

University of Cape Town



Racial Integration: A Social Intervention on a South African University Campus

**A dissertation submitted in fulfillment of the requirements for the award of
the degree of Doctor of Philosophy in the Department of Psychology**

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Caroline Kim,

Signature:  Date: 17/07/2015
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Abstract

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Gordon Allport's contact theory has given rise to the widely accepted proposition that contact improves intergroup attitudes, with stronger effects in settings that reflect optimal conditions of contact. Investigators have long been interested in the effects of contact in South Africa where, until twenty years ago, intergroup contact had been formally restricted. Although research has shown a significant inverse relationship between contact and prejudice in this country, 'hyper-segregation' has been well documented in everyday spaces where diverse groups of people coexist. Of significance, these patterns of racial isolation are also prevalent in contexts where contact conditions are among the most optimal: university campuses. Despite the hope that naturally occurring encounters between different groups would start to create more integrated environments, it may be that interventions would be required to facilitate the direct interpersonal contact presupposed in contact theory.

This thesis presents data from two sets of longitudinal studies conducted in university dining halls to investigate whether patterns of 'self-segregation' could be disrupted. The interventions enhanced optimal conditions, and addressed intergroup anxiety—one of the main hindrances to intergroup contact in diverse spaces on this campus—by attempting to instill positive emotions. Both naturalistic observational methods and quasi-experimental methods were used to measure changes in intergroup attitudes and behaviors as a function of the interventions. Students' seating patterns in the dining hall were mapped before, during, and after the intervention. The impact of the intervention on intergroup contact, cross-group friendship, intergroup anxiety, and social

distance were measured through pretest-posttest surveys. Based on evidence from the first set of studies, a larger-scale version of the intervention was launched in the same format, one year later.

The findings reported in this dissertation support the implementation of a practical, easily administrable social intervention in university dining halls with marked ‘self-segregation’. In each study, Analysis of Variance showed an effect for the intervention. In the expanded version of the study, posttest observations revealed that dining tables were significantly more integrated in the dining halls of the experimental group. In the control group, however, the dining halls showed no changes in seating integration. The larger study also showed that positive emotions significantly increased during the intervention, as intended by the interventional design. Finally, path models tested and corroborated the indirect effect of intergroup contact on social distance through intergroup anxiety and cross-group friendship.

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Chapter 1: Introduction

The following work picks up Gordon Allport's (1954) *contact hypothesis*—that positive intergroup contact can reduce prejudice—and takes it back to South Africa, where Allport himself had conducted intergroup research in the 1950s. The purpose is to revisit the issue of racial segregation. At the time when Allport and his students first conducted contact research, they faced the problem of formal, institutionalized segregation in apartheid-era South Africa. Now, two decades after apartheid, the topic at hand is 'informal segregation', also referred to as 'spontaneous segregation' or 'self-segregation'. The phenomenon of 'informal segregation' is neither nascent nor unique to South Africa, but, for a few reasons, this location is presently opportune for intergroup contact research. Firstly, the conditions¹ for contact research have now recently become suitable, as the current generation of young people² has neither been subjected to the legislated segregation nor immersed in the perilous racial climate as that of previous generations. Much of the prior research on intergroup contact theory has taken place in North America, where conditions over the past 60 years have been conducive for studying intergroup relations. As generalizability and relevance across cultures remains one of the consistent criticisms of social psychological theories (Pettigrew, 2011), it seems appropriate to revisit the contact hypothesis somewhere else. Moreover, the current university-aged students in South Africa are the first of the so-called 'born-free' generation—those born after the end of apartheid—to enter university, making South African college campuses particularly apt contexts for investigating intergroup relations.

¹ I refer to Allport's (1954) optimal conditions for contact—equal status, cooperation, common goals, and institutional support—which I will discuss later in this chapter.

² Here, I refer to the South African "youth", which is defined as people from 15-35 years old. (National Youth Commission, 2009).

An emerging field of enquiry known as the ‘micro-ecology of segregation’ has recently carved out a place within social psychological research in South Africa. Dixon, Tredoux, and Clack (2005b) introduced this as an ‘intimate’ level of social scientific investigation within everyday spaces, which they described as places where:

...social relations tend to be fleeting, informal, and subject to constant realignment.

Segregation, in this sense, is the outcome of innumerable small acts of division that occur ‘spontaneously’... Viewed in isolation such acts may seem innocuous. Collectively, however, they may quietly reproduce systems of social isolation and profoundly shape the ‘daily experience’ of race... (p. 402).

By ‘daily experience’, the authors referred to Goldberg’s (1998) notion that through present forms of ‘self-segregation’, race continues to limit and determine aspects of daily life, which can include where you attend school, how you get to work, where you choose to sit in a cafeteria, or how you are treated in a local shop or restaurant. Dixon et al. (2005b) emphasized the micro-ecological processes, including “boundary construction, negotiation, maintenance, and dissolution”, that are constantly in motion in places where this type of ‘spontaneous segregation’ takes place (p.406). Put simply, this emerging body of literature in South Africa takes a closer look at ordinary, familiar, everyday spaces in the hopes of unveiling new perspectives on ‘self-segregation’.

Within this micro-ecological framework, this thesis presents a social psychological investigation of ‘informal segregation’ and racial integration. It focuses on the contents of intergroup interaction, and experiments with a social intervention in the context of a South African university. Before delving into the massive body of literature on intergroup contact and

racial integration, I will begin with a critical exploration of key concepts that are discussed in this work. Following this will be an outline of the research problem, along with a rationale for studying this problem within the narrow context of one particular South African university—the University of Cape Town—and implications for the broader context of college campuses. Lastly, I will introduce the two, two-part studies that I present in Chapters 4 through 7.

Problematic Terminology for Contemporary ‘Segregation’

The concept of segregation differs drastically depending on whether the reference is toward formal or ‘informal’ segregation—the former refers to political, ideological, and organizational systems of legalized racial separation and oppression, while the latter refers to the act of freely associating with members of one’s own group. Formal segregation usually conjures up images of the Jim Crow era in the United States and the apartheid regime in South Africa, where racial segregation was systematically and often brutally enforced. Meanwhile, ‘informal segregation’ may evoke images of modern-day cafeterias and social clubs around the world, where people often gather in ethnic clusters (e.g., Karsten, 1998; Orfield & Lee, 2006; Schrieff, Tredoux, Finchilescu, & Dixon, 2010; Tredoux & Dixon, 2009; Tatum, 1997).

If viewed as observable outcomes, the broad similarities in these two forms of segregation may be obvious. As seen in the aforementioned argument around the micro-ecology of segregation (Dixon et al., 2005b; Goldberg, 1998), some may further posit that ‘informal segregation’ “may quietly reproduce [past] systems of social isolation (Dixon et al., 2005b, p. 402).” However, likening one type of segregation to the other—by using the term ‘segregation’ to describe present-day forms of racial isolation—risks the implication that people of color may not only be replicating but also self-imposing pieces of past systems of injustice and oppression.

Moreover, it may diminish the many positive benefits and meaningful purposes of associating with members of one's own ethnic group. For example, this type of association can be helpful for a healthy development of racial identity or the development of coping mechanisms for discrimination.

Similarly, 'racial balkanization', a term that social scientists have used to describe 'informal segregation' on college campuses, is problematic because it presupposes that students of color are recreating racial separation and are the cause of ensuing problems (D'Souza, 1991). This phenomenon lacks empirical backing, however, and is considered by some to be a myth, influenced by theories of cultural deprivation and White supremacist ideologies (hooks, 1995; Tatum, 1997). Hence, I emphasize that the current investigation of 'self-segregation' and racial integration is not based on either of these two assumptions about identity-based association. To avoid any implication that people of color are reproducing or self-inflicting aspects of unjust historical segregation, I refer to present-day forms of 'segregation' in single quotation marks.

Accordingly, with regard to racial integration, this effort does not presuppose underlying assumptions of judgment on 'self-segregation'. Instead, it primarily presumes that the notion of integration warrants further examination. Integration efforts that have been studied thus far have arguably had multiple consequences—both positive and negative. Yet, the most obvious outcome is 'self-segregation', which often exists in prevalent and extreme patterns. On a broad scale, these patterns of racial isolation are still associated with societal problems such as a lack of access to resources and racial bias (Ananat, 2011; Anderson, 2010).

'Self-segregation' here does not refer to all types of association with others from one's ethnic background. In the university context, for example, it refers to the restricting of social

experiences solely to homogeneous groups, whether through formal organizations or informal groups. In this particular microcosm, ‘self-segregation’ can deprive all students of the interactions and cooperative engagements that are necessary to deal with racial bias, and stifle opportunities to develop social and cultural capital (Anderson, 2010; Mills, 2000).

Associating with other members of one’s ethnic background has indeed had many positive benefits, including being part of a community that is affirming and welcoming. This type of community can provide the necessary solace and tools for coping with racism and cultural stresses (Berry, 2005; Tatum, 1997). Homogenous communities have also been endorsed in cases where the intent was to preserve language and cultural heritage, granted that they do not involuntarily exclude groups from opportunities or maintain privileges (e.g., White Afrikaner groups in South Africa; Young, 2002). While these perspectives provide important affirmations of ethnic association, integrationists contend that, ideally, collaboration between groups is essential for improving social conditions and racial equality (Anderson, 2010).

Outlining the Issue

This thesis investigates the issue of ‘informal segregation’ in South Africa, but this phenomenon is not limited to this location. In addition to North America, where the majority of related studies have taken place, ‘informal segregation’ has been documented in many other contexts and geographic regions, including Czech and Slovak societies (Novotny & Polonsky, 2011), Northern Ireland (Hewstone et al., 2008), and Israel and Palestine (Maoz, 2000). Hence, while the focus of this work takes place in a university setting in South Africa, it may have further implications for understanding ‘informal segregation’ in other contexts.

The studies presented in this work were conducted on the campus of the University of Cape Town (UCT), which has its own unique past within South Africa's history. This Institution carries the distinction of having been one of the only South African universities to criticize academic segregation and admit students of color during apartheid. It was also one of the first universities to undergo substantial desegregation after the end of apartheid (Leuscher, 2009). (Please see image below, which shows the center of UCT's main campus, also known as Upper Campus.)



Figure 1.1. Photograph of the University of Cape Town's Upper Campus, from the rugby fields.
[Untitled photograph of UCT, from University of Cape Town, 2014b, Daily news archives].

Much has changed on this campus over time. Today, the student body of the historically White institution is now extremely diverse: over half of the current student population consists of

men and women of color, about one-third White, and roughly one-fifth international students (University of Cape Town, 2012, Annual Report³).

However, some aspects of campus life have remained nearly unchanged since apartheid. Groups of students have long gathered in open spaces like picnic tables outside the food court, small patches of grass, and a centrally located staircase that serves as the main gathering place for students (Tredoux, Dixon, Underwood, Nunez, & Finchilescu, 2005). These steps lead from the famous Jameson Hall, where leaders like Nelson Mandela and Robert F. Kennedy have delivered iconic speeches, down ten flights to the rugby fields (see Figure 1.2).

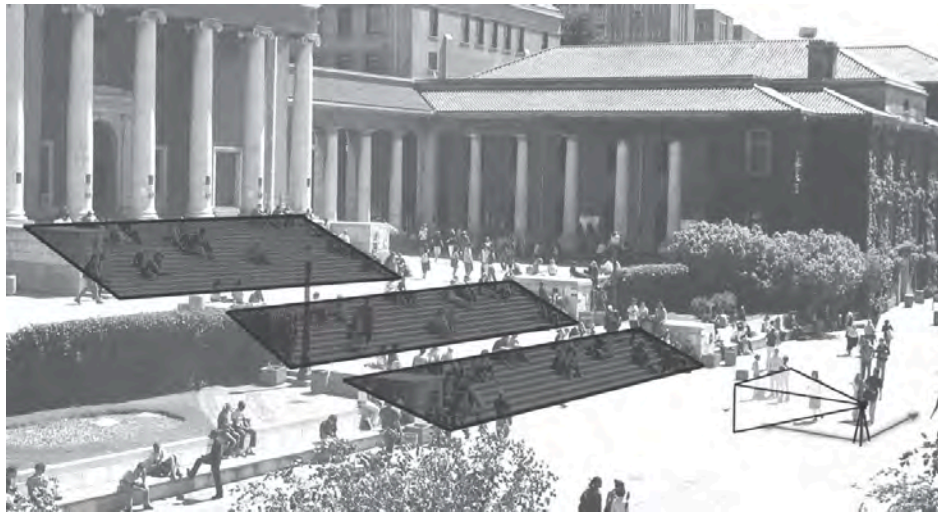


Figure 1.2. Image of the Jameson ('Jammie') Steps at the University of Cape Town. From Tredoux, et al. (2005), p. 418.

At first glance, images of students on the steps suggest growing racial diversity and integration on campus. Yet, a closer look reveals clear separation along racial lines (Tredoux et al., 2005), both in casual meeting places like the Jameson Steps, and in virtually all major

³ This is the most recent report; the 2013 Annual Report is not yet available.

meeting places on campus, including lecture halls, discussion classrooms, and dining halls (e.g., Alexander, 2006; Alexander & Tredoux, 2010; Gibbs & McGivern, 2010; Govender, 2008; Schrieff, Tredoux, Finchilescu, & Dixon, 2005, 2010).

In 2005, Muianga revealed that few students at UCT reported having friends of a different racial group. Only 30% of White students and 32% of Black students indicated that they had any friends of a different racial group. This trend changed dramatically five years later, based on findings from another study by Gibbs and McGivern (2010). This study showed that 98% of White students and 95% of Black students surveyed replied 'yes' to having friends of a different race. However, during this time, numerous observational studies on this campus showed extreme and persistent levels of racial separation (e.g., Alexander, 2006; Alexander & Tredoux, 2010; Gibbs & McGivern, 2010; Govender, 2008; Schrieff et al., 2005, 2010). For example, Gibbs and McGivern (2010) measured segregation using Massey and Denton's (1988) indices of spatial variation, where D values ranged from 0 (unsegregated) to 1 (completely segregated). They found that average D values in the dining hall ranged from 0.66-0.90, indicating hyper-segregation.

This raises the issue that observational data does not seem to align with self-reported data. One possible explanation of this discrepancy is that there may have been a shift in attitude (less willing to admit to not having friends of a different race) that does not match a shift in behavior (seeing more students with friends of different races). This contrast can also be seen in intergroup literature: in general, contact research consistently shows support for improvements in intergroup attitudes (Pettigrew & Tropp, 2006, 2008), yet studies in South Africa have reported patterns of informal 'self-segregation' in spaces that are compositionally diverse. Hence,

revealing that attitude adjustments do not necessarily translate to changes in behaviors, such as more intergroup contact and greater integration (e.g., Alexander, 2006; Alexander & Tredoux, 2010; Gibbs & McGivern, 2010; Govender, 2008; Schrieff et al., 2005, 2010).

These studies have revealed that racial lines are not only clearly established but also maintained through spatial boundaries, even in contexts where intergroup interactions are supported and people share common interests (such as tutorial groups, dining clubs, sport groups, dancing clubs) (Alexander 2007; Alexander & Tredoux 2010; Bangeni & Kapp 2005; Durrheim & Dixon, 2005; Schrieff et al., 2005, 2010; Tredoux et al., 2005; Tredoux & Dixon, 2009). At UCT, Alexander (2007) experimented with disruptions to these spatial boundaries in residence dining halls, and found that students were highly resistant to intrusions of these boundaries. For example, when Black and White research confederates sat at tables occupied by all White or Black students, respectively, researchers found that the racial composition would switch over entirely within an hour. These studies reveal the central problem around which my research focuses: that patterns of racial isolation are prevalent and resistant to change.

Rationale for Intervention

Given that the phenomenon of ‘self-segregation’ has consistently proven its tenacity over time and under a variety of circumstances, it seems likely that it will remain unchanged if left to its ‘natural course’. Thus, exploring the use of an intervention is warranted. For decades, governments, companies, and educational institutions have made multifaceted efforts toward integration, which have included implementing new policies and practices as well as launching evaluations of these efforts (SA Department of Trade and Industry, 2013; US Government Accountability Office, 2013). Diversity offices devoted to integrating and diversifying

workforces and student bodies have been established in many corporations and universities to implement strategic diversity agendas (Williams & Wade-Golden, 2008).

Integrative diversity initiatives. A small, but growing body of literature on integrative initiatives has also emerged in various academic fields, such as psychology, sociology, education, and economics (e.g., Lemanski, 2006; Milem, 2003; Muyebe & Seekings, 2011; Pollock, 2008; Tihanyi, 2006; Young, 2002). Many of these studies have taken place on university campuses because of the seemingly ideal time and place for university-aged students to benefit from cross-group engagement. For obvious reasons, university students are easily accessible for study. But more importantly, university years are often a time when students are living and studying with different groups of people for the first time, meaning there is a unique opportunity to realize the benefits of intergroup contact (Muthuswamy, Levine, & Gazel, 2006).

A wave of university-based integration studies emerged in the U.S. in response to the highly debated 2003 U.S. Supreme Court case involving the University of Michigan, *Grutter v. Bollinger* (2003). The outcome of this case upheld the right of universities to consider race in admissions decisions, on the ruling that racial diversity was a legitimate part of an institution's educational mission. Milem, Chang, and Antonio (2005) were among the first researchers to respond to this decision using empirical data. They examined the effectiveness of integration programs at nine universities, and found evidence that supports the benefits of a pervasive campus climate of *diversity* that is achieved not only through admissions policies and intellectual agendas but also through social initiatives (e.g., Chang, 1996; Milem et al., 2005). *Diversity* is another term that often gets misused and overused in educational settings. So, for universities contexts, these authors provide a useful definition: "engagement across racial and ethnic lines

comprised of a broad and varied set of activities and initiatives”, (Milem, Chang & Antonio, 2005, p. 4). The focus here is on process rather than composition. University-based intergroup contact studies like those mentioned above have shown that this type of diversity has been associated with an array of personal and social benefits for students (e.g., Antonio, 2001; Chang, 1996; Gurin, 1999; Hurtado et al., 2003).

Chang and colleagues have also contributed a significant amount of data that associates campus diversity with individual and group benefits for students. Chang (1996) surveyed 11,600 students in 371 American universities and found that socializing or conversing with peers across races may contribute to students’ academic progress and school satisfaction by increasing understanding of different cultures. In later work, Chang and colleagues (2006) found that social initiatives implemented through supportive campus climates and institutional practices have also been correlated to a high degree of student-to-student intergroup interaction. In turn, these initiatives increased cultural competence by creating opportunities for getting to know other students from a variety of backgrounds, and in turn becoming more accepting of differences.

Intervening at the university level may also be associated with benefits beyond college. For example, Hurtado and colleagues’ (2003) review of higher education literature revealed that students educated in diverse settings, who (a) study and discuss race-related issues and interact and (b) socialize within a diverse group of classmates and friends, have an increased likelihood to live and work in racially diverse environments after graduation (p. 148). Thus, the potential for positive outcomes of racial integration provides motivation for further investigation.

Importance of cross-group friendship. Within the university setting, residence halls can be critical locations for student interaction because they often contain peer groups from which

friends and acquaintances are chosen (Antonio, 2001; Antonio et al., 2004). Here, students establish the ways in which peers interact and the values of different types of relationships. Environment and physical distance within the vicinity can influence patterns of friendship formation and engagement across groups. Thus, residential life may play a significant role in forming social connections with peers from various backgrounds (Milem et al., 2005).

Interracial friendship is also an important context for interracial interaction because interaction between friends of different races or ethnicities may serve as a means by which students benefit from diversity (Antonio 2001; Gurin 1999). Antonio (2001) suggests that the beneficial outcomes connected to diversity “are both realized from and mediated by friendships amongst students with different racial and ethnic backgrounds” because these relationships are between group members of equal status, and provide opportunities for ongoing dialogue on topics such as race and culture (p. 79). Van Laar, Levin, Sinclair, and Sidanius (2005) provide an example of the effects of opportunities for contact and conversations over time, realized through roommates and their extended networks. Some of the reported effects of sharing a room with someone from another ethnicity include a decrease of uneasy feelings in the presence of peers from different groups, decreased symbolic racism, increased ethnic heterogeneity of friendship groups, and increased positive effects toward that group and sometimes effects also apply to other groups not involved in the contact situation.

Friendship groups have also proven to be an important factor in studies on ‘informal segregation’ at UCT. At this University, Schrieff et al. (2005, 2010) found that the most common reason for continued ‘self-segregation’ in the dining halls was that students did not want to leave the ‘comfort zones’ of their friendship groups. Students reported comfortability as a need and as

an organizing factor for seating patterns and interactions. This phenomenon was confirmed in a follow-up study by Gibbs and McGivern (2010), who introduced an intervention to promote intergroup contact by randomly assigning seats in the dining hall for a short period of time and assessing whether this had an effect on students' long-term seating patterns. Although participants thought integration was important, 32% reported experiencing negative emotions (as general affect), 87% did not want the intervention to be a part of the regular dining hall experience. It was unclear whether friendships were made and maintained during the study. In the following chapters, I discuss the need for a generally positive experience to occur in order for social intervention to have a lasting beneficial impact. Thus, the intervention in the studies that I present incorporates a fun and enjoyable element, endeavoring to induce positive emotions, where the target is positive affect in general.

Given that one of the most commonly reported reasons for the persistence of 'self-segregation' among students was feelings of anxiety (Schrieff et al., 2005; 2010), further evidence points to the use of positive emotions because of its effects on negative feelings like anxiety (e.g., Fredrickson, 1998; Fredrickson & Branigan, 2001; Levenson, Ekman & Friesen, 1990; Wolpe, 1958). South African behavioral psychologist, Joseph Wolpe's (1958; 1973) Theory of Reciprocal Inhibition suggests that "if a response incompatible with anxiety can be induced in the presence of anxiety-provoking stimuli, then it will weaken the relationship between these stimuli and anxiety responses" (Wolpe, 1973, p. 17). In general, when people experience positive emotions, it is usually accompanied by feelings of safety and satisfaction, and these sentiments are rarely experienced in unpleasant situations (Fredrickson, 1998). Therefore, according to this theory, anxiety responses may be reduced when paired with positive emotions during intergroup interactions. When applied to the four studies that I will present, an

intervention that will induce positive emotions tests whether it can counteract negative emotions related to intergroup interactions such as intergroup anxiety. This intervention is structured as a set of group activities that involve an element of enjoyment in order to provide a context in which positive emotions can be induced and sustained.

Introduction to Studies A and B

I have conducted two, two-part longitudinal studies that present a social intervention. This intervention was implemented to create more opportunities for structured and ongoing interracial contact in a university residence setting where diverse student groups live together in the same space, but have shown established patterns of self-segregation. Each longitudinal study had two subsets: an observational study alongside an experimental study that uses an intervention to facilitate intergroup contact. I observed university students' seating patterns in five dining halls that serve ten residences. The intervention was designed to address intergroup anxiety—one of the main hindrances to intergroup contact in diverse spaces on campus. Before and after the intervention, I measured intergroup contact, cross-group friendships, intergroup anxiety, and prejudice.

The first aim of this intervention was to create more opportunities for interracial mixing during the dinner period. A second aim was to implement an intervention that provides students with regular opportunities for intergroup contact and dialogue. The intervention maximizes an opportunity for contact in a place where diverse groups of students live together, but self-segregate, as noted above. I also investigated the enduring effects of such an intervention by measuring intergroup contact at one and two months following the termination of the intervention. This was done by measuring the impact of the intervention on friendship patterns,

seating patterns, contact patterns, outgroup attitudes, and intergroup anxiety. I expected that an increase in structured contact would produce changes in each of the measures.

The ensuing chapters contain a social psychological exploration of intergroup contact, racial integration, the contents of intergroup interaction, and social intervention. In Chapters 2 and 3, I provide a review of the relevant bodies of literature on integration and contact theory, respectively. The background on racial integration in Chapter 2 includes a brief (recent) historical grounding for the context within which my research takes place. It also contains an overview of integration studies—mainly in residence, employment, and school settings—and includes philosophical, sociological, psychological, and educational perspectives on a wide variety of topics, from ‘colorblindness’ to ‘multiculturalism’ to ‘integration’. Chapter 3 explores contact theory as described in psychology and social psychology, but also includes perspectives from education, anthropology, and sociology, as my research is based within an educational setting. In Chapters 4-7, I present the four studies that I conducted in the residence halls. Chapter 4 contains the intervention program executed in one dining hall and the accompanying observational study within that space, both of which were measured longitudinally. The study presented in Chapter 5 occurs alongside the one in Chapter 4 and comprises a longitudinal pretest-posttest survey that measures student attitudes and behaviors as related to the intervention in Chapter 4. Based on evidence from these studies, I launched a larger-scale version of this intervention that included five dining halls, and was conducted the following year. Chapters 6 and 7 present the second set of studies in the same format. Lastly, although each of the research chapters includes a brief discussion of the results, Chapter 8 provides a broader discussion of the results and impact of the research.

Chapter 2: Rethinking Integration in Context

Introduction

This chapter presents a different perspective on the issue of intergroup contact that goes beyond the traditional contact literature and incorporates the complexities and challenges of racial integration. Before investigating the research questions that concern whether patterns of ‘self-segregation’ can be disrupted and whether integration can be increased through structured contact interventions, this chapter considers the influences of historical segregation as well as contemporary integration efforts. Starting within the South African context, I present a review of the existing literature on integration from various academic disciplines, including education, sociology, and psychology, which draw on theoretical and philosophical ideas that drive different perspectives on integration. The chapter sets the scene for the context in Studies A and B, which test whether contact can translate into increases in integration and whether structured contact can influence integration in university settings. Racial integration has proven to be an intricate topic that carries complicated histories and ideologies.

I first examine some key terms around integration and ways in which it might be achieved. I then present important topics in the South African context, including residential and educational desegregation. Following is a discussion of the main perspectives on integration, namely what I refer to as the ‘multiculturalist perspective’, the ‘colorblind perspective’, and the ‘integrationist perspective’. Finally, I present evidence in support of integration initiatives on university campuses. As most of the recent literature on integration comes from North America, much of the discussion stems from North American research and examples. Still, a growing body of

research has been conducted in South Africa and I will present these two strands alongside each other.

On race. As a pertinent theme in this study is race, I would like to clarify the use of the term as seen throughout this body of work. Race is currently understood as a socio-historical and political construct that refers not to biological factors, but to hierarchical structures of meaning attached to physical attributes that materialize in people's lives. People tend to use these attributes to make sense of their self-perceptions, perceptions of others, and the world around them (Erasmus, 2005, 2010). Thus, race is not a characteristic that individuals are born with, but rather a category into which individuals are racialized. As a subject of social analysis, the concept of race "underplays the ways in which a whole range of conditions and processes influence the sense of cohesiveness and fragmentation within groups (Soudien, 2004, p. 90)."

I acknowledge that continuing to use racial categories in academic writing can perpetuate racialization and perpetuate the use of contested categories. However, race still significantly affects people of color today through the impact of racism and unjust systems, and thus, is not yet obsolete. Although it is an important future goal, presently, it would not be helpful to disregard race from study, examination, and dialogue, particularly for understanding and combatting the reality of racial discrimination that still exists. Furthermore, for the sake of clarity and functionality, I acknowledge the need to use racial labels given the research topic of racial integration and refer to race categories throughout this work. Race categories have been clearly identifiable and found useful in integration studies in South Africa, including ones at this University (e.g., Alexander & Tredoux, 2010; Schrieffer et al., 2005; 2010). Lastly, when using race categories, many previous intergroup studies have limited discussions to a Black-White

binary, which may inadvertently devalue and dismiss the reality of racialized experiences of people of other racial groups, namely Asian and Coloured in South Africa. Hence, unlike some previous studies in this University setting, I attempt to include all representative race groups.

Race categories in this country are predominantly Black, Coloured, Indian, and White, which date back to the Population Regulation Act No 30 of 1950 that was repealed in 1991 (Worden 2010). This law required that all South Africans be classified into single race categories based on physical appearance, social acceptance and behavior, and descent, among other criteria (Posel, 2001). Black South African originally referred to a population of Khoisan, Xhosa, Zulu, Ndebele, Sotho, Shangaan and Venda descent, among others (Worden, 2010). The so-called Coloured group generally referred to a population of Malaysian, Khoisan, and Dutch descent, among other places of origin (Worden, 2010). The Indian group consisted of a population from the former British India. White South African generally consisted of people from Dutch, French, German, and English descent (Worden, 2010). Although these terms are still used today at the University of Cape Town and in many South African contexts, the labeling and membership of these groups remains under dispute because of the categories were used to underpin an unjust oppressive system.

Racial Integration in the South African Context

Through a complex web of forces, the history of racial segregation and integration affect everyday interpersonal contact in contemporary South Africa (Tihanyi, 2006). These influences include local forces such as community dynamics and socio-economics, and the external forces that encapsulate a national history, societal transition, and globalization, which influence the present society in many intricate ways, both seen and unseen. Examples of these implications are

presented in the follow section through a brief history of racial segregation in South Africa.

Arguably, the strongest influence from South Africa's history, characterized by years of violent oppression and resistance, is a legacy of inequality and a culture of violence.

Tracing racial inequality and segregation through history. Racial conflict is commonly dated to the start of colonial rule in 1652. Clashes over land and resources resulted in systems of racial oppression and privilege, similar to many other European colonies of that period (Worden, 2010). "Uniquely, it has been at once a colony of White settlement, a colony of slave labor, and a colony of rule over a large indigenous population (Ross, 2008, p. 3)." During the first 50 years of colonialism, a White wage-earning class appeared, but when land became plentifully available in the 18th century, this class almost entirely turned into a White land-owning class (Terreblanche, 2002). With the abundance of land, colonists met the demand for 'unfree' labor first with the importation of slaves, as did all the European colonies of the time. They then forced local people into serfdom (Terreblanche, 2002.) After the abolishment of serfdom in 1828 and slavery in 1838, Afrikaans⁴ and English landowners replaced these systems with different systems of Black labor exploitation.

The discovery of diamonds in 1867, and gold in 1886 in South Africa, changed the social, economic and political atmospheres. By this time, systems of racial oppression in the labor industry were already strongly institutionalized (Ross, 2008). When the De Beers Consolidated Mines⁵ Company dominated the diamond industry in 1889, it marked the start of a phase of

⁴ Afrikaans people were the descendants of the Dutch settlers (Worden, 2010).

⁵ De Beers Consolidated Mines was a mining company, at the time controlled by John Cecil Rhodes, who also happened to have donated the land used to build the University of Cape Town. "Rhodes' imperialist and racist attitude to Africa causes much controversy and resentment today, but without the section of his estate which he

racial separation of the labor force, which included Black laborers being restricted to housing compounds. This stage was also marked with decidedly harsher, more inhumane treatment of laborers, who were Black, Indian, and later Chinese (Ross, 2008).

A string of invasions, wars, revolts, and open conflicts between indigenous African peoples, Dutch settlers, British settlers, and European colonies from 1879-1915, resulted in enduring consequences in all sectors of life. One result was a labor shortage between 1904 and 1907, which was met by importing indentured laborers from China (Ross, 2008). With the import of Chinese labor, came the first distinct separation of skilled or supervisory White workers and unskilled Chinese, African, and Indian laborers. Overall, Africans were subjected to further subordination. African rebellions, particularly from 1906-1908, made both British and Afrikaans White ruling groups believe they needed to unify against African resistance (MacKinnon, 2012). As a result, White control was consolidated under the creation of the Union in 1910 and policies were implemented to maintain White supremacy and capitalism by profiting from the economy while controlling power over South African labor (MacKinnon, 2012). Racial separation was formally adopted into a policy of segregation from this time through 1940 (Ross, 2008).

The apartheid government gained control in 1948 when South Africa set itself apart from the rest of the world in the mid-twentieth century. During this time, governments began to ban segregation and racist policies while South Africa's segregationist apartheid government was vigorously increasing and expanding its power and influence (Worden, 2010). South Africa's history of apartheid consisted of a combination of in-depth political, ideological, and

donated for the founding of a university, UCT would probably not have come into existence in 1918.” (University of Cape Town, Our heritage, 2014a, p.1).

organizational tactics that were premeditated for the purpose of preserving and engraining White supremacy (Dubow, 1989). During the implementation of this system of oppression, Black communities suffered identity displacement, violation, humiliation, and immense trauma (Zuma, 2010). This system was orchestrated by the apartheid government in every sector of life, through a carefully engineered segregationist and racist scheme that was held intact with vastly repressive political and military measures (Worden, 2010).

The nature of interaction between groups during apartheid was strictly hierarchical. The cities were designated as White spaces and rural areas as Black spaces, but Black people were brought into White spaces as laborers. Thus, Black people were deemed temporary travellers in the cities, and systems of separation were implemented to prevent contact between groups. Residential segregation was put in place to keep a spatial and social separation between Black and White people in cities, and everyday interactions were further prevented by separating facilities like schools, benches and bathrooms (Leuscher, 2009). Cape Town was historically less segregated than other cities in South Africa, and interracial contact was comparatively common (Giliomee & Schlemmer, 1989). However, the nature of these interactions were still hierarchical, limited to work places, and did not cross over to social spaces even though there was some level of racial tolerance. After apartheid ended, residential segregation in urban areas throughout the country remained exceptionally high (Christopher, 2001; 2005). Although segregation was intended to separate White people from other groups, it created further separation between different Black peoples and between Black and Coloured people. Conflicts ensued between Black and Coloured people over labor because Coloured people were preferred over Black

people, for reasons such as common language. Some remnants of this conflict still remain (Lemanski, 2006)

The end of formal segregation and the downfall of the apartheid government in South Africa have not resulted in widespread racial integration. Patterns of informal racial segregation and conflict have endured in much of the country, except for some middle and elite class contexts. When considering the intricate, all-encompassing system of strategic separation, which determined the ideology internalized by most South Africans for so many years, this is not surprising. Understanding and describing racial integration efforts in light of this history brings the challenge of capturing the complex ways in which the various lasting influences shape daily interpersonal contact (Tihanyi, 2006).

