.344	
	Chi-square <i>p</i> -level= 0.0004					

The effect of racial identity on prejudice is negative and statistically insignificant. Figure 5, next, shows the significant paths only for the entire sample and the two population groups.

Figure 5: Trimmed causal model of prejudice for the whole sample and the two population groups



Racial identity has indirect negative effects via the nature of contact on prejudice for the entire sample. The respective coefficient is  $-0.185$  ( $= -0.244 \times 0.760$ ). Following the same procedure as before, next presented is the same trimmed model for the two population groups.

- *Trimmed causal model of prejudice for the two population groups*

When frequency of contact is left out, the result of the Steiger-Lind *RMSEA* point estimate is 0.0748 for the White population group and 0.0786 for the African population group. The two values indicate that the model is of fair fit. The table 6 above shows the respective parameter estimates illustrated in the output path diagram (figure 5 above).

*In the White population group (N=457)*

Racial identity has negative and statistically significant effects on the nature of contact and on prejudice. It exerts indirect effects via nature of contact on prejudice. The respective coefficient is -0.187 ( $= -0.260 \times 0.722$ ). The corresponding estimate of total effect is -0.286 ( $= -0.187 - 0.099$ ). The nature of contact has positive significant effects on prejudice (see figure 5 above).

*In the African population group (N=369)*

Racial identity exerts negative but statistically insignificant effects on both nature of contact and prejudice for the African population group. Conversely, nature of contact has direct and statistically significant effects on prejudice (see figure 5 above).

*Similarities between the conceptual and the trimmed causal model*

The two models – the conceptual model with the four latent variables and the trimmed model - are similar concerning the nature (statistically in/significant) and the sign of the causal relationships between the variables. Across all models racial identity has direct negative but statistically insignificant effects on prejudice by the whole sample and by the African population group when all four causal variables are included. Also systematically, the direct effect of racial identity on nature of contact is negative and significant for the entire sample and for the White population group. The nature of contact has direct and positive significant effects on the frequency of contact systematically

(across all causal models). It also has direct positive significant effects on prejudice across all causal models for the entire sample and for all population groups. The direct effect of racial identity on the nature of contact is statistically insignificant for the African population group systematically. Racial identity has negative but statistically significant effects on prejudice for the White population group only. Now the results of causal effects on social distance follow.

### 5.3.2 Causal model of social distance

The causal model of social distance is also outlined for the entire sample and for population groups.

- *Causal model of social distance by the whole sample (N=826)*

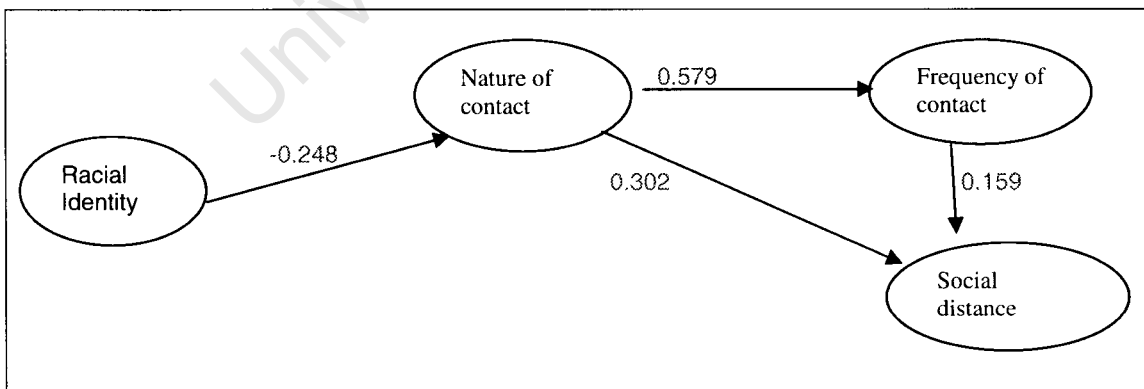
The Steiger-Lind *RMSEA* point estimate is 0.065 which means a good fit of the model to the data. There is one parameter estimate (Racial identity ----- --> Social distance) which is statistically insignificant. The following table 7 shows the summary of the results and the figure 6 is the output path diagram which illustrates significant paths only. Racial identity exerts a negative significant effect on the nature of contact and a negative but statistically insignificant effect on social distance. Nature of contact exerts a positive significant effect on the frequency of contact and on social distance. The frequency of contact has positive significant effects on social distance.

Table 7: Parameter estimate of the causal model of social distance for the entire sample and the two population groups

	Whole sample (N=826)		Population groups			
		<i>P</i> -level	White (N=457) Parameter estimate	<i>P</i> -level	African N=369 Parameter estimate	<i>P</i> -Level
Racial identity ----->Nature of contact	-0.248	0.0004	-0.271	0.0004	-0.023	0.723
Racial identity ----->Social distance	-0.073	0.055	-0.245	0.0004	0.032	0.577
Nature of contact ---->Frequency of contact	0.579	0.0004	0.587	0.0004	0.545	0.0004
Nature of contact ----->Social distance	0.302	0.0004	0.336	0.0004	0.288	0.0004
Frequency of contact ---->Social distance	0.159	0.003	0.162	0.0004	0.131	0.086
Steiger-Lind RMSEA point estimate	0.065		0.063		0.0667	
Normalised multivariate kurtosis	37.314		11.666		35.796	
Chi-square p-level= 0.0004						

The indirect effects are clearly illustrated in figure 6.

Figure 6: Causal model of social distance for the entire sample



Racial identity exerts indirect effects via the nature of contact on the frequency of contact. The respective coefficient is  $-0.143$  ( $-0.248 \times 0.579$ ). It also exerts indirect effects via the nature of contact of social distance. The corresponding coefficient is  $-0.074$  ( $= -0.248 \times 0.302$ ). The nature of contact

has indirect effects via the frequency of contact on social distance. The respective coefficient is 0.092 ( $0.579 \times 0.159$ ) and the total effect estimate is 0.394 ( $=0.092+0.302$ ). The output path diagrams by population groups shown next are different.

- *Causal model of social distance for the two population groups*

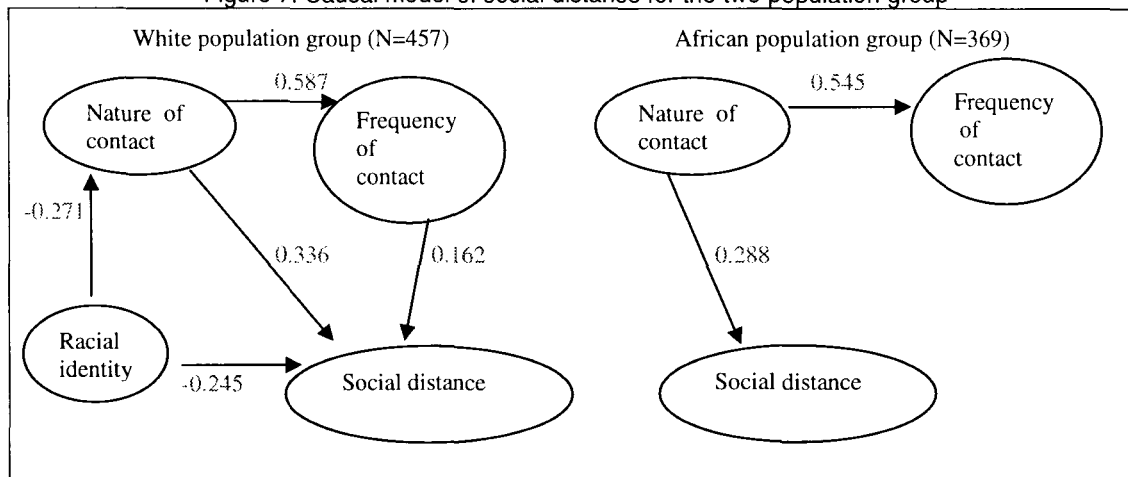
The Steiger- Lind *RMSEA* point estimate of 0.063 and 0.0667 for the White and the African population group respectively shows that the model is of good fit. The parameter estimates are shown in table 7 above. All paths are significant for the White population group whereas only two paths are significant for the African population group.

*In the White population group (N=457)*

Racial identity has negative and significant effects on the nature of contact and on social distance. Nature of contact has positive significant effects on the frequency of contact and on social distance. The frequency of contact has positive significant effects on social distance. Figure 7 below illustrates the significant parameters.

Racial identity exerts indirect effects via nature of contact on frequency of contact. The respective coefficient is -0.159 ( $= -0.271 \times 0.587$ ). It also exerts indirect effects via the nature of contact on social distance. The coefficient is -0.091 ( $= -0.271 \times 0.336$ ). The respective total effect estimate is -0.336 ( $= -0.091-0.245$ ). The nature of contact has indirect effects via the frequency of contact on social distance. The respective coefficient is 0.095 ( $= 0.587 \times 0.162$ ). The coefficient of total effect is 0.431 ( $0.095+0.336$ ).

Figure 7: Causal model of social distance for the two population group



*In the African population group (N=369)*

Racial identity has negative but statistically insignificant effects on nature of contact and social distance. The nature of contact has significant effects on the frequency of contact and on social distance. The frequency of contact has positive but statistically insignificant effects on social distance (see table 7 and figure 7 above).

Following the same logic of causal analysis for prejudice, the variable frequency of contact was left out of the trimmed model for the entire sample and for the population groups.

- *Trimmed causal model of social distance - the frequency of contact variable left out - for the whole sample (N=826)*

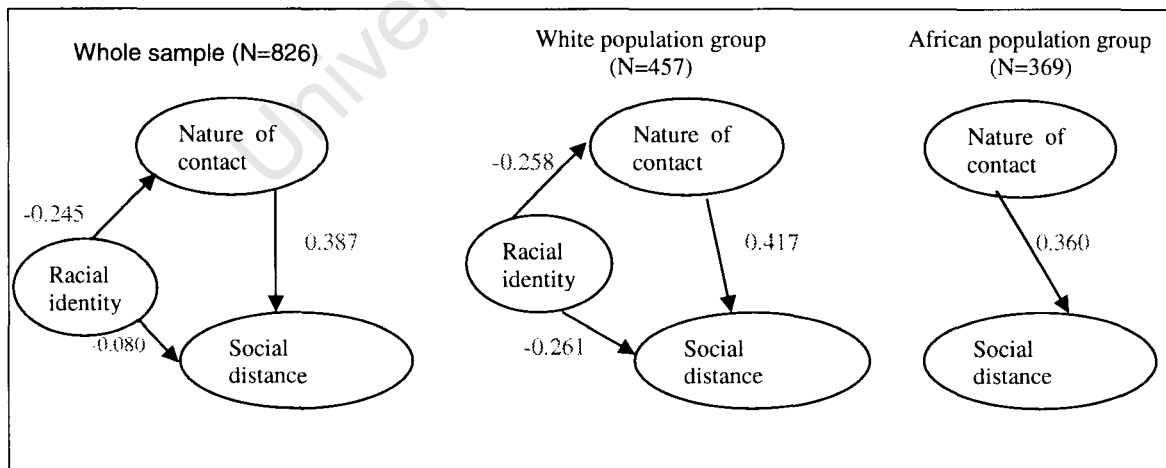
The resulting modified model is shown in the figure 8 below. The corresponding estimates are summarized in table 8 that follows. The Steiger-Lind *RMSEA* point estimate is 0.075 which shows that the model is of fair fit. Racial identity exerts significant negative effects on the nature of contact and on social distance. The nature of contact has significant positive effect on social distance.

Table 8: Parameter estimate of the trimmed causal model of social distance for the entire sample and the two population groups

	Population groups					
	Whole sample (N=826)		White (N=457)		African (N=369)	
	Parameter estimate	P- level	Parameter estimate	P-level	Parameter estimate	P- level
Racial identity ----> Nature of contact	-0.245	0.0004	-0.258	0.0004	-0.014	0.832
Racial identity ---->Social distance	-0.080	0.0004	-0.261	0.0004	0.021	0.712
Nature of contact ----> Social distance	0.387	0.0004	0.417	0.0004	0.360	0.0004
Steiger-Lind RMSEA point estimate	0.075		0.0795		0.0777	
Normalised multivariate kurtosis	40.088		13.555		42.138	
Chi-square p-level= 0.0004						

All parameters depicted in figure 8 are statistically significant.

Figure 8 Trimmed causal model of social distance for the entire sample and the two population groups



Racial identity has indirect effects via the nature of contact on social distance. The corresponding coefficient is  $-0.0948 (= -0.245 \times 0.387)$ . The total effect of racial identity on social distance is negative with a coefficient of  $-0.1748 (= -$

0.0948-0.080). Next are the results of the trimmed causal model by population groups.

- *Trimmed causal model of social distance - the frequency of contact variable left out - by the two population groups*

When the frequency of contact is left out, the model is of fair fit as indicated by the values of 0.0795 and 0.0777 of Steiger-Lind *RMSEA* point estimate for the White and the African population group respectively. The respective significant estimates are shown in table 8 above.

*In the White population group*

The effect of racial identity on the nature of contact and on social distance is negative and significant. The effect of nature of contact on social distance is positive and significant.

Figure 8, presented above illustrates the significant paths. Racial identity exerts indirect effects via the nature of contact on social distance. The respective coefficient is -0.107 ( $= -0.258 \times 0.417$ ). The coefficient of total effect is -0.368 ( $= -0.107 - 0.261$ ).

*In the African population group*

Only nature of contact has a direct positive and significant effect on social distance. The effect of racial identity on the nature of contact and on social distance is statistically insignificant (see table 8 and figure 8 above). The results are similar to the results of the trimmed causal model of prejudice for the same African population group.

There are similarities and differences between the conceptual and the trimmed causal models of social distance.