Residential segregation. Although terms like ‘Rainbow Nation’ and the ‘New South Africa’ have entered the cultural ethos and vernacular of South Africans, residents are still living relatively separate lives, socially and spatially; occupying separate places of residence, study, religious observance, and leisure (Battersby, 2004; Lemanski, 2006). The extent of this residential segregation after apartheid can be seen in some numerical indices of segregation (Duncan & Duncan, 1955; Massey & Denton, 1988) calculated by Christopher (2001), using data from the 1996 national census in South Africa. These indices of segregation are expressed on a scale from 0—fully integrated, to 100—fully segregated. Overall indices for the four largest population groups were as follows: Coloured—80.2, Black—86.9, Asian—85.1 and White—93.8, which remained almost unchanged even though integration was occurring in formerly White spaces. These data show that in contemporary South Africa, most people still live in same-

race neighborhoods (see also Christopher, 2005; Pieterse, 2003; Tomlinson et al., 2003). Figure 2.1 below displays an example of this in the city of Cape Town.

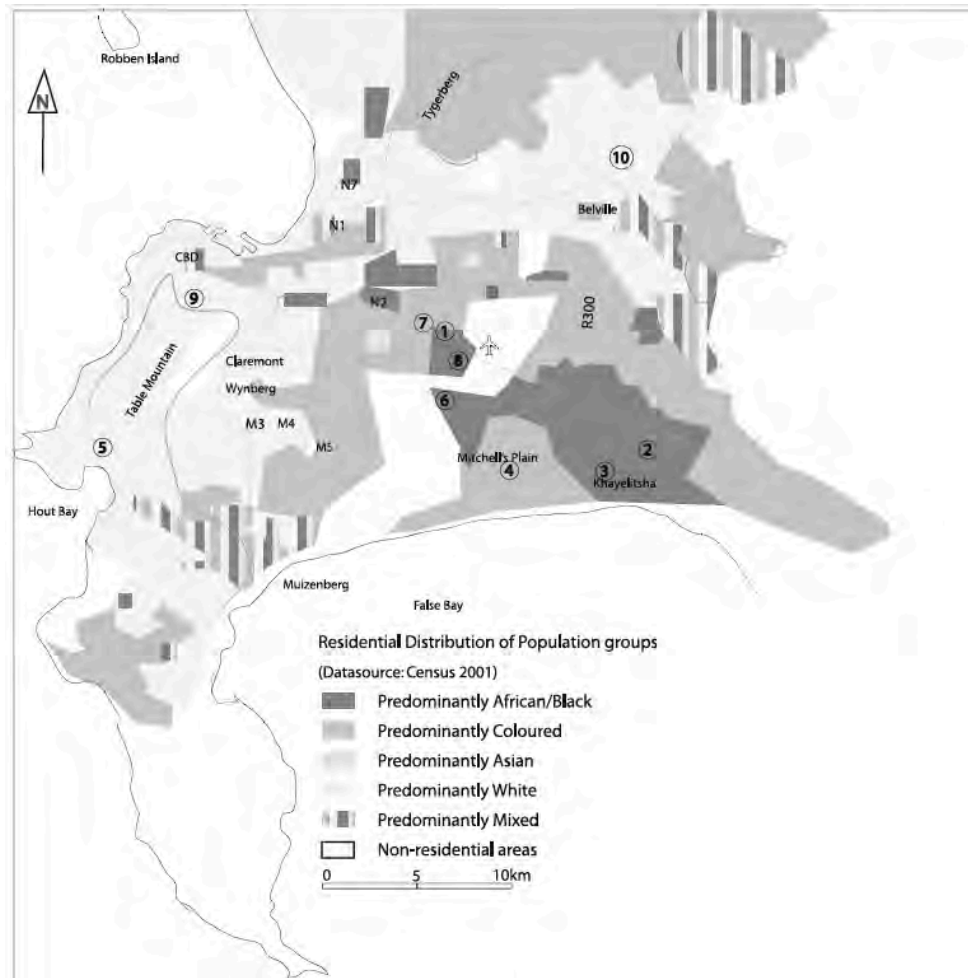


Figure 2.1. Map showing residential distribution of population groups in Cape Town in 2001.

(From Newton & Schuermans, 2013, p. 585).

Parry (2013) took a closer look at racial segregation in two major South African cities, also using census data, and similarly found that these major cities showed very little change in levels

of segregation since apartheid. He measured racial segregation using Theil's Entropy Index (E)⁶, which was incorporated into the Spatial Information Theory Index (H) to compare segregation in small to large geographic areas (1km² – 8km²) of each city. H scores represented segregation, where a score of 0 represented complete integration, and a score of 1 showed complete segregation. Results showed that while segregation (in the form of H scores) decreased from 1991-2011, overall levels of segregation still remained high. For example, in Cape Town, levels of segregation (H) in larger areas fell from 0.37 in 1991 to 0.26 in 2011, but smaller areas showed a decrease from 0.78 to 0.59. Similarly, in Johannesburg, larger areas showed a decrease in H levels from 0.45 to 0.30 during the same time frame, while smaller areas showed a difference of 0.70 to 0.53. Thus, at the more local, neighborhood level, levels of segregation remained high in 2011.

As a whole, integration in South Africa has been an extremely slow process, and desegregated public spaces are still very segregated. Wealthy suburbs substantiated by economic and other resources are centrally located, while congested and impoverished townships⁷ occupy the peripheries. Since formal desegregation, people of color have had some limited mobility and access to middle-class neighborhoods, but this type of residential integration has not translated to much face-to-face interaction, as houses in these neighborhoods are surrounded by high walls (Seekings & Nattrass, 2005). In some cases, strong tensions have also resulted from Black people moving into some suburbs. Consequently many of these neighborhoods and schools had experienced 'White flight', where White people started to move out of the neighborhoods in

⁶ The E index stands for racial diversity, where a score of 0 represents no diversity and 1.39 shows perfect diversity.

⁷ Townships are urban, impoverished areas often bordering cities, which were originally created to separate Black, Coloured, and Asian laborers from White areas (Huchzemever, 2011).

large numbers, and take their children out of integrated schools (Morris, 1999; Lemanski, 2006).

In a nationally representative public opinion poll for The Institute of Justice and Reconciliation⁸, Wale (2013) also found that the rate of interracial socialization remained very low. She conducted a survey (Racial Reconciliation Barometer), which looked at a longitudinal measure of progress in reconciliation since 2003, using a questionnaire completed by over 3,500 participants. Results from the survey found that on average, the percentage of respondents who reported that they talked to people of other races rose from 49% in 2003 to 56% in 2013. In 2003, 29% of participants said they socialized with people of other races, and this number rose to 43% in 2013. However, in the most recent 2013 survey, 41% of participants responded that they either rarely or never interacted with someone of a different race in everyday settings, compared to 33% who always or often interact. In social settings, 54% rarely or never interacted, compared to 24% who always or often engaged with people of other races. Thus, a greater number of South Africans were not engaging in interracial interaction.

Some exceptions to the prevalent residential and social segregation have been seen in integrated places, among White and middle class Black people (Saff, 1998; Teppo, 2004). Yet, these are historically White places that only allow Black people with the necessary middle-class socio-economic standing to share this space. Furthermore, this type of integration does not necessarily contribute to desegregating societies or creating integrated spaces for all people; they are limited to people with social and economic means.

⁸ Reconciliation is a term often used in South Africa that refers to a process of improving race relations by increasing tolerance, reducing racial animosity and prejudice, and accepting all South Africans as “equals, extending dignity and respect” (Gibson & Claassen, 2010, p.260). Gibson (2004) also includes supporting human rights and legitimizing the new government.

Examples of residential desegregation. Some limited residential areas have been desegregated, though even in these spaces, often social segregation still prevails (Horn & Ngcobo, 2003; Oldfield & Stokke, 2004). However, some exceptions have been documented in desegregated residential areas in Cape Town that have shown the opposite trend: more and generally positive interracial interactions. Lemanski (2006) found one example of social integration in an area where mainly Black and Coloured people shared a housing complex provided by the government. She conducted a qualitative case study, and found that residents in this complex were not only living without conflict with their neighbors, but also showed evidence of effective social and economic integration, and even in political and cultural spaces to a lesser extent. She saw that in these places, the dominant culture was racialized, and residents still held racial stereotypes, but there were signs of positive interactions and even interracial friendships, within an overall tolerant and multicultural environment. Lemanski's (2006) study may have been considered an anomaly because the housing development was located in a wealthy, central area in Cape Town, but Muyebe and Seekings (2011) found similarly exceptional cases of integration in other low-income, peripheral neighborhoods in Cape Town.

Muyebe and Seekings (2011) expanded upon Lemanski's (2006) study to two low-income neighborhoods in Cape Town that have a balanced Black and Coloured population, using similar qualitative interview methods among residents of various ages, employment statuses, and gender. In these lower income neighborhoods, different groups were in close proximity to one another: there was less physical distance between houses and families from the lower walls, and smaller yards. In addition, more people walked than drove, so neighbors were more visible. Their results showed that residents had increased levels of racial tolerance and reduced levels of prejudice.

Muyeba and Seekings (2011) found that over the course of time, neighbors who lived together learned from one another, and the spaces that they inhabited eventually transitioned into places where regular, frequent interracial interactions occurred, and social relationships began to form. Residents in these areas often retained their racial identities but did not necessarily choose to separate along these lines. Selection bias may obviously be a contributing factor to these findings, since people who choose to live in integrated spaces might already be inclined to a more positive outlook and to more interactions with people of other groups.

Desegregation in schools. Before the first democratically elected government in 1994, four separate school systems were in place for the four racial groups at the time. Students attended different schools that were extremely unequal in everything from resources to teacher qualifications (Christie, 1991). Desegregation began in a limited number of private schools in 1976, public schools in 1990, and was finally written into official policies for all schools after 1994.⁹ The process of desegregation in schools was unidirectional—that of Black, Coloured, and Indian students moving into better-resourced White schools (Mda, 2000). Some have claimed that movement followed a distinct pattern: generally, a small number of Black and Coloured students with means moved to formerly White schools, some Black students with limited means moved to former Coloured schools that were more affordable, while some White students with means moved to more homogenous schools that charged higher fees (Tihanyi, 2006).

Desegregation in education was a slow and complicated process. Less than 15% of black students were attending integrated schools by 1995 (Naidoo, 1996). And by 2000, 60% of

⁹ The most notable policies include The White Paper on Education and Training (Department of Education, 1995), The National Education Policy Act (Department of Education, 1996a), and The South African Schools Act (Department of Education, 1996b)

schools in areas formerly designated for Black South Africans under the Apartheid government (also known as the Bantustans or Homelands) were still segregated and very uneven in quality (Naidoo, 2004). For the most part, township schools remain segregated and under-resourced (Ndimande, 2006).

Schools that were integrated were also faced with several social and psychological problems (Soudien & Sayed, 2003; Tihanyi, 2006; Wolhuter, 2010). In Vally and Dlamba's (1999) SAHRC (South African Human Rights Commission) report on desegregation in South African public schools, they found that many of these problems stemmed from internal racism that fueled discriminatory disciplinary measures and teacher hiring, racial discrimination, and violence among students. In a qualitative analysis of inclusion and exclusion in school practices, Soudien and Sayed (2003) compared schools that were previously classified as White, Indian, African (Black), and Coloured. They found that most of these problems could be attributed to the lack of accommodation for students of color as schools were assimilated rather than integrated¹⁰. Several years later, Wolhuter (2010) conducted qualitative questionnaires that looked at the experience of students in desegregated, historically White high schools, and continued to find many of the same issues. These issues were related to academic progress, relationships with teachers, peer group relationships, and accommodation of diversity.

Tihanyi (2006) explored desegregation in South African high schools in Cape Town from an educational anthropological perspective, through a qualitative cultural analysis in which she conducted interview and surveys, and observed students. In some places, she found evidence of leanings toward harmony and cultural acceptance, which was in line with other major educational movements like that in the U.S. On the one hand, she saw that while the current

practice of cultural acceptance was effective in maintaining relative peace and promoting space for conversation, this was limited to the confines of schools. Yet, on the other hand, she still found that integrated schools mirrored their formerly White educational practices, and that the importance of race was downplayed by teachers and school administration—resembling assimilation more than cultural acceptance.

Naidoo (1996) argued that for integration in South Africa, schools would require a major shift in the deeply rooted, personally held attitudes and patterns of behavioral interaction by students and teachers of both minority and majority groups. He went on to suggest that this effort may be complicated by pre-existing patterns of school practices and policies as well as the nature of interactions as defined by school culture and climate. Social and symbolic boundaries from the larger society were also reproduced in educational places through everyday school practices, educators, and students. He argued that this reality highlights the tension between the goals of racial integration policies implemented in these very places, and perceived group interests: that teachers and students presumably function according to deep-seated perceptions of different groups. From an early age, even before primary school, students have explicitly and implicitly learned to think about race (Aboud, 2008). Some of these thoughts turn into beliefs that create a racial frame—“a perspectival frame that gets imbedded in individual minds, as well as in collective memories and histories, and helps people make sense out of everyday situations (Feagin & O’Brien, 2010, p. 91).” In other words, as students grow up in segregated areas, they witness racial prejudice, and racist language and comments, which can contribute to perceptions about race, which students presumably carry with them to university.

Desegregation in universities. Statistical information from race relations surveys from the South African Institute of Race Relations reveal distinct patterns of desegregation in South African universities (Myburgh, 2012). Although schools were formally segregated under the Apartheid government, three universities maintained open admission policies between the 1950's and 1980's (though one of these universities still segregated classes). In 1959, the government passed The Extension of University Education Act No. 45 to further segregate higher education and establish new, separate facilities for Black, Coloured, and Indian students, which continued until 1983. Students of color could only study at formerly open institutions with a special permit from a state minister. Thus, before 1983, all but two universities were completely segregated, but by 1983, only two of the 22 remained completely segregated. However, half of these universities were still nearly entirely segregated, with 98% or higher of the student population being of the same race, and half of these universities were also majority white. In 1994, over half of all universities were majority white, and still a third of all universities were close to completely segregated, with 98% or higher of students of the same race. In 2000, the number of majority white universities dropped to a third, and further to 15% in 2012. The number of extremely segregated universities also dropped, but many remained extremely segregated: a third of South African universities was still 95% or higher homogenous in 2000, dropping to about 25% in 2012, though a fifth of universities were still 99% or higher homogenous.

As mentioned in the introduction, the University of Cape Town has a distinctive history of racial integration in midst of the apartheid government. It was one of the two open universities, and one of the first universities to undergo significant racial integration in the student population. It is characterized by its historical opposition to academic segregation since the 1950's and

throughout apartheid (Welsh, 1979). In the 1970's, the university enrolled a few students of color, but a total of less than 10% of the student body. However, by 1993, over 30% of students were people of color, and this number rose to over 50% by the time South Africa transitioned into a democracy in 1994 (Cooper & Subotzky, 2001; Saunders, 2000). Leuscher (2009) describes this process of desegregation at this University as:

...strategic, explicit use of race by both Black and White political actors, to serve the goal of non-racialism... the recognition and institutionalization of race in university governance was tied with emancipatory intent. From the perspective of its historical origins, the legitimacy of the use of race thus depends on its rectificatory power, i.e. its ability to increase the representation of under represented affected interests. (p. 423)

The sentiment in the statement above helps explain the politicization of race in this context and the institutionalization of race as an effort toward a non-racial campus. Consequently, the politicization and institutionalization of race in this context seems to have resulted in the concept of integration being misunderstood regarding the path to non-racialism.

Rethinking the Integration Ideal

Formal racial integration policies are declining and coming under increasing scrutiny in places like the U.S. and South Africa (e.g., race-based affirmative action policies). Universities have often been at the center of high profile debate on this policy. Undoubtedly in these places, the racial equality ideal has become increasingly normalized and racism has become

progressively stigmatized. Proponents of ‘multiculturalist’ and ‘colorblind’ perspectives¹⁰ in these contexts have shifted the focus away from racial integration and have at times viewed integration as an obstacle on the path toward social equality (Banting & Kymlicka, 2006; Bloemraad, Korteweg, & Yurdakul, 2008; Norton et al., 2006). The concern here is that these advocates may have begun resisting the idea of integration before it has properly been understood, implemented, or tested.

Defining integration: From desegregation to informal social integration. The difficulty in understanding racial integration lies in part in the various definitions and uses of the term integration, which have contributed to misunderstandings about the necessity and achievement of integration. Integration is often used interchangeably with desegregation, yet the latter has more to do with a changing of existing institutional structures, whereas the former refers more to finding ways for different groups to coexist (Anderson, 2010). Desegregation is the formal removal of laws that required segregation or created barriers to legal contact, as well as the implementation of antidiscrimination laws (Anderson, 2010). It is, at least in part, an attempt to dismantle structures of inequality. Integration, on the other hand, can be viewed as an attempt to look forward and make informed decisions on better alternatives that is arguably toward social equality, at least from the integrationist perspective. As racial inequality has been consistently and strongly linked to segregation (e.g., in the U.S.; Ananat, 2011; Massey & Denton, 1993), integration policy makers sought to rectify the injustice by allowing and encouraging people of color opportunities in spaces that were previously restricted, such as housing, places of employment, education, and other public places.

¹⁰ ‘Colorblindness’ refers to the perspective in which racial identities are denied. This concept will be discussed further in the ensuing section on “‘Multiculturalism’ and ‘Colorblindness’”.

Along with the definition of integration, a few assumptions often associated with the term also call for clarification. Integration is not the opposite of segregation and thus does not aim for the dissolution of racial affiliation, clustering, or identification. Studies have shown that racial solidarity is essential for identity formation (Helms, 1990; Tatum, 1992; Phinney, 1990), the development of coping mechanisms (Sue, 2004, Thompson & Neville, 1999), and collective action (Campbell & Jovchelovitch, 2000; Hook, 2004). Integrationists have argued that integration focuses on racial equality and addressing problems caused by segregation, without taking a stance against racial association (Anderson, 2010; Cashin, 2013).

However, continued ‘informal segregation’ in formally desegregated places has been associated with a continuation of some problems brought on by segregation, from inequalities in access to public and private goods (Anderson, 2010), to a lack of empathy or subtle antagonism between groups (Korgen, Wang, & Mahon, 2006). For example, Massey and Denton (1993) found evidence in U.S. cities that areas with greater residential segregation scored worse on measures extending from infant mortality to educational achievement, compared to areas that were less segregated. It is also important to recognize that the relationship between segregation and disparity is not necessarily causal. However, when testing an instrumental variable estimate method, Ananat (2011) found some evidence that while racial segregation ‘increased’ poverty and economic disparity among the Black population, it also ‘decreased’ these two measures among the White population, showing a causal effect.

On the other hand, Messer, Oakes, and Mason (2010) warn of the dangers of structural confounding—“the confounding associated with social stratification or other selection process (p. 664)” of these types of studies. This further emphasizes the difficulty and complexity in

measuring segregation and disparity, as well as in using such labels. Holloway, Wright, and Ellis (2012) also investigated segregation in urban areas in the U.S. and argued for a more nuanced understanding of racially segregated cities that also included racial diversity. In other words, they saw that U.S. metropolitan areas were more accurately defined and described by both segregation and integration simultaneously. For example, diversity increased in metropolitan areas from 1990-2000, as the number of highly segregated areas decreased, but all the while some areas remained dominantly White and extremely segregated areas persisted.

One of the difficulties in describing racial segregation and racial integration arises because we arguably do not have a widely agreed upon example of a fully integrated society at large. Although Holloway, Wright, and Ellis (2012) found a few examples of integrated societies on a small scale, in certain pockets of cities, they found these to be extremely rare and the least persistent among the U.S. metropolitan areas they studied. So the question remains: what might integration look like and how will we know when it has been achieved?

Anderson (2010) proposes a four-stage model from an integrationist perspective that describes the transition that societies would ideally undergo from desegregation to integration: *formal desegregation*, *spatial integration*, *formal social integration*, and *informal social integration*. *Formal desegregation* denotes the removal of policies that enforce racial separation. The next stage, *spatial integration*, consists of adherence to anti-discrimination laws and social justice policies with regard to the use of facilities and public spaces such as neighborhoods and schools, and the presence of substantial numbers of different races. However, at this stage, *spatially integrated* spaces can continue to be *socially segregated*, which might take the form of

neighbors, classmates, and coworkers who do not interact or congregate in the same spaces, or form casual relationships.

In contrast, *social integration*, both formal and informal, requires intergroup cooperation, where each group has an equal footing (Anderson, 2010). When a society undergoes *formal social integration*, defined social positions, hierarchical roles, and groups exist, but different racial groups occupy these spots in large enough numbers so that the roles are not racially identifiable. Signs of *informal social integration* in these situations would ideally reflect an ease, welcome, trust, affiliation, and intimacy that go beyond the requirements of organizationally defined roles—including friendships, dating, marriage, having children, engaging in conversations at a lunch table at school or work, and playing together at recess (Anderson, 2010).

‘Multiculturalism’ and ‘colorblindness’. ‘Multiculturalism’ and ‘colorblindness’ are conflicting views on how to achieve social equality. Proponents argue that the same level of social equality can be achieved through methods other than integration, such as through cultural sensitivity (multiculturalism) and racelessness (colorblindness) (Bloemraad, Korteweg, & Yurdakul, 2008; Norton et al., 2006). However, these approaches fail to challenge the present reality of racial inequality, which includes disproportionate levels of education, incarceration, wealth, and access to resources among different groups.

There are conflicting views on the effects of multiculturalism. On the one hand, it is intended to promote the celebration of diversity and unique identities. In the Common Ingroup Identity model for reducing intergroup bias (Gaertner & Dovidio, 2000), the goal is to reach a level of mutual distinctiveness and cooperative interdependence between members of different racial groups, in which differences are recognized and appreciated. This process aims to

exemplify the benefits of diversity in order to improve intergroup relations. On the other hand, critics have argued that although multiculturalism encourages people to respect and value cultural differences, it fails to address racial inequality because it shifts priorities away from redressing inequalities left by segregation (Fraser, 1997). Anderson (2010) argues from an ‘integrationist’ perspective that this focuses too heavily on unique identities while diminishing the value of identifying with a larger, integrated group such as a nationwide community.

On the opposite end of the spectrum, ‘colorblindness’ is defined as a “denial or pretense that one does not see color or race” (Sue et al., 2007, p.281). In the form of principle, ideology, or policy, it contends that racial inequality will end by ceasing to think in racial terms and eliminating racial identities (Anderson, 2010; Kang, 2010). ‘Colorblind’ policies ban state and business practices that use explicit race categories, regardless of whether these policies are aimed at inequality or equality, or promote segregation or integration (Anderson, 2010; Bonilla-Silva, 2013). ‘Colorblindness’ has not only been connected to racial prejudice and avoidance but has also been identified as a form of prejudice in its own right (Bonilla-Silva, 2013). Richeson and Nussbaum (2004) found that White college students exposed to the ‘colorblind’ ideological approach displayed greater racial attitude bias, both explicitly and subconsciously, compared to those exposed to a race-conscious ideology. Sue et al. (2007, p. 272) classified ‘colorblindness’ as a *microaggression*—a form of subtle, everyday racism, which ignores the reality of racial experiences, and communicates that race and culture do not affect the lives and psyches of people of color. From a clinical psychology perspective, they claim that “although colorblindness may be intended to be supportive, sympathetic, and to convey greater understanding, people of color can feel invalidated, negated, and unimportant” (Sue et al., 2007, p.281).

In this way, taking on a ‘colorblind’ perspective can hinder the ability to recognize and understand modern forms of racism and injustice, and the formation of a conceptual framework for thinking about and dealing with the present reality and experience of racial injustice (Mills, 2000). An ‘integrationist’ view might argue that it allows for racial stigmatization and discrimination to continue and for racial avoidance and negligence of disadvantaged groups to remain unchallenged (Anderson, 2010, p.113). For example, Penny, Appel, Gultig, Harley, and Mui (1993) argued that the ‘colorblind’ ideology of the “Rainbow Nation” in post-apartheid South Africa hindered the ability of schools to provide educational models for a desegregated, multicultural nation. Tihanyi (2006) submitted that integrated South African schools unconsciously may have attempted to overcome racial differences by making children of color assimilate to ‘White’ standards, as most of these institutions maintained a ‘White’ ethos post-apartheid. Thus, Anderson (2010) referred to ‘colorblindness’ as a “folly and incoherence”, since it neither seems to support improved intergroup relations, nor does it convey a coherent or positive message about race.

Sue and colleagues (2007) proposed that an alternative approach to ‘colorblindness’ would be acknowledging differences and choosing to celebrate them, while making conscious efforts not to let these differences affect attitudes and behaviors. Results from Apfelbaum et al. (2010) concur with this ‘value-diversity’ approach. They compared students in universities in the U.S. who were exposed to a ‘colorblind’ mindset with those exposed to what they labeled a ‘value-diversity’ mindset. The former were less likely to recognize explicit racial discrimination or explain these instances in such a way that might draw the teacher’s attention and evoke teacher-intervention.

Obstructions to integration. Integrationists like Anderson (2010) and Brooks (1996) have theorized that the greatest obstructions to racial integration include (a) the lack of implementation of policy caused by White resistance, (b) the inability to overcome personal prejudice, and (c) the unanticipated negative byproducts of integration that have reinforced certain inequalities. It has been argued both in the U.S. and in South Africa that, theoretically, many White people claim to agree with the principles of integration and social equality, but resist anything more than ‘token integration’, especially when it requires giving up power (e.g., in housing, employment, government) (Anderson, 2010; Brooks, 1996; Wale & Foster, 2007). In other words, through subtly unwelcoming or overtly hostile behavior, White people are thought to resist the entry of people of color into their neighborhoods or workplaces. This behavior, arguably, has the potential to cause harm to people of color and lead to ‘resegregation’. From a clinical psychology perspective, the failure to overcome bias, both on personal and environmental levels, has proven to be harmful to the health and well-being of people of color, and has similar implications for society as a whole (Sue et al., 2009). Personal bias creates an obstacle to integration because the content of everyday exchanges—the way people think about and interact on a micro-level—remains unchanged, even when groups are compositionally integrated. Lipsitz (2000) describes environmental bias in the U.S. as prejudice that takes the form of large-scale job discrimination, lower income for present and future Black families, patterns of urban development, and racially discriminatory home loan programs. Although racial progress in places like the U.S. and South Africa is undeniable, these subtleties may reveal the larger, deeper problem that current changes may be taking place on a surface-level.

The deeper issue, at least in part, is that for centuries, people of color have been represented in all institutions as less than human or second-class citizens, and the majority of White people have internalized these views (Pinkney, 1986). The growing academic fields such as *Whiteness* (Green, Sonn & Matsebula, 2007; Wale & Foster, 2007) and contemporary racism (Gaertner & Dovidio, 2005; Sue et al., 2007; Sue et al., 2008) have begun to address and reveal the current manifestations of these larger, historical problems. From the perspective of these fields of study, acceptance of racial identities and their connection to racial history can assist White people in realizing that they are not exempt from racism or racial privilege and in dealing with these issues openly (Green, Sonn & Matsebula, 2007; McIntosh, 1988; Pinkney, 1986).

Some unforeseen negative byproducts of integration policies arguably include a depletion of human and economic resources from Black neighborhoods, as talented, high-achieving, and stable families move out. For example, Robinson (2011) contends that integration has divided the Black population in the U.S., leaving the most vulnerable poor Black communities poverty stricken and without the opportunity or hope of social mobility. This group has debatably become increasingly isolated, as it lacks the resources of social and cultural capital, including social networks connected to employment opportunities and political influence (Brooks, 1996). The isolation of poor Black communities has continued implications for middle class Black people in integrated communities because it can be a contributing factor to the reinforcement of stereotypes and biases that further stigmatize Black people and causes discrimination (Anderson, 2010).

Benefits of Integration for Universities

Legislators in the U.S. and South Africa have implemented institutional policies to promote racial diversity in campus admissions, and studies have suggested significant benefits of these diversity-promoting initiatives. In 2003, the U.S. Supreme Court deemed that diverse campuses further expand educational missions of universities by increasing cultural competence and “preparing students to better serve society as workers, citizens, and leaders, by fuelling the nation’s economy and shaping its moral and civic life (Milem et al., 2005, p. 2).” Thus, this decision legalized the intentional diversification of an incoming first year class, using affirmative action policies to work towards these educational missions.

As a result of this high-profile case, diversity has become an important part of fulfilling educational missions, and consequently the focus of empirical studies that ascertain that diversity initiatives may be essential for achieving beneficial outcomes. Much of the emerging literature stemmed from Goodwin Liu’s (1998) legal argument for the qualification of diversity in education as a ‘compelling interest’ (Chang, Witt, Jones, & Hakuta, 2003). In order to do this, Liu (1998) maintained that a university must “demonstrate clear, consistent internal policies and practices designed to facilitate interracial contact, dialogue, and understanding on campus (p. 439).” Based on this line of reasoning, studies began to show that a pervasive campus climate of diversity that utilizes a comprehensive approach would be necessary to achieve intended benefits of racial integration (e.g., Milem et al., 2005).

These campus diversity studies look beyond diversity as a compositional end and focus on diversity as an *engagement* across lines of difference (Milem et al., 2005). Previous studies have already shown that achieving compositional diversity would not be adequate for attaining desired

educational outcomes (Gurin, 1999; Hurtado, Milem, Clayton-Pedersen & Allen, 1998, 1999). Hurtado et al. (1998, 1999), in accord with theories on race relations, maintained that increases in structural diversity would also lead to an increased likelihood of intergroup conflict. Thus, it would be necessary for campuses to widen the focus onto a pervasive campus racial climate that encompasses more than just structural diversity in order to turn conflict into meaningful and positive learning experiences.

A comprehensive approach to campus diversity is one that integrates admissions, academic, and informal or social initiatives. This approach has been associated with four positive elements of campus climate: “sense of community, cultural awareness, commitment to promoting racial understanding, and overall satisfaction with the college experience (Milem, 2003, p. 130).” Institutional practices, such as diversity requirements in curricula and social initiatives that encourage integration, have been correlated with less perceived discrimination among students of color and more frequent cross-racial interactions among students (Chang, Denson, Saenz, & Misa, 2004). Assessments of these practices suggest that facilitated interactions across diverse groups create opportunities for students to build cultural knowledge and abilities to accept, appreciate, and embrace others from different backgrounds. One empirical assessment of these initiatives also reported that participants “hold significantly more positive attitudes, express [positive] interracial behaviors more frequently, and possess more accurate knowledge regarding issues related to race” (Muthuswamy, Levine, & Gazel, 2006, p.110).

Interactional diversity on campus. The studies presented in this thesis refer to the informal, social, or *interactional* diversity initiatives. Longitudinal studies confirm that this type of *interactional diversity*—“the frequency of cross-racial interaction that occurs during

undergraduate life (Denson & Chang, 2009, p.325)”—is associated with many positive personal and social outcomes for students (Hurtado, 2001; Milem et al., 2005; Smith et al., 1997). For example, Denson and Chang (2009) conducted a quantitative study on longitudinal survey data collected from entering first year students in 272 U.S. institutions, and again at the end of their final year. Using hierarchical linear modeling, they found that interacting with students of other race groups had significant positive benefits for personal self-efficacy and academic skills, as well as racial-cultural engagement.

Chang, Astin, and Kim (2004) conducted a similar quantitative study using longitudinal survey data from 670 U.S. universities, comparing students upon entering and graduating from college. They found significant positive effects of interaction on action-oriented democratic outcomes, intellectual and social self-confidence, and student retention. They offered that a possible explanation for these benefits was likely in part due to the persistence of segregation in the country, which led them to presume that cross-racial interactions may increase the likelihood that students engage with someone with experiences and views different from their own. And from a developmental perspective, “this kind of encounter may enhance cognitive functioning by facilitating the critical and analytical thinking that can lead to changes in values and beliefs (Chang et al., 2004, p. 545).” Antonio and colleagues (2004) conducted a randomized experiment with 357 students at three universities to further explore psychological explanations of these effects from interactional diversity in discussion settings. They found that there was indeed a significant positive effect on complex thinking on students who participated in discussions with racial minority members and reported having racially diverse friends and classmates.

Several other studies have shown similar beneficial results, including Lopez (2004), who found that interactional diversity was positively correlated with intergroup attitudes, when contact and residence hall programs were tested against attitude change of first year students, at the beginning and end of the year. A more comprehensive study conducted over four years, with a sample of 500,000 U.S. undergraduate students, also supported these findings, and highlighted the importance of interactional diversity for maximizing educational benefits, as well as positive cognitive and affective outcomes of campus diversity initiatives (Astin, 1993). Chang and Astin (1997) also found that socializing or conversing with people from different groups contributed to gains in students' academic development, college satisfaction, and cultural competence.

In addition, results generalized across groups and amount of participation or engagement with diversity related programs and initiatives. In a similar four-year longitudinal quantitative study, Villalpando (1994) found that positive outcomes were consistent for all race groups present in the study involving 15,600 US students. Moreover, Chang and Denson (2009) found an extended benefit effect on campuses where students are more engaged with interactional diversity, and effects were positive across the student body, regardless of their own participation. In addition, Villalpando (1996) collected survey data from students, who were five years post-college graduation, and found that students continued to display social responsiveness and participate in local community services.

Conclusion

All things considered, based on the complicated history and ideology around integration presented here, further empirical investigation of the effects of integration is necessary.

Exploring this topic on university campuses is especially pertinent, since evidence for potential

benefits and approaches aimed at attaining these benefits have been documented. Intentions towards these benefits are often cited in university mission statements. For example, the University of Cape Town's mission includes the provision of "an environment for diverse student and staff community that is affirming and inclusive of all and promotes diversity in demographics, skills, and backgrounds, ... and cultivates competencies for global citizenship (University of Cape Town, 2013a, Our mission)." Admissions policies at this University have succeeded in creating a student population in which over half are students of color. Yet, opponents of integration policies at this University, similar to many U.S. perspectives, continue to claim that integration policies may be harming rather than benefitting students of color by reinforcing stereotypes and assumptions, and perpetuating harmful classification systems, among other things (e.g., Alexander, 2010; Benetar, 2012; Jansen, 2010). Thus, opposition may add to the difficulty in attaining the benefits originally intended by integration policy makers.

The difficulties and confusions around understanding and responding to racial integration are evident in that this topic has consistently been strongly debated, particularly within the context of universities. In the U.S., the consideration of race in admissions policies has sparked national debate, reaching the Supreme Court time after time, from the onset of *Brown v. Board of Education* (1954), the landmark case that decreed school segregation unconstitutional, to the most recent *Fisher v. University of Texas* (2013)¹¹. Similarly, in South Africa, affirmative action debates at the University of Cape Town (University of Cape Town, 2013b, Admissions Policy Debate), among other universities, has sparked national debate and received international

¹¹*Fisher v. University of Texas* (2013) was the most recent U.S. Supreme Court affirmative action case in which a White undergraduate student, who was not admitted to the university, contested the race-based admissions policies. This case was ultimately returned back to the lower courts.

attention, with coverage from major international news organizations like the New York Times and National Public Radio over the last four years. UCT has an entire section on their homepage (University of Cape Town, 2013b, Admissions Policy Debate) dedicated to this debate between students, parents, faculty, the vice chancellor, and the media. Often, voices in these debates convey that there may be a lack of understanding and appreciation for the complexities of racial integration and the historical context as well as the current transitional context within which it is embedded.

This highlights the need to re-engage with basic questions and assumptions about integration, and to reconsider leading the current perspectives. A glimpse into the recent history of a place like South Africa reveals deep-seated and multifaceted intricacies beneath the surface of today's observed racial segregation and racial integration policies. Considering all of these facts, integration is still a topic for which social scientists and educators can make important contributions toward university education as well as social policy. The highly politicized and charged nature of discussions thus far has led to confusion and a loss of focus. Overwhelming evidence of racial isolation shows that patterns of segregation are persistent and continue to have a significant impact on everyday life. In the past, this impact has had negative consequences, and although debatable today, at the very least, racial isolation is not ideal for an educational setting. Potential benefits for university students have yet to be fully attained, as arguments for more comprehensive approaches to campus integration have been presented. This warrants further investigation on racial integration, and in particular, further testing, because a definitive amount of empirical evidence has yet to surface regarding its effects, the processes through which it works, and what it might look like.

In sum, integration may need to be facilitated in some places where it is possible. College campuses are one such place, where the integration process could be accelerated in order to realize the array of potential individual, social, and educational benefits of integration. Thus, the two studies presented in this work contribute to this end by examining effects of the facilitation of intergroup contact in this context, as well as long-term effects on patterns of integration. Before delving into the empirical work from these studies, I first present a review of the related literature on contact theory in the next chapter.

Chapter 3: An Overview of Contact Theory and Research

Introduction

In the following chapter, I will provide a brief background of contact theory, from before its notable conception in Gordon Allport's *Nature of Prejudice* in 1954 to its most recent updates. This section is divided into three main sections: Overview of Contact Theory, Critique of Contact Theory, and Micro-ecology of Segregation. The first section will include an overview of contact research, including examples of important experimental, cross-sectional, and longitudinal studies. The limited but growing body of contact research conducted in the South African context will also be presented. Much of the focus will be on contact studies in university settings, and particularly on developments in recent decades regarding important factors that have been identified as significant aspects of the contact-prejudice relationship, including the role of cross-group friendship, affective mediators, moderators, and outcomes. The second section will discuss a few of the major critiques of the contact hypothesis. The final section will cover the emergence of a body of non-mainstream contact studies that highlights "micro-ecology", which is an important aspect of intergroup research.

Overview of Contact Theory

Although Gordon Allport (1954) is often credited with introducing contact theory, which submits that intergroup prejudice can be reduced through intergroup contact when optimal conditions are present—equal group status and with common goals, cooperation, and institutional support. However, this idea was present in writings that date back to the 1930's. Zelig and Hendrickson (1933) and Horowitz (1936) studied attitudes toward different race groups among children, but did not find significant connections between racial attitudes and

amount of contact (as cited in Dovidio, Gaertner, & Kawakami, 2003). However, in the following decade, studies showed that significant improvements in racial attitudes could be achieved through positive intergroup contact experiences among university students (Smith, 1943), integrated combat experiences in the U.S. Army (Singer, 1948), and integrated experiences under conditions of mutual interdependence in the U.S. Marines (Brophy, 1946).

Three of the optimal conditions for contact—equal group status and with common goals, and cooperation, which Allport (1954) identified in his seminal work, were also introduced in earlier papers in the fields of sociology and education. Watson (1947), writing from an educational perspective, identified equal status and cooperation as important factors for reducing prejudice through intergroup contact. The common goals condition was introduced by Lett (1945), who observed that mutual understanding between groups could be achieved by a sharing of experiences in which individuals share a common objective (as cited in Dovidio, Gaertner, & Kawakami, 2003). Sherif, Harvey, White, Hood, and Sherif (1961) also conducted the well-known Robbers Cave experiment with 11-year-old boys at a summer camp, and found that intergroup contact would only lead to improved relationships when there was a superordinate goal present.

Two other important concepts about contact theory on which much of my research rests, were also introduced during this era: face-to-face interactions and facilitated contact. Bramfield (1946) observed race relations in public schools and found that prejudice and tensions reduced in places where different groups freely associated on a genuine level. However, in places that were spatially integrated but groups stayed isolated from one another, prejudice increased considerably. From the field of sociology, Williams (1947) proposed the idea of structured

intergroup contact, and identified that benefits included reduced hostility between groups, when people associated on a personal level, operated as equals, and cooperated on a common task that was equally valued by both groups.

Although the above-mentioned authors and others grappled with ideas around intergroup contact and prejudice reduction early on, much of the research on intergroup contact conducted over the past 60 years has been based on Gordon Allport's formulation of the contact hypothesis in 1954. At the time, Allport was writing from a post-World War II perspective in the United States, which was also in the midst of its African-American Civil Rights era. Allport attempted to explain the origins of prejudice in order to limit the destructive impact of prejudice on societies and improve intergroup relations. He explored multiple causes of prejudice, including historical, cultural, and economic factors, which are woven into human personality. He concluded with the hypothesis that unless prejudice is "deeply rooted in the character structure of the individual," it can "be reduced by equal status contact between majority and minority groups in the pursuit of common goals" (Allport, 1954, p.281). In this body of work, references to contact theory will refer to the most basic idea that when different groups of people come together and engage in more interactions, prejudice decreases.

The contact "hypothesis" has been supported by a long history of research that has provided valuable insight into how and when intergroup contact leads to improved intergroup attitudes, as well as how these effects may generalize beyond the contact situation. Thus, it can be referred to as *intergroup contact theory* (Hewstone & Swart, 2011). Over the past several decades, this hypothesis has been critically evaluated (e.g., Durrheim & Dixon, 2005; Pettigrew, 1986; Reicher, 2007; Stephan & Stephan, 1985), tested (Aboud, Mendelson, & Purdy, 2003; Steyn &

van Zyl, 2001; Van Laar et al., 2005), and revised (e.g., Brewer & Miller, 1984; Hewstone & Brown, 1986, Pettigrew, 1998). Additionally Pettigrew and Tropp (2006) conducted a meta-analysis, which computed an aggregate effect size of $r = -.21$ and consistently found evidence in support of contact theory with a range of methods and measures, in over 500 studies. Pettigrew and Tropp (2006) also argued that the optimal conditions of contact identified by Allport (1954)—equal status, common goals, cooperation, and institutional support—are not necessary for prejudice reduction, but they do enhance effects. Although the majority of contact studies have been cross-sectional (e.g., Wagner et al., 2003; van Dick et al., 2004), several important experimental (e.g., Cook 1984; Ensari 2002; Shook & Fazio, 2008; Wilder, 1984; Wilder & Thompson, 1980; Wright et al., 1997) and longitudinal (Binder et al., Brown et al., 2007; 2009; Christ et al., 2010; Eller & Abrams, 2004; Levin et al., 2003; van Laar et al., 2005; Swart, Hewstone, Christ, & Voci, 2011) studies will be highlighted throughout the sub-sections below on other important factors involved in understanding contact effects (i.e., mediators, moderators, outcomes, etc.). Experimental studies have provided valuable contributions to exploring causal hypotheses, and longitudinal studies have allowed more rigorous tests of causality, so I will elaborate upon these.

Aside from contact theory, alternative approaches for achieving the generalization of positive attitudes beyond the outgroup members in the encounter have been proposed, and the most notable in social psychology has been from the research tradition of social categorization: *decategorization* (Brewer & Miller, 1984), *recategorization* (Gaertner & Dovidio, 2000), and *mutual differentiation* (Hewstone & Brown, 1986). These approaches are based on models that propose that intergroup attitudes can be improved, respectively, by de-emphasizing original group boundaries, transforming the two distinct group identities into one common ingroup, and

positive distinctiveness of groups within a cooperative frame work. Pettigrew (1998) offered a longitudinal model that included essential factors for facilitating the reduction of prejudice through contact, and movement from the initial contact stage, characterized by de-categorization, to the unified group stage, characterized by re-categorization.

Cross-group Friendship

Pettigrew (1998) argued that friendship between people of different groups has additional importance in contact situations because friendships involve contact over an extended period of time rather than once-off encounters or initial meetings, and thus added *friendship potential* as another optimal condition of contact. Friendships also help facilitate the other optimal situational conditions of equal status, cooperation, and common goals. Cross-group friendship has been linked to strong and positive outgroup attitudes (Levin et al., 2003; Turner et al., 2007, Vonofakou et al., 2007). Other important processes involved in how cross-group friendships improve intergroup attitudes are intimacy, self-disclosure, and group norms (Aron et al., 1997, 2004; Wright et al., 1997; see also Davies et al., 2013). In Pettigrew and Tropp's (2006) meta-analysis, they also found that when contact with outgroups involved cross-group friendship, there was a stronger effect on prejudice reduction ($r = -.26$), compared to other forms of outgroup contact ($r = .22$).

In a cross-sectional study on cross-group friendship and intergroup attitudes, Pettigrew (1997) surveyed a large sample of majority group participants from four European countries. When asked about attitudes towards minority groups, participants with cross-group friends were more likely to express positive and supportive attitudes towards minority groups, immigrant policy, and immigrant rights. He found a significant negative association between friendship and

prejudice, and also found that these effects generalized to groups beyond those involved in the contact situation. These effects have since been well documented in cross-sectional, longitudinal, and experimental studies, which will be described in this chapter (e.g., Binder et al., 2009; Levin, van Laar, Sidanius, 2003; Wright et al., 1997; or see Davies et al., 2013).

Levin et al. (2003) and Schofield et al. (2010) have also made important contributions on university cross-group friendships through five-wave longitudinal data on large scales ($N = 2,000$, $N = 3,877$, respectively). Both studies looked at four race groups at American universities: Black, White, Asian, and Latino. Levin and colleagues (2003) found that students who had more ingroup bias and intergroup anxiety as first year students had significantly less cross-group friends in their second and third years in college, even when controlling for pre-existing friendships. They also found that students with more cross-group friends during their second and third years of college showed significantly less ingroup bias and intergroup anxiety at the end of college, after controlling for prior attitudes and friendships.

Schofield et al. (2010) conducted one of the few studies that investigated predictors of cross-group friendships. They found that intergroup contact both before and during college, as well as indirect contact before college, were all significant predictors of cross-group friendships (consistent for both close and causal friendships) during college. They also saw support for prejudice-reducing effects of contact (Pettigrew, 2008) but rather than through anxiety or empathy, they found it was through the development of cross-group friendships. Contrary to previous studies that showed diminished effects for minority groups (e.g., Tropp & Pettigrew, 2005), they found the majority of factors predicting cross-group friendship were consistent for both majority and minority groups. Similar to Levin et al.'s (2003) finding, they saw that first year students with greater initial levels of prejudice were less likely to develop cross-group

friends in college, although other studies show that cross-group friendships may have a greater impact on prejudice than the other way around (e.g., van Dick et al., 2004; Wagner et al., 2003).

Extended cross-group friendship

Contact theory has been expanded to include situations that do not involve contact, also known as *indirect contact*, which has three main subcategories: extended contact, vicarious contact, and imagined contact¹². Much of the research on extended contact has examined it in the form of extended cross-group friendship (e.g., Paolini et al, 2004; Turner et al., 2007; Wright et al., 1997), as friendship has been well documented to be the most effective form of direct contact (though, Van Laar et al. (2005) also examined this effect for university roommates.) Wright, Aron, McLaughlin-Volpe, and Tropp's (1997) longitudinal studies further found that these effects extended to individuals who simply had knowledge of ingroup members with outgroup friends, without being involved in a friendship themselves. They conducted four studies: two questionnaire studies that examined the relationships between extended cross-group friendship and prejudice, and two experimental studies that tested indirect friendship effects in different situations in order to explore causal directions. The first study looked at White (majority) participants' attitudes toward Asian, Black, and Latino (minority) participants at a university in the U.S., and found that indirect friendship predicted lower amounts of negative outgroup attitudes. When replicated in a second study, results were consistent with another White sample as well as a minority sample. In a third study, they created situations of conflict in a lab setting with students from a different American university and found support for the causal direction from extended cross-group friendship to reduced prejudice. In robbers-cave-style conflict

¹² *Vicarious contact* and *imagined contact* are discussed in the "Latest Developments" subsection of this chapter.

situations, results showed that negative outgroup attitudes decreased after participants became aware of extended cross-group friendship (knowledge of ingroup member having an outgroup friend). A fourth study provided further evidence of the direct causal relationship by examining participant's evaluations of outgroup members when observing ingroup and outgroup research confederates in positive (close friends), negative (disliked acquaintances), and neutral situations (strangers). Results showed that indirect contact caused participants to evaluate outgroup members more positively when observing positive interactions compared to observing neutral or negative interactions. Results from Paolini et al. (2004) and Turner et al. (2007) also support the effects of extended contact among Catholics and Protestants in Northern Ireland and among Whites and South Asians in the U.K., respectively (details for each study are located in the following section).

In a large-scale five-wave panel study, experimental and longitudinal in design, Van Laar and colleagues (2005) found evidence for extended contact effects through both randomly and voluntarily assigned roommates in university housing. They measured intergroup attitudes for four racial groups (White, Black, Latino, and Asian American) and found that both types of roommates were associated with reduced prejudice toward the roommate's outgroup. In some cases, this effect also generalized to other outgroups not involved in the roommate situation (e.g., exposure to Black roommates improved attitudes toward both Black and Latino groups). However, they came across an exception that for some groups, showing contrary to contact theory, exposure to Asian American roommates and White roommates led to increases in prejudice toward other groups.

Mediating roles of self-disclosure and intergroup anxiety

Friendship theorists have long argued that friendships result from an escalation in the level of intimacy in information disclosed between people (Altman & Taylor, 1973). This theory has been successfully tested by Aron and colleagues (1997) in experimental settings at an American university, where pairs of students asked and answered questions in increasing levels of intimacy in self-disclosure. They found that this “fast friends” mechanism resulted in significant feelings of closeness with someone a participant had just met within as little as 45 minutes. One explanation was that these feelings led to an overlap of cognitive representations of the self to include the outgroup member, also known as *inclusion of other in self (IOS)* (see also Aron et al., 2004; Wright et al., 1997, 2009).

In other longitudinal and cross-sectional studies, researchers found that prejudice-reducing effects of direct and extended cross-group friendships were also mediated by intergroup anxiety¹³. The idea is that fear of acting inappropriately can contribute to intergroup anxiety, so disclosure can better equip someone to predict appropriate behaviors, making intergroup situations seem less threatening. For example, Paolini and colleagues (2004) conducted two cross-sectional studies that helped to understanding underlying mechanisms of prejudice-reducing effects of cross-group friendship by exploring the mediating effects of intergroup anxiety for both direct and extended cross-group friendships. Both studies sampled Catholics and Protestant in Northern Ireland. Using structural equation modeling, they found that reduced intergroup anxiety partially mediated the relationship between cross-group friendship and prejudice reduction, and fully mediated the relationship with extended cross-group friendship. In

¹³ Intergroup anxiety is discussed in further detail in the following section “Important factors involved in the contact-prejudice relationship: Mediators, moderators, and outcomes” under the sub-section “Mediators: Intergroup anxiety”.

a (replicated and expanded) second study, they found that reduced intergroup anxiety partially mediated both relationships.

In a longitudinal friendship study, Turner and Feddes (2011) saw more evidence for the mediation of intergroup anxiety. They investigated these relationships among incoming first year students at a university in the U.K. by asking students to report the level of intimacy in disclosures in one friendship, along with intergroup attitudes and anxiety levels. When comparing measures taken six weeks later, they found that the intimacy of self-disclosure significantly predicted more positive outgroup attitudes over time, through the mediation of intergroup anxiety.

In a set of four cross-sectional studies, Turner, Hewstone, and Voci (2007) found further support for the mediating roles of intergroup anxiety and self-disclosure. They investigated friendships among White and South Asian students (primary, secondary, and university) in the UK using path analyses and structural equation modeling. In the first study, they found that intergroup anxiety mediated the relationship between direct friendship and attitudes. Results from the second and third studies showed that extended friendships were mediated by self-disclosure and anxiety. A fourth study further explained the influence of self-disclosure on improving outgroup attitudes via empathy, trust, and importance of contact. In another set of cross-sectional studies among the same two groups the following year, Turner and colleagues (2008) tested Wright et al.'s (1997) model by using structural equation modeling to test intergroup anxiety along with other mediators—perceived ingroup and outgroup norms and *IOS* (inclusion of other in self). They found that all four mediators work concurrently to improve outgroup attitudes.

Importance of the role of friendship in university contexts

Cross-group friendships are also an important context for intergroup contact in university settings because “beneficial outcomes associated with diversity are both realized from and mediated by these relationships” (Antonio, 2001, 2004; Gurin, 1999). Further, some longitudinal studies (Antonio, 2001; Van Laar, Levin, Sinclair, & Sidanius, 2005) have proposed that people with diverse groups of close friends have a greater likelihood of interacting with people of diverse backgrounds, beyond the scope of their intimate social groups. Thus, the benefits of cross-group friendships can be transferred to contexts beyond the friendships themselves.

Antonio (2001) agrees that friendships amongst students from different racial and ethnic backgrounds are necessary because they provide opportunities for ongoing conversations, while enhancing other optimal conditions such as being group members of equal status. Many of the personal benefits of contact stem from dialogues amongst peers, which may also help define normative behaviors for engagement with diversity, such as engaging in conversations on topics concerned with difference, including “political and social views, racism and discrimination, women’s rights, and national politics” (Antonio, 2001, p.80). These interactions and conversations about differences have been reported to increase levels of cultural competence and awareness (Antonio, 2001, 2004; Gurin, 1999).

Another important aspect to consider here is proximity. Milem et al. (2005) argue that university environments, and residence halls in particular, are significant places for the development of friendships with peers from various backgrounds, since students are living, dining, and studying in very close proximity to one another. However, observational studies show that although students often occupy the same spaces, they do not readily engage in intergroup interactions or make cross-group friendships (Alexander, 2006; Alexander &

Tredoux, 2010; Schrieff et al., 2005, 2010). For example, Schrieff and colleagues (2005) found that ‘informal segregation’ was present in dining hall seating patterns on the level of individual seating choice as well as on the broader level of table organization—meaning that not only were students sitting at separate tables, but these tables were also clustered into separate sections within the room.

Although contact research has established that contact is usually effective in reducing prejudice, the persistence of spontaneous segregation reduces the *likelihood* of contact occurring, even in diverse contexts. In many of the studies that will be discussed in the next section (“Non-mainstream Contact Research”), diverse groups of participants are brought together or naturally occupy the same space, but often do not interact with one another. In these situations where contact can occur, a useful strategy for providing more opportunities for engagement may be to first increase contact and then increase the potential for friendship formation.

Important factors involved in the contact-prejudice relationship: Mediators, moderators, and outcomes.

Mediators of the contact-prejudice relationship. Pettigrew & Tropp (2008, p. 271) conducted a meta-analysis of the most commonly explored mediators, as displayed in the model below, which indicate that anxiety reduction, knowledge, and empathy are important mediators of the contact-prejudice relationship:

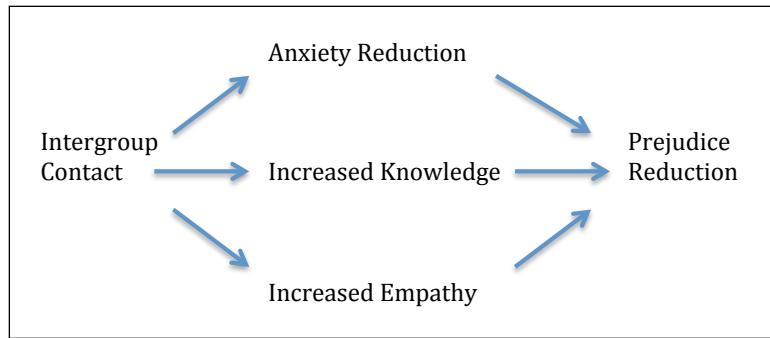


Figure 3.1. Commonly explored mediators of the contact-prejudice relationship (Pettigrew & Tropp, 2008).

In recent decades, contact research has focused on the importance of affective mediators of the contact-prejudice relationship (Pettigrew & Tropp, 2008), which will be discussed at greater length in the following sections.

Intergroup Anxiety

Intergroup anxiety is characterized by uneasy and awkward feelings that people experience when engaging in intergroup contact, when anticipating this interaction, or considering whether or not to participate in it (Stephan & Stephan, 1985). Engaging in intergroup contact may seem threatening under these conditions because of uncertainty of how to interact (e.g., fear of incompetence or fear of offending outgroup members), negative expectations (e.g., fear of rejection or fear of being taken advantage of), and perceptions about negative intergroup relationships (e.g., fear of disapproval from ingroup members) (Stephan & Stephan, 1985). It has been well documented that intergroup anxiety mediates the contact-prejudice relationship, and that this anxiety is related to perceived outgroup variability. For example, these results have been consistent in cross-sectional studies among Catholics and Protestants in Northern Ireland (Paolini

et al., 2004)¹⁴, Italians and non-European immigrants (Voci & Hewstone, 2003)¹⁵, and Muslims (majority) and Hindus (minority) in Bangladesh (Islam & Hewstone, 1993). Islam and Hewstone (1993) found that both the amount and quality of contact had a direct positive correlation with outgroup attitudes and negative association with intergroup anxiety. Results also showed that intergroup anxiety predicted lower perceptions of outgroup variability.

Studies have shown that intergroup anxiety is most likely to arise in places with historical conflict and inequalities in status (Plant & Devine, 2003; Stephan & Stephan, 1985), which is especially relevant in the South African context of this study, fewer than 20 years after the end of apartheid. Finchilescu (2010) also argues that a history of segregation is likely to contribute to a lack of familiarity with outgroups, thus increasing behavioral uncertainties, which potentially makes contact situations seem emotionally and cognitively challenging.

Within the framework of integrated threat theory, intergroup anxiety, along with negative stereotypes, and realistic and symbolic threat, can simultaneously affect outgroup attitudes (Stephan & Stephan, 1996, 2000). Integrated threat theory considers that four types of threat contribute to outgroup attitudes in various intergroup contexts, including gender, racial, national, ethnic, and health groups (Riek, Mania, and Gaertner, 2006). Intergroup threat theorists, consistent with stereotype theorists, propose that *realistic* and *symbolic* threat—concerns with perceptions of competition and values, respectively—produced anxiety due to increases in fear (Steele & Aronson, 2000). *Realistic* threat reflects concerns about competition for resources with outgroups, while *symbolic* threat involves fears related to perceptions about differences in values held by outgroups (Stephan & Stephan, 2000). However, Stephan and Stephan (2000) added that

¹⁴ Further details of Paolini et al. (2004) are provided in the previous sub-section on “Mediating roles of self-disclosure and intergroup anxiety”.

¹⁵ Further details of Voci & Hewstone (2003) will be discussed in the following sub-section on “Moderators”.

intergroup anxiety, along with negative stereotypes, also constitutes unique types of threat since it may reveal concerns about expectations of negative consequences that can occur in intergroup interactions. Negative stereotypes and intergroup avoidance also seem to have a reciprocal relationship of influence. On the one hand, Plant and Devine (2003) found that negative stereotypes led to an increase in avoidant behavior. On the other hand, the increase in avoidance led to a simplified, expectancy confirming process, which can cause a greater emphasis on stereotypes when gauging members of other groups (Wilder, 1993). Thus, it may also be important to consider these types of threat that may be related to the way individuals perceive one another, because they can influence behavior.

Blascovich and colleagues (2001) conducted three experimental studies and found that measured intergroup anxiety both physiologically and behaviorally. Responses to both measures showed that participants who had greater amounts of prior contact with outgroups had less anxiety during intergroup interactions. One of these experiments used research confederates to manipulate race and socioeconomic status. Participants (White, Asian, and Latino American university students) were asked to complete tasks with a research confederate (White or Black) that ranged from exchanging information to participating in a cooperative task. Cardiovascular measures showed that both types of stigma (race and socioeconomic status) caused threat, and participants who had doubly stigmatized partners had a stronger threat reaction than participants whose partners had a single stigma. Behavioral responses show that participants with Black partners had poorer performance on cooperative tasks compared to those with White Partners. Results showed that prior experience with members of the stigmatized group reduced these threat reactions. The other two studies manipulated stigma, and results were consistent. Subjective

measures for these studies were inconsistent with results, possibly due to social desirability of self-reported measures.

The role of intergroup anxiety in the present context. In the present setting, students arrive from various different backgrounds, to an environment with many opportunities for potential engagement with peers across groups but tend not to engage. For example, policies are in place to ensure the compositional diversity of each incoming class, academic cohort, and residence hall, and dozens of social groups are open for all students to converge on common beliefs and interests (University of Cape Town, Vice chancellor's report, 2011). The majority of students in the aforementioned studies reported that maintaining 'comfort levels', or minimizing intergroup anxiety, was the greatest organizing factor for students' intergroup contact patterns (Gibbs & McGivern, 2010; Schrieff et al., 2010). Thus, the intervention is designed to increase intergroup interactions by increasing friendship potential and reducing intergroup anxiety, which seemed to be the most common reasons for intergroup avoidance in this University's context. In efforts to achieve this goal, each activity in the intervention program committed participants to a level of self-disclosure that is conducive for friendship creation. In addition, each activity included an element of humor or enjoyment that may contribute to creating a more comfortable environment by limiting the amount of negative feelings (general affect) (Fredrickson & Branigan, 2001; Wolpe, 1973).

In an effort to directly address intergroup anxiety in this study, I applied Wolpe's (1958) Theory of Reciprocal Inhibition as a method to investigate intergroup anxiety reduction. Since intergroup anxiety was reported as a consistent obstruction to intergroup contact, the intervention we proposed here was designed to help increase intergroup comfort by inducing positive emotions. Wolpe's (1958) theory presumes that opposite emotions, such as anxiety and comfort,

cannot exist at the same time; and as one increases, the other must decrease. This theory emerged as a tool for addressing anxiety and has been applied to various contexts, including in behavioral therapy, particularly among people suffering from social anxiety (Wolpe, 1958), and younger children with phobias (Wolpe & Lazarus, 1966). Given the negative correlation between comfort and anxiety, positive emotions may serve to decrease anxiety when students leave the ‘comfort zones’ of their usual friendship groups to interact with members of other groups.

The idea is that if students do something enjoyable, they cannot feel anxious at the same time; and further, the presence of positive emotions can decrease the presence of negative emotions that may have existed beforehand. Some experiments have even shown the distinct capacity of positive emotions to down-regulate or reverse negative emotional arousal and enduring physiological effects on the heart (Fredrickson & Levenson, 1998; Levenson, Ekman & Friesen, 1990). The cardiovascular effects accompanied by negative emotions—such as the arousal of autonomic nervous systems, which results in a rise in heart rate, vasoconstriction, and blood pressure—can be reduced through the experience of positive emotions. Tests in these experiments have confirmed the reversal effect for both positive emotions on the high end of the spectrum, like joy, as well as positive emotions on the low end of the spectrum such as satisfaction (Fredrickson, 2013; Fredrickson & Branigan, 2001). Therefore when applied to the current study, an intervention that will encourage positive feelings, such as excitement and amusement, would be expected counteract the commonly occurring negative feelings related to intergroup interactions, such as awkwardness, self-consciousness, and unease, which are emotions implicated in intergroup anxiety (Finchilescu, 2010; Smith, 2008).

At the campus involved in the present study, an intervention was previously implemented to increase opportunities for intergroup contact by simply randomizing seating in a dining hall,

without addressing intergroup anxiety (Gibbs & McGivern, 2010). Results showed that the intervention failed to clearly reduce intergroup anxiety and to increase contact. These results were mainly attributed to comfort levels and a lack of prompting for verbal exchange (Gibbs & McGivern, 2010). Although 68% of students felt neutral or comfortable during the intervention and 34% of students claimed to have made new friends, 32% of participants felt uncomfortable with the intervention and the large majority did not make new friends, despite opportunities to do so. During the intervention, students continued to self-segregate at tables, creating ‘tables within tables’ (Domenico & Phillips, 2009), where subtle physical boundaries were observed, for example, by turning one’s body away from certain people at racially diverse tables (Gibbs & McGivern, 2010). Seating patterns at dining room tables also reportedly became more segregated after the intervention. The problem may have been that students were simply placed in closer proximity to one another, but intergroup avoidant behaviors persisted because there was no facilitation of interaction. Gibbs and McGivern (2010) suggested that future studies create ‘integration-friendly tables’ that could allow for a verbal exchange between students at the table.

The present intervention applies the reciprocal inhibition theory of positive emotions, taking the form of ‘fun’ activities that serve to 1) promote positive feelings in group settings, such as excitement, curiosity, and enjoyment, 2) facilitate conversations in which students have an opportunity to get to know one another, 3) and encourage cooperation to complete a task. These activities are all structured as group activities that involve an element of amusement, self-disclosure, and cooperation, in order to provide a context in which positive emotions can be induced as well as sustained. As a manipulation check, I measured positive and negative emotions that participants experienced before, during, and after the intervention. These activities

serve to create potential opportunities for friendships to form by facilitating get-to-know-you type conversations that typically occur during friendship formation.

Despite the benefits of integration noted by campus diversity studies, spontaneous segregation is often observed on university campuses. This behavior threatens functional aspects of the contact theory, so we chose a location where, despite the compositional integration of the space at large, patterns of spontaneous segregation persist. Contact theory suggests that this pattern may be altered by enhancing optimal conditions, or through affective mediators such as intergroup anxiety (Pettigrew & Tropp, 2008). Previous studies suggest that avoidant behaviors are due to intergroup anxiety, so the present study used a positive-affect approach to the intervention to limit the amount of intergroup anxiety that might occur during the intergroup interaction.

Empathy

Empathy involves both emotional and cognitive components, and have been associated with positive outgroup attitudes and prosocial behavior (Finlay & Stephan, 2000). Studies have shown that intergroup contact, especially in the form of close cross-group friendships, can enable individuals to build perspective-taking skills and empathetic abilities toward outgroup members (Pettigrew & Tropp, 2008). Experimental studies have shown that inducing empathy toward strangers can also improve attitudes and generalize to attitudes towards groups (Batson et al., 1997; Finlay & Stephen, 2000).

For example, Batson and colleagues (1997) conducted three experimental studies to test whether empathy for an individual of a stigmatized group can improve attitudes toward the group in general. They had participants listen to an interview with a woman with AIDS and induced

empathy by instructing half of the participants to imagine feelings of the member of a stigmatized group (high-empathy) and instructing the other half to remain objective (low-empathy). Responsibility for being a member of the stigmatized group was also manipulated (responsible or not responsible). They repeated this experiment with two other stigmatized groups: the homeless and convicted murderers. Results from all three experiments showed that inducing empathy for a woman with AIDS, a homeless man, or a convicted murderer led to more positive attitudes toward the group as a whole, regardless of whether or not the individual was responsible for being a member of the group. In the third experiment, they found stronger evidence for improved attitudes, even 1-2 weeks after the experiment. Batson and colleagues proposed that perspective-taking led to empathic feelings, which led to concern for the well-being of a person in need, and that these positive feelings generalized on the group-level.

In another experimental study, Finlay and Stephan (2000) found that inducing empathy toward a Black American improved White university students' attitudes toward Black Americans in general. They manipulated empathy by providing participants with information about discriminatory incidents against Black Americans or White Americans, along with instructions that either induced an empathic perspective or a neutral-observer perspective, or no instructions. Results showed that participants in the empathy condition who read scenarios involving Black Americans reported no significant differences in evaluations of the ingroup and outgroup, whereas participants in the control condition reported significant ingroup—outgroup bias. Another interesting finding was that negative emotions toward the ingroup (White Americans) was related to improved attitudes toward the outgroup.