### *Similarities*

Racial identity exerts direct negative but statistically significant effects on the nature of contact across all the causal models for the entire sample and for the White population group systematically. Racial identity has negative and statistically insignificant effects on the nature of contact for the African population group. Nature of contact exerts positive and significant effects on social distance and frequency of contact variable for the entire sample and for population groups systematically.

### *Differences*

In the conceptual model, racial identity exerts direct negative and significant effects on social distance for the White population group only. In the trimmed model, racial identity has negative but statistically significant effects on social distance by the entire sample and by the White population group. In the conceptual model the direct effect of frequency of contact on social distance is positive and statistically significant for the entire sample and for the White population group.

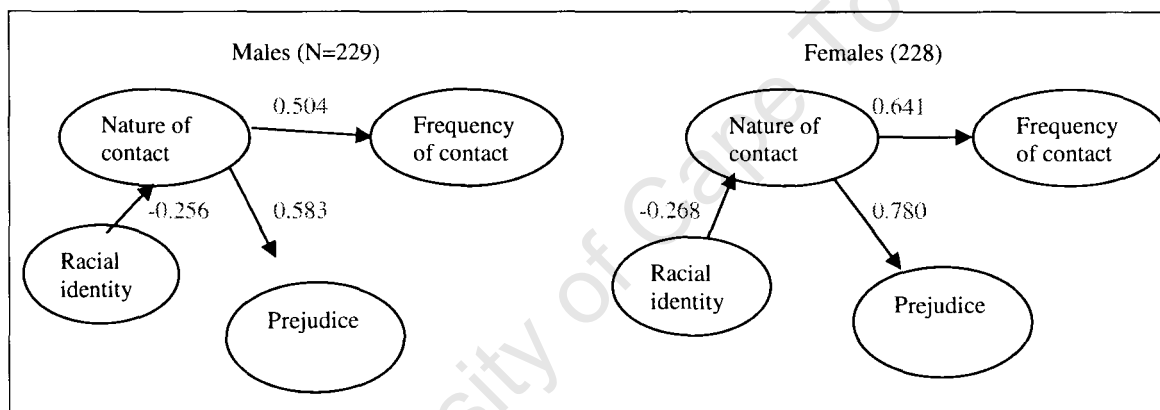
The value of the Steiger-Lind *RMSEA* point estimate changes along with the modification of the model. The model is of good fit when the variable frequency of contact is included together with racial identity and nature of contact. When the frequency of contact variable is left out, the model is of fair fit to the data across the analyses for the whole sample and for the population groups. Across the path analysis one can see that the variable of racial identity has statistically insignificant effects on nature of contact and on prejudice as well as on social distance for the African population group. For this reason, the researcher decided to examine the effects of the racial identity variable by gender. Below are the results which show that racial identity has opposite signs but statistically significant effects on prejudice only by gender in the African population group.

### 5.3.3 Results of path analysis by gender

#### *Causal model of prejudice by gender*

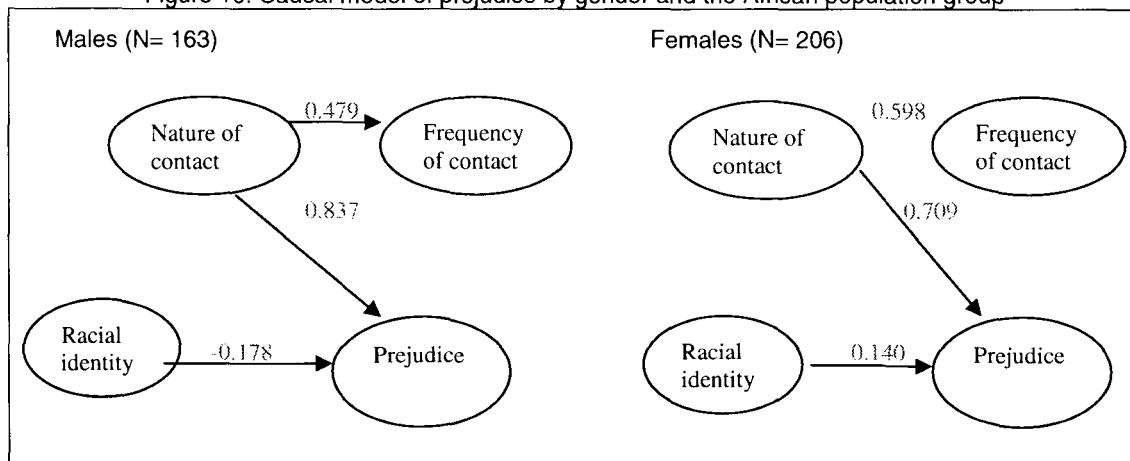
The results by gender show that there is one model given in figure 9 for White males and White females. The nature (statistically in/significant) and the signs of the effects are the same. However, the strength of the relationships given by the values called path coefficients slightly change by gender. As illustrated in the figure 9 racial identity exerts negative but statistically significant effects on nature of contact. The later exerts positive and statistically significant effects on the frequency of contact and on prejudice.

Figure 9: Causal model of prejudice by gender and the White population group



The figure 10 shows the significant paths by gender in the African population group. Racial identity has statistically insignificant effects on nature of contact. The parameters from racial identity to prejudice for males and females are statistically significant but with opposite signs. This means that the stronger the racial identity in the African males the lower the positive feelings towards the out-group. Conversely, the stronger the racial identity is the higher the positive feelings in the African females towards the out-group. Once more, nature of contact has positive and statistically significant effects on frequency of contact and prejudice (see figure 10 next).

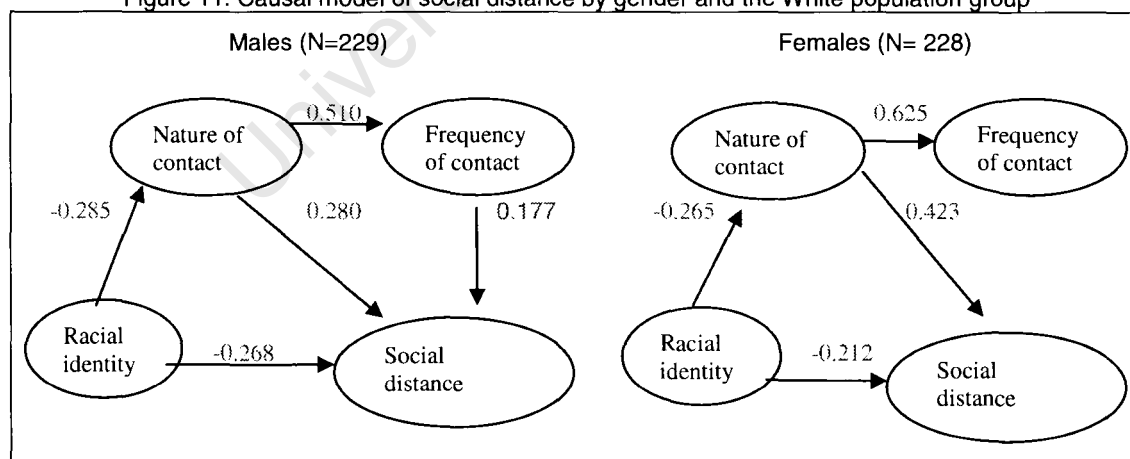
Figure 10: Causal model of prejudice by gender and the African population group



### Causal model of social distance by gender

There are two models for the White males and White females respectively (see figure 11 below). Racial identity has negative but statistically significant effects on nature of contact and on social distance in White males and White females. The nature of contact exerts positive and statistically significant effects on frequency of contact and on social distance across all groups. Frequency of contact exerts positive and statistically significant effects on social distance for the White males.

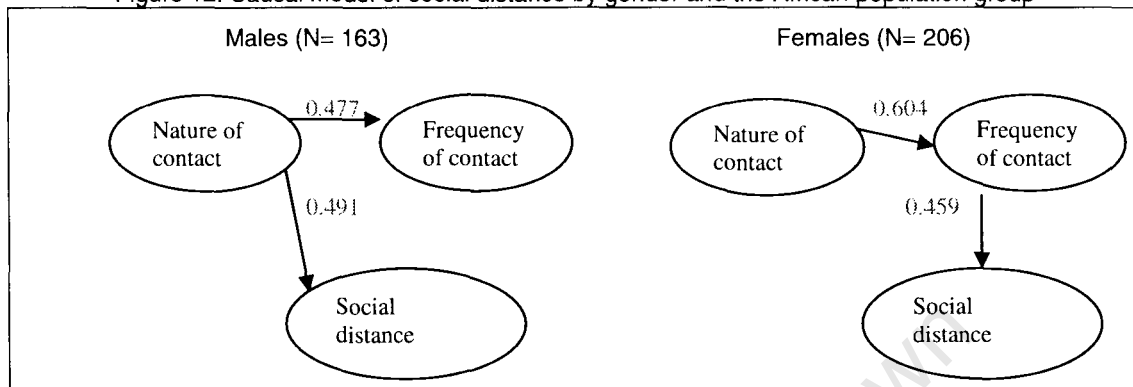
Figure 11: Causal model of social distance by gender and the White population group



The causal model of social distance by gender in the African population group is different. The nature of contact variable has statistically significant and positive effects on social distance only for males. Frequency of contact has positive and statistically significant effects on social distance for African

females. Nature of contact has statistically significant but indirect effects on social distance for the African females. Again racial identity has statistically insignificant effects on the endogenous variables in this population group (see figure 12 that follows).

Figure 12: Causal model of social distance by gender and the African population group



There are pre-eminent positive effects of the variable of nature of contact on social distance across all groups.

The simultaneous regression model that follows provides indices of the amount of the explained variance in the dependent variable of prejudice/social distance.

#### 5.4 Simultaneous regression model

All the predictors (racial identity, nature of contact and frequency of contact) were tested at once for the entire sample, by population groups and by gender.

In the table 9 below, one can see four models. One model is for the entire sample, the White population group and both the White males and females. The nature (statistically in/significant) and the signs (positive or negative) are the same. The other model is for the African population group and two more models are for the African males and African females. The strength of the effects of each predictor varies as the participants are all participants (N=826), all Whites (N= 457), White males (N= 228) and White females (N= 229), African (N= 369), African males (N= 163) and African females (N=206). The

value of the coefficient of determination ( $R^2$ ) also changes. The table 9 below only reports the predictors that have statistically significant effects.

#### 5.4.1 Simultaneous regression model for the entire sample

As shown in table 9, the variable of prejudice was regressed onto the predictor variables. For the entire sample racial identity has a negative effect on prejudice (positive feelings about the target population group – either White or African) because its beta value  $\beta$  (*Beta*) value is negative and significant at a  $p$ -level value of less than 0.05 ( $p < 0.05$ ). In contrast, the predictor nature of contact and frequency of contact have positive effects on the prejudice variable because their  $\beta$  (*Beta*) is positive and also statistically significant at a  $p$ -level value of less than 0.05 ( $p < 0.05$ ). Nature of contact is the predictor that has the strongest effect on prejudice since its *Beta* value is the highest ( $\beta = 0.58$ ). The predictor variables acting together explain 44,30% of variation of the prejudice (positive feeling towards the target population group either White or African) and are left with 55,7% ( $= 1 - R^2$ ) residual variability.

The regression summary in table 9 also shows that for the entire sample the relative contribution of racial identity in the prediction of the social distance variable is negative because its  $\beta$  (*Beta*) value is negative and significant at a  $p$ -level value of less than 0.05 ( $p < 0.05$ ). The relative contribution of the predictor nature of contact and frequency of contact is positive; their  $\beta$  (*Beta*) value is positive and also statistically significant at the  $p$ -level value mentioned above. Nature of contact is the predictor that has the strongest effect on social distance since its  $\beta$  (*Beta*) value is the highest ( $\beta = 0.25$ ). The same table 9 shows that 16,24% variation of the social distance is explained by the predictor variables acting together and left with 83,76% ( $= 1 - R^2$ ) residual variability (see table 9).

Table 9: Regression summary for the dependent variable of prejudice/social distance for the entire sample, two population groups and by gender

	Entire sample N= 826	White N= 457	African N= 369	White males N= 229	White females N= 228	African males N= 163	African females N= 206
Dependent variable: Prejudice	$R^2 = .4430$	$R^2 = .4601$	$R^2 = .4128$	$R^2 = .3388$	$R^2 = .5358$	$R^2 = .4093$	$R^2 = .4678$
	Racial identity (-0.07)	Racial identity (-0.12)		Racial identity (-0.13)	Racial identity (-0.11)	Racial identity (-0.12)	Racial identity (0.12)
	Nature of contact (0.58)	Nature of contact (0.55)	Nature of contact (0.60)	Nature of contact (0.46)	Nature of contact (0.62)	Nature of contact (0.64)	Nature of contact (0.55)
	Frequency of contact (0.11)	Frequency of contact (0.15)		Frequency of contact (0.14)	Frequency of contact (0.12)		Frequency of contact (0.19)
Dependent variable: Social distance	$R^2 = .1624$	$R^2 = .29$	$R^2 = .1226$	$R^2 = .2630$	$R^2 = .2962$	$R^2 = .1367$	$R^2 = .1987$
	Racial identity (-0.08)	Racial identity (-0.28)		Racial identity (-0.30)	Racial identity (-0.24)		
	Nature of contact (0.25)	Nature of contact (0.29)	Nature of contact (0.24)	Nature of contact (0.23)	Nature of contact (0.35)	Nature of contact (0.39)	
	Frequency of contact (0.19)	Frequency of contact (0.17)	Frequency of contact (0.15)	Frequency of contact (0.17)	Frequency of contact (0.13)		Frequency of contact (0.39)

Entries in brackets are Beta weights, and are all significant at  $p < 0.05$

#### 5.4.2 Simultaneous multiple regression model by population groups and by gender

Racial identity, with  $\beta$  (beta) values of -0.12 for the White population group, -0.13 for White males and -0.11 for White females, has negative but statistically significant effects on prejudice. The nature of contact with the  $\beta$  (beta) values of 0.55, 0.46 and 0.62 for the White population group, White males and White females respectively has positive and statistically significant effects on prejudice. Likewise, the frequency of contact with  $\beta$  (beta) values of 0.15, 0.14 and 0.12 for the White population group, White males and White females respectively, has positive and statistically significant effects on prejudice. The overall model for the White population group explains 46,01% of variance in the dependent variable of prejudice (positive feelings towards the African population group) and is left with 53,99% ( $=1 - R^2$ ) residual

variability. The overall model for the White males explains 33,88% of variance in the prejudice and is left with 66,12% ( $=1- R^2$ ) residual variability. And the overall model for the White females explains 53,58% of variance in prejudice and is left with 46,42% ( $=1- R^2$ ) residual variability (see table 9 above).