Simultaneous effects of intergroup anxiety and empathy

A few studies have looked at the affective mediators of the contact-prejudice relationship simultaneously, but most notably, Swart et al. (2011) explored a full mediation of these effects through a 3-wave longitudinal study among Coloured South African secondary school students. They examined the effects of cross-group friendships between Coloured (minority status) and White (majority status; target group) secondary school students on three measures of prejudice (affective, cognitive, and quasi-behavioral) via positive (empathy) and negative (intergroup anxiety) affective mediators. Participants completed three questionnaires at six-month intervals. Results from structural equation modeling showed that intergroup anxiety at Time 1 was indirectly negatively associated with affective empathy at Time 3 through the mediation of cross-group friendships at Time 2. Overall results showed that cross-group friendship was negatively associated with prejudice. Affective empathy at Time 2 mediated the relationship between cross-group friendship at Time 1 and all three measures of prejudice at Time 3 (outgroup attitudes, perceived outgroup variability, and negative action tendencies), while intergroup anxiety only mediated the relationship between cross-group friendship and perceived outgroup variability. Another important finding of this study was that the full longitudinal mediation of contact effects over time by intergroup anxiety and affective empathy was only found in a single direction—from contact at Time 1 to prejudice at Time 3, via both affective mediators at Time 2.

Moderators

Group salience. In empirical studies, including simultaneous analyses for mediation and moderation of the contact-prejudice relationship, group membership salience has been identified as a key moderator (Van Oudenhoven et al., 1996; Voci & Hewstone, 2003; see also Brown &

Hewstone, 2005). These studies have shown that intergroup contact (quality and quantity) can have stronger, more effective, and more generalizable effects on outgroup attitudes when group membership of the outgroup member is salient. Thus, when an individual is seen as representative of a group, interpersonal contact effects can generalize to intergroup effects. For example, in an experimental study, Van Oudenhoven and colleagues (1996) tested these effects among Dutch secondary students who were randomly assigned to work in groups of three (one Turkish confederate and two Dutch students) on a cooperative task. They manipulated salience by providing ethnic background information at the beginning (high salience), in the middle (low salience), or not at all. Although they found that all groups reported positive attitudes toward an outgroup partner, these positive attitudes only generalized to the outgroup as a whole when group membership was salient.

Further, Voci and Hewstone (2003) explored the simultaneous moderation effects of group salience and mediation effects of intergroup anxiety in two cross-sectional studies on Italian attitudes toward non-European immigrants among students (Study 1) and co-workers (Study 2). Path analyses from both studies showed that intergroup contact had positive effects on outgroup evaluations and perceptions through the mediation of reduced intergroup anxiety, and that effects were stronger when group salience was high. Study 2 also showed that positive attitudes of co-workers generalized to favorable attitudes toward outgroups.

Minority vs. majority status groups. Although most studies have examined the effects of intergroup contact on majority-status groups, a growing number of studies that have looked at effects on minority-status groups, which have shown that the prejudice-reducing effects of contact are weaker for minority-status groups (Tropp & Pettigrew, 2005). Using meta-analytic data from Pettigrew and Tropp (2006), they found that the relationship between contact and

prejudice was $r = -0.18$ for minority-status groups, compared to $r = -0.23$ for majority-status groups.

In a longitudinal study among ethnic minority and ethnic majority groups in Germany, Belgium, and England, Binder and colleagues (2009) also found that effects were not only weaker for minority groups, but actually non-significant. They also found that while intergroup anxiety partially mediated effects for majority groups, these effects were diminished for minority groups. Both groups, however, yielded stronger effects when the outgroup member was perceived as typical of the outgroup. A further important finding was that cross-lagged effects were found for both prejudice on contact and vice versa, which conflicts with findings from meta-analytic and other data that shows support for the direction from contact to prejudice (Pettigrew & Tropp, 2006; Swart et al., 2011)¹⁶.

Other outcomes of contact

Various outcomes including physiological responses (e.g., Blascovich et al., 2001 as seen above), implicit associations (e.g., Turner, Hewstone, & Voci, 2007 as seen above), and, prosocial behavior (e.g., Tropp et al., 2012), attitude strength (e.g., Christ et al., 2010) and “secondary transfer effects” (Pettigrew, 2009) have also been tested.

Tropp and colleagues (2012) tested other outcomes of cross-group friendships in a large-scale longitudinal study by interviewing 1,600 American university students (involving four ethnic groups) each year for four years. As mentioned earlier, the majority of previous studies examined majority attitudes toward minority groups, but this study explored effects of cross-group friendship on perceived discrimination from the perspective minority groups. Using path

¹⁶ The causal sequence problem will be further discussed in the “Critiques of Contact Theory” section.

analyses, they found that more friendship with White students predicted lower perceived discrimination among members of Black and Latino groups. Two interesting findings were that students who had more White friends were also less likely to support ethnic activism¹⁷, and that these results were not significant for Asian American groups.

Christ and colleagues (2010) looked at attitude strength as another outcome. They found evidence from cross-sectional and longitudinal data for direct and indirect contact effects on attitude certainty as one dimension of attitude strength. Although results from the cross-sectional data showed that direct contact had a stronger relationship to attitude certainty than extended contact, longitudinal results showed that over time, both types of contact were related to stronger and more positive attitudes.

Latest developments

Contact theory was rooted in improving racial attitudes, but has since been tested and shown to be effective in several other contexts, many of which have been discussed in this chapter. These include improving attitudes towards people who are gay (Herek & Glunt, 1993; Herek & Capitanio, 1996), people with mental illness; (Kolodziej & Johnson, 1996), other religious groups (e.g., towards Muslims; Novotny & Polonsky, 2011, between Catholics and Protestants; Hewstone et al., 2008), and different ethnic groups (e.g., between Israelis and Palestinians; Maoz, 2000).

Other developments have been made regarding potential contact effects that do not involve direct interpersonal contact: *vicarious contact* and *imagined contact*. As mentioned earlier in this chapter, vicarious contact and imagined contact are a subset of indirect contact, under which

¹⁷ This phenomenon will be further discussed in the “Critiques of Contact Theory” section.

extended contact also falls. While extended contact involves knowledge of an existing cross-group friendship of an ingroup member, vicarious contact involves simply observing an ingroup member having a successful intergroup interaction. Mazziotta, Mummendey, & Wright (2011) applied socio-cognitive theory to propose that observing someone in one's own group having a positive encounter with members of outgroups could *vicariously* improve attitudes toward the outgroup. In a set of two experimental studies, Mazziotta and colleagues found that when participants (German university students, and community visitors at a German university) observed successful intergroup encounters, they reported an increase in positive outgroup attitudes as well as an increase in willingness to engage in direct intergroup contact. Path analytic results also showed that these effects were mediated by positive self-efficacy expectancy (subjective assessment about one's ability to carry out observed behavior), which in turn reduced feelings of uncertainty about the intergroup interaction.

Like extended and vicarious contact, imagined contact does not involve being present in the contact encounter. However in this case, it does not involve an actual encounter at all. Imagined contact was introduced by Crisp and Turner (2009), who argued that attitudes toward another group could improve by merely envisioning having positive interactions with individuals from that group. Critics have questioned the significance of imagined contact outside of the laboratory setting (Lee & Jussim, 2010), and the subjectivity of self-report measures used in previous studies (Bigler & Hughes, 2010). However, Miles and Crisp (2014) recently conducted a meta-analysis on this emerging topic of imagined contact, that reviewed over 70 studies, and concluded that imagined contact had a significant effect on intergroup bias, showing bias reduction in both implicit and explicit measures.

Further studies have begun to show that effects translate to groups not involved in the contact situation, also known as “secondary transfer effect” (Pettigrew, 2009). Through cross-sectional and longitudinal data, Pettigrew (2009) found support for this in intergroup contact situations—between Germans and foreigners—that were related to more positive attitudes toward people who are homeless and people who are gay. Prior longitudinal data from Eller and Abrams (2004) and Van Laar et al. (2005) also found that contact between students of different nationalities (Eller & Abrams, 2004) or different race groups (Van Laar et al., 2005) predicted more positive attitudes toward other national or ethnic groups. Tausch et al. (2010) also found consistent evidence from cross-sectional and longitudinal studies that this relationship was mediated by *attitude generalization*, which is the process of attitudes toward one object generalizing toward other, related, yet less familiar objects.

Contact Research in South Africa

Although much of the previous contact research has been conducted in North America, there is also a growing body of literature coming out of South Africa, and the two streams have overlapped from the first emergence of the contact theory. Soon after Gordon Allport first published his seminal work on contact theory in the book, “The Nature of Prejudice” in 1954, he took a six-month trip to South Africa that year with one of his mentees—Thomas Pettigrew, who has since become one of the greatest contributors to contact research, conducting research from South Africa (Pettigrew, 1959; Pettigrew, 1960). Another student of Allport’s—Jack Mann, also conducted contact research in South African townships (Mann, 1955).

South African Context

In pre-democracy South Africa, before 1994, intergroup contact was generally prohibited. Some limited amounts of contact were permitted, but only between people of severely unequal status and it was often characterized by violence and oppression (Durrheim & Dixon, 2010; Foster & Finchilescu, 1986). This type of contact was devoid of cooperation and without opportunities for intimate relationships. These segregationist policies under the apartheid government made the nation a non-contact society (Foster & Finchilescu, 1986). Very few academics conducted research or published writings on intergroup contact at this time because speaking out against the apartheid regime was a considerable risk (Finchilescu & Tredoux, 2008). However, there were some examples of contact research in the following South African contexts: schools (Luiz & Krige, 1981; Mynhardt, 1982), residences (Mann, 1955), and hospitals (Finchilescu, 1988). After the dissolution of apartheid, some studies have tested the impact of contact on race relations, showing strong inverse relationships between interracial contact and prejudice, with an average r value of $r = -.37$ (Gibson, 2004), ranging from $r = -.23$ to $r = -.56$ (Finchilescu, 2005).

Since 1994, intergroup contact in South Africa has still been very limited, especially social contact (Finchilescu & Tredoux, 2010). After the formal integration of schools and implementation of affirmative action policies, schools and universities became optimal places to investigate the impact of intergroup contact because students experience a relative amount of 'equal status'. Dixon, Durrheim, and Tredoux (2005a) have questioned the meaning of this term in contact situations, as this proved difficult in the context of post-apartheid South Africa. Here, 'relative amount of equal status' encapsulates the complexity of 'equal status' as granted in the

nominal sense—explicitly stated in government constitutions and university mission statements—as well as the lack thereof in the subjective experience of many South African students (Zuma, 2013). In a collection of student interviews, Zuma (2013) found that Black students consistently expressed feelings of ‘unequal existence’ in both psychological and material perceptions of disadvantage when comparing themselves to White students. Hence, experiences of ‘equal status’ may vary, so this term will be reserved for use in the broad, outward sense. The following section will provide a brief overview of contact research in South African university and other public settings, which have shown continued patterns of informal segregation. Even during apartheid, there was evidence that increased contact could reduce prejudice (e.g., between White and Coloured teenagers; Luiz & Krige, 1981), but Finchilescu and Tredoux (2010) argue that the persistence of ‘informal segregation’ in South Africa today poses a problem that should thus be studied.

Recent contributions to contact research in South Africa

In recent years, considerable support for contact theory and underlying mediators of the contact-prejudice relationship has been provided by researchers such as Swart et al. (2011) (as discussed earlier in this chapter), Tredoux and Finchilescu (2010), and Swart, Hewstone, Christ, and Voci (2010). A comparison of cross-sectional studies by Gibson and Claassen (2010) based on a representative national sample reveal a generally supportive but more complicated picture, however.

In a large-scale questionnaire study ($N = 2,559$) among White and Black South African university students, Tredoux and Finchilescu (2010) found significant correlations between intergroup contact and prejudice (from $r = -.17$ to $r = -.65$ for two different measures of

prejudice). Similar to Tropp and Pettigrew (2005), they also found that correlations were weaker for Black (minority status) students than for White (majority status) students. Results also showed that intergroup anxiety was the strongest mediator of the contact-prejudice relationship out of the five mediators tested (outgroup blame, meta-perceptions, ingroup identity, and amount of cross-group friendships), supporting Pettigrew and Tropp's (2008) meta-analysis of mediators.

Swart et al. (2010) found similar consistency in results from two cross-sectional studies among White and Coloured South African high school students with regards to the significant contact-prejudice relationship. In this study, they measured contact in the form of cross-group friendships, and prejudice in the form of cognitive, affective, and quasi-behavioral measures, and found significant associations to all three measures of prejudice. They also found support for the diminishing of effects for minority status groups, and intergroup anxiety as an important mediator. In addition they also found that affective empathy was another important mediator of contact effects, which also corresponds to findings from Swart et al. (2011) and Pettigrew and Tropp (2008) discussed earlier in this chapter.

Although survey results from a large-scale nationally representative sample comprised of all four major racial groups in South African (Black, White, Indian, Coloured) generally support that intergroup contact contributes to improved intergroup attitudes, Gibson and Claassen (2010) found that this was only relevant for White, Coloured, and Indian attitudes toward Black South Africans. For Black South Africans, they found that contact had no significant effect on attitudes toward White South Africans. Further, when compared to Gibson's (2004) nationally representative survey three years prior to the current survey data, they found a significantly higher level of prejudiced attitudes. However, intimate contact ("true" friendships) had

significant effects for prejudice reduction for all groups; thus, showing further support for contact theory.

In a cross-sectional study, Dixon and colleagues (2010) have highlighted some of the challenges of negative effects of contact within the South African context. Upon examining perceived discrimination and relative deprivation experienced from the perspective of Black South Africans (minority-status group), they found that positive interactions with White South Africans were associated with lower perceptions of discrimination and relative deprivation. They also found that this relationship was significantly mediated by more positive racial attitudes and fewer personal experiences of discrimination. Challenges of negative effects of contact within this context will be further discussed in the “Critiques of Contact Theory” section of this chapter.

Non-mainstream Contact Research: Micro-ecology of Segregation

A growing body of non-mainstream contact research on the *micro-ecology of segregation* on university campuses and in other public places in South Africa (e.g., Bangeni & Kapp 2005; Durrheim & Dixon, 2005; Tredoux & Dixon, 2009) show that racial lines are not only clearly established but also resistant to change; thus directly interfering with opportunities for contact. This research on ‘self-segregation’ has added significance in the field of social psychology because authors begin to answer questions about how racial isolation operates on a *micro-ecological* level—ordinary places where people meet and take part in commonplace activities such as classrooms and cafeterias (Dixon et al., 2005a). In these studies, persistent ‘segregation’ has been observed in contexts with institutional support for intergroup interactions (e.g., university, government) and where students share common activities (e.g., tutorial group, dining,

beach activities, clubbing), maintaining spatial boundaries along racial lines (Alexander, 2006; Alexander & Tredoux, 2010; Dixon & Durrheim, 2003; Schrieff et al., 2005, 2010).

For example, Alexander and Tredoux (2010) looked at seating patterns in 26 tutorial sections (weekly small-group discussion sections within large lecture classes) over the course of a year, and found that “an implicit system of unofficial rules governs intergroup relations and shapes contact opportunity among students (p. 367).” They also offer that the persistence of ‘segregation’ served as both a determining factor as well as an outcome in seating patterns. Figure 3.2 below shows an example of the difference between ‘integrated’ and ‘segregated’ seating patterns in a tutorial section (Alexander & Tredoux, 2010, p. 373).

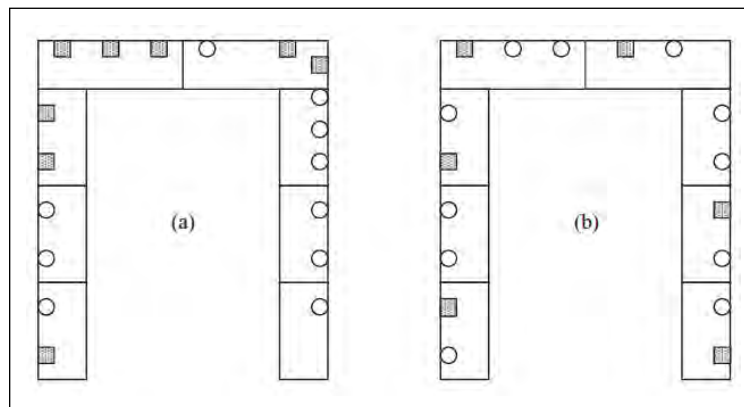


Figure 3.2. Diagram showing (a) ‘integrated’ vs. (b) ‘segregated’ seating patterns in a tutorial section. From Alexander & Tredoux (2010), p. 373.

In another example, Alexander (2007) experimented with disruptions to these spatial boundaries in residence dining halls, by sending Black and White research confederates to sit at informally designated White and Black tables, respectively, and found that students were highly

resistant to intrusions of these boundaries. The figure below shows that when a Black research confederate sat at a table where White students normally sit, within an hour, the racial composition of the table changed from White to Black, maintaining the Black-White boundary:

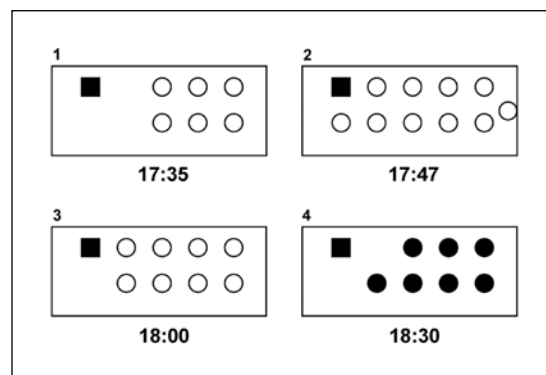


Figure 3.3. Diagram showing sample seating pattern observations in a university dining hall.

From Alexander (2007), p. 750.

Schrieff and colleagues (2005) further contributed to the work on the micro-ecology of segregation with some evidence for why people tend to create racial boundaries in places with seemingly ample opportunity for interacting across groups. They found that friendship patterns and ‘comfort zones’ were the main organizing factors in seating choice reported by students. The work of Schrieff et al. (2010) and Gibbs and McGivern (2010) also supported this notion, in favor of spatial zones of comfort (comfort zones) and friendship patterns as the main reasons that students reported for segregated seating patterns. In these studies, comfort zones can be seen as an index of intergroup anxiety in part, since one of the measures of anxiety was comfort level. Schrieff et al. (2010) asked participants to rate the most important factors determining seating choice among comfortability, friendship, and similarities such as language, culture, and race, and found that comfortability and “people I can talk to” were consistently reported as organizing

factors. The present study addresses these two factors by implementing an intervention that seeks to reduce intergroup anxiety and increase intergroup friendship potential through the facilitation of dialogue. According to contact research, the reduction of intergroup anxiety and increase of friendship potential have positive correlations to intergroup contact and empathy for outgroups, and negative correlations to prejudice (Lopez, 2004; Pettigrew, 1998; Schofield, Hausman, Ye & Woods, 2010). Hence, cross-group friendship and intergroup anxiety play an important role in the development of the interventions that will be described in Chapters 4 and 6, and both topics will be discussed in greater detail in the following two sections.

Observational studies in everyday settings on South African campuses have consistently shown that patterns of informal segregation spontaneously unfold and persist (Alexander, 2006, 2007; Clack, Dixon, & Tredoux, 2005; Schrieff et al., 2005, 2010). The most recent studies from the university setting in the present study suggest that one of the reasons for this spontaneous segregation may be intergroup anxiety (Gibbs & McGivern, 2010; Schrieff et al., 2010), which leads to contact avoidance (Stephan & Stephan, 1996; Plant & Devine, 2008). Due to the persistence of informal segregation, which reduces the likelihood of intergroup contact, an interventional method is employed in the current study, providing more opportunities for contact and friendship formation, addressing intergroup anxiety through positive emotions, and enhancing optimal conditions.

Critiques of Contact Theory

Critics of contact theory have highlighted problems with the theory's generalizability, "utopianism", causal implications, selection bias, and negative effects on social change. Even in ideal situations, contact does not always result in positive attitudes towards outgroups. For

example, when ingroup members view outgroup members as atypical and subcategorize them as exceptions to their group, it has no effect on attitudes toward the group as a whole (Ellison & Powers, 1994). Forbes (2004) also argued that changes on the micro level (individual) do not translate to changes on the macro level (group), but Pettigrew and Tropp (2011) argue that Forbes' theory was not tested empirically. In addition, other empirical studies presented in this chapter show favorable support for the generalization of contact effects to the outgroup as a whole (e.g., Batson et al., 1997; Finlay & Stephan, 2000; Voci & Hewstone, 2003) and even to other outgroups not involved in the contact situation (e.g., Eller & Abrams, 2004; Pettigrew, 2009; Tausch et al., 2010; Van Laar et al., 2005).

Critics have also claimed that the optimal conditions of contact reflects context too broadly and fails to take into account the nature of face-to-face contact situations in everyday life spaces (Dixon et al., 2005a). For example, Dixon et al. (2005a) have proposed that this may create a “utopian” context that makes contact theory inapplicable in the “real world”. Setting down optimal conditions such as institutional support may be problematic because it is not always clear what conditions like this mean – in the present case, this can refer to institutional support in the limited contact situation (e.g., the residence hall or classroom), locally (e.g., the university or city), or on a larger scale (national government). Some contexts may also have established principles and practices of institutional support, but the implementation of these principles may be difficult to measure.

However, meta-analytic results from Pettigrew and Tropp (2006) show that while these optimal conditions facilitate contact effects, they are not necessary. In addition, over 70% of the studies in the meta-analysis asked respondents about everyday contact situations that do indeed reflect real-life scenarios. Thus, Pettigrew and Tropp (2011) see this criticism as “outdated” in

light of the considerable amount of research and development that has broadened the scope of integrative contact theory and understanding of contact effects on cognitive, affective, and behavioral prejudice.

Causal implications have also been questioned with regard to whether contact reduces prejudice or less prejudiced people are more likely to seek out contact, which in turn questions the relevance and reliability of the contact hypothesis (e.g., Binder et al., 2009). However, when Swart et al. (2011) addressed this question by testing longitudinal models, they found that the forward direction (more contact reducing prejudice) is better supported than the reverse direction (less prejudice increasing contact) (e.g., Swart et al., 2011). This is additionally supported by meta-analytic data (Pettigrew & Tropp, 2006), and experimental data (van Dick et al., 2004).

This also rules out a further critique that selection bias may account for the link between contact and prejudice. In other words, since meta-analytical, longitudinal, and experimental evidence has been shown in favor of the implication that contact reduces prejudice (Pettigrew & Tropp, 2006; Swart et al., 2011; van Dick et al., 2004), over the implication that less prejudiced people are more likely to seek out contact, it diminishes the claim that positive results of contact research is a result of selecting less prejudiced participants.

Contact theory has also been criticized because it has been associated with overly optimistic perceptions of intergroup inequality among members of disadvantaged groups (Dixon et al., 2012; Dixon et al., 2010; Dixon et al., 2005a; Wright & Lubensky, 2008). For example, Dixon et al. (2005a) saw that Black participants who had more contact with White people were less likely to support race-specific policies designed to rectify historical injustices experienced by Black South Africans. Cakal and colleagues (2011) found a similar ‘sedating effect’ among people from disadvantaged groups that reduced the likelihood of even being aware of, let alone acting

upon, unfair conditions. These studies have argued that this deters the disadvantaged group's recognition of inequality, and diminishes support for social action. Some researchers have described this as 'paradoxical effects' of intergroup contact, which inadvertently reveal problematic consequences of a model intended to improve intergroup relations (Reicher, 2007; see also Cakal et al., 2011; Dixon et al., 2012; Durrheim & Dixon, 2010; Wright & Baray, 2012). These authors problematized the focus of contact theory on prejudice reduction for improving intergroup relations because of the assumptions that come with the idea of prejudice as the primary cause for intergroup conflict. These critics argue that it can be problematic if contact theory is viewed as a means for converting prejudiced views of dominant groups, or for social change in general, because it may harbor misconceptions of the meaning of prejudice and accordingly the means for combating it. In other words, assuming that prejudice is a negative perception of outgroups held by dominant ingroups would be to then assume that the key is to fix the views of the dominant group. The authors point out the potential consequences that come at the cost of appeasing the dominant group while inhibiting social change among disadvantaged groups. Erasmus (2005) has engaged these topics in a critical analysis of the effects of contact theory, namely the reinforcement of race categories, as well as the impact and effects of Whiteness, power dynamics, and racism, which have been left out of analyses of the theory (Erasmus, 2010). Yet, claims by Erasmus have not been backed by data or clear conceptual and analytic work, thus, as Pettigrew (2010) argued, relevance to intergroup contact theory is unclear.

Most recently, Durrheim, Jacobs, and Dixon (2013) attempt to explain the 'paradox of contact' as a byproduct of a *system justification* process, which is grounded in the theoretical

work of Jost and colleagues (2004; 2012). They define the theory of *system justification* as the legitimization of current social conditions and positions by people of disadvantaged groups, including reasons why members of these groups might view their condition as reasonable, ‘natural’, or unavoidable. Durrheim, Jacobs, and Dixon (2013) present the supposition that:

...positive contact with the dominant group facilitates the transmission of ideological values that justify unequal social systems, leading the disadvantaged to accept the idea that they inhabit essentially meritocratic societies with permeable status boundaries, and that, a fortiori, there is little need for collective action to challenge the status quo (p. 3).

This idea was explored in their case study on relationships between employers and employees in the South African domestic labor profession, and they found that “the *paternalistic discourse* of ‘helping’ nurtured gratitude, obligation, and dependency, rather than political resistance (Durrheim et al., 2013, p. 13).” In the case of domestic labor relations in South Africa, the authors argue that these discourses personalized the relationship between employer and employee, causing people to overlook problematic roots and structure of the labor system. Especially with regard to political and social change, Durrheim et al. (2013) have presented an important contribution to the critique: that negative—or paradoxical—effects of intergroup contact occur because within the contact situation, unjust conditions are legitimized by disadvantaged groups, and then reinforced by both advantaged and disadvantaged parties through discourses about the giving and receiving of assistance.

Although these critiques have laid serious claim that intergroup contact may prevent disadvantaged groups from recognizing or resisting inequalities, Pettigrew and Tropp (2011) have also highlighted counter-evidence provided from studies conducted by many of the critics

themselves (Dixon et al., 2010), which shows support for the *positive* effects of contact on social change. In their cross-sectional study on White South Africans (N = 794), they found that the frequency and quality of intergroup contact significantly predicted support for both race compensatory policies (e.g., scholarships for previously disadvantaged students) and race preferential policies (e.g., affirmative action policies) that would support the advancement of Black South Africans. In addition, other studies as discussed in previous sections, have shown diminished effects for minority status groups, which is consistent in this context as well (e.g., Binder et al., 2009; Tropp and Pettigrew 2005).

In another study by Durrheim and Dixon (2010), survey results also reveal conflicting evidence for negative effects of contact on social change. On the one hand, more intergroup contact was associated with greater opposition to transformative social policies among Black South Africans. On the other hand, increased contact was also associated with increased support for transformative social policies, along with reduced stereotyping among White South Africans. Thus, as Pettigrew and Tropp (2011) have argued, these potential negative effects of intergroup contact appear to lack evidence and require more sufficient testing.

Conclusion

Despite criticisms, meta-analytic tests of a large cross-section of contact research, including 713 studies over the past few decades, have revealed an overall consistency in results (Pettigrew & Tropp, 2006). The vast amount of contact research now available has provided sufficient evidence that intergroup contact reduces prejudice, and that effects do generalize to entire outgroups, do not result from participant selection, and can be extended to other groups outside the contact situation. Many of the common criticisms of contact theory have been contradicted

by evidence from research using a variety of methods, such that criticisms like “utopianism” (Dixon et al., 2005a) seem “outdated” (Pettigrew & Tropp, 2011). Other criticisms about negative effects of intergroup contact on social change have been countered by data showing positive effects on social change, and seem to require further testing and support.

This growing body of contact literature has further highlighted the importance of intergroup contact and its usefulness as part of the solution for intergroup conflict, while revealing complexities of intergroup research in various settings and among various groups. There is now a considerable amount of evidence on the importance of affective mediators, namely intergroup anxiety and empathy, and a growing body of work on previous gaps in contact literature such as weaker effects for minority-status groups, the role of self-disclosure, perceptions from various group perspectives, and salience of group identity. Contact research is also continuing to expand to a broader array of potential influence on attitudes toward outgroups not involved in the intergroup encounter and encounters that are merely observed or imagined.

Studies set in the context of South Africa have shown overall support for contact theory, while showing a more complicated picture of intergroup relations based on the country’s unique recent history of longstanding racial conflict. Research on the micro-ecology of segregation has provided important contributions to understanding the persistence of segregation in everyday spaces, even under optimal conditions. This presents problems for opportunities for contact, or the ‘leading the horse to water’ problem (Pettigrew, 2010). Although contact theory was not designed to solve this problem, it becomes an important consideration for improving intergroup relations in the South African context and can also be applicable to other countries with pervading patterns of ‘self-segregation’.

In conclusion, the prejudice-reduction model of contact theory has some decided shortfalls, but the considerable amount of evidence holds that it is still useful for thinking about integration and its connection to social equality and improved intergroup relations. Contact theory plays an integral part in our current social psychological conceptions of integration because it informs us about processes involved in how and why contact improves intergroup relations, as well as factors involved in when contact is most effective.

Chapter 4: Study A1

Introduction to Study A: One Study, Two Parts, Three Components

Study A was a multidimensional study comprised of three components that were organized into two studies: Study A1, which included a longitudinal observation component and a quasi-experimental intervention component, and Study A2, which included a longitudinal pretest-posttest survey component. All three components of the study took place during the same six-week period and in the same university dining hall setting. Each component also used participants from the same population—students from two residence halls that share one dining hall.

The first component was an intervention program, which consisted of four individual intervention activity sessions and took place once a week, for four weeks. The intervention program was designed according to specific criteria that functioned to assist in increasing integration in dining hall seating patterns. The second component was a set of observations that were taken before and after the intervention program, and during each intervention activity. The third component was a set of surveys that were distributed before and after the intervention program. The three components will be reported in two separate chapters (Chapter 4 and Chapter 5) for organizational purposes and to assist with reading. Each component in Study A is illustrated in the six-week timeline displayed in Figure 4.1 below.

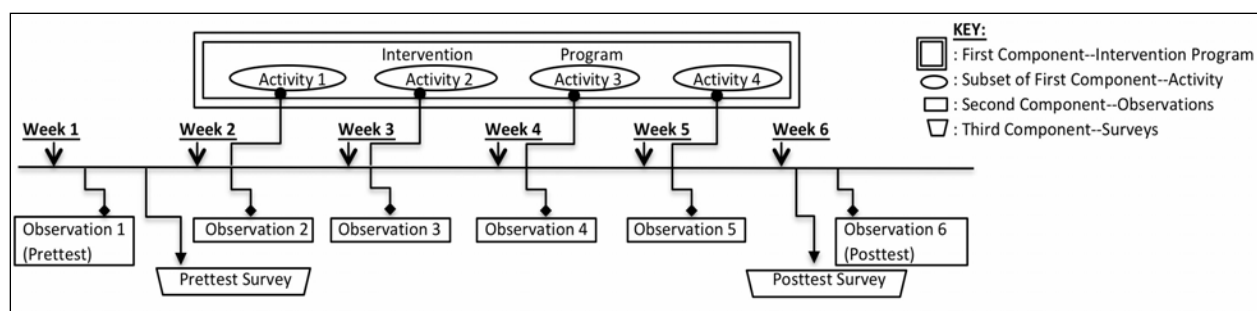


Figure 4.1. Timeline for Study A. Study A is also repeated on a larger scale and reported in detail in Study B, located in Chapters 6 and 7, which is organized into the same components and sections as described here.

Study A1: Dining Hall Intervention Program and Observations

Design

Study A1 consisted of a quasi-experimental intervention component and longitudinal questionnaire and observational components. The intervention was comprised of a nonequivalent control group pretest-posttest design (Cozby, 2009). This design is structured such that instead of randomly assigning participants to groups, as in true experimental designs, pre-existing groups deemed to be similar to the experimental groups are chosen as the control groups. True experimental designs are better able to properly isolate confounding variables and may be susceptible to internal validity threat of selection or pre-existing differences. However, in efforts to avoid these problems, results controlled for prior differences.

Group composition. The experimental group participated in the intervention, and the control group did not. Both groups were given questionnaires at the same time, before and after the intervention. The participants were not divided into experimental and control groups ahead of time. The participant makeup of these groups was determined each week of the intervention

program, as participants were recruited on each day of data collection, on a completely voluntary basis. Each evening of the intervention, I recruited students to participate in the activity, and those who declined comprised the control group. Thus, over four weeks, the experimental group was the total set of students who participated in at least one intervention activity, and the control group was the set of students who did not participate in any activities. The observational component, which involved recording seating patterns, measured both control and experimental groups simultaneously. The observations were naturalistic and unobtrusive in design.

Participants

The sample for both the intervention and observation components was a group of undergraduate students from a racially diverse university in South Africa in 2011. That year, the total student population at this University was 25,508, of which 17,312 were undergraduates and 8,196 were postgraduates. At this University, the demographic breakdown by race is organized into the South African-specific categories that correspond to the following four historical race categorizations: Black, Coloured, Indian, and White. In addition to these four categories, a fifth category is used at UCT, labeled “International”, referring to students with permanent residence in countries outside of South Africa. The racial breakdown at this University that year was 22% Black, 14% Coloured, 7%, Indian, 36% SA White, 19% International, and 3% other¹⁸ (University of Cape Town, Vice chancellor’s report, 2011, p. 9). (See Tables 4.1-4.2 below for student demographics.)

¹⁸ “Other” refers to a race other than the ones listed, unknown, or unavailable. At this university, Indians are categorized separately from other Asians due to the large population of Indians and historical categorizations. Thus “Asian” refers to those people whose country of origin is an Asian country aside from India. In demographic forms at this university, Asian students are all categorized as Chinese, albeit incorrectly, for the same reasons.

Table 4.1.

Student Demographics: Race

Race	National population ¹⁹ (N=51,770,560)	University population (N=25,508)	Study 1 residents (N=597)	Posttest participants (N=265)
Black	79%	22%	53%	41%
White	9%	36%	23%	30%
Coloured	9%	14%	5%	12%
Indian	(combined with next)	7%	7%	10%
Asian	3%	NA	1%	2%
other/NA	0%	3%	10%	5%
International	NA	19%	NA	NA

Table 4.2.