The overall model for the African population group explains 41,28% of variance in prejudice and is left with 58,72% ( $=1- R^2$ ) residual variability. In this model nature of contact only, with the positive  $\beta$  (*beta*) values of 0.60, has statistically significant and positive effects on prejudice. The overall model for African males explains 40,93% of variance in prejudice and is left with 59,07% ( $=1- R^2$ ) residual variability. In this model racial identity with  $\beta$  (*beta*) values of -0.12 has negative but statistically significant effects on prejudice while nature of contact has positive and statistically significant effects on prejudice. The overall model for African females explains 46,78% of variance in the prejudice variable and is left with 53,22% ( $=1- R^2$ ) residual variability. Racial identity, nature of contact and frequency of contact have positive and statistically significant effects on prejudice. The strongest relative contributor is nature of contact with a  $\beta$  (*beta*) value of 0.55 (see table 9 above).

We now inspect the predictors of social distance by population groups as well as by gender. Racial identity, with the  $\beta$  (*beta*) values of -0.28, -0.30 and -0.24 for the White population group, White males and White females respectively, has significant but statistically negative effects on social distance. Nature of contact with the  $\beta$  (*beta*) values of 0.29, 0.23 and 0.35 for the White population group, White males and White females respectively, has statistically significant and positive effects on social distance. Similarly, the frequency of contact, with its  $\beta$  (*beta*) values of 0.17, 0.17 and 0.13 for the White population group and for both White males and females respectively, has positive and statistically significant effects on social distance. The overall model for the White population group explains 29,00% of variance in the social distance and is left with 71% ( $=1- R^2$ ) residual variability. The overall model for the White males explains 26,30% of variance in the social distance and is left with 73,7% ( $=1- R^2$ ) residual variability. And the overall model for

the White females explains 29,62% of variance in the of social distance and is left with 70,38% ( $=1- R^2$ ) residual variability (see table 9 above).

The model for the African population group explains 12,26% of variance in the social distance and is left with 87,74% ( $=1- R^2$ ) residual variability. Both, nature and frequency of contact have positive and significant effects on the social distance. The respective  $\beta$  (*beta*) values are 0.24 and 0.15. The model for the African males explains 13,67% of variance in social distance and is left with 86,33% ( $=1- R^2$ ) residual variability. Nature of contact with the  $\beta$  (*beta*) value of 0.39 is the unique predictor of social distance. Likewise, there is one predictor only in the model for African females. The frequency of contact with the  $\beta$  (*beta*) value of 0.39 has statistically significant and positive effects on social distance. This model explains 19,87% of variance in social distance variable and is left with 80,13% ( $=1- R^2$ ) residual variability (see table 9 above).

#### 5.4.3 Modified simultaneous regression model

The simultaneous regression model was modified as the variable of frequency of contact was left out of the analysis. In table 10 below one can see two models for the prediction of prejudice. One model is for the entire sample, White population group, White males, White females, African males and African females. Another model is for the African population group. The coefficient of multiple determination as well as the beta weight vary across the models. Nature of contact is the strongest contributor to the explained variance of prejudice because it has the highest *beta* value across all models of sub-groups of participants.

The overall model for the entire sample explains 43,21% of variation in the prejudice. The relative contribution of racial identity is negative but statistically significant with a  $\beta$  (*beta*) value of -0.07. Nature of contact with a  $\beta$  (*beta*) value of 0.63 has positive and statistically significant relative contribution to the explained variance. The overall model for the White population group explains 44,21% of variation in the prejudice. Racial identity with a  $\beta$  (*beta*)

value of -0.14 has negative but statistically significant effects on prejudice. Nature of contact with a  $\beta$  (*beta*) value of 0.62 has positive and statistically significant effects on the prejudice. The overall model for the African population group explains 40,78% of variance in prejudice. Only nature of contact with a  $\beta$  (*beta*) value of 0.63 has statistically positive and significant effects on prejudice.

The overall model for White males explains 32,02% of variance in prejudice. Racial identity with a  $\beta$  (*beta*) value of -0.15 has negative but statistically significant effects whereas nature of contact with a  $\beta$  (*beta*) value of 0.51 has positive and statistically significant effects on prejudice. The overall model for White females explains 52,33% of variance in prejudice. Racial identity with a  $\beta$  (*beta*) of -0.12 has negative but statistically significant effects while nature of contact with a  $\beta$  (*beta*) value of 0.68 has positive and statistically significant effects on prejudice. The overall model for African males explains 40,85% of variance in prejudice. Racial identity with a  $\beta$  (*beta*) value of -0.12 has negative but statistically significant effects on prejudice while nature of contact with a  $\beta$  (*beta*) value of 0.63 has positive and statistically significant effects. The overall model for African females explains 43,88% of variation in prejudice. Both racial identity and nature of contact have positive and statistically significant effects on prejudice. The corresponding beta values are 0.12 and 0.65 (see table 10).

Table 10: Regression summary for the dependent variable of prejudice/social distance for the entire sample, two population groups and gender

		Entire sample N= 826	White N= 457	African N= 369	White males N= 229	White females N= 228	African males N= 163	African females N= 206
Dependent variable: Prejudice		$R^2 = .4321$	$R^2 = .4421$	$R^2 = .4078$	$R^2 = .3202$	$R^2 = .5233$	$R^2 = .4085$	$R^2 = .4388$
	Predictors	Racial identity (-0.07)	Racial identity (-0.14)		Racial identity (-0.15)	Racial identity (-0.12)	Racial identity (-0.12)	Racial identity (0.12)
		Nature of contact (0.63)	Nature of contact (0.62)	Nature of contact (0.63)	Nature of contact (0.51)	Nature of contact (0.68)	Nature of contact (0.63)	Nature of contact (0.65)
Dependent variable: Social distance		$R^2 = .1336$	$R^2 = .2671$	$R^2 = .1027$	$R^2 = .2370$	$R^2 = .2816$	$R^2 = .1305$	$R^2 = .0822$
	Predictors	Racial identity (-0.09)	Racial identity (-0.29)		Racial identity (-0.33)	Racial identity (-0.25)		
		Nature of contact (0.33)	Nature of contact (0.36)	Nature of contact (0.32)	Nature of contact (0.30)	Nature of contact (0.41)	Nature of contact (0.36)	Nature of contact (0.28)

Entries in brackets are Beta weights, and are all significant at  $p < 0.05$

We now turn to the predictors of social distance as provided by the modified simultaneous regression model. There appear two models for the different sub-groups of participants. One model is for the entire sample, the White population group, White males and White females where the two predictors play a statistically significant role. Another model is for the African population group, African males and African females where only one predictor plays a statistically significant role. Once more, there is a pre-eminent positive and statistically significant relative contribution of the predictor nature of contact to the explained variance of social distance across all models of the sub-groups of participants.

The overall model for the entire sample explains 13,36% of variance in social distance. Racial identity with a  $\beta$  (beta) value of -0.09 has negative but statistically significant effects whereas nature of contact with a  $\beta$  (beta) 0.33 has positive and statistically significant effects on the social distance. The

overall model for the White population group explains 26,71% of variance in social distance. Racial identity with a  $\beta$  (*beta*) value of -0.29 has negative but statistically significant effects while nature of contact with a  $\beta$  (*beta*) value of 0.36 has positive and statistically significant effects on social distance. The overall model for the African population group explains 10,27% of variance in social distance. Once more, only nature of contact with a  $\beta$  (*beta*) value of 0.32 has positive and statistically significant effects on social distance.

The overall model for the White males explains 23,70% of variance in the social distance. Racial identity with a  $\beta$  (*beta*) value of -0.33 has negative but statistically significant effects whereas nature of contact with a  $\beta$  (*beta*) value of 0.30 has positive and statistically significant effects on the social distance. The overall model for the White females explains 28,16% of variance in the social distance. Racial identity with a  $\beta$  (*beta*) value -0.25 has negative and statistically significant effects whereas, nature of contact has positive and statistically significant effects on the social distance. The overall model for the African males explains 13,05% of variance and the overall model for the African females explains 08,22% of variance in social distance. Only the relative contribution of the nature of contact has positive and statistically significant effects on the social distance. For both males and females the  $\beta$  (*beta*) values are 0.36 and 0.28 respectively.

So far we have seen that nature of contact is the variable that has the strongest causal effects on the positive feelings in the participants towards the out-group as well as on their desire for interracial contact. Nature of contact is also the predictor that has the strongest relative contribution to the explained variance of the positive feelings in the participants as well as on their desire for interracial contact. This information is completed by the results of thematic analysis of comments of the participants on this study that follows.

#### **5.4 Analysis of the results from the comments of participants**

This part outlines the information captured from all the written comments of the participants, concerning this study. A total of 162 comments are all

considered in their social contexts of use and meaning (Krippendorff, 2004). The categories presented (themes) were captured taking into account the frequency and the linkages to the variables (nature of contact, frequency of contact, friendship, prejudice and social distance) and to the research hypotheses of the study. Contact theory and social identity theory inform the interpretation and the meaning of the comments (text) because they are the two theoretical approaches that enlighten this study. Two questions guided this analysis: What is the nature of inter-group contact? Is there a desire for inter-group contact? Four recurring themes were considered. These were: the relevance of the study, interracial relations, debriefing and consideration of the questionnaire as a research instrument. The information which seemed irrelevant was ignored. Along with the analysis some quotations illustrated the interpretations and the meanings ascribed to the ideas conveyed by the participants under the following themes.

#### **5.4.1 Relevance of the study on interracial contact**

Most participants (46.29%) considered the study to be relevant. Statements such as “...*the survey addresses some important and interesting issues...*” and the sense that the study was taking place during “...*the transition from the apartheid era towards unity...*” conveyed the idea of the relevance of the study. The research occurred at a university which has the characteristic of being in transition towards racial integration in terms of individuals' behaviour. The linkage of this research (concerned with the trends of interracial contact) with the perceptions about the transitional period seemed important. It was in consonance with the propositions of Tajfel (1972, 1978) and his followers concerning the role of social psychology.

Social psychologist must consider the social context in which investigation on socio-psychological issues occurs. Taking this aspect into consideration, the participant's perception of this study as interesting may be linked to two things. On one hand the respondents had expectations concerning positive results from the study. They stated for instance that “...*the findings may be interesting...*” and “...*the results will be positive...*”. These expectations were

tenable. For instance the descriptive statistics (total mean of 4.01 for all participants; 3.74 for White and 4.30 for African population group) gave means from 5-point scales which showed that the participants identified with their racial group above the mid-point. However, the nature of their interracial contact was of positive quality (a mean of 3.9 for all participants; 4.03 and 3.79 for White and African population groups respectively). They have positive feelings towards each other (from a 7-point scale the means are 5.02 for all participants; 5.18 and 4.88 for White and African population groups respectively). And they are willing to have interracial contact (from a 5-point scale the means are 3.91 for all participants; 3.91 and 4 for White and African population groups respectively).

On the other hand, some participants thought that the questionnaire generated effects in the respondents because they had to think about inter-group contact. They had to think deeply and give answers to the questions which “...were very much straight to the point...”. Through the questionnaire the respondents also had opportunities to evaluate some aspects of their behaviour that they did not think about before. As a result of the above effects, the level of interracial interaction could also change on campus. “...More mixing on university will be encouraged”. The point of view concerning the effect of the questionnaire may be an indication of the need for careful evaluation, selection and improvement of the research instrument for studies on sensitive issues such as interracial contact. This procedure will help researchers to get research instrument which have positive psychological effects in the respondents in a critical and constructive way. The scales for this research proved to be robust and were adapted by the scientists at UCT to the current psycho-social context of social integration.

Few (3.70%) participants were disappointed with the study because they found “... very blatant questions ...”, “...irrelevant survey...”, which “... does not shed light on race issues...” and may “...trigger racism on campus...”. The state of being disappointed of some participants may be linked to various perceptions concerning race relations within the social context. Statements such as “... the survey forced me to face the truths about the way I feel and it

*irritates me ...*” may indicate how sensitive race relations issues are. Some participants preferred to see research on more general issues such as the relationships between social classes instead of race relations. This point of view was clearly communicated by a participant who in his/her comment asked: “... *how about the different classes rather than races?...*”.

Interracial surveys and racism are two deeply connected issues which deserve attention. Interracial surveys are studies which aim at looking at trends concerning interactions between the various population groups (races) whereas racism is a kind of in-group favouritism at an exaggerated level. This may be linked to the philosophy of certain socio-politico and economic systems. For instance there are some prevailing effects of the former racist socio-politico regime recently abolished in South Africa. Sometimes in certain circumstance, students “... *find themselves racially grouped unintentionally ...*”. This recurring effect of past social experiences of minimal racial mixing in a “non-contact society” (Foster & Finchilescu, 1986) may be an indication of the need for more research, more disseminations of the positive information concerning interracial contact and the need for more talk about interracial mixing. In this way people will have more opportunities to think about interracial relations or “...*break meaningless racial boundaries*”.

#### **5.4.2 Interracial contact**

Interracial contact is the actual face-to-face interaction between people who belong to different population groups (races). Interracial relations in South Africa seem to be influenced by many factors such as cultural and psychological factors and the recurring effects of the past experience of Apartheid.

- *Influence of cultural and psychological factors on interracial contact*

Differences in up-bringing are one factor that may influence in-group identity which affects inter-group relations due to cultural differences. The cultural differences may be related to collectivist and individualist cultures which

inform some societies such as African societies and other societies such as Europeans and American societies. Individualistic culture belongs to societies in which the most important type of social arrangement is the nuclear family (parents and their children). In contrast, collectivistic culture puts emphasis on communal relationships and wider kinship groups like extended families.

The two types of cultures may generate differences in up-bringing. As one participant states: "... *not really it being a matter of the colour of someone's skin*" (*sic*). This point of view seems meaningful. It is an argument which lessens the influence of the intrusive past of the effects of racism. It seems that the differences due to the influence of types of cultures will always prevail in all multiracial societies. This point of view may be informed by social identity theory. Cultural differences appear to be strongly linked to social identity. As social identity claims, strong in-group identity may trigger in-group biases. This may affect the way people act and react to other people from out-groups. The most important thing seems to be "... *understanding each other*" although, acknowledging the intrusive past.

- *The recurring effects of past experiences on nature of contact*

Some respondents had a point of view concerning the nature of interracial contact which stated "... *the expected reactions of people are because they are people not because they are White or Black, etc.*". "... *I judge people by their behaviour not by race ...*". This point of view seems consonant with the ideal of the "new South Africa" in which the colour of the skin is not the pre-eminent category.

Other respondents had other perceptions of: "...*not good interracial relations...*", "...*not easy to mix with White...*" and "...*low interracial interaction*". These perceptions may be influenced by the experience of being socialised within a social context of same race (colour of skin). This kind of experience may trigger perceptions of bad interracial relations and difficult racial mixing. These perceptions in turn may generate low interracial interactions. This interpretation takes into account the mean age of 20 and the

mode age of 19 of the sample of this study. The participants were little girls and little boys when Apartheid was ruling South Africa. Thus, their experience of racism and segregation may stem from some events during the socialization process. Socialization is a life-long process. It is a process in which individuals acquire knowledge, values and social skills that enable them to behave appropriately within certain social contexts.

Their socialisation process was maybe influenced by the background of being socialized in same-race social contexts for example, residential areas or schools. The same past experiences may also include memories of tensions of racial interactions which in an intrusive way may influence events during the process of socialisation. This may be the reason for perceptions of low interracial contact. This point of view is illustrated by a statement from one participant. S/he states “... *I am sometimes scared of non-Whites since I have so much White guilt and I feel they’d have a million good reasons to tear me apart on*”. Another respondent argues: “...*racial groups at UCT are still very segregated...*”. In contrast, the respondents who experienced being participants of multiracial interactions find “*easy interracial relations*”.

Finally, when analysing interracial relations, the issue of cross-cut categorization appears insightful. Most participants (around 85%) in this study seemed to share at least two categories: being a South African and being a UCT student. Some respondents state that: “*Black or White were both South African in the end*”. “... *it is very much important that we should unite both Blacks and Whites in peace for a better Africa in both economic and social levels ...*”.

The literature reveals that when participants share at least two categories membership, in-group bias is eliminated (Brown, 2000). The findings of laboratory studies reveal the positive effects of cross-cut categorisation to eliminate bias (Deschamps & Doise, 1971 as cited in Brown, 1995; Vanbeselaere, 1991 as cited in Brown, 1995). In contrast, some field studies do not support the positive role of cross-cut categorisation (Brewer et al. , 1987 as cited in Brown, 1995; Hewstone et al., 1993 as cited in Brown, 1995).

However, it seems that at university campuses educators can be innovative by making cross-cut arrangements via extra curricular activities such as sport and organise academic activities in co-operative and non-competitive ways. In accordance with a particular local context, educators may select the appropriate category dimension which is supposed to assume pre-eminence. In this way participants will have the experience of being involved in interracial contact and maybe form cross-race friendships on campus. As mentioned before, the participants in this study were willing to improve the actual state of racial interactions. This may be the reason for them to “*look forward the end result of the study*”. Their written comments contained many statements requesting access to the end-results, conclusions and recommendations. This question is considered next.

#### **5.4.3 Debriefing**

Some participants clearly requested feedback in their comments. Others requested access to the conclusions and recommendations of the study. This is because they found the questions interesting, important, thought-provoking and insightful. They found the questions linked to “*a great research topic*”. This request is actually related to the ethical issues considered in psychological research. For this reason, debriefing will be provided via a website, the Monday paper and the dissertation will be available in the main library. Linked to the participants’ interest in the study are their considerations about the questionnaire as a research instrument.

#### **5.4.4 Consideration of the questionnaire**

The questionnaire as research instrument was criticized and some suggestions were made concerning the types of questions which were supposed to be included such as open-ended questions and *why* questions. The participants argued “... *some items require in-depth opinion*.” The open-ended questions were requested because they would have allowed the respondents to write “*what one truly and deeply felt*”. The criticisms of the questionnaire for a study which used quantitative analysis were also

addressed within the literature review. This is because the multiple-item scales leave out the perceptions of the participants concerning interracial contact (Dixon, 2001). To counter the limitations of the scales the questionnaire provided a space for the comments of the respondents at the end of the questionnaire. In the same line of capturing the perceptions of the respondents, future research can maybe include one or two lines for comments after each scale.

In general the results of theme analyse appear similar to the results from statistical models. Interracial contact is not frequent; participants expect positive results from this study. This expectation is tenable. The findings are concerned with the positive nature of contact, positive feelings of the respondents towards each other (less prejudice) and the participants have the desire for interracial contact (small social distance).

## **5.5 Conclusion**

The results of the study concerning the effects of racial identity on contact and prejudice can be trusted. The measurement instruments proved to be reliable as shown by the results of the Cronbach's alpha coefficient test. The instruments also proved to be valid as revealed by the pilot study. The same instruments were also valid in previous studies in South Africa and also at the university campus. The key variables (such as social identity – racial identity, contact and friendship) of the theories which inform this study were correctly included in the research instruments. Significantly, the descriptive statistics showed mean values above the mid-point for racial identity, nature of contact, frequency of contact, positive feelings in the participants towards the out-group and desire for interracial contact. There was a very low percentage of cross-race friendships. The participants preferred to have as friends people who belonged to their in-groups (same population groups).

Racial identity together with contact in its two dimensions (nature and frequency of contact) integrated the causal model of positive feelings in the participants towards the out-group and their desire for interracial contact. It

was a causal model of good fit. It reproduced the data of this study with accuracy within an interval of approximation which ranged between 0.059 and 0.069 across the models by the entire sample, the two population groups and gender. In contrast, the model became of fair fit when the variable of frequency of contact was left out. Racial identity together with contact in its two dimensions (nature and frequency of contact) integrated the best model of simultaneous multiple regression. The three predictors acting together explained the highest proportion of variance of the positive feelings in the participants towards the out-group and of their desire for interracial contact. The strongest relative contribution to the explained variance of the positive feelings and desire for interracial contact was that of nature of contact.

Finally, four themes recurred in the comments of the participants. The study was interesting and many factors triggered different attitudes towards interracial contact. The participants expected to have access to the end-results since the questionnaire gave them the opportunity to reflect on interracial contact on the UCT campus.

## Chapter 6 Discussion

In this study the aim was to examine the effects of racial identity on interracial contact and prejudice. The objective was two fold: to test the four research hypotheses derived from both the social identity and the reformulated contact theories and to find out the predictors of prejudice in the context of both social identity and contact theories which inform this study. Two things are salient in the results of the present study: a) interracial contact did not allow cross-race friendships forming at a moderate or high percentage and; b) in the African population group racial identity (social identity) did not have statistically significant effects on prejudice and social distance. It did have them when the group was split by gender. Two research hypotheses were confirmed and the other two were partially confirmed. This chapter discusses the trends shown by the descriptive statistics, path analysis, simultaneous multiple regression and thematic analyses. The research hypotheses are also discussed in detail. In contrast to previous studies (for example Heaven & Bezuidenhout, 1978; Holtman, 2002; Pettigrew, 1960) this study did not split the White population group into two groups that are Afrikaans-speaking and English-speaking White students because the study focused on two population groups that is, White and African.

### **6.1. Trends shown by the descriptive statistics - *The variables of the study broken down by population groups***

#### *Racial identity and cross-race friends*

The mean values of racial identity are above the mid-point of three. And the variable racial identity is negatively and weakly correlated with all variables in this study. Moreover, the percentage of cross-race friends is very low showing that most participants prefer to have as friends people who belong to the same population group as themselves. This fact is not surprising. It can be justified in four different ways. Firstly, it may be an indication of the effects of participants' experiences of segregation in the past period of apartheid. For example, one participant stated that: "when we are requested to work in

groups in some circumstances we find ourselves racially grouped unintentionally". As Durrheim (2003) explains some aspects of the past historical period of apartheid such as race relations are still salient. Erasmus & de Wet (2003) and Steyn & van Zyl (2001) reveal the prevalence of clustering around race. Their study also explains important issues such as those of power relations between African and White students in a covert form. Race together with different levels of tensions in race relations appear to be a common finding in some recent studies (Erasmus, 2005; Mangcu, 2003; Sono, 1998).

The past era of apartheid strongly stressed the variable of race as a pre-eminent concept. During this period, racial identity was the key variable used for the performance of the self at interpersonal and group levels in racialised social spaces such as schools, residential areas, gardens and beaches. Segregation in these places exemplified practices that embodied the racist ideology (Miles, 1989). Interracial contact was prohibited by the authorities. People grew up in same-race social contexts in residential areas and at schools. The different social groups had neither common goals nor cooperation. They had no personalised relations in addition to their unequal status (Foster & Finchilescu, 1986). At the present moment, the effects of the abolished racist regime may still be exerting influences on people as they go through their everyday public lives (Durrheim, 2003).

Secondly, the distinction between in-group and out-group in terms of race seems to have a powerful influence on emotions and affect in people as co-members of a race sharing same culture (Schneider, 2004). This means those people who see themselves as in-group members of a meaningful category in a given social context enjoy being together than being with out-group members.

Thirdly, as Lits (1991) explains, liking and mutual acceptance of the students can occur without close friendships forming. This may be triggered by many reasons one of which could be that the residential areas from which some students come are still not racially mixed. As a result, the nearest and

potentially the closest friends are those who belong to the same population group. That is, the formation of cross-race friendships ought to be understood as a phenomenon that occurs in a social context that may still be influenced by the abolished segregationist ideologies. In the post-apartheid period, as mentioned before, the contact situations proposed by the reformulated contact theory seem evident in South Africa. This may be the reason for the positive nature of interracial contact shown by the mean value which is above the mid-point, positive feelings in the participants towards each other also at a mean value above the mid-point and desire in the participants for interracial contact similarly shown by a mean value which is above the mid-point as pointed out in this study.

Fourthly, anxiety in terms of feelings of tension and worry experienced by the participants has the potential to give rise to social discomfort during interracial contact. This in turn, seems to have the potential to lead to low cross-race friendships. For example, one participant stated that "it is not easy to mix with Whites"; another participants argued: "I am sometimes scared of non-Whites since I have so much White guilt and I feel they'd have a million good reasons to tear me apart on" (*sic*). One more participant argued "the survey forced me to face the truths about the way I feel and it irritates me". These statements also show that interracial contact seems to be a very sensitive issue. As Hewstone (2003) and Islam & Hewstone (1993) explain, anxiety and fears can constrain the positive effects of contact. Other social factors such as socio-economic status and scholastic achievement are also likely to influence the emergence of friendship (Mynhardt & du Toit, 1991). As can be seen, cross-race friendship forming appears as a process which seems to require additional research work.

*Interracial contact, positive feelings towards the out-group and desire for interracial contact*

There seems to be an indication of positive trends on the nature of interracial contact, the desire for interracial contact and the frequency of interracial contact. This is shown by the respective mean values which are above the

mid-point value of three. The mean values of positive feelings towards the out-group are above the mid-point of four. These results seem to indicate that the patterns of race relations are changing. Seidman (1999) also points out changing patterns of race relations in South Africa. Likewise, Smith, Stones & Naidoo (2003) argue that young adults are internalizing anti-racist messages. These findings are encouraging. This is because it is assumed that the degree of acceptance of messages about integration and reconciliation by the young adults may influence their behaviour within the transforming South African environment. The positive results suggest that the trend towards interracial contact is in line with the propositions of the social political system promoted in the Republic of South Africa, which condemns racist ideologies and discrimination. Through the literature reviewed for this study, there is evidence of the positive effects of interracial contact under the optimal contact situations proposed by the reformulated contact theory. For instance, Cover (2001) reveals that the effect of interracial contact weakens social distance among the participants (university students).

Concurrently, the theme analysis points out some elements of the recurring effects of past experiences on the nature of interracial contact. Some participants stated perceptions of good experiences of interracial contact and others perceived it negatively. Some comments of the participants revealed tensions in race relations due to fears, some participants did not trust each other and perceived racism as a real problem. Likewise, Erasmus & de Wet (2003) found social discomfort as one of the many reasons for clustering around race. Steyn & van Zyl (2001) report scarce interracial interactions as well. However, it seems that the recurring unconscious or conscious informal re-segregation does not in itself mean higher prejudice or higher psychological social distance as shown by the mean values of the participants broken down by population groups and gender. This suggests that more research is needed. Educators and scientists may use the research findings to provide more opportunities (by means of selected activities) for interracial contact. During this process, it seems useful for researchers to pay attention to the question of the carry-over effects of status differences outside the contact situations (at homes in residential areas that seem hardly integrated)

into integrated situations such as the university environment in which the participants are given equal status.