Student Demographics: Gender

	University population (N=25,352)	Study 1 residents (N=597)	Posttest participants (N=265)
Race			
Female	52%	39%	41%
Male	48%	61%	59%

Participants in Study A1 were students from two catered residences that shared a common dining hall at the university: one male residence with 366 occupants and one female residence with 231 occupants. I chose this dining hall because the occupants who shared this space constituted a large and diverse sample, which provided more opportunities for intergroup interactions. The racial makeup of the 597 students living in the two residences in this study was 53% Black, 23% White, 5%, Coloured, 7% Indian, 1% Asian, and 10% “other”. The average age

¹⁹ According to the South African National Census of 2011 (Statistics South Africa, 2012).

of students living in these residences was 19.74 years ($SD = 1.15$), and ages ranged from 17 to 25 years.

I enlisted student facilitators to assist with the distribution of surveys, recruitment of participants, and facilitation of intervention activities. I enrolled most of the facilitators by attending leadership committee²⁰ meetings at the residence halls, explaining the study, and collecting information from interested students. I recruited additional student volunteers from the Psychology Department by sending out email notification and offering research points, which are a requirement for some undergraduate psychology courses.

Ethical Procedures. At my home institution, ethical approval is required from both the Research Ethics Committee and the Department of Student Affairs. The Department of Student Affairs required further approval from each of the Residence Leadership Teams. In accordance, I met with each of these governing bodies within the university and residence system and obtained consent and support for this project. Student leadership committees were informed beforehand that activities were part of a research project before providing approval. Residence leaders also sent email notification to all students in both residences and provided information of this program, including that it was as part of a research project through the Psychology Department. Emails were sent before the intervention, and reminders were sent each week so that students would be well-informed. Additionally, survey participants were informed on each questionnaire that the surveys were conducted by a researcher from the Psychology Department, and individual verbal consent was obtained from both survey and intervention participants. With approval from residence governing bodies, I also advertised the intervention program by setting up posters in

²⁰ Each residence hall at this university has leadership teams that consist of one faculty member, who is the head of the residence, and a group of student leaders, who are elected by students in the residence hall.

the dining hall and in both residence halls involved. Posters also contained information that activities were part of a research project. The ethical procedures followed here fall in accordance with ethical requirements at the home institution. (Please refer to Appendix O for the intervention advertisement.)

Further, students were informed that their survey responses would be confidential, and that they could withdraw from participation in the surveys or activities at any time, without any consequences. Students were asked to provide their student identification numbers for survey matching purposes, but they were informed that these numbers would be replaced with a code in order to disconnect identifying information from responses, and to remain anonymous. To ensure anonymity, student numbers were not recorded during data entry. Instead, a numeric code was provided when survey data was entered into a computer. A list of codes and corresponding numbers was kept in a password-protected document, which was only used to match posttests to pretests. Additionally, original surveys remained in a locked cabinet in the Psychology Department.

Apparatus

Observations were recorded using a pencil-and-paper method with a data-capturing tool, which was a map that approximated the spatial layout of tables in the dining hall. (See Figure 4.2 below.) Similar designs have been used in previous studies in dining hall settings in South Africa as well as in the United States (Schrieffer et al., 2005, 2010; Schofield & Sagar, 1977). This tool allowed for quick and systematic data capturing. It also provided a safeguard for potential errors that may occur through the accidental multiple recordings of individual students or the overlooking of students when recording observations.

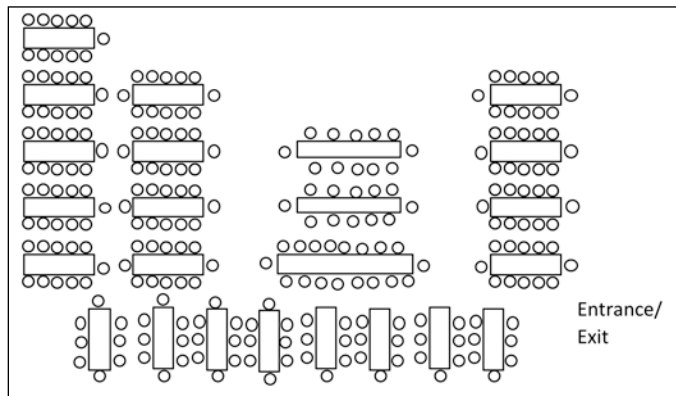


Figure 4.2. Diagram showing seating arrangement in the dining hall. Rectangles represent tables, and circles represent individual seats.

Materials

Intervention program. The intervention program consisted of four distinct activity sessions that were advertised as “Get to Know Your Res-Mates²¹ Game Nights.” During game nights, social activities took place in the dining hall during dinner sessions, for the purpose of becoming acquainted with fellow residents. Activity sessions took place during the regularly allotted dinnertime in the dining hall once a week, for four consecutive weeks. I designed each activity to take about ten to fifteen minutes and to start at different times so that students would be able to come and go as they normally would, without having to wait or stay for extended periods of time. I created activities that would be appropriate for dinner-table settings and easy to complete while eating and with minimal guidance—controlled through one or two simple rules. I also edited activities with reproducibility in mind; the intention was to use activities that would

²¹ “Res-mates” is an informal reference to peers who live in one’s residence hall that is often used at this university.

be inexpensive and easy to manage so that they could be replicated (by these residences, other residences, or other organizations interested in integration) if the program succeeded in providing support for integration and participant benefits.

Intervention activity criteria. I designed the intervention program according to specific criteria that functioned to assist in increasing integration in dining hall seating patterns. Each activity satisfied the following functional criteria: participation of all members of a group, facilitation of peer-to-peer interaction, inclusion of positive affect-generating tasks (Fredrickson & Levinson, 1998; Fredrickson & Branigan, 2005; Wolpe, 1958), and enhancement of optimal conditions of contact (Allport, 1954; Pettigrew, 1998).

The first functional criterion was that the activity must initiate and facilitate contact (face-to-face interaction) between group members because previous studies in this University observed that a diverse body of students could be present in the same spaces but did not interact (Alexander, 2007; Alexander & Tredoux, 2010; Gibbs & McGivern, 2010; Schrieff et al., 2005; 2010). In Gibbs and McGivern's (2010) recent dining hall study at UCT, researchers found that when they randomized seating to promote intergroup contact, students sometimes continued to avoid contact once seated. Thus, to ensure individual participation of all group members, all activities required participants to start with two tasks: introducing themselves to the group and deciding on a group name together. These tasks initiate both a reciprocal self-disclosure process through introductions, and a cooperative process through decision-making as a group towards a team name. Each activity also facilitated participation from all group members in different ways, according to individual activity instructions, which I will describe in the next sub-sections ("Activity One - Activity Four").

The second functional criterion was the inclusion of positive-emotion generating tasks in order to address intergroup anxiety, which emerged as the foremost factor for seating choice in previous studies in this University setting (Schrieff et al., 2005, 2010; Gibbs & McGivern, 2010). Several studies have identified that intergroup anxiety leads to intergroup contact avoidance (Plant & Devine, 2008; Stephan & Stephan, 1996), so I included these positive-emotion generating tasks to try to reduce intergroup anxiety in order to facilitate intergroup contact.

The idea to include positive emotions emerged from Wolpe's (1958) reciprocal inhibition theory, which presumes that opposite emotions, such as anxiety and comfort, cannot exist at the same time, and that as one increases the other must decrease. This theory was first used as a tool for addressing anxiety and has been applied to various contexts, including in behavioral therapy, particularly among people suffering from social anxiety (Wolpe, 1958), and younger children with phobias (Wolpe & Lazarus, 1996). (Please see the Literature Review in Chapter 3 p. 65 for more on positive emotions.) I applied Wolpe's (1958) theory and Fredrickson's (1998) model on positive emotions to the current intervention in this study by incorporating tasks that could generate positive feelings, such as curiosity, excitement, and amusement, in order to counteract the commonly occurring negative feelings related to intergroup interactions.

The third functional criterion is the enhancement of optimal conditions of contact, namely: equal status, institutional support, cooperation towards a common goal, and friendship potential (Allport, 1954; Pettigrew, 1998). This criterion was based on Pettigrew and Tropp (2006) who reviewed studies that used programs with optimal contact conditions and found that on average, groups that participated in these programs reported greater improvements in intergroup attitudes. In each activity, to reinforce the equal status condition of group members, no official group leader would be appointed, and each activity required participation from all members. To

enhance the feeling of institutional support, I recruited student leaders from governing bodies in the residence hall to be facilitators for each intervention activity, as described in an earlier section (“Participants” on p. 78). Each activity had distinct ways to enhance cooperation through a specific group task. Friendship potential was enhanced through various closeness-generating tasks, which will be discussed in the activity descriptions below. Closeness-generating tasks incorporated shared activities and “reciprocal, escalating, and personalistic self-disclosure”, which Aron et al. (1997, p. 364) noted was a key pattern in relationship building amongst peers.

Activity 1: Murder Mystery. Activity 1 consisted of an activity sheet with instructions to solve a mystery about a fictional murder, and an envelope full of clues from the day that it took place. The sheet contained places for groups to fill in the following answers: where, what time, why, murderer, and weapon). The task was to pass the envelope around, taking two clues at a time, until the envelope was empty. The only rule was that participants were not permitted to show their clues to anyone, though they were able to read the clues aloud. This rule was placed to ensure that students worked together to solve the mystery, and to reduce the likelihood that any one or two members dominated group participation. It also enhanced equal status, by allotting a similar number of clues to each group member; thus, one member’s input was not more valuable than another’s. This activity was piloted in 30 small groups that were part of a first year university course. On average, small groups consisted of approximately 4% Black students, 38% White students, 8% Indian students, and 8% Coloured students. In feedback sessions, students consistently reported feeling positive after the activity and closer to group members whom they have met for the first time.

Activity 2: People Bingo. The second activity was “People Bingo”, for which each team was given a card that contained instructions and a 5 X 5 card. The card was modeled after Bingo

(U.S.), an American version of a game of chance that is played on a 5 X 5 square with a printed number on each square (Singh, 2009). (See Appendix B for People Bingo card.) In place of numbers, the “People Bingo” card contained statements in each box: 20 boxes contained statements that varied from “I grew up in Mpumalanga²²” to “I can ‘do the Dougie’²³”, and 5 boxes contained the phrase “We all have this in common”. I selected each statement with the intent to facilitate dialogue and self-disclosure as part of the get-to-know-you process (e.g., Where are you from?) as well as to help generate positive emotions through humor (e.g., “do the Dougie”—a current pop-culture dance reference, which someone in the group had to demonstrate to fulfill this square). Instructions for this activity were to find out if any statements were true for anyone in the group, and for that group member to sign their name in the corresponding box. The boxes labeled “We all have this in common” ensured participation from all members, and facilitated further dialogue and self-disclosure towards relationship building. To fulfill the requirement for this box, groups had to find out things that group members all had in common, such as “we all have a brother” or “we all like house music.”

Activity 3: Pub Quiz. Activity 3 was a pub quiz²⁴, which is a trivia-style quiz. The activity sheet included a list of pop-culture trivia questions that groups had to work together to complete. The only rule was that the use of phones and the internet were not allowed. Question topics ranged from local South African comics to sports players to cuisine to languages. (Please see

²² Mpumalanga is one of nine provinces in South Africa, located on the northeastern side of the country, bordering Swaziland and Mozambique.

²³ “Dougie” is a pop culture reference to a dance that was popularized by the American hip hop group, Cali Swag District, through the song “Teach Me How to Dougie”, which was released in 2011.

²⁴ This is a game that has been popularized in recent years, especially in places like the United Kingdom and the United States. A 2008 survey by The Publican, a British weekly magazine on news related to the pub trade, estimated that 42% of pubs held weekly pub nights (Market Report Survey, 2008). There are also several weekly pub quizzes in Cape Town, the city in which my study takes place.

Appendix C for the full quiz.). I included a wide range of topics in the quiz to enhance group cooperation. I also incorporated humorous pictures and references, such as comics and funny glasses, to facilitate the experience of positive emotions.

Activity 4: Fast Friends. The fourth activity was adapted from Aron et al.'s (1997) fast friends activity that was used to simulate the experience of closeness. Aron et al. (1997) found that when pairs of people were given the task to take turns answering questions that progressively became more personal, the mutual self-disclosure facilitated closeness and friendship between people who had only spent 45 minutes together. Questions also encouraged behaviors that are critical to friendship, such as perceiving similarities and social support (e.g., "Name three things that you and your partners appear to have in common"; "Tell your partners something thing you like about them already"). In a related residence friendship study (Zhou, 2010), participants reported positive feelings toward their partners, and a strong interest in continuing interactions with their partners in the future. The majority of participants also described their partner as a "friend".

All four activities were piloted in a first-year class at UCT. The class consisted of a racially diverse group of thirteen students: five Black students, four White students, three so-called Coloured students, and one Indian student. The course was structured for group work, and small group activities were a required part of the curriculum for this course, so this class was an appropriate place to pilot these activities. Pilot activities were helpful for testing three things: 1) duration of time required to complete activities, 2) positive-emotion arousal, and 3) level of difficulty. After each pilot, students commented on each of these items, and activities were altered accordingly to fit the intervention program criteria mentioned above. Based on the students' feedback, I omitted certain questions and items that were difficult or confusing, since

the activities were meant to be simple and easy to understand. I also shortened some of the activities that took longer than fifteen minutes by cutting down the number of questions or items, in order to stay within the timeframe appropriate for a dinnertime table game at the dining hall.

Measures

Seating patterns. For the observational component, observers used copies of an approximate map of the dining hall to record which seats were occupied at each table, as well as the race and gender of the person occupying the seat (Figure 4.2). Observers repeated this process every twenty minutes during the 2.5-hour dinner session. Observations were recorded on six different days: once before and once after the intervention, and during each of the four intervention activity sessions. (Please see Figure 4.1 for the timeline.) Advantages of this type of observational measure are that it allows for rapid recording while minimizing errors from overlooking students or logging multiple recordings of a student.

While recognizing that the reading of race can be a sensitive and problematic area, especially given the country's history of assignment of race categories based on physical attributes, this method was used based on success from previous research. Previous studies conducted at this University and public spaces in South Africa have also employed the reading of race in observations, and this measure has shown to be highly reliable. For example, Tredoux, Dixon, Nunez, Underwood, and Finchilescu (2005) have calculated high levels of inter-rater reliability when coding race in observational data at this University, with a 93.3% inter-rater reliability of race assignments, and 100% of gender assignments (see also Dixon & Durrheim, 2003). Thus, inter-rater reliability was not calculated, but this is a potential limitation of this study.

Levels of segregation in dining hall seating patterns were then analyzed using two of Massey and Denton's (1988) indices of spatial variation. This analysis produces two results: a dissimilarity index (D) and an exposure index (xPy^*). D scores range from 0 to 1, 0 representing the absence of segregation and 1 representing complete segregation in a given space. xPy^* also ranges from 0 to 1, but here 0 represents no exposure or potential for integration, while 1 represents high exposure or potential for integration. This paper and pencil method of data collection, as well as Massey and Denton's (1988) spatial variation analysis has been used successfully in three previous related studies: Schrieff et al., (2005, 2010), and Gibbs and McGivern (2010). These studies have also shown that determining and documenting a person's racial group through observation was not problematic in this setting; results have consistently and accurately corresponded to demographic data (Dijkstra, 2006). The D and xPy^* indices of segregation can only measure two groups at a time, so the two largest race groups, Black and White, were used for analysis.

Positive emotions. A Simplified Adjective Checklist (Russell, 1979) was adapted to measure general affect. Participants were asked to indicate emotions felt before and during interventions. This scale consists of 14 emotions, seven positive and seven negative, and participants were asked to indicate simply the presence or absence of each emotion. Responses were scored according to the sum of positive and negative terms chosen. For each term chosen, a "+1" indicates a positive emotion, a "-1" indicates a negative emotion, and terms that were not chosen were left out. These numbers were then added up to yield a single score. This scale has been tested with this scoring system and Vosburg (1998) supports acceptable reliability. (See Appendix E for full adjective checklist.) One of the potential limitations of this study was that

positive emotions before and during the intervention were measured at the same time, which leaves the possibility of recall bias, since this measure was retrospective.

Enduring contact effects. Intervention effects were measured through a posttest survey item that asked whether participants met anyone new during the activity night, if and how they kept in touch with anyone they met, and if that person was of a different racial group than their own. (See Appendix H for full list of questions related to enduring contact effects.)

Exploratory measures. Lastly, I explored opinions about the intervention program through two-question mini-surveys each week after the intervention activity, and opinions about integration through a posttest survey. The mini-surveys consisted of the question “How would you rate tonight’s activity?”, which was scored on a five-point scale that ranged from 1(very poor) to 5(excellent). The mini-surveys also contained one question about the social experience. (See Appendix F.) In the posttest survey, I also included three related questions regarding opinions about integration in residence halls and at the university. These questions were measured on binary scales, offering the options “yes” or “no.” (See Appendix F.)

Procedure

Please refer to Figure 4.1 for an outline of the procedure for Study A.

Preparation. Prior to the start of data collection, I obtained all necessary consent from university and residence governing bodies, recruited facilitators for the intervention program, and advertised the intervention activities to students in the two residence halls. I attended residence leadership²⁵ meetings at each residence to recruit student leaders to help facilitate the intervention activities. Students signed up in pairs for facilitating during one-hour time slots each

²⁵ Each residence at this university has residence leadership teams comprised of one faculty member at the university and a group of students who are elected to the leadership position by other residents.

intervention evening. Students who participated benefitted by adding this activity to their leadership portfolio²⁶, because integration is one of the strategic goals that the university sets forth for residence management teams. Facilitators received ZAR50²⁷ as compensation for their time. Their role was to recruit participants, assign and direct them to tables, answer questions about activity rules, and check completed activity sheets. They also advertised the intervention program by emailing all students, and hanging posters in public spaces in the residence halls. Activities were advertised as game nights that would provide opportunities for residents to get to know one another.

Week 1: Observation 1. In the first week of data collection, observers recorded seating patterns during one dinner session, as a pretest, one week before the intervention program commenced. Two observers sat at a table with a copy of the dining hall map (Figure 4.2), which they used to document students' race, gender, and seating choice. Observers plotted all occupied seats on to a map every twenty minutes throughout the dinner period, starting at 17h45 and ending at 19h45, for a total of six observations. (Dinner is served at this dining hall each weeknight from 17h30 to 20h00). Pretest surveys were also distributed this week, but will be discussed in detail in Study A2 located in Chapter 5.

Week 2: Intervention Activity 1 and Observation 2. The first intervention activity in conjunction with the second observation set took place in week two of data collection. As in the previous week, observers began recording seating choices at 17h45. Observers visually scanned the entire dining hall and recorded the seat location of each student, and the student's gender and race onto a copy of the approximated map of the dining hall. This was repeated on new copies of

²⁶ A portfolio refers to a compilation of accomplishments and tasks undertaken while in the student leadership position.

²⁷ Approximately equivalent to \$7.00 USD at the time of this study.

the dining hall map at 18h05, 18h25, 18h45, 19h05, 19h25, and 19h45. The dining hall closes at 20h00.

Activity group composition. Fifteen minutes before the dining hall opened for dinner (17h15), facilitators and I set up tables with numbers corresponding to seating cards that would be handed out to students. As students entered the dining hall, facilitators informed them of the game night happening that evening and asked if they wanted to participate. Students who wished to participate received cards with table numbers and directed to the table for seating. Groups consisted of about 4-6 participants. When handing out number cards, facilitators were instructed to make an effort to separate groups that arrived together and create racially diverse tables when possible, by handing different numbers to students who arrive in groups. For instance, when students indicated that they wanted to participate, facilitators quickly glanced at the participating tables and sent students to tables where they could diversify the composition. Although specific group composition was not recorded, observational data confirmed that tables used for intervention activities were more integrated during game night evenings. At certain points in the sequence of twenty-minute intervals when only students of a particular group arrived, the racial composition of tables could not be diversified. However, in these situations, we attempted to separate groups of friends that arrived together so that students would still have opportunities to get to know residential neighbors with whom they were not already acquainted.

We handed out table cards in clusters of four tables at a time to ensure that students were not left sitting alone at a table and waiting for prolonged periods. In other words, we began by handing out cards that corresponded to four tables, and as each table filled up, we added sets of cards that correspond to other tables. The clustering of tables addressed the problem in a previous dining hall intervention in this setting (Gibbs & McGivern, 2010). In this study, Gibbs

and McGivern (2010) found that some students were left sitting alone because students enter and exit the dining hall at different times, thus leaving a range of tables empty at any given time.

When three or four students were seated at a table, facilitators gave them a “Murder Mystery” activity sheet and an envelope with clues, and instructed them to begin. (See Appendix A for activity sheet and clues.) The students sitting at the table constituted the group for the game night activity. Facilitators and I were present to hand out activity sheets, to make sure activities were carried out as planned, and check finished activities. We only intervened when students had questions.

After students completed the activity, facilitators revealed the answer to the mystery, thanked participants, and administered mini-surveys. In these two-question mini-surveys, students were asked to rate their experience, with one item on the activity (“How would you rate tonight’s activity?”) and one item on the social experience (e.g., “Would you like to learn more about someone you met tonight?” “Would you be open to meet up again with someone you met tonight?”). The activity rating was measured on a Likert-type scale that included the numbers 1 through 5—1 represented “very poor” and 5 represented “excellent”. The experience rating was measured on a binary scale with the options “yes” and “no”. These mini-questionnaires served as a manipulation check, and verified that a potential negative assessment of the activity itself did not reflect a negative assessment of the peer-to-peer interaction.

Week 3: Intervention Activity 2 and Observation 3. In the third week, facilitators and I closely followed the procedure from Week 2 in carrying out the second intervention activity and third observation. In the same manner as in Week 2 mentioned above, we arrived at the dining hall early to set up tables, and throughout the evening we recruited students as they entered the dining hall, recorded seating observations, administered the intervention activity, and distributed

mini-surveys. The second intervention activity was “People Bingo”, a game that required participants to find out about their group members by asking questions written in boxes on the activity sheet and figuring out things they all had in common. (See Appendix B for activity sheet.) When groups completed the activity, facilitators chose a few boxes at random from which to check answers. For example, if a group member signed in the box “I have a famous doppelganger”, the facilitator would ask whom that person is. As in the previous week, facilitators administered two-question mini-surveys that asked participants to rate the activity and the experience.

Week 4: Intervention Activity 3 and Observation 4. The fourth week of data collection proceeded in the same manner as the second and third weeks, as described above. The third intervention activity was the “Pub Quiz”, which required participants to answer trivia type questions. For example, “What team is currently in first place in the South African PSL?” Participants had to work together to answer each question as fast as possible. (See Appendix C for quiz sheet.) When groups handed in completed activity sheets, facilitators checked the questions and revealed how many questions were answered correctly, and distributed the two-question mini-surveys.

Week 5: Intervention Activity 4 and Observation 5. The fifth week of data collection also continued in the same format as the previous three weeks. The fourth and final intervention activity was “Fast Friends”, a game in which participants took turns asking and answering a set of get-to-know-you questions. (See Appendix D for full list of questions.) Upon completion of questions, facilitators asked students to fill out the two-question mini-surveys.

Week 6: Observation 6 and Posttest Survey. During the sixth and final week of data collection, observers went back into the dining hall during a dinner session and recorded a

posttest observation set of seating choices. These observations were recorded in the same manner as the previous five observation sets.

That week, a posttest survey was also administered with the help of facilitators, during a dinner session. This posttest was a section of the main posttest survey that will be discussed in Study B2 in the next chapter. Facilitators and I stood by the entrance and asked each student who walked into the dining hall if they would like to participate in the survey. We distributed pens and surveys to willing participants, and asked them to place their surveys in a box when they were finished. (In preparation for this data collection, I had constructed a cardboard box in which participants could place completed surveys.)

Results

Predictions. In the first part of Study A (Study A1), I examined three predictions. The first prediction was that participants would experience positive emotions during the intervention program, as a result of intervention activity tasks that were designed to produce positive affect. The second prediction was that the dining halls in the experimental group would be more integrated post-intervention, compared to the dining halls in the control group. The third prediction was that students would meet new people during the activity nights. In addition to these predictions, I examined a few exploratory questions about opinions of the intervention program, and integration in general. In Chapter 5 (Study A2), I will examine predictions about changes in intergroup contact, intergroup anxiety, cross-group friendship, and intergroup attitudes.

Positive emotions. As discussed earlier, the intervention was designed to promote positive emotions. This was based on reciprocal inhibition studies which have demonstrated that when

positive emotions are present, it is very difficult for negative emotions such as anxiety²⁸ to exist at the same time (e.g., Fredrickson & Levenson, 1998; Levenson, Ekman & Friesen, 1990; Wolpe, 1958). So, next, we checked to see whether the experimental group experienced positive emotions during the intervention, as intended by the design. Of 265 students surveyed, 89% participated in one or more “Get to Know Your Neighbor” activity. Results confirmed that positive emotions were experienced by 90% of respondents who participated in the intervention. Although the average increase in positive emotion score per individual was 0.13 ($SD = 1.44$) higher during the intervention compared to before, it was not significantly related to the intervention. The average positive emotion score for the “before” measure was 1.40 ($SD = 1.56$) and the average score for the “during” measure was 1.52 ($SD = 1.88$). A repeated measures resulted in a non-significant F value: $F(1, 156) = 1.41, p = 0.24, \eta_p^2 = 0.01$. As mentioned in the “Measures” section earlier in this chapter, this was a potential limitation of the study since both positive emotions measures (before interventions and during interventions) were taken retrospectively and at the same time, indicating the possibility of recall bias.

Seating. Amount of integration in dining hall seating patterns was analyzed by calculating D and xPy^* , using Massey and Denton’s (1988) indices of spatial analysis. Lower scores denoted a higher number of segregated tables, and higher scores signified a higher number of integrated tables. Observations during the four intervention sessions served as manipulation checks to confirm that the intervention activity tables were integrated, as intended by the design, and to see whether seating patterns at the activity tables had any impact on the non-activity tables. (See Figure 4.3 below for a sample observation record.)

²⁸ The baseline measure of anxiety is the measure reported in the pretest, which will be discussed in Chapter 5.

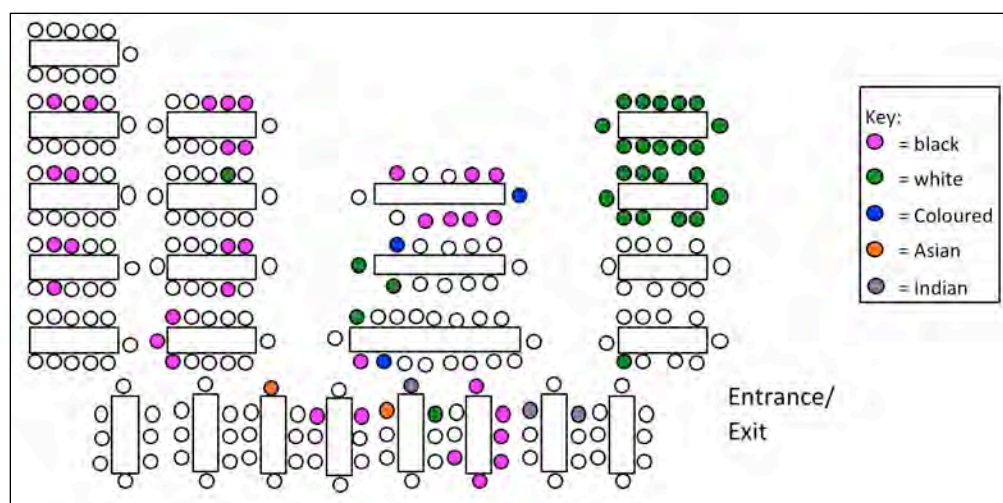


Figure 4.3. Sample record of seating observations from Pretest (Week 1, 18h45). This figure depicts race only, though gender was also recorded.

Before the intervention took place, the average (D) dissimilarity index of the entire dining hall was .90 ($N = 6$, $SD = .06$), which can be interpreted as hyper-segregation. During the intervention weeks, the mean D value was .80 ($N = 29$, $SD = .07$). Post-intervention observations reported $D = .82$ ($N = 6$ observations, $SD = .04$). xPy^* values were .05 ($N = 6$, $SD = .03$) for pre-intervention, .10 ($N = 20$, $SD = .05$) on average during the four-week intervention program, and .06 ($N = 6$, $SD = .03$) post-intervention. Changes in D and xPy^* were not significant for pretest-posttest comparisons, but some changes in D and xPy^* were significant when comparing pre-test and activity evening observations. (See Tables 4.3 - 4.5 below.) Thus, the intervention may have produced slight reductions in segregation in seating patterns during the intervention program, though these did not appear to have significant enduring effects after the intervention program.

Table 4.3.

Means and Standard Deviations for D & xPy Scores*

Observation	D(SD)	xPy*(SD)
Pre-test	.91(.06)	.05(.03)
Activity 1	.81(.09)	.09(.05)
Activity 2	.74(.05)	.14(.05)
Activity 3	.79(.04)	.10(.05)
Activity 4	.82(.04)	.06(.02)
Posttest	.88(.04)	.07(.03)

Table 4.4.

Paired Samples T-tests (2-tailed) for Changes in D

Pair	<i>t</i>	<i>df</i>	<i>P</i>
1: Pretest-Activity 1	2.44	1, 5	.059 ^s
2: Pretest-Activity 2	7.82	1, 5	.001**
3: Pretest-Activity 3	3.52	1, 5	.02*
4: Pretest-Activity 4	2.11	1, 5	.09
5: Pretest-Posttest	0.79	1, 5	.58

Note. * = $p \leq .05$, ** $p \leq .01$, ^s = $p \leq .06$

Table 4.5.

*Paired Samples T-tests (2-tailed) for Changes in xPy**

Pair	<i>t</i>	<i>df</i>	<i>P</i>
1: Pretest-Activity 1	-2.79	1, 5	.04*
2: Pretest-Activity 2	-4.86	1, 5	.005**
3: Pretest-Activity 3	-3.07	1, 5	.03*
4: Pretest-Activity 4	-0.95	1, 5	.39
5: Pretest-Posttest	-0.87	1, 5	.43

Note. * = $p \leq .05$, ** $p \leq .01$

In this study, the seating analyses were conducted to measure the effectiveness of the manipulation—creating a more integrated context in the dining room. Although observations included all students present in the dining hall, both participants and non-participants in the intervention, it was not possible to differentiate these in the pretest and posttest observation analyses. I tested the aggregate *D* value of the entire room here, which inevitably underestimated the integration of the section of the room where intervention participants were seated. Only certain tables were used for the intervention, and these were not separated in the observations, so data included both experimental group and control group seating combined. Thus, in the next study (Study B), the intervention was designed in such a way that each group would be easily distinguishable, as will be discussed in Chapter 6.

Post-intervention contact effects. I examined the enduring effects that the intervention had on intergroup contact patterns by administering a post-test survey. Students were asked whether they kept in touch with people they met during the intervention, and if so, the medium through which they kept in touch. Previous studies in residence dining halls at the university at hand have

shown that patterns of spontaneous segregation sets in very early on, so people make very few friends in these spaces (Gibbs & McGivern, 2010; Schrieff et al., 2010). Notably, 72% (N = 168) of students who participated in the intervention kept in touch with someone new that they had met during the activity. Of the students who stayed in touch, 79% (N = 93) continued contact with someone of a different race. The majority of students kept in touch through conversations on campus, sharing meals at the dining hall, and exchanges on Facebook. A few students stayed in touch through meetings outside of campus, email, Twitter, and BBM (BlackBerry Messenger). Students who participated in 3-4 activities were more likely to keep in touch with someone new whom they had met compared to students who participated in 1-2 activities (i.e., 74% of students who participated in 3-4 activities kept in touch with someone new, versus 67% of students who participated in 1-2 activities). These results showed that the intervention may have provided opportunities for friendship formation, which facilitated an increase in intergroup interaction in spaces that previously had very little friendship potential.

Intervention and integration: General exploration. Lastly, I was interested in students' general opinions about the intervention, and integration in their residence halls and university. I measured the intervention each week with two-question mini-surveys that were distributed after each activity. I also included four related questions on the posttest survey that were measured on binary scales, offering the options "yes" or "no."

Of 265 students surveyed, 62% participated in one or more intervention activity. At the end of the activity each week during the intervention program, facilitators handed mini-surveys to activity participants. Some students who participated in the intervention activity did not wish to complete the mini-survey, or at times when facilitators were very busy it was difficult to manage the distribution and collection of mini-surveys, so the number of mini-survey participants does

not reflect the number of activity participants. Each week, students were asked, “How would you rate tonight’s activity?”, and results showed that students generally had positive feedback about the activities. On a 5-point scale from 1(very poor) to 5(excellent), the average of all four activity ratings was 3.9 ($SD = .17$). (See Table 4.6 below for individual means.)

Table 4.6.

Intervention Activity Ratings

Activity #	<i>N</i>	<i>M</i>	<i>SD</i>
1	59	4.0	0.88
2	49	3.9	0.67
3	40	3.6	0.81
4	38	3.9	0.93

Note. Responses were scored on a 5-point scale from 1(very poor) to 5(excellent).

In addition to the activity-rating question, students were asked one question about the experience. At the end of the first activity of the intervention program, 51% of students reported that they exchanged personal details (phone number, email, BBM, Facebook) with someone new they had met during the activity evening. Exchanging details is a potentially important aspect of further contact because it creates opportunities for further contact. Without exchanging details, keeping in contact would have been more difficult. After the second activity, 90% of students surveyed indicated that they were interested in learning more about someone they had met that evening. After the third intervention activity, 80% of students reported that they would be open to meeting up with someone they had met. After the final intervention week, students were asked “How positive do you feel right now?”, and on a 5-point scale from 1(not at all positive) to

5(extremely positive) the average response was “4—very positive”. Please see Table 4.7 below for activity-experience questions and feedback results.