Despite intrusive past experiences of negative feelings that appear in some comments, some participants are requesting debriefing, access to the end-results, conclusions and recommendations. Again these requests may confirm the desire of the participants to improve the actual stage of interracial contact. Now we turn to the causal effects of positive feelings and desire for interracial contact.

## ***6.2 Causal effects on positive feelings towards the out-group and desire for interracial contact***

### *Causal effects on positive feelings towards the out-group*

This study revealed that there are direct and indirect negative but statistically significant causal effects of racial identity on positive feelings towards the out-group. Racial identity had statistically insignificant causal effects on the nature of contact and on positive feelings towards the out-group as well as on the desire for interracial contact for the African population group despite its in-group identity value which is above the mid-point. In this case it seems that racial identity is not related to in-group bias. This result seems to challenge the theoretical statement of social identity theory. But at the same time there is a tendency to cluster around race as stated in comments from some participants in this study. However, an inspection by gender shows that racial identity in the African males exerts negative but statistically significant effects on positive feelings towards the out-group. In contrast, in African females racial identity exerts positive and statistically significant effects on positive feelings towards the out-group. This result suggests that African females may perceive racial identity differently. In the whole African population group, the cancelling-out effect of both perceived similarity on the category of African and perceived differences on the category of gender may have occurred. That may be the reason for the neutral effect of racial identity on the nature of

contact, positive feelings towards the out-group and the desire for interracial contact in the African population group.

Racial identity has direct negative but statistically significant causal effects on positive feelings towards the out-group for the White population group. Racial identity has statistically significant indirect causal effects via nature of contact on positive feelings towards the out-group for the entire sample and for the White population group. The nature (statistically in/significant) and the sign (positive/negative) of the causal effects show that in the entire sample, in the White population groups and in African males, prejudiced behaviour can be understood via in-group bias as stated by the social identity theory. It means that the stronger racial identity is, the less positive feelings towards the out-group in the participants mentioned above, whereas, the stronger the racial identity is, the more positive feelings towards the out-group we find in African females.

The variable of nature of contact exerts the strongest direct and statistically significant positive causal effects on positive feelings towards the out-group for the entire sample, the two population groups and by gender. This means that the higher the quality of contact, the less prejudiced attitudes or behaviour among the participants. This is in consonance with the propositions of the contact theory which stress the role of the quality of contact during inter-group contact under the essential contact conditions. The quality of contact may be correlated with other variables such as knowledge about the out-group, friendship forming, in-group reappraisal, generating affective ties and changing behaviour.

Taking the root mean square error of approximation of Steiger-Lind (Kaplan, 2000) the trimmed causal model of positive feelings towards the out-group was of fair fit. In this model racial identity exerts indirect negative but statistically significant effects via nature of contact on positive feelings towards the out-group by the entire sample and by the White population group. Racial identity has direct negative but statistically significant effects on positive feelings towards the out-group for the White population group only.

Once more, these findings are in consonance with the propositions of social identity theory as stated above. Systematically nature of contact has the strongest direct and statistically positive causal effects on positive feelings towards the out-group for the entire sample, the two population groups and by gender. This last fact is in consonance with the reformulated contact theory as mentioned above. Let us now turn to the causal effects on desire for interracial contact.

#### *Causal effects on desire for interracial contact*

Once more, we can see the interplay of social identity theory and the reformulated contact theory to understand the meaning of the findings. Racial identity exerts indirect negative but statistically significant causal effects via nature of contact on desire for interracial contact for the entire sample and for the White population group. Racial identity exerts direct negative but statistically significant causal effects on desire for interracial contact for the White population group. The trimmed causal model reveals similar results. Racial identity has direct and indirect negative but statistically significant effects on desire for interracial contact for the entire sample as well as for the White population group. All the effects of racial identity suggest that the stronger the racial identity, the less the desire for interracial contact by means of in-group bias.

Conversely, nature of contact exerts the strongest direct positive and statistically significant causal effects on desire for interracial contact for the entire sample and for the two population groups. It also exerts indirect positive and statistically significant causal effects via frequency of contact on desire for interracial contact for the entire sample and for the White population group only. In the trimmed model, nature of contact exerts the strongest direct positive and statistically significant causal effects on desire for interracial contact for the entire sample and for the two population groups. All the effects of nature of contact mean the higher the quality of contact the more desire for interracial contact as stated by contact theory. The results of path analysis are

completed by those of simultaneous multiple regression analysis to which we now turn.

### **6.3 Predictors of positive feelings towards the out-group and desire for interracial contact**

The variables that have a statistically significant relative contribution on the explained variance of positive feelings towards the out-group are the ones which have statistically significant causal effects shown by the path analysis across the sub-groups of participants. The variation in positive feelings towards the out-group is explained by the racial identity, the nature of contact and the frequency of contact, acting together for entire sample, the White population group, White females and males and African females. The strongest contributor to the explained variance is that of the nature of contact followed by frequency of contact. Nature of contact is the unique statistically significant predictor of positive feelings towards the out-group in the African population group. The important role of inter-group contact was also found by Holtman (2002). The quality of inter-group contact at school and the amount of contact in and outside the school were the predictors of inter-group attitudes in her study. Likewise in Islam & Hewstone (1993) the quality of contact was the reliable predictor of the overall attitude of the respondents towards the out-group. Racial identity has the lowest and negative but statistically significant relative contribution to the amount of the explained variance in positive feelings towards the out-group and desire for interracial contact.

Frequency of contact is the unique predictor of desire for interracial contact and is also the unique variable that has causal effects on the desire for interracial contact in African females. Nature of contact is the unique predictor of desire for interracial contact and also it is the unique variable that has statistically significant causal effects on desire for interracial contact in African males. Racial identity, nature of contact and frequency of contact collectively explain the variance in desire for interracial contact for the entire sample, the White population group, White males and females. Definitely, nature of

contact contributes the most followed by the frequency of contact to the explained variance of both dependent variables. This fact confirms the emphasis given by the contact hypothesis on the nature of inter-group contact (Allport, 1954).

The modified regression model provides the strongest contribution of the nature of interracial contact once more. Thus far, the multivariate analysis provided information that is helpful to discuss the research hypothesis outlined below.

#### **6.4. Discussion of the research hypotheses**

The research hypothesis 1: Inter-group contact is negatively related to prejudice and social distance (paths 1 and 2) was confirmed. This means inter-group contact is positively related to positive feelings in the participants towards the out-group and desire for interracial contact. For the entire sample and for the two population groups, the findings from path analysis show that an increase in the positive quality of interracial contact implies an increase of positive feelings in Whites towards the African population group and vice-versa. High quality of contact decreases the psychological social distance and prejudice between the two population groups. This shows that the positive nature of contact is important to reduce prejudice and social distance as stated by the reformulated contact theory. As mentioned before in this study, the mean values of the descriptive statistics of the nature of contact is above the mid-point of the scale. Nature of contact exerts the strongest positive and statistically significant causal effects on positive feelings towards the out-group and on desire for interracial contact.

The results of path analysis also show that the frequency of contact exerts positive and statistically significant effects on desire for interracial contact by the entire sample, the White population group and the African females. An increase of frequency of interracial contact implies an increase in desire for interracial contact (shorter social distance) among the participants. However,

the mean values of descriptive statistics reveal that frequent of interracial contact is slightly above the mid-point of the scale.

The research hypothesis 2: Stronger in-group identity (racial identity) is negatively related to inter-group contact (path 3) was confirmed by the entire sample and by the White population group. The results of path analysis by the entire sample and by the White population group show that the stronger the racial (in-group) identity, the lower the quality of contact as shown by means of direct negative but statistically significant effects of racial identity. This is also negatively related to frequency of contact by means of the indirect effect of racial identity via nature of contact on frequency of contact. As stated by social identity theory, in-group bias is likely to occur during the interracial contact when the participants identify with their in-groups strongly. Similar results were found by Bezuidenhout, 1978, MacCrone, 1949 (as cited in Louw & Foster, 1992), Man (1955) and Pettigrew (1960). The effect of racial identity on nature of contact is negative but statistically insignificant for the African population group, African males and females all through the path analyses. Therefore, for this population group, the research hypothesis 2 was not confirmed. These results seem to suggest that the meaning and functions of racial identity may be influenced by different factors in the two population groups.

The research hypothesis 3: Stronger in-group identity (racial identity) is positively related to prejudice/social distance (path 4) was confirmed by the entire sample, the White population group and the African males. Racial identity does not have direct causal effects on positive feelings towards the out-group for the entire sample. It has statistically significant but negative indirect effects via nature of contact on positive feelings towards the out-group. This means the stronger the racial identity the less positive feelings in the participants towards each other as population groups. Racial identity has negative but statistically significant direct and indirect effects on positive feelings towards the out-group for the White population group. This means the stronger the racial identity the less the positive feelings in the White population group towards the Africans. These results are in consonance with

the propositions of the social identity theory. This theory seems to be challenged by the positive and statistically significant causal effects of racial identity on positive feelings towards the out-group in African females. This means the stronger the racial identity the more positive feelings towards the out-group.

Racial identity has negative indirect effects on desire for interracial contact via nature of contact for the entire sample and for the White population group. This means the stronger the racial identity, the less the desire for interracial contact (this means the more prejudice). Racial identity has negative direct but statistically significant effects on desire for interracial contact for the White population group. This means the stronger the racial identity, the less desire for interracial contact (this means the higher the psychological social distance). These results are in consonance with the propositions of social identity theory. Nature of contact has statistically significant effects on desire for interracial contact for the African population group and African males. Frequency of contact has statistically significant effects on desire for interracial contact. Therefore, the research hypothesis 3 was partially confirmed.

The research hypothesis 4: Inter-group friendship is negatively related to prejudice/social distance, was not confirmed. The descriptive statistics show that the percentage of crossed-race friends is extremely low (14.23% and 12.60% for the White and African population group respectively). This suggests that more research is needed to find out why this happened as well as to find ways to improve the percentage of cross-race friends on the UCT campus. As explained before, this variable was excluded in the path analysis and simultaneous regression analysis. Apart from confirming the three research hypotheses, the results also revealed that nature of contact is positively related to frequency of contact (path 5). The results of path analysis for the entire sample, the two population groups and by gender showed that an increase in the positive quality of contact implies an increase in frequency of contact.

As can be seen, the discussion of the research hypotheses suggests that the results of this study support both the social identity theory and the reformulated contact theory. Looking at the figure 2 which depicts the reformulated contact theory, one can suggest that within essential and facilitating situations (stage [A]) evident at UCT the participants' experience and characteristics have been influencing the nature of interracial contact (stage [B]) which appeared quite positive in the results of this study. Perhaps more time is needed for the development of friendships as well as optimal situations which will lead to liking without generalization (stage [C]). Further they are supposed to reach the stage of established contact and salient categorization (stage [D]). During this stage the participants are supposed to experience reduced prejudice and social distance with generalisation of attitude or behaviour towards out-group members (as a whole) in diverse contact situations. As explained previously, friendship forming in the context of transitional period from apartheid to a "new" South Africa requires creative and also innovative ways in terms of activities to give opportunities to the university students to think and to talk about their current race relations. Together educators and young adults who are the students have a crucial role to play since the positive nature of interracial contact seems fruitful to reduce tensions in race relations.

### ***6.5 Comparison of the statistical model in relation to the theme analysis***

Both the results of path analysis and simultaneous multiple regression analyses for the entire sample, the two population groups and for males and females show the strongest effects exerted by the variable interracial contact on positive feelings in the participants towards the out-group and on desire for interracial contact. The comparison of the statistical model shows the pre-eminent role of the variable nature of contact. This is corroborated by the theme analysis. The expectations of the participants for positive results of the study may be an indication of their enthusiasm concerning their experience of interracial contact. This, despite social discomfort and fears perceived by some participants concerning interracial contact. The participants seem optimistic concerning the evolution of interracial contact. For instance one

participant argued: “more mixing on university will be encouraged” with these kinds of surveys. Another participant stated: “Black or White were both South African in the end”. One more participant stated: “ it is very much important that we should unite both Blacks and Whites in peace for a better Africa in both economic and social levels”. Choice of friends in terms of being of the same race may be linked to the “ ... differences in upbringing ...” and “cultural differences ...”. The positive feelings of the participants towards each other in this study seem to corroborate the findings by Smith, Stones & Naidoo (2003).

### ***6.6 Comparison between African and White population groups***

The major difference is that in the White population group, racial identity has negative but statistically significant direct effects on nature of contact and on positive feelings towards the out-group as well as on desire for interracial contact.

In contrast in the African population group racial identity has no effects on contact and on both positive feelings towards the out-group and on desire for interracial contact. This seemed a surprising result. Opposite results are revealed by gender. Racial identity has negative but statistically significant direct causal effects only on positive feelings towards the out-group for African males. Conversely, racial identity has positive and statistically significant causal effects only on positive feelings towards the out-group for African females. The predictors of positive feelings towards the out-group and the desire for interracial contact examined by gender are different in African males and females. It appears that more research is required to find out the factors that underlie this finding.

### ***6.7 Evaluation of the results***

The on-line data collection may have given the participants a sense of freedom of choice to participate in the study at the time they wanted. They were not under pressure to give immediate responses. Possibly they may have given sincere open responses to the sensitive questions such as those

concerning racial identity and interracial contact. Both the questionnaire and the on-line data collection practice may have avoided or minimised bias (in contrast to the potential interviewer bias) as well as the tendency to agree with positive statements. Definitely the on-line data collection system did not store questionnaires with missed values. The combination of positive and negative adjectives in the scales may have resulted in more caution by the participants. The space for comments given to the participants at the end of the questionnaire allowed them to state opinions that they were not able to convey by means of the interval scales in questionnaire. All multiple item scales were adapted to the social context and used in previous studies with a good value of Cronbach's coefficient alpha. In this study the measures proved to be reliable also. The results appeared consistent. However, this study has some weakness that need to be pointed out.

#### *Limitations of the study*

There are two limitations of the research methodology in this study. First, the study was done only on UCT students who constituted a convenience sample. For this reason the findings cannot be generalised. Second, inferences cannot be drawn from a non-probability sample (Judd, Smith and Kidder, 1991). The recommendations that follow consider these limitations.

#### *Recommendations*

It seems that more opportunities must be created to allow the UCT students to experience interracial contact. In this regard, the diversification of activities seems to be tenable.

- a) Some structured activities might be provided in order to give more opportunities to the students for inter-group as well as for inter-personal behaviours.
- b) Structured activities can also aim at developing task-interdependence to reach super-ordinate goals. The pre-requisite for super-ordinate goals is the super-ordinate identity (dual identity). It is assumed that task-interdependence and super-ordinate goals attainment may contribute towards alteration of

social discomfort in interracial contact among the UCT students. As stated in Erasmus this seems to be one of the reasons for clustering around race (population group) and scant frequency of interracial contact.

c) Cross-cut category situations are another possibility for stimulate interracial interactions. The advice is that caution must be taken in the selection of the categories to be crossed in specific social contexts. The selected categories must be of equivalent psychological importance to the participants to ensure that one category is not dominant. Otherwise motivational factors can keep inter-group discrimination in cross-categorisation situation (Brown and Turner, 1979 as cited in Johnston and Hewstone, 1990).

## **6.8 Conclusion**

Interracial contact has been an issue that deserves systematic study informed by the many theories of inter-group processes during the apartheid as well as currently in the post-apartheid period. The common finding has been that of tensions in race relations at different levels of strength. The present study tested four research hypothesis derived from social identity theory as well as contact theory. Two hypotheses were confirmed and the other two were partially confirmed. Interesting is that racial identity had statistically insignificant causal effects on contact and on positive feelings towards the out-group for the African population group. But when this group was split by gender racial identity had effects on positive feelings towards the out-group only.

Nature of contact followed by frequency of contact has important causal effects on prejudice and social distance. It also has an important relative contribution to the explained variance of the dependent variables of the positive feelings in the participants towards the out-group and the desire for interracial contact. The predictors of the dependent variables tend to vary by sub-groups of participants. The nature of interracial contact appears positive given the mean value which is above the mid-point. The frequency of interracial contact with a mean value slightly above the mid-point appears scant.

The mean value of the percentage of cross-race friendships is very low. However, the participants in this study have support from the authorities (stated in the UCT mission and in the Constitution of the Republic of South Africa chapter 2 concerning the bill of rights, s 9 as well as in the higher education act 101 of 1997) for integration and interracial contact at UCT. They are given equal status as UCT students. They have common goals of obtaining their degrees. They also cooperate during the structured learning activities.

On the basis of these findings, it is suggested that more research is needed to discern the factors that influence interracial contact and prejudice/social distance with a more representative sample.

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## Appendix Aa

### Inter-group contact survey

Thank you for participating in this survey. It investigates the relationships between people from different population groups in South Africa. Given the sensitive nature of the questions asked in this survey, information that you provide will be treated with the utmost confidentiality. The only people to have access to information which could be used to identify you are those researchers who are directly involved in the survey. By participating in this survey you agree to provide this information to the researchers, and in return, they agree not to allow anyone outside of the research.

In completing the questionnaire, you stand the chance of winning ONE THOUSAND RAND. The winner will be drawn randomly from the list of people who participate in the study. Please note that your chance of winning this prize is many thousand times more likely than winning the Lotto! Please provide your contact details below, so that should you be the lucky winner, we can get hold of you once all data has been collected. Please make sure that the information you provide is as accurate as possible, as you will be required to present student card as proof of identity on collecting the prize.

Once you have entered your contact details and clicked on the submit button, you will be directed to the first page of this 2 pages questionnaire. Please ensure that you answer all of the questions on these pages. The entire questionnaire should take 15 to 20 minutes.

Please note that for quality control purposes, we will contact a number of respondents to this questionnaire. This is to ensure that answers are a fair reflection of respondents' views, and that the respondents completed the questionnaires.

Go to survey

### Part I: Demographic information

Dear student,

In this study we would like to get your opinion about your experience of contact with students who belong to another population group. Please answer all of the following questions about yourself.

1. Age (years):
  
2. Sex:  Male  Female
  
3. University education level:  
 Undergraduate  Postgraduate
  
4. Population group:  
 Black  White  
 Indian  Coloured  
 Other (Which?):
  
5. Home language:  
 Afrikaans  English  
 Xhosa  Zulu  
 Sotho  Tswana  
 Other (Which):
  
6. Religion:  
 Christian  Muslim  
 Jewish  Hindu  
 Other (Which?):

Please begin the survey by clicking the button:

**Part II: Main questionnaire**

## Question 7

Please read the following statements and select the circle next to the response that best shows your feeling concerning your population group.

7a. I am a person who sees myself belonging to the Black population group.

- Never    Seldom    Sometimes    Often    Very often

7b. I am a person who considers the Black population group important.

- Never    Seldom    Sometimes    Often    Very often

7c. I am a person who criticizes the Black population group.

- Never    Seldom    Sometimes    Often    Very often

7d. I am a person who identifies with the Black population group.

- Never    Seldom    Sometimes    Often    Very often

7e. I am a person who tries to hide belonging to the Black population group.

- Never    Seldom    Sometimes    Often    Very often

7f. I am a person who is glad to belong to the Black population group.

- Never    Seldom    Sometimes    Often    Very often

7g. I am a person who is annoyed when people refer to me as being a Black

- Never    Seldom    Sometimes    Often    Very often

7h. I am a person who is embarrassed to belong to the Black population group.

- Never    Seldom    Sometimes    Often    Very often

7i. I am a person who feels strong ties with the Black population group.

- Never    Seldom    Sometimes    Often    Very often

7j. It upsets me when other people speak negatively about Black people.

- Never    Seldom    Sometimes    Often    Very often

#### Question 8

How would you describe the nature of your communication and interaction with White people? Please indicate your choice by selecting the circle next to the number you feel accurately describes your experience.

8a. Courteous    1    2    3    4    5 Rude

8b. Pleasant    1    2    3    4    5 Unpleasant

8c. Meaningless    1    2    3    4    5 Meaningful

8d. Spontaneous    1    2    3    4    5 Forced

8e. Uncomfortable    1    2    3    4    5 Relaxed

8f. Destructive    1    2    3    4    5 Constructive

#### Question 9

How often do you have contact with White people in the following situations? Please select the appropriate number by clicking on the circle next to it.

9a. With White people in your residential area?

- Never    Seldom    Sometimes    Often    Very often

9b. With White people at your own home?

- Never    Seldom    Sometimes    Often    Very often

9c. With White people at the homes of other people?

- Never    Seldom    Sometimes    Often    Very often

9d. With White people at their homes?

- Never    Seldom    Sometimes    Often    Very often

9e. With White people at religious events?

- Never    Seldom    Sometimes    Often    Very often

9f. With White people at social events?

- Never    Seldom    Sometimes    Often    Very often

9g. Do you sit next to White students during lectures?

- Never    Seldom    Sometimes    Often    Very often

9h. Do you have friendly conversations with White people?

- Never    Seldom    Sometimes    Often    Very often

#### Question 10

Please indicate the percentage of your friends who belong to the Black, White, Indian and Coloured population groups (The percentage should add up to 100%).

Example: Black: 20%   White: 50%   Indian: 15%   Coloured: 15%

Black:  %   White:  %   Indian:  %   Coloured:  %

#### Question 11

Please describe how you feel about the White population group in general. Please select the number that best represents your feeling.

I feel the following way towards White people in general:

11a. Warm    1    2    3    4    5    6    7   Cold

11b. Negative    1    2    3    4    5    6    7   Positive

11c. Friendly  1  2  3  4  5  6  7 Hostile

11d. Suspicious  1  2  3  4  5  6  7 Trusting

11e. Respect  1  2  3  4  5  6  7 Disrespect

11f. Admiration  1  2  3  4  5  6  7 Disgust

### Question 12

Please click on the circle next to the word which expresses or most closely expresses your feelings in relation to the statement.

Example (do not select response):

My first feeling or reaction is to willingly allow:

Any  Most  Some  Few  No White people into my book club.

My first feeling is to willingly allow:

12a.  Any  Most  Some  Few  No White students to my University.

12b.  Any  Most  Some  Few  No White people to my street as neighbour.

12c.  Any  Most  Some  Few  No White guests to my home.

12d.  Any  Most  Some  Few  No White people to be my personal friends.

12e.  Any  Most  Some  Few  No White people in my work/group study.

12f.  Any  Most  Some  Few  No White people in close kinship by marriage.

13. Please give comments you have concerning the study.

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Submit survey

University of Cape Town

## Codes used in the questionnaire

No	Categories	Code
1	Male	1
	Female	2
2	Undergraduate	1
	Postgraduate	2
3	Black	a
	White	b
	Indian	c
	Coloured	d
	Afrikaans	1
	English	2
4	Xhosa	3
	Zulu	4
	Sotho	5
	Tswana	6
	Other	7
5	Christian	1
	Muslim	2
	Jewish	3
	Hindu	4
	Other	5

## Appendix Ab

### Inter-group contact survey

Thank you for participating in this survey. It investigates the relationships between people from different population groups in South Africa. Given the sensitive nature of the questions asked in this survey, information that you provide will be treated with the utmost confidentiality. The only people to have access to information which could be used to identify you are those researchers who are directly involved in the survey. By participating in this survey you agree to provide this information to the researchers, and in return, they agree not to allow anyone outside of the research.

In completing the questionnaire, you stand the chance of winning ONE THOUSAND RAND. The winner will be drawn randomly from the list of people who participate in the study. Please note that your chance of winning this prize is many thousand times more likely than winning the Lotto! Please provide your contact details below, so that should you be the lucky winner, we can get hold of you once all data has been collected. Please make sure that the information you provide is as accurate as possible, as you will be required to present student card as proof of identity on collecting the prize.

Once you have entered your contact details and clicked on the submit button, you will be directed to the first page of this 2 pages questionnaire. Please ensure that you answer all of the questions on these pages. The entire questionnaire should take 15 to 20 minutes.

Please note that for quality control purposes, we will contact a number of respondents to this questionnaire. This is to ensure that answers are a fair reflection of respondents' views, and that the respondents completed the questionnaires.

[Go to survey](#)

**Part I: Demographic information**

Dear student,

In this study we would like to get your opinion about your experience of contact with students who belong to another population group. Please answer all of the following questions about yourself.

6. Age (years):

7. Sex:  Male  Female

8. University education level:

Undergraduate  Postgraduate

9. Population group:

Black  White

Indian  Coloured

Other (Which?):

10. Home language:

Afrikaans  English

Xhosa  Zulu

Sotho  Tswana

Other (Which):

6. Religion:

Christian  Muslim

Jewish  Hindu

Other (Which?):

Please begin the survey by clicking the button:

**Part II: Main questionnaire**

## Question 7

Please read the following statements and select the circle next to the response that best shows your feeling concerning your population group.

7a. I am a person who sees myself belonging to the White population group.

Never    Seldom    Sometimes    Often    Very often

7b. I am a person who considers the White population group important.

Never    Seldom    Sometimes    Often    Very often

7c. I am a person who criticizes the White population group.

Never    Seldom    Sometimes    Often    Very often

7d. I am a person who identifies with the White population group.

Never    Seldom    Sometimes    Often    Very often

7e. I am a person who tries to hide belonging to the White population group.

Never    Seldom    Sometimes    Often    Very often

7f. I am a person who is glad to belong to the White population group.

Never    Seldom    Sometimes    Often    Very often

7g. I am a person who is annoyed when people refer to me as being a White

Never    Seldom    Sometimes    Often    Very often

7h. I am a person who is embarrassed to belong to the White population group.

Never    Seldom    Sometimes    Often    Very often

7i. I am a person who feels strong ties with the White population group.

Never    Seldom    Sometimes    Often    Very often

7j. It upsets me when other people speak negatively about White people.

Never    Seldom    Sometimes    Often    Very often

### Question 8

How would you describe the nature of your communication and interaction with Black people? Please indicate your choice by selecting the circle next to the number you feel accurately describes your experience.

8a. Courteous    1    2    3    4    5 Rude

8b. Pleasant    1    2    3    4    5 Unpleasant

8c. Meaningless    1    2    3    4    5 Meaningful

8d. Spontaneous    1    2    3    4    5 Forced

8e. Uncomfortable    1    2    3    4    5 Relaxed

8f. Destructive    1    2    3    4    5 Constructive

### Question 9

How often do you have contact with Black people in the following situations? Please select the appropriate number by clicking on the circle next to it.

9a. With Black people in your residential area?

Never    Seldom    Sometimes    Often    Very often

9b. With Black people at your own home?

Never    Seldom    Sometimes    Often    Very often

9c. With Black people at the homes of other people?

Never    Seldom    Sometimes    Often    Very often

9d. With Black people at their homes?

- Never    Seldom    Sometimes    Often    Very often

9e. With Black people at religious events?