Table 4.7.

Intervention Experience Feedback

Question	Response	SD	N
Did you exchange information with someone new tonight?	51% Yes	-	59
Would you like to learn more about someone you met tonight?	90% Yes	-	49
Would you be open to meeting up with someone you met tonight?	80% Yes	-	40
How positive do you feel right now?*	M=4	.99	38

Note. *On a 5-point scale from 1(not at all) to 5(very positive).

At the end of the survey, I added a few evaluative questions regarding student opinion of the intervention activities and integration in residences, since it was a new program that had the potential to continue after the completion of the study. 95% of surveyed students who participated in the intervention program reported that they enjoyed the activity nights. 86% of all students surveyed thought the activity nights should be part of ‘orientation week’²⁹ for all first-year students. 75.5% of all students surveyed would like to see their residence hall more integrated. 54% of students surveyed reported that they see their university as segregated.

²⁹ Orientation week is a week-long program before the start of the school year that takes place in every residence hall, to help first-year students become acquainted with the residential life, other residents, and the university setting.

Discussion

At UCT, diverse groups of students are present in a common space, at the same time, but tend to avoid interactions across groups. Within this context, I implemented a social intervention to address intergroup avoidance through positive emotions, closeness-generating tasks, and enhancement of optimal conditions of contact (Allport, 1954; Pettigrew, 1998). This was an attempt to reduce the amount of informal segregation in a residence-dining hall with established patterns of hyper-segregation.

The observation and intervention components of the study focused on the nature of contact and the context in which contact occurred. A meta-analysis of contact studies (Pettigrew & Tropp, 2006) show that positive effects of contact are enhanced when certain optimal conditions exist—members of both groups sharing common goals, equal status, and institutional support (Allport, 1954). In addition to these three optimal conditions, cross-group friendships have emerged as an important factor in the contact hypothesis (Pettigrew, 1998). Recent studies also suggest that, compared to other forms of contact, friendships are related to stronger positive outcomes (Davies et al., 2011; Swart et al., 2011). Thus, I designed the intervention with elements to enhance these optimal conditions, which included a common goal in each intervention activity that required cooperation, and opportunities for the formation of new cross-group friendships.

I also included positive-emotion-generating tasks as part of the activities. Although positive emotions were slightly higher during the intervention compared to before the intervention, this change was not significant. However, overall results showed support for participant experience of positive emotions during the intervention. Although this was not measured explicitly, the experience of positive emotions during the intervention might have indicated that contact during

the intervention was positive. Multi-wave longitudinal contact studies have shown that positive contact leads to more contact (e.g., Levin et al., 2003; Schofield et al., 2010; Swart et al., 2011; See also, Pettigrew, 2011). Thus, the positive contact experience would support findings from the present study on enduring contact effects, which showed that the majority of students continued contact with someone new they had encountered during the intervention. (But since explicit connections and measures have not been used, these potential results should be regarded tentatively.)

Enduring contact effects of the intervention were measured by the percentage of participants in the experimental group who made new friends and continued contact with new people they had met during the activity nights. As seen earlier, 72% ($N = 168$) of experimental group participants stayed in touch with a new acquaintance, and 79% ($N = 93$) of these participants stayed in touch with someone of a different race. These findings suggest that the intervention provided opportunities for intergroup contact and friendship formation, as intended by the design. The formation of friendships from the intervention was not measured explicitly, but these results indicated that acquaintances were made and contact with acquaintances continued outside the intervention, indicating opportunities for future friendship formation. Enduring contact effects of the intervention were only measured for the experimental group, since this was the group that received the intervention.

Results indicated a small reduction in the segregation in students' seating patterns during the intervention program. A pretest-posttest observation comparison did not show a significant change in segregation in seating. On the one hand, previous interventional studies at this University that used interventions to disrupt patterns of 'self-segregation' also failed to see changes in seating patterns. For example, Gibbs and McGivern (2010) attempted to randomly

assign seats in a dining hall at the university. In another example, Alexander (2007) sent Black and White research confederates to informally designated White and Black tables at another dining hall. Yet, both studies showed that these patterns were highly resistant to change. Thus, results from the current study may not be surprising, and may further support that patterns of ‘self-segregation’ are highly persistent.

On the other hand, the non-significant changes that may have reflected the particular spatial indices used for analysis (Massey & Denton, 1988). Observers reported that they noticed greater changes in seating patterns than the resulting output from analyses. This may be due to Massey & Denton’s (1988) method of analysis, which can only measure two groups at a time. In Study B, seating patterns will be analyzed in a way that accounts for multiple groups present at the same time, in the same place, which will be a more sensitive measure that may be able to reflect small-scale changes in this setting.

Limitations

Limitations of this study include the positive emotions measure, lack of optimal conditions measures, and potential effects of selection bias. Since positive emotions experienced before and during the intervention were measured at the same time, recall bias could have been a potential problem. In addition, optimal conditions of contact were not measured, so the success of manipulations in creating optimal conditions such as equal status within activity groups, institutional support through residence leadership, and cooperation and common goals through cooperative tasks, were not measured. Nonetheless, as Pettigrew and Tropp’s (2006) meta-analysis shows, while these optimal conditions are facilitating conditions, they are not required.

Lastly, the amount of participation in the intervention may have reflected potential issues around selection bias. Some students present in the dining hall chose to refrain from participation in the intervention activities. Many students claimed this was due to time and exam pressure. Yet it could be possible that students with positive outgroup attitudes were more inclined to participate in activities, or a greater number of activities. Nonetheless, seating observations measured all students present, and surveys were collected from all students, both participants and non-participants, so results were representative of the entire sample and not only of those who may have been more inclined to participate in the activities. Moreover, as will be discussed in Study A2, there were no significant differences between participants and non-participants in pretest measures.

Chapter 5

Study A2: Nonequivalent Control Group Pretest-Posttest Design Survey

Design

Study A2 was the second part of Study A, and contained the survey component. It took place in the same university dining hall where the first part of Study A occurred (Study A1), with the same sample of students allocated to this dining hall. This survey component was measured longitudinally, six weeks apart—one week before the four-week intervention program described in Study A1 (see Chapter 4), and one week after the program ended. This component consists of a two-part survey with a nonequivalent control group, repeated-measures design³⁰ (Cozby, 2009). The survey tested for changes in attitude and behavior measures across the intervention. The main measures that were tested were intergroup contact, intergroup anxiety, cross-group friendship, and social distance. The survey compared those who participated in the intervention to those who did not.

In the same format as Study A1, the control group was comprised of students who did not participate in the intervention program, and the experimental group contained students who participated in the intervention program. Participants in both groups were not predetermined, in the same way as in Study A1. Group membership was determined each session of data collection, as participants were recruited at each session, on a voluntary basis. Students who participated in the intervention made up the experimental group, and those who did not made up the control group. Figure 5.1 below displays the timeline for Study A2 embedded in the timeline

³⁰ See Chapter 4 “Introduction” for further explanation of this design.

from Study A, as Study A2 took place around specific events in Study A1. (Please see “Introduction” section in Chapter 4 on p. 67 for an explanation of study components included in the timeline.)

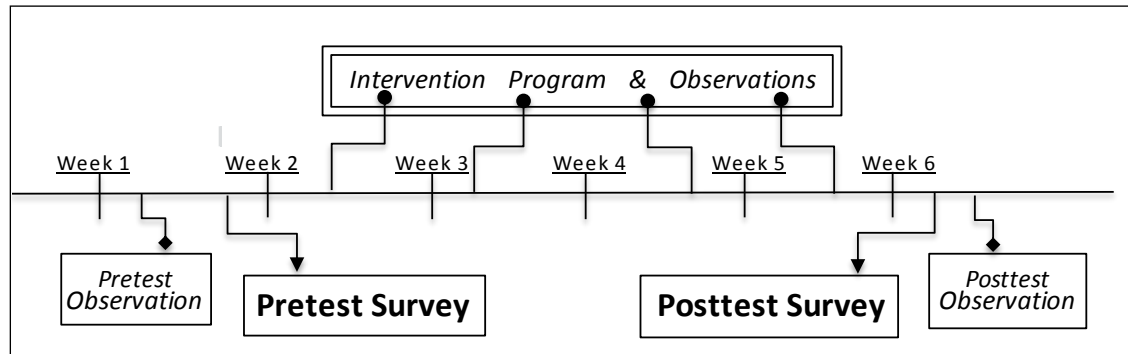


Figure 5.1. Timeline for Study A2. Timeline includes Study A1 components in italics for reference points.

Participants

The participant sample in Study A2 consisted of students, from the same two residences, who share the dining hall described in Study A1.³¹ To assist with participant recruitment for Study A2, I created advertisements for the study through emails and posters, and offered students an opportunity to win prizes. Posters and emails contained information about study dates, the researcher (myself), the purpose and potential benefits of participation, and prizes. Facilitators placed posters in residence halls and distributed emails to residents. Advertisements informed students that two surveys would be offered during dinner at the dining hall, and completion of both surveys would qualify them for a chance to win one of ten prizes—one mp3 player and nine flash drives. On two evenings in Week 1 and two evenings in Week 6, facilitators and I recruited

³¹ Please see “Participants” section of Chapter 4 for further information about participants and participant recruitment and selection.

participants by asking each student who walked into the dining hall if they would like to participate in the survey for a chance to win a prize. Each survey contained further information about voluntary participation and confidentiality. I asked students to include their student identification numbers on the surveys, and explained that this number would be replaced with a code for data recording and matching purposes in order to ensure anonymity. I informed students that their student numbers would only be used to contact them if they won a prize. At this University, student numbers, which are given to all students by the university, are also email addresses. (Please see Chapter 4 “Participants” section for further details of ethical procedures.)

Of the 597 students living in the two residences, 352 students participated in the pre-test survey, and 265 participated in the post-test survey six weeks later. I was able to match 154 (44%) of the post-test surveys to the respondents’ corresponding pre-test surveys; so a total of 154 participants completed both the pretest survey and posttest survey. I matched participants’ surveys using their student numbers. Some students only participated in one of the two surveys, either the pre-test or posttest, so I was unable to match all of the surveys. Attendance at the dining hall varied daily because on any given day many students skipped meals or took their meals ahead of time, particularly during exam periods.

Of the 154 students who completed both surveys, 84 self-identified as Black, 43 as White, 5 as Coloured, 15 as Indian, 4 as Asian, and 3 as “other”³² race. There were 56 female respondents and 98 male respondents, which closely reflects the proportion of females and males who take meals in this dining hall.

³² Please see “Participants” Section in Chapter 4 for more information about racial groups in this context.

Table 5.1.

Student Demographics: Race

Race	Survey participants (N=154)	Sample population: Study 1 residents (N=597)
Black	55%	53%
White	28%	23%
Coloured	3%	5%
Indian	10%	7%
Asian	3%	1%
Other	2%	10%

Table 5.2.

Student Demographics: Gender

Gender	Sample: Study 1 residents (N=597)	Survey participants (N=154)
Female	39%	36%
Male	61%	64%

The experimental group consisted of 93 students who completed both surveys and participated in the intervention program. 65 of these students participated in 1-2 intervention activities, and 28 students participated in 3-4 activities. The control group included 61 students who participated in both surveys and chose not to participate in any intervention.

Table 5.3.

Number of Survey Participants in Intervention Program

Participation	<i>N</i>	%
0 Activities	61	40%
1-2 Activities	65	42%
3-4 Activities	28	18%
Total	154	100%

Measures

The surveys consisted of scales that measured intergroup contact, cross-group friendships, social distance, and intergroup anxiety. (See Appendices G and H for all scales as they appear in the pretest and posttest.)

Amount of intergroup contact. The amount of intergroup contact was measured on a scale adapted from Bornman (1988) and Bornman and Mynhardt (1991). This scale measured the amount of interactions participants have with people of a different race to their own in the following settings: university, residence hall, and social settings. These items asked explicitly about interactions with people of outgroups, not just physical proximity, since all students at this compositionally diverse university campus have proximal contact. Face-to-face interactions were presumed, as the items asked, “How many of your interactions are with people of a different race to you?”. However, it did not specifically ask for or explain “face-to-face” interactions, so this a potential limitation of this item. Each of the three items provided five answer choices ranging from “1(none)” to 5(all)” (maximum 15 points). Other versions of this scale were tested and used

by Tredoux and Finchilescu (2010), and Holtman et al. (2005), and proved reliable. The Cronbach's alpha coefficient for the sample in Study 2 was 0.85 for the pre-test survey and 0.80 for the post-test survey.

Racial heterogeneity of close friendships. The racial heterogeneity of close friendships was measured on a single-item scale adapted from Van Laar, Levin, and Sidanius (2005) that measured how many of the respondents' closest friends belonged to a racial group different from their own. As a reliability check, I included one item before this scale that asks respondents to list five of their closest friends by first name or initials only. Then, I inserted the item "Of the friends above, how many are of a different race to you?". This served as a different index of cross-group friends, which may be less sensitive to social desirability. Responses ranged from 0 (none) to 5(all).

Degree of social distance. The degree of social distance was measured on a scale adapted from Bogardus (1933). On a 7-point scale, this question measured the level of closeness that participants are willing to accept with members of outgroups. Outgroups referred to racial groups that are different from one's own racial group. Instead of seven separate items, this measure was condensed to a single item for purposes of brevity, which may be a potential limitation of this item. Closeness was measured according to degrees of physical and relational intimacy ranging from "1(accept into my family through marriage)" to "7(excluded from my country)". Low scores indicated low amounts of social distance (high amounts of closeness), and high scores indicated large amounts of social distance (low levels of closeness). Over the years, this scale has been used in several studies in South Africa with good reliability (e.g., Schrieffer et al., 2010; Tredoux & Finchilescu, 2010). Tredoux and Finchilescu (2010) reported the following Cronbach's alpha coefficients: 0.88 and 0.87. Schrieffer et al. (2010) used this scale at the same

university in which Study 1 took place, and reported the following alpha coefficients: 0.89, 0.85, 0.86, and 0.88. The studies mentioned here have used multiple items for this scale, but I combined multiple items into one question.

Level of intergroup anxiety. The level of intergroup anxiety was measured on a scale adapted from Stephan & Stephan (1985), and uses six items to measure participants' feelings related to interactions with members of outgroups. This scale has been tested by other researchers, including Swart et al. (2011), with acceptable reliability. Cronbach alpha tests of reliability were performed and items that were problematic were left out, leaving three items (maximum 15 points). The alpha coefficient for this sample was 0.82 for the pre-test survey 1 and 0.80 for the post-test survey. These items referred to interactions with people whom participants do not already know. Participants were asked: "When interacting with people who you do not know, of other racial groups, how do you feel?" The scale consisted of three items that contain positive feeling words (comfortable, at ease, and confident) and three items that contain negative feeling words (anxious uncertain, and awkward). Each feeling word was presented on a 5-point scale, from "1(not at all)" to "5(extremely)" (maximum 15 points). Low scores indicate low levels of anxiety, or mostly positive feelings toward contact with outgroup members, and high scores indicated high levels of anxiety, or mostly negative feelings toward contact with outgroup members.

Procedure

Please refer to Figure 5.1 for the timeline of Study A2, as it took place around Study A1 components.

Preparation. Before I began collecting data in Week 1, I completed the preparations for Study A2 at the same time as Study A1. (Please see "Preparation" section in Chapter 4.) As

described in the previous chapter, prior to Week 1, I started by obtaining all necessary consent from relevant governing bodies at the university and by recruiting facilitators from student leadership committees in the residence halls.³³ I created advertisements for the surveys in the form of emails and posters, which facilitators distributed to students and residences. To assist with collecting completed surveys, I also constructed a cardboard box with a survey-sized opening on top, in which participants could place surveys.

Week 1: Pretest survey. In the first week of data collection, facilitators and I entered the dining hall during the dinner session to distribute pretest surveys. We recruited survey participants during this time, as students walked into the dining hall, by informing each student of the study and the chance to win prizes, and asking if they would like to participate. We issued surveys and pens to willing participants, and asked participants to place their surveys in a box when they were finished. We went back the next evening and repeated this process because not all students visit the dining hall during dinner each day, so I wanted to return the next day to try to recruit more potential participants. Given the availability of potential prizes, steps were taken to control for duplicate survey entries by looking at student identification numbers. When duplicate entries were received on the second night, they were discarded, and only the initial entry was recorded.

Week 6: Posttest survey. During the sixth and final week of data collection, facilitators and I went back to the dining hall on two consecutive evenings to administer posttest surveys, in the same manner as we did for pretest surveys in Week 1. As students entered the dining hall for their dinner meal, facilitators and I approached them, one by one and in groups, to tell them

³³ For further details on ethical procedures, please see Chapter 4 “Participants” section.

briefly about the study and prize-winning lottery, and ask them if they would like to complete a survey. As in the pretest survey, duplicate entries were discarded.

Results

Predictions. I tested four hypotheses in this portion of the study. First, I predicted that the experimental group would show stronger positive outcomes than the control group. This refers to positive outcomes of contact from the experimental group: more intergroup contact, more cross-group friendships, less intergroup anxiety, and less social distance. The intervention program, as described in Chapter 4, was designed to increase integration in seating patterns in the dining hall by increasing intergroup contact, enhancing optimal contextual conditions of contact, and incorporating positive-emotion generating tasks. I hypothesized that this intervention program would in turn be related to greater decreases in intergroup anxiety and social distance, and greater increases in cross-group friendships and intergroup contact for the experimental group, compared to the control group. This hypothesis is supported by a review of studies that have used structured contact programs (Pettigrew & Tropp, 2006). These programs were structured to enhance contextual conditions for contact, including cooperation, common goals, equal status (Allport, 1954), and the later-added optimal condition of friendship potential (Pettigrew, 1997).

Second, I expected the four variables to have specific relationships to one another, based on meta-analytic data from contact research that consistently shows negative associations of intergroup contact to prejudice and anxiety (Pettigrew & Tropp, 2006). I also predicted that intergroup contact would be positively related to cross-group friendships. This prediction is supported by research among samples from four South African universities (Tredoux & Finchilescu, 2010), which found that cross-group friendship was significantly and strongly

associated with intergroup contact ($r = .48 - .52$) for all groups. These results were confirmed by a longitudinal study with an American university student sample that showed that intergroup contact was strongly related to the development of cross-group friendship (Schofield et al., 2010).

Although cross-group friendship is usually used in contact research as a distinct form of cross-group friendship, data from South African national samples, which are also supported by international studies, further motivated the inclusion of cross-group friendship as a separate variable. For example, Gibson and Claassen (2010), concluded that while intergroup contact was positively related to intergroup attitudes, they distinguished that when contact was in the form of close friendships, it produced stronger and more direct effects on attitudes. These findings are also supported by Pettigrew and Tropp's (2006) meta-analysis.

The third and fourth hypotheses looked at two separate predictor variables. The third prediction was that intergroup contact would predict intergroup anxiety. This prediction was based on studies that have shown that intergroup contact can reduce the level of anxiety by diminishing uncertainties about proper behaviors and perceptions of outgroups (e.g., Stephan & Stephan, 1985; Islam & Hewstone, 1993; Paolini et al., 2004). And the final prediction was that cross-group friendship would predict social distance—based on research that shows the importance of cross-group friendship in reducing prejudice and social distance (e.g., Pettigrew & Tropp, 2006; Van Laar et al., 2005; Wagner et al., 2003). I tested these relationships separately instead of placing all four relationships in one model for a few reasons, including that when put in simultaneously, local effects may disappear and produce an incorrect view that may be too multi-co-linear. Thus, these steps were explored separately in the causal chain. Additionally, since Study A was considered a preliminary study with a small sample, the full model including

all four measures was not explored until the expanded version, Study B. The small sample size also motivated exclusion of cross-lagged analysis, and further motivated follow through with the expansion in Study B.

Based on the literature, I expected the results to show these changes, but given the relatively brief six-week timeframe of this study, I did not anticipate finding large effects. I will explore more complicated mediating relationships in Study B2, located in Chapter 7. In Study B2, I will use path analytic models to test the indirect effect of intergroup contact on prejudice, through changes in anxiety and cross-group friendship.

Against existing contact literature, exploring cross-group friendship as a mediating variable may seem unconventional, but previous studies in both South African and international contexts provide reason to do so. For example, Eller and Abrams's (2004) longitudinal study found that mere quantity of contact without quality of contact (contact as friends) could have detrimental effects on intergroup attitudes and emphasized the important role of contact as friends for achieving contact effects. Moreover, in a large scale ($N = 2000$), four-wave longitudinal university study, Levin, van Laar, and Sidanius (2003) found that cross-group friendship in year 2 and 3 of college significantly predicted improvements in intergroup attitudes and anxiety in year 4, even when controlling for previous (year 1 and pre-college) attitudes and friendships. Results from Swart et al.'s (2011) 3-wave longitudinal study confirm these effects.

Experimental vs. control. To test the first prediction, I ran repeated measures analyses of variance to determine whether the experimental group that received the intervention program had greater improvements on the four main measures (intergroup contact, intergroup anxiety, cross-group friendships, and social distance) than the control group that received no intervention. The grouping variable (experimental vs. control) was entered as the between subjects factor. In

addition, I explored whether there was a dosage effect in amount of participation in the intervention by creating a dosage variable that reflected 0, 1-2, or 3-4 activities as its levels. For dosage effects, I split the control group into three subgroups (0, 1-2, 3-4 activities as its levels) and conducted repeated measures analyses of variance again with the new grouping variable that reflected the three levels (0 activities/control, 1-2 activities/experimental, 3-4 activities/experimental-high participation).

Table 5.4.

Group Means and Standard Deviations for Each Construct at Each Time Point

Group	Construct	Time	<i>M</i>	<i>SD</i>
Control N = 61	I-G Contact	1	7.28	2.83
	I-G Contact	2	8.39	2.41
	C-G Friends	1	1.98	.99
	C-G Friends	2	2.04	.81
	I-G Anxiety	1	6.92	2.52
	I-G Anxiety	2	7.80	2.12
	Social Distance	1	2.10	1.34
	Social Distance	2	1.37	.62
Experimental N = 93	I-G Contact	1	7.59	2.73
	I-G Contact	2	9.06	2.47
	C-G Friends	1	2.11	1.16
	C-G Friends	2	2.17	1.02
	I-G Anxiety	1	6.44	2.38
	I-G Anxiety	2	7.12	2.15
	Social Distance	1	2.23	1.31
	Social Distance	2	1.44	.79

Table 5.5.

Average Change Per Individual [ΔM (SD)] for Experimental and Control Groups

Group	N	Intergroup Contact	Cross- group Friendship	Intergroup Anxiety	Social Distance
Experimental	93	1.44(2.50)**	.07(1.14)	.44(3.70)**	-0.76(1.26)**
1-2 activities	65	1.40(2.33)**	-0.08(1.00)	1.09(2.14)**	-0.08(1.00)**
3-4 activities	28	1.52(2.92)*	0.41(1.37)	.00(2.18)	-0.91(1.55)**
Control	61	1.21(2.23)**	0.07(0.81)	1.65(2.98)**	-.79(1.23)**

Note. * = $p \leq .05$, ** $p \leq .01$ for differences between means at Time 1 and Time 2

Pretest comparison. For each pretest (Time 1) construct, there were no significant differences between the control and experimental groups. I ran t-tests to compare the control and experimental groups' pretest scores and determine whether there were any significant differences for each construct before the intervention. Results were as follows: intergroup contact: $t(150) = 0.66$, $p = .51$, cross-group friendship: $t(150) = .88$, $p = .50$, intergroup anxiety: $t(151) = 1.18$, $p = .24$; and social distance: $t(151) = 0.58$, $p = .57$.

Gender comparison. There were also no significant differences in change scores between males and females, for each construct. I conducted repeated measures analyses of variance with gender as the between-subjects factor to determine whether there were significant differences in change scores between males and females for each construct. The results were as follows: intergroup contact: $F(1, 141) = .05$, $p = .83$; cross-group friendship: $F(1, 142) = 3.02$, $p = .08$; intergroup anxiety: $F(1, 140) = .00$, $p = .99$; and social distance: $F(1, 142) = .01$, $p = .92$.

Intergroup contact. On average, the experimental group reported a slightly higher increase ($\Delta M = 1.44$, $SD = 2.50$) in intergroup contact than the control group ($\Delta M = 1.21$, $SD = 2.23$); however, this difference between the two groups was not statistically significant ($F(1, 141) = .29$, $p \leq .6$, $\eta_p^2 = .002$). Nonetheless, both the experimental and control groups reported significant increases in contact (respectively: $F(1, 86) = 28.85$, $p \leq .001$, $\eta_p^2 = .25$; $F(1, 55) = 16.61$, $p \leq .001$, $\eta_p^2 = .23$), which may indicate potential indirect effects of the intervention. (See “Potential impact of indirect contact” below.) There were no dosage effects ($F(1, 140) = .17$, $p = .85$, $\eta_p^2 = .002$), so results did not appear to change significantly based on the number of intervention activities in which students participated.

Cross-group friendship. On average, the experimental group showed almost no difference to the control group reported in cross-group friendship, both groups reporting almost no change (respectively: $\Delta M = .07$, $SD = 1.14$; and $\Delta M = .07$, $SD = .81$). However, within the experimental group, students who participated in 3-4 intervention activities showed a notable, marginally significant increase ($p = .056$) in cross-group friendship ($\Delta M = .41$, $SD = 1.37$), compared to students who participated in 0, 1, or 2 activities ($F(1, 142) = 3.70$, $p \leq .056$, $\eta_p^2 = .03$). The control group and students who participated in 1-2 activities reported almost no change in number of cross-group friends (respectively: $\Delta M = .07$, $SD = .81$; $\Delta M = -.08$, $SD = 1.00$). Since the development of true friendships over the short period of time may be unrealistic, I can conclude that what may have actually increased—as a function of amount of participation in the intervention program—are the amount of acquaintances and potential friendships.

Intergroup anxiety. The experimental group reported relative improvements in change in levels of intergroup anxiety compared to the control group. On average, both experimental and control groups experienced significant increases in intergroup anxiety over time (respectively: F

(1, 89) = 10.95, $p \leq .001$, $\eta_p^2 = .11$; $F(1, 53) = 10.49$, $p \leq .01$, $\eta_p^2 = .17$). This was an unusual result, which will be discussed in the “Discussion” section. Nonetheless, the control group reported a greater increase ($\Delta M = 1.65$, $SD = 2.98$) than the experimental group ($\Delta M = .44$, $SD = 3.70$), with a significant difference between the two groups: $F(1, 140) = 4.09$, $p \leq .05$, $\eta_p^2 = .03$. Thus, compared to the control group, the experimental group experienced a *relative* decrease. These results imply that on average, all students experience an increase in intergroup anxiety over the course of the semester, but the intervention may have contributed to lower anxiety scores at Time 2 for the experimental group. Further implications will be discussed in the “Discussion” section. Lastly, although students who participated in 3-4 activities showed no change in anxiety on average ($\Delta M = .00$, $SD = 2.18$), this was not significantly different from those who participated in less or no activities ($F(1, 141) = 2.70$, $p = .07$, $\eta_p^2 = .04$).

Social distance. The social distance measure refers to the degree of relational and proximal distance a participant was willing to accept with members of outgroups (i.e., sharing a flat, acceptance into family by marriage, etc.). For this measure, results again showed little difference between the control and experimental groups. Students who participated in 3-4 intervention activities showed the greatest decrease in mean social distance (or increase in closeness) with outgroups ($\Delta M = -.92$, $SD = 1.55$), though this was not significantly different from other dosage/participation levels ($F(1, 140) = .45$, $p = .50$, $\eta_p^2 = .003$). However, once again, both experimental and control groups showed significant improvements in social distance (respectively: $F(1, 85) = 30.73$, $p \leq .001$, $\eta_p^2 = .27$; $F(1, 55) = 22.79$, $p \leq .001$, $\eta_p^2 = .29$), which may be further support for potential indirect contact effects from the intervention.

Relationships between measures. Next, I checked whether the relationships between the measures were as expected, based on recent reviews of contact studies (Pettigrew, 2007;

Pettigrew & Tropp, 2006; Pettigrew & Tropp, 2008). For example, in addition to the inverse contact-prejudice relationship, we would expect intergroup contact to be negatively related to intergroup anxiety (e.g., Blascovich et al., 2001; Paolini et al., 2004; Voci & Hewstone, 2003). In addition, we would expect measures of prejudice (appearing as social distance in this study) to be negatively related to cross-group friends (e.g., Hewstone et al., 2006; Van Laar et al., 2005; Wagner et al., 2007).

Table 5.5

Inter-correlations of Variables Before(Pre) and After(Post) the Intervention Program

	IC (Pre)	IC(Post)	CF(Pre)	CF(Post)	SD(Pre)	SD(Post)	IA(Pre)	IA(Post)
Intergroup contact(Pre)	-							
Intergroup contact(Post)	.60**	-						
Cross-group friendship(Pre)	.55**	.46**	-					
Cross-group friendship(Post)	.45**	.54**	.58**	-				
Social distance(Pre)	-.09	-.07	-.10	.03	-			
Social distance(Post)	-.15	-.06	-.20*	-.01	.36**	-		
Intergroup anxiety(Pre)	-.23**	-.27**	-.10	-.16	.28**	.21*	-	
Intergroup anxiety (Post)	-.27**	-.38**	-.14	-.22**	.22**	.21*	.60**	-

Note. * $p < 0.05$; ** $p < 0.01$; N always ≥ 139 ; IC = intergroup contact; CF = cross-group friendship; SD = social distance; IA = intergroup anxiety

Table 5.6 shows the inter-correlations of study variables reported in the pretest survey distributed before the intervention and the posttest survey distributed after the intervention. As expected, social distance had negative relationships with intergroup contact and number of cross-

group friends, and a positive relationship with intergroup anxiety, however only some of these correlations were significant. Results from the pretest survey showed that intergroup contact was positively correlated to cross-group friendship [$r(148) = .55, p \leq .01$] and negatively correlated to intergroup anxiety [$r(149) = -.22, p \leq .01$]. Intergroup contact was not directly significantly related to social distance [$r(149) = -.09, p \geq .27$], but social distance was positively correlated to intergroup anxiety [$r(149) = .28, p < .01$], which was negatively correlated to intergroup contact [$r(150) = -.23, p \leq .01$]. Thus, before the intervention program, lower levels of social distance co-occurred with less intergroup anxiety, which was in turn related to more cross-group friends and more intergroup contact. (See Table 5.6 above for all inter-correlations.)

After the intervention, intergroup contact was significantly correlated to cross-group friendship [$r(139) = .54, p \leq .01$] and intergroup anxiety [$r(138) = -.39, p \leq .01$]. Intergroup anxiety was significantly correlated to cross-group friendship [$r(140) = -.19, p \leq .05$] and social distance [$r(143) = .21, p \leq .05$]. Thus, all of the variables were significantly correlated, except for social distance, which was again only significantly related to intergroup anxiety. This implies that both before and after the intervention, participants who reported more intergroup contact had more cross-group friendship, and less intergroup anxiety, and in turn, less anxiety was related to less social distance between groups. In the expanded version of this study (B2), path models were created to test the indirect effect of intergroup contact on social distance, through the reduction of intergroup anxiety and an increase in cross-group friends (Results will be discussed in Chapter 7).

Effects of predictor variables. To further examine the relationships between variables for the total sample (both groups), I used hierarchical regression analysis to test: (1) the effects of

intergroup contact on intergroup anxiety and (2) the effects of cross-group friendship on social distance.

Many studies have shown that intergroup contact can reduce the level of anxiety that people experience when interacting with or thinking about interactions with members from other groups, for reasons that include the diminishing of uncertainties about proper behaviors and perceptions of outgroups (e.g., Islam & Hewstone, 1993; Paolini, et al., 2004; Stephan & Stephan, 1985). So first, I tested the effects of intergroup contact on intergroup anxiety. Then, I tested the effects of cross-group friendship on intergroup attitudes.

To test whether intergroup contact predicted the amount of anxiety people have when interacting with others of different groups, I used the contact variable measured before the intervention (Time 1) as an independent variable and the anxiety variable measured after the intervention (Time 2) as the dependent variable. I controlled for the anxiety variable at Time 1 in order to test the significance of this relationship while checking that initial levels of anxiety did not significantly account for the outcome. Taking intergroup anxiety at Time 2 as the outcome variable, intergroup anxiety at Time 1 was entered first in a hierarchical regression, and contact at Time 1 was then entered in the second step in this hierarchical sequence. The second step added a significant amount of explanatory variance ($R^2\Delta = .018$, $df = 1,138$, $p < .01$). The Beta weight for contact at Time 1 in this model was significant ($\beta = -.19$, $t(50) = -2.07$, $p < .05$). Hence, the amount of intergroup contact at Time 1 was a significant predictor for intergroup anxiety at Time 2, regardless of initial anxiety levels; so students who had more interactions with people of different groups at Time 1 likely had less anxiety at Time 2 as a function of contact.

Next, I tested the effects of cross-group friendship at Time 1 on social distance at Time 2. Here, I again controlled for social distance at Time 1 to show any changes in social distance as a

function of cross-group friendship, and that initial levels of social distance did not significantly interfere with this relationship. Social distance at Time 2 was entered as the outcome variable. Social distance at Time 1 was entered first in a hierarchical regression, followed by cross-group friends at Time 1. The second step in this hierarchical sequence was statistically significant ($R^2\Delta = .03$, $df = 1,137$, $p \leq .04$), and the Beta weight for cross-group friends at Time 1 in this model was significant, controlling for social distance at Time 1 ($\beta = -.16$, $t(137) = -2.08$, $p < .05$). In other words, cross-group friends at Time 1 was a predictor for social distance at Time 2, regardless of social distance at Time 1; so participants who had more cross-group friends at Time 1 were likely to report less prejudice at Time 2.

Discussion

Overall, results from Study A2 showed that changes were very small³⁴, and contrary to the first prediction, most of the changes were not statistically significant or in favor of the intervention. However, the experiment may not have produced anticipated outcomes because of potential indirect contact effects. Both groups reported significant improvements in intergroup contact and attitudes over time, which support the basic tenets of contact theory when taking potential indirect contact effects into account. Thus, the experiment was redesigned for the expanded study to control for these effects, as will be described in the next chapter.

Potential impact of indirect contact. Although results from repeated measures analyses of variance show that the majority of changes were not significantly different for the experimental group compared to the control group, as seen above, each group reported significant changes in intergroup contact and social distance, which may indicate that the intervention was potentially

³⁴ Small changes were anticipated, as discussed earlier, based on the short six-week timeframe.

indirectly related to these improvements, showing further support for contact theory. One possible explanation for the significant improvements of not just the experimental group, but also the control group, could be the potential impact of *indirect contact effects* experienced by the control group, since this group was present in the dining hall when the experimental group participated in the intervention activities. In this case, the specific type of indirect contact would be *vicarious contact*—observing an ingroup member in a positive intergroup encounter (Mazziotta et al., 2011).

Thus, it is possible that students in the control group experienced positive effects of indirect contact by observing ingroup members engaging in positive intergroup contact. As seen in Figure 4.2 in the previous chapter, the setup and size of the dining room would make it easy for control group members to witness other students enjoying the intervention activities. For example, the buzzing sounds from the activities, including laughter, may have been heard, and positive facial expressions (such as smiling), intergroup dialogue, and cooperation could have easily been observed by those who did not participate in the intervention. In addition, since both groups live in the same residence, students in the control group could have become aware of ingroup members making acquaintances or potential friendships with outgroup members during this time, so they could have enjoyed the benefits of *extended contact*—knowledge of an ingroup member in a cross-group friendship. However indirect contact was not explicitly measured, which is a potential limitation of this study, so the impact of indirect contact effects remain unclear.

Support for contact theory. Again, although most results were neither directly nor significantly related to the intervention, the relationships between variables and effects of predictor variables show further support for contact theory in this setting. The significant

increases in intergroup contact and improvements in intergroup attitudes may also show support for extended contact theory. To further investigate the relationship between variables, path models will be constructed and analyzed in Study B2, located in Chapter 7.

Unusual results. I expected that a lower level of intergroup anxiety would be related to higher amounts of intergroup contact, based on previous contact studies that have reported intergroup anxiety as an important influence in intergroup avoidance (Plant & Devine, 2003, Richeson & Shelton, 2007; Stephan & Stephan, 1985). Although correlational results supported this negative relationship between intergroup anxiety and intergroup contact, there were no significant reductions in intergroup anxiety on average, even for the experimental group. As predicted, the intervention was related to *relative* improvements in intergroup anxiety for the experimental groups compared to the control group. But, in fact, both groups reported significant *increases* in intergroup anxiety over time, and the control group had a significantly greater increase. Thus, with regard to the intervention, these results may indicate that the intervention helped to hold intergroup anxiety in check for the experimental group.

This was an unusual result, since according to contact literature, increases in contact are expected to be associated with *decreases* in anxiety, which in turn would be associated with improved attitudes. Of the six initial items, three were left out because they were unreliable, and this unusual result may be indication of further problems with this measure, possibly including the technical layout of the question on the questionnaire. Thus, it could be a potential limitation of this study, and this result should be taken tentatively. In the next study (Study B), the three reliable items will be used again, but will be organized and laid out on the questionnaire in such a way that would be clearer and easier for participants to understand.

Notable trends. Results from Study A showed us that students who received the intervention showed some differences from students who did not receive the intervention; but as anticipated, the differences were small. In most cases these changes were not statistically significant, aside from the anxiety measure. Two notable trends were that 1) participation in the intervention, compared to non-participation, was connected to greater improvements in intergroup contact and intergroup anxiety; and 2) more participation (3-4 activities) revealed a pattern of greater improvements in cross-group friendship, compared to less or no participation (0-2 activities).

Other limitations

In addition to these distinct trends, on average, all students (both the experimental and control groups) reported the following three subtle threads: slight increases in intergroup contact, slight decreases in social distance, and slight increases in intergroup anxiety. Thus, the intervention program may have resulted in changes for all students. I recognize that the timing of the experiment and the university year of the majority of participants may have potentially affected the lack of change in cross-group friendship measure. The experiment took place in the middle of the second semester, when students are less likely to meet new people and make new friends. Thus, Study 2 was planned to take place at the beginning of the first semester, when students are generally more likely to meet new people and make new friends. The majority of students living in university housing are first-year students, which may provide more opportunities for new friendships, since they are at the start of their university career and many students at this University arrive without a preexisting network of friends (Schrieff et al., 2005, 2010).

Alternatively, I considered the composition of the control group, which was comprised of students who did not participate in any intervention program but did have knowledge of the intervention program, which may have affected outcomes. Students received information about the activities through emails from residence leadership as well as posters hanging in the residence hall. All of these messages have to be approved by residence leadership, so even the students who did not participate in the intervention could have inadvertently experienced an added layer of institutional support, enhancing contextual conditions of contact (Allport, 1954).

Additionally, students in this group may have experienced an increase in opportunities for intergroup contact, resulting from being present in the dining hall where the program took place. Students who participated in the program often lingered at the table after the activity finished, and at times, students who did not participate in the intervention would join these tables. Therefore, some students who did not participate in the activities ultimately interacted with students who did participate. This provided students who did not participate with opportunities for intergroup contact and meeting new people. In turn, these opportunities may have promoted positive contact effects, including the improvement of intergroup attitudes (as the results have shown). Thus, it is possible that exposure to the intervention program may have affected the outcomes of the control group.

Lastly, there are potential issues around self-reported measures and social desirability that are embedded in any pretest-posttest survey apparatus. However, Pettigrew and Tropp (2008) argued that the consistency of negative and positive contact measures showed that social desirability had no significant impact on outcomes. Pettigrew and Tropp's (2006) meta-analysis also showed that studies using self-reported contact measures actually produced a smaller effect on prejudice measures than directly observed contact measures ($r = -.21$ vs. $r = -.25$,

respectively). Thus, the self-reported measures were not expected to cause an exaggeration of the results in a favorable way.

Cross-group friendship measure. Previous studies that have used the cross-group friendship measure have shown that responses to this measure vary greatly and that the number of cross-group friends is likely over-reported (Smith et al., 1997). One reason for the inconsistency of responses was based on how the question was asked; for example, when asked directly, people may over-report the number of cross-group friends they have (Smith et al., 1997). To address this issue, we used a two-step methodological approach to this measure that limits the opportunity to over or underreport the number of cross-group friends. This two-step approach first asks respondents about their network of friends (“Name 5 of your closest friends.”), and then asks respondents how many of these friends are of a different race to themselves. In Study B, located in Chapters 6 and 7, I will address the issues discussed here, and explain the relevant changes that I incorporated into Study B based on findings from Study A.

Social distance measure. I noticed that a few students asked facilitators to clarify the social distance measure, so the wording of this measure may have been problematic. For example, it stated “I am willing to accept people of a different race to me being:” and one of the sample choices was “people excluding from my country”, which, in retrospect, is convoluted and grammatically problematic. Thus, in the following study, this item will be presented in a clearer, more concise manner that is easier to understand.

The collapse of the multi-item measure into one measure, however, did not seem to be a problem. Participants were asked to “tick all that apply”, and the lowest level of social distance indicated was recorded. When recording data, I found that students who, for example, ticked the lowest level of social distance—“close relatives by marriage” (1) had also ticked the four other

levels—friends (2), neighbors (3), co-workers (4), and citizens (5). In the same way, participants who chose the level of “neighbors” also chose the levels of co-workers and citizens. Also as expected, participants who ticked “as visitors only” or “exclude from my country” (7) did not tick any other levels. Thus, I continued to use the single item measure in the following study.

Chapter 6: Study B1

Introduction to Study B

Study B was a replication of Study A. It incorporated a few changes pertaining to control group composition, sample size, duration, and timing. The control group and the sample size were adjusted based on findings from the previous study. Results from Study A revealed distinct trends but had potential design issues and may have had insufficient statistical power to detect small effects, so I repeated the study with a larger sample. Study B expanded from one dining hall to five dining halls that cater for eleven residences at the same university setting as the previous study.

In Study A, part of the design was to enhance optimal contextual conditions for contact for the experimental group. One of these contextual conditions was institutional support, which I aimed to enhance by enlisting the support of residence governing bodies. In the previous study, both the control and experimental groups in this study were subsets of the same residence population. So, although I aimed to enhance this condition for the experimental group, the implicit and explicit displays of support by residence leaders may have inadvertently enhanced the experience of this condition for the control group as well. Many participants in the control group from Study A had knowledge of the intervention via emails and posters in the residence halls. These participants may have also witnessed the intervention activities taking place in the dining hall, if they were present on the intervention nights and chose not to participate.

I changed the design for Study B in order to control for possible contamination that may have occurred from the control group's exposure to the intervention in Study A. I set up the control group in Study B in such a way that the control group did not have any exposure to or

knowledge of the intervention program. Three of the five dining halls in Study B received the intervention, and two dining halls neither received the intervention nor had knowledge of it. Residence leaders from the control group were also not involved in facilitation of the intervention program.

Two other changes in Study B were the timing and duration of the study. Study B took place in the first semester of the university calendar year, and spanned over the course of ten weeks. The timing of the intervention program in Study A may have had an effect on changes in intergroup contact and cross-group friendship because students are generally more likely to meet new people and make new friends at the beginning of the year. The majority of participants (students living in university housing) are first year students, which makes this possibility even more plausible, since many students at this University arrive without a preexisting network of friends. Thus, the intervention may have had a stronger impact on cross-group friendship and intergroup contact because it took place before students had sufficient opportunities to establish social networks over the course of the semester.

Lastly, I conducted Study B over the course of ten weeks, instead of six, to account for the expansion from two residences to eleven residences. The intervention program was run over the course of eight weeks, with one activity every other week, rather than over four consecutive weeks. Please see Figure 6.1 below for the timeline for this study.

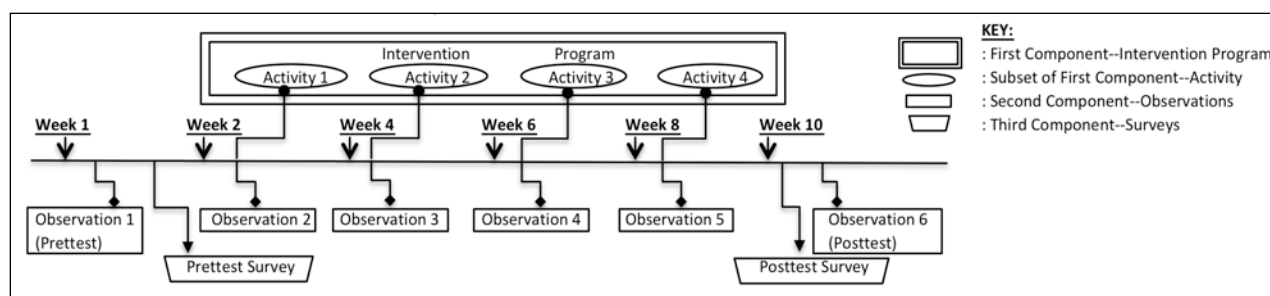


Figure 6.1. Study B Timeline.

Study B1: Dining Hall Intervention and Observation Expanded

Design

Study B1 is a replication of the nonequivalent control group pretest-posttest design from Study A1 (please see Chapter 4), with a change in control group composition. It consisted of a quasi-experimental intervention that intended to reduce segregated seating patterns in university dining halls. Alongside the intervention, an unobtrusive, longitudinal observation took place in which students' seating choices in the dining halls were recorded. The control group in Study B differs from the control group in Study A, which was a subset of students from the same residence halls as the intervention group. Rather than comparing two groups within the same dining hall, I compared students in dining halls that received the intervention with students in different dining halls that did not receive the intervention.

Participants

The sample for this study was comprised of students from the same undergraduate university as the one in Study A. This University has 15 catered residence halls, each of which are assigned to one of eight total dining halls. 4,529 students resided in university housing in 2012. The demographic profile of this population was 53% Black, 24% White, 6% Coloured, 7% Indian,

1% Asian³⁵, and 9% other³⁶. 48% of these students were male and 52% were female. The average age of students living in university housing was 19 years (SD = 1.15), and ages ranged from 17 to 25 years.

Participants for Study B1 were students from 11 catered residences and 5 corresponding dining halls at university housing facilities. I attended meetings with leaders from all residences at the end of the previous university year in order to gauge interest and availability for the study. Governing bodies from all catered residences expressed interest in participating in the study, but due to time sensitivity as mentioned in the introduction, I chose residences for this study based on which leaders were most readily available and followed through with communication around consent.

The experimental group was comprised of students from three dining halls that served 1,866 students in total, with a racial breakdown of 56% Black, 21% White, 7% Coloured, 7% Indian, 1% Asian, and 8% other. 40% of these students were male and 60% were female. The two dining halls that made up the control group serviced 1,126 students together, with a racial breakdown of 52% Black, 27% White, 5% Coloured, 6% Indian, <1% Asian, and 10% other. 76% of these students were male and 25% were female. (See Tables 6.1- 6.2 for student demographics.)

³⁵ At this university in South Africa, Indians are categorized separately from other Asians due to the large population of Indians and historical categorizations. Therefore Asian refers to those people whose country of origin is in an Asian country aside from India. Sometimes Asians are also categorized as Chinese, albeit often incorrectly, for the same reasons.

³⁶ “Other” refers to a race other than the ones listed, unknown, or unavailable.

Table 6.1.

Student Demographics: Race (University of Cape Town, 2012, Annual report)

Race	National population ³⁷ (N=51,770,560)	University population (N=25,532)	University housing (N= 4,529)	Intervention residences (N=1,886)	Non- intervention residences (N=1,126)
Black	79%	23%*	53%	56%	52%
White	9%	34%	24%	21%	27%
Coloured	9%	14%	6%	7%	5%
Indian	(with next)	7%	7%	7%	6%
Asian	3%	NA	1%	1%	<1%
International*	NA	18%	NA	NA	NA
other	<1%	4%	9%	8%	10%

Note. *International is excluded from race categories in this report. *At least 8% of international students are Black African, so this percentage would more accurately be $\geq 31\%$.

³⁷ According to the South African National Census of 2011 (Statistics South Africa, 2012). The national census is taken every 10 years.

Table 6.2.

Student Demographics: Gender

	University population (<i>N</i> =25,352)	University Housing (<i>N</i> =4,529)	Study Residences (<i>N</i> =2,929)
female	52%	52%	45%
male	48%	48%	55%

Note. The gender breakdown between intervention and non-intervention groups is unbalanced due to the structure of the residences (some are single-sex and some are co-ed), but these differences were not statistically significant for any of the measures at pre-test. Thus, there were no significant pre-existing differences between males and females: Intergroup anxiety: $F(1, 629) = 1.21, p = .40$; Intergroup contact: $F(1, 633) = .05, p = .95$; Cross-group friendship: $F(1, 604) = .52, p = .47$; Social distance: $F(1, 619) = .85, p = .36$. Please see survey participants' demographic details by group in Table 6.3 below.

Table 6.3.

Survey Participant Demographics

		Experimental Group	Control Group
Demographic Info		N=388	N=262
Race	Black	56%	56%
	White	36%	30%
	Coloured	8%	4%
	Indian	7%	7%
	Asian	2%	2%
	other	1%	1%
Gender	female	60%	25%
	male	40%	75%
University	1 st year	66%	54%
Year of	2 nd year	27%	32%
Study	3 rd year	6%	13%
	4 th year	1%	1%

I obtained consent and support from all relevant governing bodies within the university and residence halls in the same manner as Study A (please see Chapter 4). The only difference, due to the design change, was that informational emails and advertisements about the intervention component were sent to residents of the experimental group only. Residents in the control group received information about the surveys only. I enlisted student facilitators and research assistants to assist with recruiting participants for the study. We recruited participants by gaining permission to enter the dining hall during dinner and approaching students as they arrived for their evening meal. We approached students by telling them about the event that evening, asking each student (or groups of students) if they would like to participate in the study, and informing

them of potential prizes.

Apparatus

A paper-and-pencil apparatus was employed, using maps that depicted seating arrangements in the dining halls. Each student's seating choice was indicated on the maps. Please see Figures 6.2-6.6 below for each individual map of the dining halls.

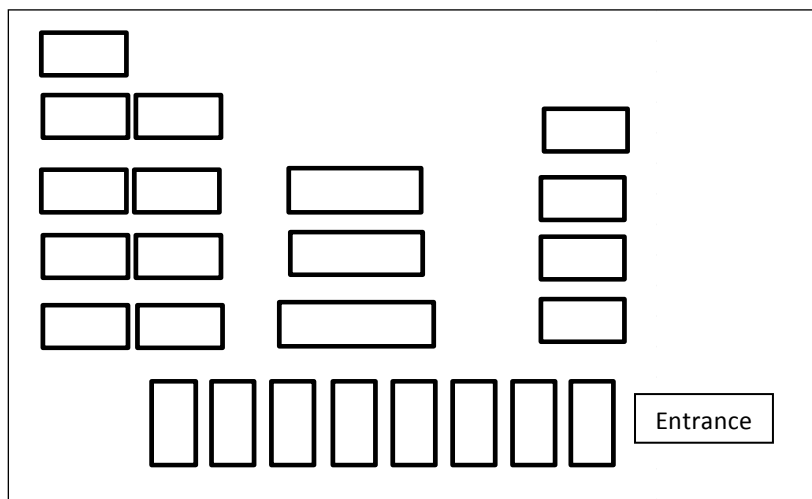


Figure 6.2. Map of Dining Hall A, one of three Experimental Group dining halls. Rectangles represent tables.

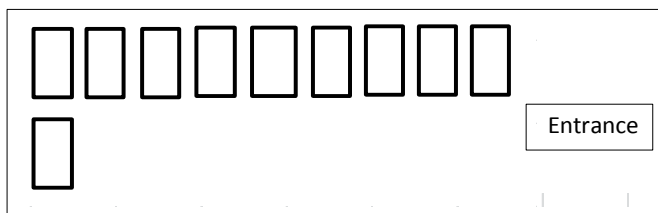


Figure 6.3. Map of Dining Hall B, one of three Experimental Group dining halls. Rectangles represent tables.

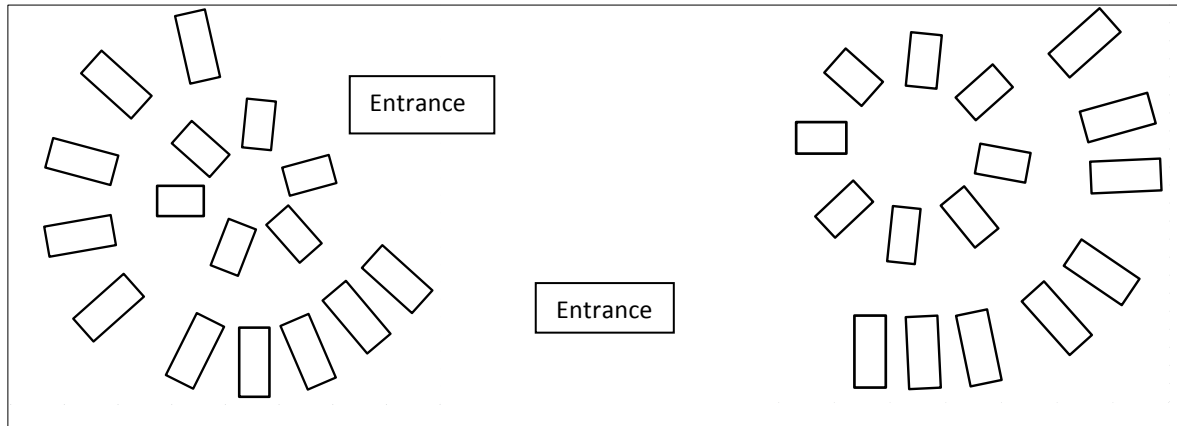


Figure 6.4. Map of Dining Hall C, one of three Experimental Group dining halls. Rectangles represent tables.

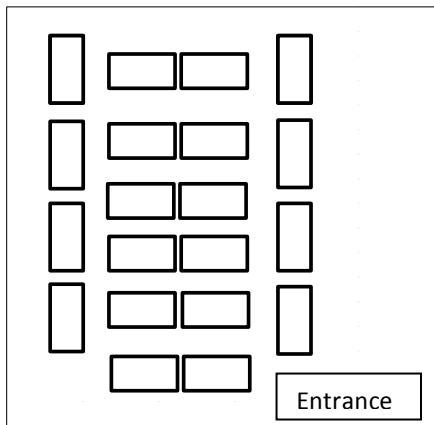


Figure 6.5. Map of Dining Hall D, one of two Control Group dining halls. Rectangles represent tables.

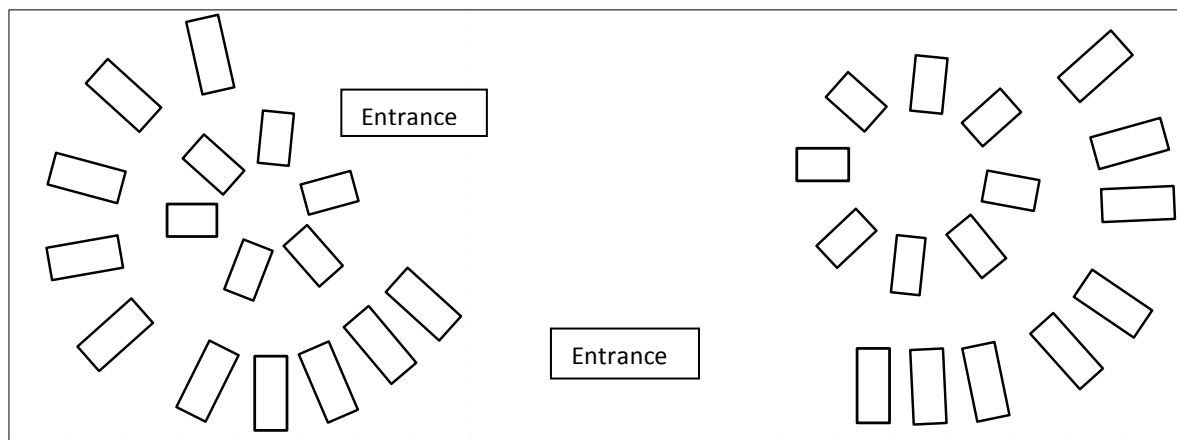


Figure 6.6. Map of Dining Hall E, one of two Control Group dining halls. Rectangles represent tables.

Materials

Intervention program and criteria. The intervention program and criteria directly followed that of Study A1. (Please see Chapter 4 “Materials” section.)

Activity One: “People Bingo”. The first activity was the same as the activity in Study B1. Groups worked together to fill out a bingo card that contained tasks to find out which group member(s) fulfilled certain criteria, and what group members had in common. (Please see Chapter 4 “Materials” section, and Appendix B.)

Activity Two: “Unsolved Mystery”. The second activity was a mystery similar to the one in Study A1, but was customized for the students in this context. Groups read the fictional clues to figure out how a student at their university got sick. Clues were placed in an envelope and students were instructed to take two clues and pass the envelope along until it was empty. Students were not allowed to show anyone their clues but they could read their clues to their group. I included humorous clues, which aimed to induce positive emotions. The mystery enhanced group cooperation and equal status by allowing everyone the same amount of information that was necessary for solving the mystery. I aimed to enhance friendship potential by generating closeness through a shared activity. The setting and experiences mentioned in the clues focus on things students at this University had in common, which may add to the sense of shared experience. This activity was piloted with a small group of students who met for the first time, and during a feedback session, students provided verbal reports that suggested that the activity helped instill positive emotions and feelings of closeness among group members. (Please see Appendix I for the activity as it appeared in the intervention.)

Activity Three: “Word Scramble”. The third activity was similar to the “Fast Friends” activity from Study A1, but was altered to suit a group setting and for team cooperation. Like

Fast Friends”, “Word Scramble” consisted of questions adapted from Aron et al.’s (1997) closeness generating activity. Questions were written in a combination of four different South African languages—Zulu, Xhosa, English, and Afrikaans.³⁸ Each question was divided into clusters of words that were mixed up into small cards, and each cluster was comprised of words from a different language. Groups had to work together to translate and unscramble the word clusters in order to put the questions together. I used different languages for this activity to try to enhance group cooperation through reliance on group members to contribute their knowledge of different languages. To ensure participation from all members, each member had to answer every question, and all answers were recorded on the activity sheet. Questions included positive-emotion and closeness generating elements through humor and escalating, reciprocal self-disclosure (i.e., “What is your most embarrassing moment?” “What is your greatest fear?”). (Please see Appendix J for full activity and question list.)

Activity Four: “Dating Guide”. The fourth activity, ““Mad Libs’ Dating Guide”, is a two-part activity, adapted from a popular American paraphrasal template word game, which is based on spontaneous improvisation, Mad Libs (Price & Stern, 1958). This game required one player to prompt another for a list of words³⁹ that would be substituted for words in a story. The ““Mad Libs’ Dating Guide” required group members to answer a set of questions with one-word, part-of-speech-specific answers. Those questions were then placed strategically into a dating guide. Questions included closeness generating through self-disclosure (e.g., “One adjective to describe

³⁸ There are a total of 11 national languages in South Africa. The four languages listed here—Zulu, Xhosa, English, and Afrikaans, are the most commonly spoken home languages according to the South African National Census of 2011 (Statistics South Africa, 2012).

³⁹ In the original game, word prompts were organized by categories, including: adjective, noun, verb, place, exclamation, animal, number, etc., and players would have to provide one word within the category that comes to mind (Price & Stern, 1958).

your personal style”, “Name one of your pet peeves (something that really bothers you)”). The dating guide was used to arouse positive emotions through humorous and strategic placement of answers. For example, the dating guide included the sentence, “Try going to more parties, and make sure to talk to all the ____ ____.” The blanks are filled by answers to the questions “What is your favorite popcorn flavor? (+y)” and “Name a family member you are close with. (+s).” Some sample answers were “buttery mamas” or “salty brothers”. To facilitate participation of all members, students had to take turns to answer questions. (Please see Appendix K for full list of questions and activity paragraph.)

Measures

Seating patterns. Previous dining hall studies at this University (Alexander, 2007; Schrieff et al., 2005), found that patterns of ‘self-segregation’ in dining halls became established very early in the calendar year, and were usually organized by table. Alexander (2007) found that tables were organized as such, to the extent that when a White or Black research confederate sat down at a table comprised of students of a different race group from the confederate, the entire racial make-up of the table would change within an hour.

There are multiple indices of segregation that could have been used to report levels of integration. Based on results from Study A1, which show very small-scale changes, I chose a method of analysis that would be sensitive enough to pick up slight changes that I anticipated in Study B1. The Massey and Denton indices, D and xPy^* , which I used in Study A1, were also limited to analyzing only two race groups at a time. Since only the two largest groups—Black and White—were represented, these results did not reflect integrated seating of other groups (Indian, Coloured, Asian). For example, if a table had Black, Indian, and Coloured students, the

Massy and Denton indices would have indicated that the table was homogenous or completely segregated, when in fact it was not.

In Study B1, I wanted to use a measure that would account for all race groups, so here I measured the proportion of integrated tables. I counted the number of tables that observers recorded as integrated—containing students of more than one race group—as a proportion of the total number of tables in the dining room. Tables were considered integrated when the following two conditions were met: when there were two or more students seated at the table, and when members of two or more race groups were present. This measure did not account for greater levels of integration *within* tables, such as for a greater number of race groups present or a more even balance between race groups at one table⁴⁰. However, since it included all race groups, it did account for greater levels of integration among tables the dining room. There were five total race groups recorded: Black, White, Indian, Coloured, and Asian. Thus, for the example given in the previous paragraph, this new measure would more accurately indicate that a table with Black, Indian, and Coloured students was *integrated*, whereas the previous indices would portray this table as completely segregated.

Positive emotions. This measure took the same format as the measure in Study A1. I used an adapted Simplified Adjective Checklist (Russell, 1979) that listed seven positive and seven negative emotions. Respondents indicated the presence of any emotions that applied to them. Each positive emotion chosen was recorded as +1, each negative emotion chosen was recorded as -1, and the total represented the score.

⁴⁰ An even balance of race groups was not expected at tables, since, as evident in Table 6.3, race groups were highly imbalanced.

Optimal contact measure. To address one of the limitations of Study A1, I included an item that measured one optimal contact condition: cooperation. The intervention activities were designed to promote cooperation, so this item checked the manipulation, which was lacking in the previous study. It asked, “How well did your team cooperate during the activity night(s)?” Responses ranged on a scale from 1 (Did not cooperate) to 5 (Cooperated Extremely Well).

Enduring contact effects. This measure also took the same format as Study A1. This item asked students whether they kept in touch with someone new they had met during activity nights. Follow-up items asked how they kept in touch (Facebook, email, meet up, conversation, other), and whether they kept in touch with someone of a different race. To gauge whether post-intervention contact effects applied more broadly to other intergroup contact aside from interracial contact, I added another exploratory measure that asked participants whether they stayed in touch with “someone from a different social circle”.

Procedure

Preparation. As I had done in Study A1, I recruited student facilitators and advertised the activity nights before data collection commenced. In Study B1, I recruited student facilitators as volunteers who did not receive any compensation for assistance and facilitation of the intervention activities. The recruitment of volunteers rather than paid facilitators was helpful for purposes of continuity of the intervention program beyond the context of this study. I had designed the intervention program in Study A1 according to criteria that would make the program easy to replicate. These criteria included the ability to be executed with little or no funding and carried out by interested parties (Residence Life Offices, orientation leaders, residence governing bodies, etc.). Thus, for practical purposes, to ensure that there was an option

for this program to potentially continue in this capacity, I recruited student volunteers from existing leadership teams in the residences that are involved with residence activities or integration.

As I had done in the previous study, I met with each individual residence warden⁴¹ and attended several residence leadership meetings to clarify the details of the study. I also explained potential benefits for participants and residences, which included enhancing existing efforts to encourage group cohesion within residences.

In addition to student volunteers, I recruited undergraduate research assistants to help with observations and administration. I advertised these positions by sending email notification to the UCT's Psychology Department about the opportunity to assist with the study. I offered research points to students who needed these as part of their course requirements. Students who did not need research points received ZAR50⁴² per hour of assistance. Other students volunteered out of interest in the field of study. I met with assistants individually to prepare them for recording observations or administering activity nights.

Week 1: Observation 1. I collected observation data using the same procedure as in Study A1. In Week 1, observers entered Dining Halls A, B, C, D, and E during a dinner session to record pretest observations. Observers sat at a table with a map of the dining hall, at times moving around the room for a better view of students at tables, and recorded each seat that was occupied. The gender and race for each student occupying a seat were also recorded onto the map by marking one letter for race (B = Black, W = White, C = Coloured, I = Indian, A = Asian, O = other) and one letter for gender (M = male; F = female). Observers completed seating maps,

⁴¹ At this university, faculty members who served as heads of residences were called "wardens".

⁴² R50 was equivalent to about \$7USD at the time.

marking every occupied seat in the dining hall every twenty minutes throughout the dinner period.⁴³ A total of six observations were recorded per dining hall, at the following times: 17h45, 18h05, 18h25, 18h45, 19h05, 19h25, and 19h45. Each observation was recorded onto blank copies of dining hall maps. The pretest surveys marked on the timeline in Week 1 will be discussed in Study B2.

Week 2: Intervention Activity 1 and Observation 2. In Week 2, facilitators and I went back to Dining Halls A, B, and C, and administered the first activity in the intervention program—“People Bingo”. We arrived 15 minutes before the dinner session to set up a section of tables with activity table numbers and writing utensils. Facilitators recruited participants as they entered the dining hall, and directed willing participants to activity tables. When four or more students were seated at the table, facilitators provided the group with an activity sheet and instructed the group to begin.

Week 4: Intervention Activity 2 and Observation 3. I conducted the intervention program in Study B over eight weeks instead of four weeks. Due to the expansion to three dining halls, I executed three intervention activities every two weeks rather than on consecutive weeks. In week 4, facilitators and I carried out observations and Activity 2—“Unsolved Mystery”—following the same procedure as in Week 2. Students received an envelope with clues about a medical mystery, and an activity sheet with instructions. Based on the clues, groups worked together to find out how and when the student got sick, his symptoms, and who else may have been infected.

Week 6: Intervention Activity 3 and Observation 4. The sixth week of data collection proceeded in the same manner as Weeks 2 and 4, as described above. The third intervention

⁴³ Dinner is served at all dining halls each weeknight from 17h30 to 20h00.

activity was “Word Scramble”, which required participants to unscramble words in four different South African languages that formed a get-to-know-you type question. For example, “What do wena thanda to doen op die impela-veki?”, which translates into “What do you like to do on the weekends?”. Participants had to work together to put the words together in order, translate the question, and provide short answers to the question. Each person was required to answer each question, and one person recorded responses in the spaces provided in the activity sheet. (See Appendix J.) When groups handed in completed activity sheets, facilitators checked the questions and revealed whether or not sentences were translated correctly.

Week 8: Intervention Activity 4 and Observation 5. The eighth week of data collection also continued in the same format as the previous three activity weeks. The fourth and final intervention activity was “‘Mad-Libs’ Dating Guide”, a game in which participants had to provide part-of-speech specific answers to questions on an activity sheet. (See Appendix K.) Upon completion of questions, group members notified facilitators, who then gave the groups a second activity sheet that contained a brief instructional story with blank spaces dispersed throughout the story. Groups then filled in the blank spaces, which corresponded to answers previously recorded on the first activity sheet. When groups completed the second activity sheet, one group member would read the story aloud.