- Never    Seldom    Sometimes    Often    Very often

9f. With Black people at social events?

- Never    Seldom    Sometimes    Often    Very often

9g. Do you sit next to Black students during lectures?

- Never    Seldom    Sometimes    Often    Very often

9h. Do you have friendly conversations with Black people?

- Never    Seldom    Sometimes    Often    Very often

Question 10

Please indicate the percentage of your friends who belong to the Black, White, Indian and Coloured population groups (The percentage should add up to 100%).

Example: Black: 20%   White: 50%   Indian: 15%   Coloured: 15%

Black:  %   White:  %   Indian:  %   Coloured:  %

Question 11

Please describe how you feel about the Black population group in general. Please select the number that best represents your feeling.

I feel the following way towards Black people in general:

11a. Warm    1    2    3    4    5    6    7   Cold

11b. Negative    1    2    3    4    5    6    7   Positive

11c. Friendly    1    2    3    4    5    6    7   Hostile

11d. Suspicious  1  2  3  4  5  6  7 Trusting

11e. Respect  1  2  3  4  5  6  7 Disrespect

11f. Admiration  1  2  3  4  5  6  7 Disgust

### Question 12

Please click on the circle next to the word which expresses or most closely expresses your feelings in relation to the statement.

Example (do not select response):

My first feeling or reaction is to willingly allow:

Any  Most  Some  Few  No White people into my book club.

My first feeling is to willingly allow:

12a.  Any  Most  Some  Few  No Black students to my University.

12b.  Any  Most  Some  Few  No Black people to my street as neighbour.

12c.  Any  Most  Some  Few  No Black guests to my home.

12d.  Any  Most  Some  Few  No Black people to be my personal friends.

12e.  Any  Most  Some  Few  No Black people in my work/group study.

12f.  Any  Most  Some  Few  No Black people in close kinship by marriage.

13. Please give comments you have concerning the study.

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Submit survey

University of Cape Town

## Appendix B1

WIN R1000! R1000! R1000!

Simply by completing a 20 minute online survey ....

Open only to UCT students

We are doing a study on social experiences of students at UCT, and need your assistance. All you have to do is complete an online survey.

The survey can be found by following the link at the following address: [www.uct.ac.za/depts/psychology](http://www.uct.ac.za/depts/psychology) [the Psychology Department homepage]. The link is in the top right hand corner.

The winner of the prize will be decided by randomly drawing one name from the list of people who have completed the survey. We will email or phone you to tell you that you have won the prize, and arrange for collection.

Thank you very much for your participation.

For further information, email [mngloc001@mail.uct.ac.za](mailto:mngloc001@mail.uct.ac.za)

### Appendix B3

#### Institutions and places in which the posters were put

N	Institutions	Residences
1	Monday paper	Rastenburg
2	Dance School (Hidding)	Glendower
3	Library (Hidding Hall)	Med Residence
4	Michael School of Fine Art	J.P.Duminy
5	Anatomy building	Liesbeeck
6	Health Science building	Groote Schuur Flats
7	Departments of Medical School	Forest Hill Blocks A-G
8	Low Faculty	North Grange
9	College of Music	Varietas
10	School of Dance (Lower Campus)	Tugwell
11	Department of Social Development	Cleradon
12	School of Economics	Clarinus
13	Department of Mathematics and Applied Mathematic	Kopano
14	Botany	Rochester
15	Physics Department	Devie Court
16	Documentation Centre	Woolsack
17	Civil engineering	Fuller
18	Faculty of Humanities	College House
19	Department of Chemistry	Kilindini
20	Statistical Sciences building	
21	Career Development Programme	
22	Department of Electrical Engineering	
23	Liesly building Hall	
24	UCT Student YMCA	

## Appendix C

### UCT mission statement

#### ABOUT UCT

##### Our Mission Statement

Our mission is to be an outstanding teaching and research university, educating for life and addressing the challenges facing our society.

Educating for life means that our educational process must provide:

- a foundation of skills, knowledge and versatility that will last a life-time, despite a changing environment;
- research-based teaching and learning;
- critical enquiry in the form of the search for new knowledge and better understanding; and
- an active developmental role in our cultural, economic, political, scientific and social environment.



Addressing the challenges facing our society means that we must come to terms with our past, be cognisant of the present, and plan for the future.

In this, it is central to our mission that we:

- recognise our location in Africa and our historical context;
- claim our place in the international community of scholars;
- strive to transcend the legacy of apartheid in South Africa and to overcome all forms of gender and other oppressive discrimination;
- be flexible on access, active in redress, and rigorous on success;
- promote equal opportunity and the full development of human potential;
- strive for inter-disciplinary and inter-institutional collaboration and synergy; and value and promote the contribution that all our members make to realising our mission.

To equip people with life-long skills we must and will:

- promote the love of learning, the skill of solving problems, and the spirit of critical enquiry and research; and
- take excellence as the bench-mark for all we do.

We are committed to academic freedom, critical scholarship, rational and creative thought, and free enquiry. It is part of our mission to ensure that these ideals live: this necessarily requires a dynamic process of finding the balance between freedom and responsibility, rights and obligations, autonomy and accountability, transparency and efficiency, and permanence and transience, and of doing this through consultation and debate.

*This Mission Statement was formulated by a Working Group of the University Transformation Forum and was affirmed and adopted at a University Assembly on April 24, 1996.*

## Appendix D

### The histograms, the normal probability plot of residuals and linear relationship between the criterion and the predictor variables

The histogram and the normal probability plot of residuals for prediction of prejudice

Figure 1a: Distribution of raw residuals

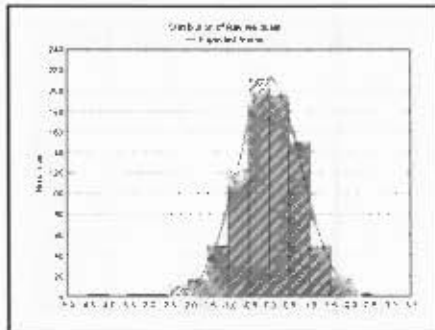
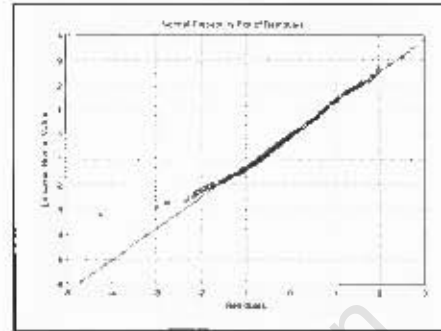


Figure 1b: Normal probability plot of residuals



The histogram and the normal probability plot of residuals for prediction of social distance

Figure 1c: Distribution of raw residuals

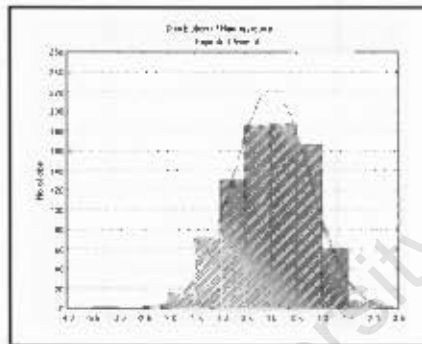
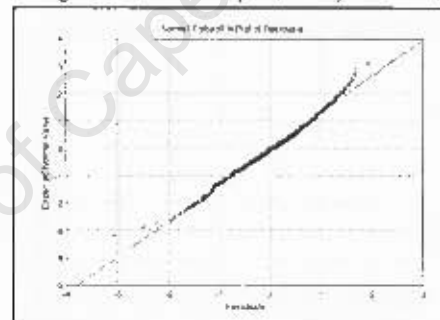


Figure 1d: Normal probability of residuals



Linear relationship between the criterion variable and the predictor variables

#### Scatterplots

Figure 2a: Prejudice vs. racial identity

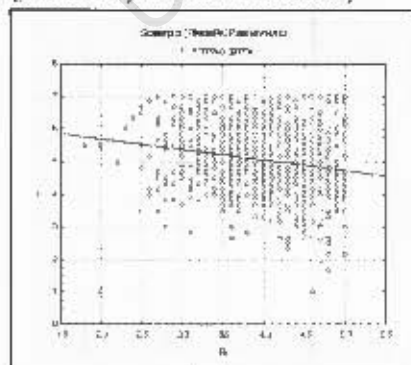


Figure 2b: Prejudice vs. nature of contact

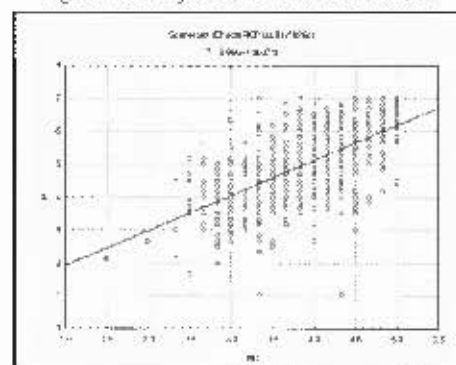


Figure 2c: Prejudice vs. frequency of contact

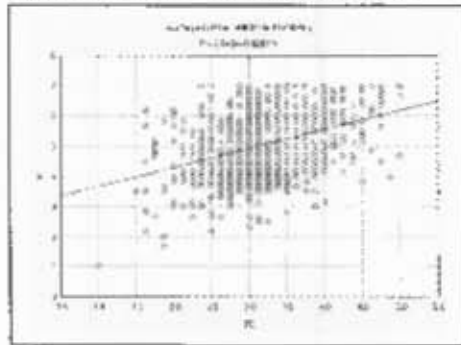


Figure 2d: Social distance vs. racial identity

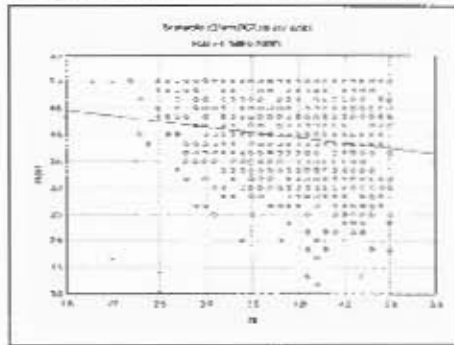


Figure 2e: Social distance vs. nature of contact

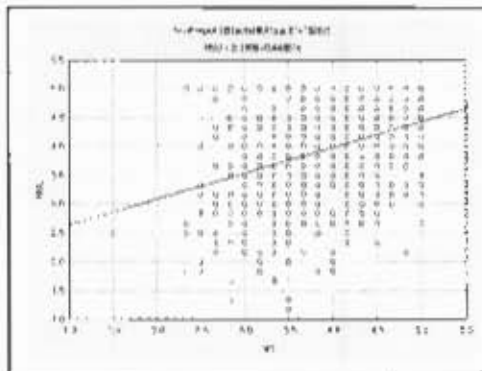
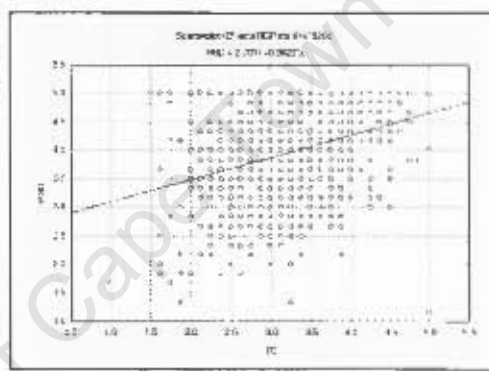


Figure 2f: Social distance vs. frequency of contact



University of Cape Town

## Appendix E

### Inter-correlations between the latent variables and descriptive statistics

#### E1 Racial identity

Table E1: Correlation matrix of measure of racial identity with the scores reversed

Correlations										
Marked correlations are significant at $p < .05$										
N= 826										
Item	Q7a	Q7b	RQ7c	Q7d	RQ7e	Q7f	RQ7g	RQ7h	Q7i	Q7j
Q7a	1.00									
Q7b	0.59	1.00								
RQ7c	0.00	0.07	1.00							
Q7d	0.56	0.52	0.16	1.00						
RQ7e	0.13	0.15	0.23	0.20	1.00					
Q7f	0.44	0.58	0.20	0.52	0.28	1.00				
RQ7g	0.24	0.23	0.13	0.24	0.24	0.24	1.00			
RQ7h	0.16	0.30	0.33	-0.22	0.37	0.39	0.28	1.00		
Q7i	0.56	0.61	0.18	0.63	0.24	0.60	0.26	0.32	1.00	
Q7j	0.22	0.40	0.20	0.21	0.11	0.32	-0.06	0.20	0.34	1.00

**E2 Nature of contact**

Table E2: Correlation matrix of measure of nature of contact with the scores reversed

Correlations						
Marked correlations are significant at $p < .05$						
N=826						
Item	RQ8a	RQ8b	Q8c	RQ8d	Q8e	Q8f
RQ8a	1.00					
RQ8b	0.66	1.00				
Q8c	0.30	0.39	1.00			
RQ8d	0.28	0.40	0.40	1.00		
Q8e	0.29	0.36	0.36	0.50	1.00	
Q8f	0.39	0.42	0.43	0.41	0.42	1.00

**E3 Frequency of contact**

Table E3: Correlation matrix of measure of frequency of contact

Correlations								
Marked correlations are significant at $p < .05$								
N= 286								
Item	Q9a	Q9b	Q9c	Q9d	Q9e	Q9f	Q9g	Q9h
Q9a	1.00							
Q9b	0.35	1.00						
Q9c	0.32	0.48	1.00					
Q9d	0.28	0.36	0.53	1.00				
Q9e	0.18	0.06	0.17	0.24	1.00			
Q9f	0.28	0.30	0.42	0.39	0.21	1.00		
Q9g	0.16	0.20	0.26	0.23	0.16	0.31	1.00	
Q9h	0.29	0.29	0.36	0.33	0.15	0.38	0.44	1.00

**E4 Prejudice**

Table E4: Correlation matrix of measure of prejudice with the score reversed

Correlations						
Marked correlations are significant at $p < .05$						
N=826						
Item	RQ11a	Q11b	RQ11c	Q11d	RQ11e	RQ11f
RQ11a	1.00					
Q11b	0.72	1.00				
RQ11c	0.68	0.64	1.00			
Q11d	0.54	0.63	0.52	1.00		
RQ11e	0.58	0.55	0.57	0.48	1.00	
RQ11f	0.53	0.54	0.48	0.51	0.59	1.00

**E5 Social distance**

Table D5: Correlations of measure social distance after reversing the scores

Correlations						
Marked correlations are significant at $p < .05$						
N= 826						
Item	RQ12a	RQ12b	RQ12c	RQ12d	RQ12e	RQ11f
RQ12a	1.00					
RQ12b	0.68	1.00				
RQ12c	0.57	0.68	1.00			
RQ12d	0.51	0.59	0.68	1.00		
RQ12e	0.59	0.58	0.63	0.67	1.00	
RQ11f	0.32	0.44	0.48	0.48	0.44	1.00

## Appendix F

## Multiple regression summary tables

Table F1: Regression summary for the dependent variable of prejudice and social distance for the entire sample

		Regression summary for the dependent variable of prejudice and social distance					
Model		Beta	Std. Err. of Beta	B	Std. Err. of B	t(822)	p-level
Prejudice	R= .6655; $F^2$ = .4430 Adjusted $F^2$ = .4409 $F(3,822)= 217.93$ $p<0.0004$ Std. Error of estimate: .78674	N= 826					
	Intercept			1.19	0.27	4.29	0.0004
	Racial identity	-0.07	0.02	-0.12	0.04	-2.82	0.0048
	Nature of contact	0.58	0.02	0.95	0.04	19.88	0.0004
	Frequency of contact	0.11	0.02	0.18	0.04	4.00	0.0004
Social distance	R= .4030; $F^2$ = .1624 Adjusted $F^2$ = .1593 $F(3,822)= 53.146$ $p<0.0004$ Std. Error of estimate: .75050	N= 826				t(822)	
	Intercept			2.40	0.26	0.06	0.0004
	Racial identity	-0.08	0.03	-0.11	0.04	-2.72	0.006
	Nature of contact	0.25	0.03	0.31	0.04	6.96	0.0004
	Frequency of contact	0.19	0.03	0.23	0.04	5.31	0.0004

Table F2: Regression summary of modified regression model for the dependent variable of prejudice and social distance for the entire sample: the variable of frequency of contact left out

		Regression summary for the dependent variable of prejudice and social distance					
Model		Beta	Std. Err. of Beta	B	Std. Err. of B	t(823)	p-level
Prejudice	R= .6573; $F^2$ = .4321 Adjusted $F^2$ = .4307 $F(2,823)= 313.13$ $p<0.0004$ Std. Error of estimate: .79391	N= 826					
	Intercept			1.48	0.27	5.45	0.0004
	Racial identity	-0.07	0.02	-0.13	0.04	-2.91	0.003
	Nature of contact	0.63	0.02	1.04	0.04	23.97	0.0004
Social distance	R= .3655; $F^2$ = .1336 Adjusted $F^2$ = .1315 $F(2,823)= 63.482$ $p<0.0004$ Std. Error of estimate: .76283	N= 826				t(823)	
	Intercept			2.76	0.26	10.60	0.0004
	Nature of contact	0.33	0.03	0.42	0.04	10.25	0.0004

Table F3: Regression summary for the dependent variable of prejudice and social distance for the two population groups

Model		Regression summary for the dependent variable of prejudice and social distance					
		<i>Beta</i>	Std. Err. of <i>Beta</i>	<i>B</i>	Std. Err. of <i>B</i>	<i>t</i> (453)	<i>p</i> -level
Dependent variable: Prejudice	White (N= 457)						
	Intercept			1.57	0.36	4.30	0.0004
	Racial identity	-0.12	0.03	-0.21	0.05	-3.60	0.0003
	Nature of contact	0.55	0.03	0.90	0.06	14.12	0.0004
	Frequency of contact	0.15	0.03	0.23	0.05	3.89	0.0001
	African (N=369)					<i>t</i> (365)	
	Intercept			0.63	0.47	1.33	0.18
	Racial identity	0.006	0.04	0.01	0.09	0.15	0.88
Nature of contact	0.60	0.04	0.99	0.07	13.27	0.0004	
Frequency of contact	0.07	0.04	0.13	0.07	1.75	0.07	
	White (N= 457)					<i>t</i> (453)	
Dependent variable: Social distance	Intercept			3.15	0.31	10.00	0.0004
	Racial identity	-0.28	0.04	-0.35	0.05	-6.93	0.0004
	Nature of contact	0.29	0.04	0.35	0.05	6.47	0.0004
	Frequency of contact	0.17	0.04	0.19	0.05	3.82	0.0001
	African (N=369)					<i>t</i> (365)	
	Intercept			2.04	0.47	4.29	0.0004
	Racial identity	0.001	0.04	0.003	0.08	0.03	0.96
	Nature of contact	0.24	0.055	0.33	0.07	4.45	0.0004
Frequency of contact	0.15	0.05	0.21	0.07	2.87	0.0042	

Table F4: Regression summary for the dependent variable of prejudice by gender and population group

		Regression summary for the dependent variable of prejudice						
Model		Beta	Std. Err. of Beta	B	Std. Err. of B	t(225)	p-level	
White males N= 229	$R = .5821$	Intercept		2.11	0.54	3.87	0.0001	
	$F^2 = .3388$	Racial identity	-0.13	0.05	-0.21	0.08	-2.45	0.01
	Adjusted $F^2 = .3300$	Nature of contact	0.46	0.05	0.75	0.09	7.84	0.0004
	$F(3,225) = 38.443$	Frequency of contact	0.14	0.05	0.22	0.08	2.51	0.01
	$p < 0.0004$ Std. Error of estimate: .77033							
						t(224)		
White females N= 228	$R = .7320$	Intercept		1.25	0.49	2.55	0.01	
	$F^2 = .5358$	Racial identity	-0.11	0.04	-0.20	0.07	-2.57	0.01
	Adjusted $F^2 = .5296$	Nature of contact	0.62	0.05	1.01	0.08	11.88	0.0004
	$F(3,224) = 86.198$	Frequency of contact	0.12	0.05	0.20	0.08	2.45	0.01
	$p < 0.0004$ Std. Error of estimate: .66956							
African males N= 163	$R = .6398$	Intercept		2.02	0.75	2.67	0.008	
	$F^2 = .4093$	Racial identity	-0.12	0.06	-0.29	0.14	-2.07	0.03
	Adjusted $F^2 = .3982$	Nature of contact	0.64	0.06	1.13	0.11	9.65	0.0004
	$F(3,159) = 36.736$	Frequency of contact	-0.03	0.06	-0.05	0.11	-0.47	0.63
	$p < 0.0004$ Std. Error of estimate: .92523							
						t(202)		
African females N= 206	$R = .6839$	Intercept		-0.63	0.59	-1.072.47	0.28	
	$F^2 = .4678$	Racial identity	0.12	0.05	0.27	0.11	2.47	0.01
	Adjusted $F^2 = .4599$	Nature of contact	0.55	0.05	0.85	0.09	9.26	0.0004
	$F(3,202) = 59.187$	Frequency of contact	0.19	0.05	0.32	0.09	3.31	0.0010
	$p < 0.0004$ Std. Error of estimate: .76666							

Table F5: Regression summary for the dependent variable of social distance by gender and population group

		Regression summary for the dependent variable of social distance						
Model		Beta	Std. Err. of Beta	B	Std. Err. of B	t(225)	p-level	
White males N= 229	$R= .5128$	Intercept		3.36	0.48	6.87	0.0004	
	$R^2= .2630$	Racial identity	-0.30	0.05	-0.40	0.07	-5.27	0.0004
	Adjusted $R^2=.2531$	Nature of contact	0.23	0.06	0.33	0.08	3.83	0.0001
	$F(3,225)=$	Frequency of contact	0.17	0.06	0.22	0.07	2.81	0.005
	$p<0.0000$ Std. Error of estimate: .69091							
White females N= 227						t(224)		
	$R= .5442$	Intercept		2.99	0.40	7.35	0.0004	
	$R^2= .2962$	Racial identity	-0.24	0.05	-0.28	0.06	-4.31	0.0004
	Adjusted $R^2=.2868$	Nature of contact	0.35	0.06	0.38	0.07	5.40	0.0004
	$F(3,224)= 31.433$ $p<0.0004$ Std. Error of estimate: .55597	Frequency of contact	0.13	0.06	0.14	0.06	2.15	0.03
African males N= 163	$R= .3698$	Intercept		2.71	0.70	3.84	0.0001	
	$R^2= .1367$	Racial identity	-0.05	0.07	-0.09	0.13	-0.71	0.47
	Adjusted $R^2=.1204$	Nature of contact	0.39	0.08	0.53	0.10	4.89	0.0004
	$F(3,159)= 8.3972$ $p<0.0000$ Std. Error of estimate: .86087	Frequency of contact	-0.08	0.08	-0.11	0.10	-1.07	0.28
African females N= 206						t(202)		
	$R= .4458$	Intercept		1.51	0.62	2.42	0.01	
	$R^2= .1987$	Racial identity	0.03	0.06	0.05	0.11	0.51	0.60
	Adjusted $R^2=.1868$	Nature of contact	0.08	0.07	0.11	0.09	1.16	0.24
	$F(3,202)= 16.704$ $p<0.0004$ Std. Error of estimate: .80523	Frequency of contact	0.39	0.07	0.55	0.10	5.41	0.0004

### Modified model: the variable of frequency of contact left out

Table F6: Regression summary of the modified model for the dependent variable of prejudice and social distance by population groups

Model		Regression summary for the dependent variable of prejudice and social distance					
		<i>Beta</i>	Std. Err. of <i>Beta</i>	<i>B</i>	Std. Err. of <i>B</i>	<i>t</i> (454)	<i>p</i> -level
Dependent variable: Prejudice	White (N=457)						
	Intercept			1.95	0.35	5.47	0.0004
	Racial identity	-0.14	0.03	-0.23	0.05	-3.96	0.003
	Nature of contact	0.62	0.03	1.01	0.05	17.40	0.0004
Dependent variable: Prejudice	African (N=369)					<i>t</i> (366)	
	Intercept			0.86	0.46	1.86	0.06
	Racial identity	0.002	0.04	0.005	0.09	0.06	0.94
	Nature of contact	0.63	0.04	1.05	0.06	15.87	0.0004
Dependent variable: Social distance	White (N= 457)					<i>t</i> (454)	
	Intercept			3.48	0.30	11.29	0.0004
	Racial identity	-0.29	0.04	-0.37	0.05	-7.25	0.0004
	Nature of contact	0.36	0.04	0.45	0.05	8.97	0.0004
Dependent variable: Social distance	African (N=369)					<i>t</i> (366)	
	Intercept			2.40	0.46	5.21	0.0004
	Racial identity	-0.004	0.04	-0.009	0.09	-0.10	0.92
	Nature of contact	0.32	0.04	0.42	0.06	6.47	0.0004



Table F8: Regression summary of the modified model for the dependent variable of social distance

		Regression summary for the dependent variable of social distance					
Model		<i>Beta</i>	Std. Err. of <i>Beta</i>	<i>B</i>	Std. Err. of <i>B</i>	<i>t</i> (226)	<i>p</i> -level
White males N= 229	<i>R</i> = .4868						
	<i>R</i> <sup>2</sup> = .2370						
	Adjusted <i>R</i> <sup>2</sup> = .2302						
	<i>F</i> (2,226)= 35.107 <i>p</i> <0.0000 Std. Error of estimate: .7014						
	Intercept			3.80	0.47	8.09	0.0004
	Racial identity	-0.33	0.05	-0.43	0.07	-5.67	0.0004
	Nature of contact	0.30	0.05	0.42	0.08	5.16	0.0004
White females N= 228	<i>R</i> = .5306						
	<i>R</i> <sup>2</sup> = .2816						
	Adjusted <i>R</i> <sup>2</sup> = .2752						
	<i>F</i> (2,225)= 44.103 <i>p</i> <0.0004 Std. Error of estimate: .56047						
	Intercept			3.20	0.39	8.04	0.0004
	Racial identity	-0.25	0.05	-0.29	0.06	-4.37	0.0004
	Nature of contact	0.41	0.05	0.45	0.06	7.19	0.0004
African males N= 163	<i>R</i> = .3612						
	<i>R</i> <sup>2</sup> = .1305						
	Adjusted <i>R</i> <sup>2</sup> = .1196						
	<i>F</i> (2,160)= 12.010 <i>p</i> <0.0000 Std. Error of estimate: .8612						
	Intercept			2.47	0.67	3.69	0.0002
	Racial identity	-0.04	0.07	-0.08	0.13	-0.61	0.53
	Nature of contact	0.36	0.07	0.48	0.10	4.88	0.0004
African females N= 206	<i>R</i> = .2867						
	<i>R</i> <sup>2</sup> = .0822						
	Adjusted <i>R</i> <sup>2</sup> = .0732						
	<i>F</i> (2,203)= 9.0969 <i>p</i> <0.0004 Std. Error of estimate: .85967						
	Intercept			2.38	0.64	3.69	0.0002
	Racial identity	0.02	0.06	0.04	0.12	0.36	0.71
	Nature of contact	0.28	0.06	0.38	0.08	4.25	0.0004