Week 10: Observation 6 and Posttest Survey. In the final week of data collection, research assistants and I went back to Dining Halls A, B, C, D, and E to record seating patterns in the same manner as in Week 1. As described in Week 1, we started observations at 17h45, and recorded the gender and race of all students occupying seats in the dining hall. We repeated this every twenty minutes, until 19h45.

We also administered posttest surveys regarding the intervention during Week 10. This was a subsection of the full posttest survey that I will discuss in Study B2. Assistants and I reminded students in the dining hall about the second part of the two-part survey, which started about two months prior to that time. We attempted to distribute surveys to students who had completed the first part of the two-part survey by asking if students had completed the first survey.

Results

Predictions. After the data collection phase, I analyzed the data based on four predictions: 1) positive emotions would be experienced during the intervention; 2) the intervention program would be related to positive post-intervention contact effects; and 3) the experimental group would exhibit seating patterns that were more integrated after the intervention period, in comparison to the control group. As in Study A1, I also examined exploratory questions about the intervention program and integration. Based on results from the previous study, I predicted that students would meet new people during the activity nights and stay in contact afterwards.

Positive emotions. For the experimental group, the intervention was intended to increase positive emotions (or sustain already existing positive emotions), reduce intergroup anxiety (or sustain low levels of pre-existing anxiety), and create friendship potential. Students in the experimental group reported a significant increase in positive emotions during the intervention: $F(1, 241) = 14.86, p < .001, \eta_p^2 = .058 (\Delta M = .35, SD = 1.40)$, when compared to positive emotions experienced immediately before the intervention. During the activities, 83% of students experienced positive emotions, 13% experienced mixed emotions, and 4% experienced negative emotions. So, the overwhelming majority of participants in the experimental group felt positive

during the activities, and on average, they felt significantly more positive during the activities than they did before the activities.

Positive emotions were also significantly correlated to keeping in touch with someone new ($r(241) = .13, p = .05$), and experience of team cooperation ($r(240) = .18, p = .01$). Thus, although positive emotions were not directly related to anxiety reduction $r(240) = .03, p = .67$, they were significantly related to the enhancement of optimal conditions of contact—i.e., cooperation and friendship potential.

Post-intervention contact effects. 63% of participants stayed in touch with someone they met during the intervention ($N = 162$). Students reported keeping in touch via Facebook, email, meeting up outside of campus, eating together again in the dining hall, and face-to-face conversations. 78% of these students stayed in touch with “someone of a different race” ($N = 132$). As an added exploratory measure, to see if post-intervention contact effects applied more broadly to other types of intergroup contact aside from interracial contact, I asked participants whether they stayed in touch with “someone from a different social circle”. 84% ($N = 140$) of participants who stayed in touch with someone new reported that they stayed in touch with someone from a different social circle, but the type of group was not specified, so this result was regarded tentatively.

Seating patterns. I also measured post-intervention contact effects by observing seating patterns in the dining halls. Before and after the intervention, I measured the proportion of integrated tables as an average percentage of integrated tables at 6 time points at each dining hall, for both the control and experimental groups. There were no significant differences between the control and experimental groups in pre-intervention observations: $t(28) = .68, p = .50$. Thus, I can assume that initial integration patterns did not affect the difference between the two groups.

When I looked at the average proportion of integrated tables, the control group showed a very slight decrease ($\Delta M = -1.59$, $SD = 12.78$), which was not significant ($t(11) = -.43$, $p = .67$, Cohen's $d = .15$). Unlike Study A1, the experimental group showed a significant increase in integrated tables after the interventions ($\Delta M = 10.34$, $SD = 18.88$), which was significant ($t(18) = 2.32$, $p = .03$, Cohen's $d = .76$). This implies that the intervention may have contributed towards higher levels of integrated seating patterns in the dining halls after the intervention.

Discussion

Structured contact programs. These results show some support for previous findings from contact studies involving structured contact programs (Pettigrew & Tropp, 2006) that enhance optimal conditions of contact (Allport, 1954; Pettigrew, 1998). These studies reported that this type of program was related to greater improvements in intergroup contact patterns, compared to groups that did not receive the programs. Thus, in the intervention program design in the present study, I included opportunities for cross-group friendship formation, cooperation, and common goals through group activities. These conditions, along with positive-emotion generating tasks, were intended to limit anxiety that occurs when people of different groups interact, which has consistently emerged in recent studies reviewed by Pettigrew (2008) as an important factor in the reduction of prejudice through intergroup contact.

Although changes in integration do not imply changes in face-to-face interactions, results suggest that the facilitation of contact—through small group activities intended to increase positive affect—may have the potential to increase opportunities for intergroup contact and potential friendships. Results showed that the perceived level of group cooperation was positively related to general positive affect during the activities. In turn, general positive affect

was related to participants' likelihood of keeping in touch (via Facebook, email, meeting up in person, etc.) with someone newly encountered during the activities. However, these results were regarded with caution, given the limitations of the positive emotions measure and selection bias discussed in Study A1 (Please refer to "Limitations" section in Chapter 4). Further implications of increased opportunities for intergroup contact and friendship potential will be discussed in the following chapter.

Seating patterns. Unlike previous studies on structured contact programs, I recorded additional *observational* data that may further support potential positive outcomes of the intervention program. I observed individual seating patterns in the dining halls for both control and experimental groups, before and after the intervention, as another way to measure enduring effects of the intervention. In Study B1, I found that the dining halls in which the intervention took place showed a significant increase in integrated tables after the intervention. Results from this group were significantly different from the dining halls in the control group (where there was no intervention), which showed no significant change.

Again, although changes in seating patterns do not equate to changes in face-to-face contact, it does indicate a significant change in behavior. This may be important because observational results from previous intervention studies at this University (Alexander, 2007; Gibbs & McGivern, 2010) have shown that interventions were not significantly associated with changes in seating patterns.

There are multiple indices of segregation that I could have used to report changes in segregation, but I chose to use the proportion of integrated tables. There were five main race groups present, and I anticipated small changes, based on the relatively short timeframe and results from Study A1, so this measure seemed like a good fit because it was sensitive enough to

pick up slight changes. Therefore, while these findings have important implications for disrupting persistent patterns of informal segregation (Schrieff et al., 2010), further examination using other indices of dissimilarity and more observations may be necessary.

Gaps in contact theory, and future contact studies. Previous studies on contact theory have shown overwhelming evidence that increased contact improves intergroup attitudes (Pettigrew & Tropp, 2006). However, recent observational studies in settings that reflect optimal conditions for contact have reported a discontinuity between changes in intergroup attitudes and behavioral patterns, namely that improved attitudes do not reflect an increase in contact behaviors (e.g., Schrieff et al., 2010). University campuses arguably appear to have optimal conditions for contact, as this context broadly contains optimal conditions (equal student status, institutional support, common goals, friendship potential), which would expectedly foster improved intergroup relations (Schofield & Sagar, 1977). Yet previous studies in this setting consistently show resistance to contact (Alexander 2007; Gibbs & McGivern, 2010), which the present study attempted to overcome through an intervention.

Results from this study address this gap by showing some evidence that increased opportunities for contact through the intervention were related to a change in behavior. The dining halls where the intervention was conducted were significantly more integrated after the intervention period, whereas the control dining halls showed no significant change. However, further investigation would be needed to determine whether integration at tables was directly related face-to-face intergroup contact at these tables. Further implications for contact theory will be discussed in the following chapter.

Chapter 7: Study B2

Design

Study B2 has the same nonequivalent control group pretest-posttest design as Study B1. This was a two-part survey component that was measured longitudinally, ten weeks apart. In between those ten weeks, I administered a four-part intervention program with the experimental group. The control group consisted of participants from residence halls that did not participate in the intervention program. (Please see Figure 6.1 for Study B timeline.)

Participants

Participants from Study B2 were recruited from the residence halls that were involved in Study B1. Eleven residence halls, with a total of 2,992 students, were involved in the study. 1,252 of these students participated in the pretest survey, and 829 students participated in the posttest survey. I was able to match 650 of the participants' pretest surveys to their posttest surveys using student numbers, which are unique numbers that the university provides to each student. (For participant demographics, please see the "Participants" section in Chapter 6.)

Measures

The pretest and posttest surveys consisted of the same types of scales that were included in the surveys from Study A2: intergroup contact (Bornman, 1988; Bornman & Mynhardt, 1991), cross-group friendships (Van Laar et al., 2005), social distance (Bogardus, 1993), and intergroup anxiety (Stephan & Stephan, 1985). Please see Appendices M-N for pre-test and posttest surveys.

Amount of intergroup contact. This scale took the same form as the one used in Study A2. It measured the average amount of interactions participants had with people of a different race to their own on campus, in their residence hall, and in social settings. Response choices were “None” (1), “Few” (2), “About Half” (3), “Most” (4), and “All” (5). The average of the three items was taken, with a maximum of 5 points, and higher scores indicated more contact. The alpha coefficient for this sample was .82 for the pretest and .87 for the posttest.

Racial heterogeneity of close friendships. As in Study A2, respondents were asked to write down the first names or initials of their five closest friends. Following this question, the number of cross-group friends was measured by asking respondents how many of the friends listed were of a different race to their own.

Degree of social distance. The social distance scale was adapted from the version used in Study A2, to better suit university students. As mentioned in the previous study, some students were confused by this question, so I edited both the question and the items for clarity and relevance for this sample (Please refer to “Other Limitations” in Chapter 5). Instead of asking what level of closeness participants were willing to accept, I asked what participants would be very likely to do with someone of a different race to their own, if given the opportunity. The answer choices included “work on a group project” (6), “hang out” (5), “invite over to my home for a meal” (4), “share a flat/house” (3), “date” (2), and “accept into my family through marriage” (1).

Level of intergroup anxiety. For Study B2, the intergroup anxiety scale used in Study A2 was shortened from six to three items, since data from Study A2 showed that a shortened version of this scale could be used with good reliability. In Study B2, participants were asked about on average, how comfortable, anxious, and uncertain they felt when interacting with someone of a

different race. Responses ranged from (1) “Not at all” or low anxiety to (5) “Extremely.” The average of the three items was taken, with a maximum of 5 points, and higher scores indicated more anxiety. Responses from the “Comfortable” item were reverse coded. The alpha coefficient for this sample was .70 for the pretest survey and .77 for the posttest survey.

Procedure

Week 1: Pretest survey. During the first week of data collection, research assistants and I went to each of the five dining halls during the dinner session to distribute pretest surveys. We recruited participants in the same way as we did in Study A2. We approached students as they entered the dining hall, while they were waiting in the cue for dinner, or while they were seated at tables. We briefly explained to each student that we were conducting a dining hall study and offering opportunities to win prizes. We then informed students that participation was voluntary and that we would be available to answer any questions. For willing participants, we provided surveys and pens, and asked participants to place completed surveys into a box provided by the exit.

Week 10: Posttest survey. After the pretest surveys were distributed, the intervention program occurred every second week from Week 2 through Week 8, in Dining Halls A, B, and C. Once the program ended, research assistants and I went returned to each dining hall during a dinner session to distribute posttest surveys.

Results

Predictions. First, I predicted that there would be significant differences between the control and experimental groups. I expected these changes to be relatively small, considering the results from Study A2, and the brief 10-week timeframe. Second, I predicted that relationships

between intergroup contact and cross-group friendship would be positive, and that these two variables would be negatively related to social distance and intergroup anxiety. This is consistent with existing contact literature as presented in Study A as well as results from Study A.

In this study, I used path analyses to test the relationships between these variables instead of regression (as I did in Study A2) because of the advantages of taking multiple simultaneous relationships in hierarchical sequence into account, which cannot be done with regression. Also, I have more data in the present study to justify a path analysis, whereas I did not use path analyses in the previous study because of the small sample size. The program used to conduct path analyses was SPSS Amos. The chi-square statistic (χ^2), comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR) calculations are reported for each model, as these are among the most commonly reported fit indices (Kline, 2011; see also Swart et al., 2011). The chi-square statistic is the most basic overall model fit test, where a significant χ^2 indicates lack of fit, so acceptable fit would have a p value of $> .05$. CFI measures relative improvement in the model's fit as compared to a baseline model that is usually the independence model, and acceptable fit is indicated by a value of $\geq .95$ (Hu & Bentler, 1999). RMSEA measures "badness-of-fit" where 0 = best fit (Kline, 2011, p.205), and acceptable fit is indicated by a value of $\leq .05$ with a 90% confidence interval. SRMR measures the overall difference between the observed and predicted correlation, and acceptable fit is indicated by a value of $< .08$ (Hu & Bentler, 1999).

Although a bi-directional cross-lagged model is an important one to consider, these path analyses were not run in a cross-lagged model in the current study for a few reasons. First, given that the current data set only contained two waves of data, the analysis would likely be less successful than that of reports by other authors who have reported at least three waves of data

(e.g., Swart et al., 2011). In addition, causal models assume that the causal structure does not change over time—stationarity, and stationarity can only be tested when there are three or more waves of data (Christ & Wagner, 2013). Lastly, the current set of studies presented in this thesis stem from a series of observational and interventional studies around disrupting patterns of segregation. Thus, this was the main focus of the current set of studies. Given the confines of time and space, I approached the path analyses portion of this study in a simple and basic manner—as an exploration of contact theory in general and of how contact variables relate in this particular setting.

The first model predicted that an increase in intergroup contact would indirectly decrease social distance through intergroup anxiety and cross-group friendship. The second and third models also predicted the indirect effect of contact on social distance through intergroup anxiety and cross-group friendship, with an additional predictor in each model: cross-group friendship as a predictor of intergroup anxiety in the second model, and intergroup anxiety as a predictor of cross-group friendship in the third model.

As discussed in Chapter 5 (“Predictions” section), cross-group friendship is not conventionally included in contact studies as a mediating variable in the contact-prejudice relationship. However, Eller and Abrams (2003) made the point that variables commonly identified as mediators, predictors, or outcomes are not fixed to those roles over time, but rather variables can take on different roles at different times (See also Swart et al., 2011). Further, in a large-scale longitudinal study that took place in a university context, Schofield and colleagues (2010) found that intergroup contact improves intergroup attitudes through the specific mediation of cross-group friendship. Other exceptions have been in other studies that have at least three-waves of longitudinal data such as Swart et al. (2011) and Levin et al. (2003). The

current study also takes place in a university, and previous studies at this particular university that have examined the micro-ecology of segregation have highlighted the importance of cross-group friendship on segregated seating patterns (e.g., Alexander, 2007; Schrieff et al., 2005, 2010). Thus, I decided to include this measure in the model.

Differences between control and experimental groups

Preliminary analyses. I used t-tests to see if there were any differences in variables between the control and experimental groups before the intervention (Time 1) in order to see if any changes after the intervention may have reflected pre-existing patterns of intergroup behaviors or attitudes. The t-test results showed that there were no significant differences between the control and experimental groups at Time 1 for intergroup anxiety ($F(1, 634) = 1.22, p = .27$), intergroup contact ($F(1, 638) = .22, p = .64$), and social distance ($F(1, 624) = 1.36, p = .24$). However, the experimental group reported significantly fewer cross-group friendships than the control group: $F(1, 609) = 61.1, p = .01$. The experimental group started with a mean of 1.46 close friends of a different race ($SD = 1.56$), while the control group started with an average of 1.84 close intergroup friendships ($SD = 1.03$). I did not run a MANOVA, as a recent textbook on statistics did not support such analyses (Everitt & Hothorn, 2011)⁴⁴. Additionally, Bonferroni correction was not reported, as it is the most conservative and simple method for controlling error rate. Thus, I recognize I may have problems with Type I error, so interpretations should be taken with caution.

Regression analysis was conducted on the current sample to show that initial levels of cross-

⁴⁴ In the preface to Everitt and Hothorn's (2011, p. vii) textbook on applied multivariate analysis, they write: "we are not convinced that MANOVA is now of much more than historical interest; researchers may occasionally pay lipservice to this technique, but in most cases it really is no more than this. They quickly move on to looking at the results for individual variables."

group friendship did not affect results. For example, intergroup contact at Time 1 was a significant predictor of cross-group friendship at Time 2, when controlling for the amount of cross-group friendship at Time 1. Time 2 cross-group friendship was entered as the outcome variable, and Time 1 cross-group friendship was entered first in a hierarchical regression, Time 1 intergroup contact as then entered in the second step in this sequence. The second step added a significant amount of explanatory variance ($R^2\Delta = .30$, $df = 1$, 584 , $p < .001$). The Beta weight for intergroup contact at Time 1 in this model was significant ($\beta = -.25$, $t(580) = 7.00$, $p < .001$).

Group means and standard deviations for each construct at Time 1 and Time 2 are reported in Table 7.1. The experimental group reported an increase in contact at Time 2 ($\Delta M = .22$, $SD = .95$), a decrease in anxiety ($\Delta M = -.10$, $SD = 1.7$), an increase in cross-group friendships ($\Delta M = .59$, $SD = 1.34$), and a decrease in social distance ($\Delta M = .13$, $SD = 1.44$). The control group reported almost no change in contact ($\Delta M = .03$, $SD = .98$), and increases in anxiety ($\Delta M = .14$, $SD = .99$), cross-group friendships ($\Delta M = .19$, $SD = 1.00$), and social distance ($\Delta M = .56$, $SD = 1.99$).

Table 7.1.

Group Means and Standard Deviations for Each Construct at Each Time Point

Group	Construct	Time	<i>M</i>	<i>SD</i>
Control <i>N</i> = 262	I-G Contact	1	3.16	1.07
	I-G Contact	2	3.19	.89
	C-G Friends	1	1.84	1.03
	C-G Friends	2	2.04	.94
	I-G Anxiety	1	2.20	.96
	I-G Anxiety	2	2.34	1.01
	Social Distance	1	.85	1.47
	Social Distance	2	1.40	1.79
Experimental <i>N</i> = 388	I-G Contact	1	3.20	1.06
	I-G Contact	2	3.41	.83
	C-G Friends	1	1.46	1.56
	C-G Friends	2	2.04	.95
	I-G Anxiety	1	2.29	1.02
	I-G Anxiety	2	2.21	.93
	Social Distance	1	1.14	1.38
	Social Distance	2	1.06	1.49

Repeated measures. I then compared the amount of change that the experimental and control groups reported over the course of the study by conducting repeated measures analyses of variance. I entered the grouping variable (experimental vs. control) as the between subjects factor. The results for this repeated measures analyses of variance are reported in the third column of Table 7.2. Just for reference, the first two columns show significant changes over time for each group separately.

Table 7.2.

Repeated Measures Analyses of Variance Results

	Experimental Group Change over time				Control Group Change over time				Difference in changes between Experimental & Control			
	<i>df</i>	<i>F</i>	η_p^2	<i>p</i>	<i>df</i>	<i>F</i>	η_p^2	<i>p</i>	<i>df</i>	<i>F</i>	η_p^2	<i>p</i>
IC	1, 383	12.82	.032	.00**	1, 255	0.24	.001	.62	1, 638	3.71	.01	.055 [§]
SD	1, 358	1.18	.003	.28	1, 249	20.12	.074	.00**	1, 607	19.33	.03	.00**
IA	1, 366	2.25	.006	.12	1, 251	3.51	.014	.06 [§]	1, 617	5.74	.01	.02*
CRF	1, 354	69.63	.164	.00**	1, 235	8.18	.034	.01**	1, 589	15.91	.03	.00**

Note. IC = intergroup contact; CF = cross-group friendship; SD = social distance; IA = intergroup anxiety.

* $p \leq 0.05$; ** $p \leq 0.01$; [§] $p \leq .06$ (marginally significant)

Results from repeated measures analyses of variance shown in Table 7.2 above show that the experimental group reported greater improvements in each category, compared to the control group. Firstly, the experimental group reported a significant increase in contact, whereas the control group showed almost no change. Secondly, the control group showed a significant increase in social distance and a marginally significant increase in intergroup anxiety, while the experimental group reported no significant changes in both social distance and intergroup anxiety. Lastly, although both groups showed increases in cross-group friends at Time 2, the experimental group reported a significant and considerable increase compared to the control group. These results showed that the change in scores for experimental group was more

favorable on all variables than the change in scores for the control group. Repeated measures tests, as reported in the third column of Table 7.2, highlighted that changes between Time 1 and Time 2 were significantly different for social distance, cross-group friends, and intergroup anxiety, and marginally significant for the intergroup contact construct— $p = .055$. In each case, the outcome favors the experimental group, implying positive results of the intervention. The mechanisms through which these outcomes were achieved were explored through path analyses.

Results from Study A2 showed some potential dosage effects, which depended on the amount of participation in activities, but Study B2 did not replicate these results. I conducted repeated measures analyses of variance for the experimental group, with the dosage variable (3 levels: 0 activities, 1-2 activities, 3-4 activities) as the between subjects factor. There were no significant differences between the amount of participation for intergroup contact $F(1, 380) = .54, p = .59; \eta_p^2 = .003$; intergroup anxiety $F(1, 363) = .61, p = .52; \eta_p^2 = .004$; cross-group friendship $F(1, 361) = .95, p = .39; \eta_p^2 = .005$; and social distance $F(1, 365) = 1.97, p = .14; \eta_p^2 = .01$. This shows that results for students in the experimental group were consistent regardless of whether they participated in more or less activities, and regardless of whether they participated at all. This may support the possible effects of indirect and extended contact on non-intervention participants that I suspected may have occurred in Study A. In the previous study, I found that both the control and experimental groups showed improvements in some measures. Since both groups were subsets of the same sample population (residents that shared one dining hall), control group improvements may have occurred due to extended and indirect contact effects via knowledge of and exposure to the intervention program.

Correlations between variables measured before and after the intervention. As presented in Study A2, in both groups I expected intergroup contact to be positively related to

cross-group friendships, and that both of these measures would be negatively related to intergroup anxiety and social distance. Before the intervention (Time 1), I found that each of these relationships was present and significant, except for the relationship between contact and social distance. After the intervention (Time 2), I found that all of these relationships were significant. Thus, more contact was associated with more cross-group friends, less intergroup anxiety, and less social distance. See Table 7.4 below for intercorrelations.

Table 7.4.

Inter-correlations of Variables Before(Pre) and After(Post) the Intervention Program

	IC (Pre)	IC(Post)	CF(Pre)	CF(Post)	SD(Pre)	SD(Post)	IA(Pre)	IA(Post)
Intergroup contact(Pre)	-							
Intergroup contact(Post)	.31**	-						
Cross-group friendship(Pre)	.25**	.23**	-					
Cross-group friendship(Post)	.36**	.42**	.49**	-				
Social distance(Pre)	-.06	-.08*	-.11*	.01	-			
Social distance(Post)	-.11**	-.20**	-.10**	-.17**	.27**	-		
Intergroup anxiety(Pre)	-.16**	-.13**	-.16**	-.17**	.11**	.17**	-	
Intergroup anxiety (Post)	-.18**	-.22**	-.16**	-.18**	.03	.14**	.27**	-

Note. * $p < 0.05$; ** $p < 0.01$; N always ≥ 609 ; IC = intergroup contact; CF = cross-group friendship; SD = social distance; IA = intergroup anxiety

Path models. To create a more comprehensive picture of the relationships between measures, I tested a path model on the entire group (both experimental and control groups) that

shows changes in the prejudice measure (social distance) as a function of intergroup contact through the mediation of anxiety and cross-group friendships.

To further investigate this relationship, I conducted path analyses using models that test intergroup anxiety and cross-group friendships as mediators of the contact-prejudice relationship. Based on findings from previous studies (Swart et al., 2011; Levin et al., 2003) I added intergroup anxiety as a predictor for cross-group friendships in one model, and cross-group friendships as a predictor for intergroup anxiety in another model. Interestingly, I found that both models reported acceptable fit, with the same chi-squared and root mean square of approximation (RMSEA) results: $\chi^2(1) = 1.06, p > .30$; CFI = 1.00; RMSEA = .01 with 90% confidence interval [CI = .00-.11]; SRMR = .01. (See Figures 7.1 and 7.2 for full results.) However, the confidence interval is quite wide, and the CFI was high. The low *df* in the model likely indicates that the degree of fit is being overstated, so this is a weakness in the study and these results should be taken with caution. The direct connection between contact and social distance was dropped because it resulted in a poor fitting model: $\chi^2(1) = 10.69, p < .001$; CFI = 1.00; RMSEA = .09 [90% CI = .04-.14]. The lack of direct connection between the two measures was consistent with previous findings that supported the indirect contact effects on measures of prejudice (Pettigrew & Tropp, 2006, 2008).

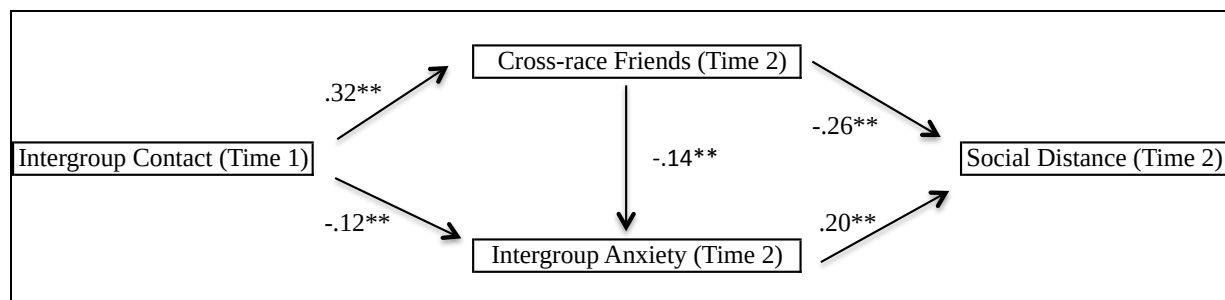


Figure 7.1. Path analytic model for indirect effect of contact on social distance, with cross-group friends predicting intergroup anxiety. $\chi^2(1) = 1.06, p > .30$, comparative fit index (CFI) = 1.00; root mean square error of approximation (RMSEA) = .01; RMSEA 90% confidence interval (CI) = .00-.11; SRMR = .01

* $p < 0.05$; ** $p < 0.01$

Table 7.5.

Standard Error for Analyses in Figure 7.1

	Path	Standard Error
CGFriends_Time2	<--- Contact_Time1	.034
Anxiety_Time2	<--- Contact_Time1	.038
Anxiety_Time2	<--- CGFriends_Time2	.043
SocialDistance_Time2	<--- CGFriends_Time2	.069
SocialDistance_Time2	<--- Anxiety_Time2	.067

Table 7.6

Sobel Test of the Significance of Mediation Effects

Time 1	Time 2 Mediator	Time 2	Size of Indirect Effect (b)	95% Confidence Lower Limit	Interval Upper Limit	Sobel Test (z)
Contact	Anxiety	SocDist	-.07	-.10	-.04	-4.38**
	Friends	Anxiety	-.05	-.08	-.02	-3.33**
Friends	Anxiety	SocDist	-.02	-.03	-.01	-2.86**

** $p < 0.01$

Indirect effects. Several significant indirect relationships were found in this model (shown in Figure 7.1). Intergroup contact at Time 1 had an indirect effect on social distance and intergroup anxiety at Time 2 via cross-group friends at Time 2. That is, Time 1 intergroup contact had a significant positive association with Time 2 cross-group friends ($b = .32, p < .01$, 95% CI, [.28, .42]), which in turn had a significant negative association with social distance ($b = -.26, p < .01$, 95% CI, [-.22, -.07]) and a significant negative association to Time 2 intergroup anxiety ($b = -.14, p < .01$, 95% CI, [-.21, -.05]). Time 1 intergroup contact also had an indirect effect on Time 2 social distance via Time 2 intergroup anxiety: Time 1 intergroup contact had a significant negative association to Time 2 intergroup anxiety ($b = -.12, p < .01$, 95% CI, [-.20, -.05]), which in turn had a significant positive association to Time 2 social distance ($b = .20, p < .01$, 95% CI, [.04, .19]). In addition to being a mediator for intergroup contact effects, Time 2 cross-group friends also had an indirect effect on Time 2 social distance via Time 2 intergroup anxiety. Time 1 cross-group friends was positively associated with Time 2 intergroup anxiety ($b = -.14, p < .01$, 95% CI, [-.21, -.05]), which in turn was positively associated with Time 2 social distance ($b = .20, p < .01$, 95% CI, [.04, .19]). Finally, Time 1 intergroup contact had an indirect relationship to Time 2 social distance via both Time 2 cross-group friends and Time 2 intergroup

anxiety. Specifically, Time 2 intergroup contact had a significant positive relationship to Time 2 cross-group friends ($b = .32, p < .01, 95\% \text{ CI}, [.28, .42]$), which in turn had a significant negative relationship to Time 2 intergroup anxiety ($b = -.14, p < .01, 95\% \text{ CI}, [-.21, -.05]$), which in turn had a significant positive relationship to Time 2 social distance ($b = .20, p < .01, 95\% \text{ CI}, [.04, .19]$). Please see Table 7.6 for Sobel tests of mediation of effects, which confirmed the significance of mediation effects.

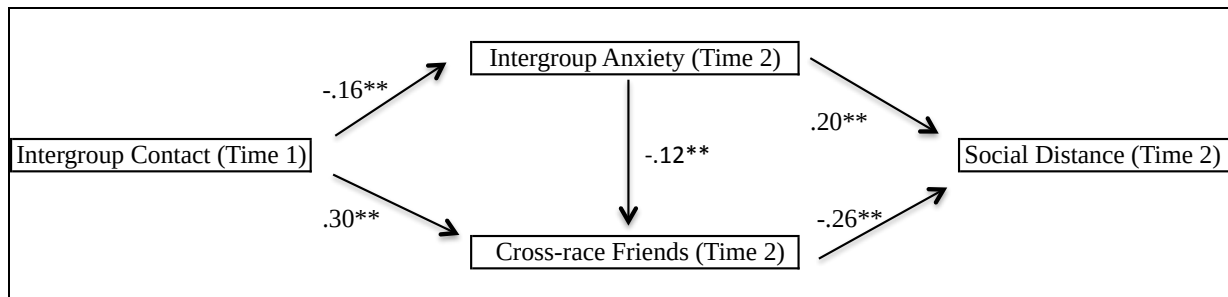


Figure 7.2. Path analytic model for indirect effect of contact on social distance, with intergroup anxiety predicting cross-group friends. $\chi^2(1) = 1.06, p > .30, \text{CFI} = 1.00; \text{RMSEA} = .01, 90\% \text{ CI} = 0.00 - 0.11; \text{SRMR} = .01.$

* $p < 0.05$; ** $p < 0.01$

Table 7.7

Sobel Test of the Significance of Mediation Effects

Time 1	Time 2 Mediator	Time 2	Size of Indirect Effect (b)	95% Confidence Interval		Sobel Test (z)
				Lower Limit	Upper Limit	
Contact	Anxiety	SocDist	-.07	-.11	-.04	-4.38**
		Friends	.02	.01	.04	2.50**
Anxiety	Friends	SocDist	.02	.07	.04	2.86**

** $p < 0.01$

Indirect effects. Significant indirect effects shown in Figure 7.2 were as follows. Time 1 intergroup contact had indirect effects on Time 2 social distance and Time 2 cross-group friends via Time 2 intergroup anxiety. Time 1 intergroup contact had a significant negative association with Time 2 intergroup anxiety ($b = -.16, p < .01, 95\% \text{ CI}, [-.25, -.10]$), which in turn had a significant positive association with Time 2 social distance ($b = .20, p < .01, 95\% \text{ CI}, [.03, .19]$) and a significant negative association with Time 2 cross-group friends ($b = -.12, p < .01, 95\% \text{ CI}, [-.19, -.05]$). Time 1 intergroup contact also had an indirect effect on Time 2 social distance via Time 2 cross-group friends. Time 1 intergroup contact had a significant association to Time 2 cross-group friends ($b = .30, p < .01, 95\% \text{ CI}, [.26, .40]$), which in turn had a significant association to Time 2 social distance ($b = -.26, p < .01, 95\% \text{ CI}, [-.22, -.07]$). In addition to being a mediator of intergroup contact effects, Time 2 intergroup anxiety also had an indirect effect on Time 2 social distance via Time 2 cross-group friends. Time 2 intergroup anxiety had a significant negative association to Time 2 cross-group friends ($b = -.12, p < .01, 95\% \text{ CI}, [-.19, -.05]$), which in turn had a significant negative association with Time 2 social distance ($b = -.26, p < .01, 95\% \text{ CI}, [-.22, -.07]$). Lastly, Time 1 intergroup contact also had an indirect effect on social distance through both Time 2 intergroup anxiety and Time 2 cross-group friends. That is, Time 1 intergroup contact had a significant negative association to Time 2 intergroup anxiety ($b = -.16, p < .01, 95\% \text{ CI}, [-.25, -.10]$), which in turn had a significant association to Time 2 cross-group friends ($b = -.12, p < .01, 95\% \text{ CI}, [-.19, -.05]$), which in turn had a significant negative association to Time 2 social distance ($b = -.26, p < .01, 95\% \text{ CI}, [-.22, -.07]$). Please see Table 7.7 for Sobel tests of mediation of effects, which confirmed the significance of mediation effects.

Table 7.8

Standard Error for Analyses in Figure 7.2

	Path		Standard Error
Anxiety_Time2	<---	Contact_Time1	.036
CGFriends_Time2	<---	Contact_Time1	.034
CGFriends_Time2	<---	Anxiety_Time2	.037
SocialDistance_Time2	<---	Anxiety_Time2	.067
SocialDistance_Time2	<---	CRFriends_Time2	.069

I also tested a simpler model that showed intergroup anxiety and cross-group friends as mediators of the contact-social distance relationship—similar to Pettigrew and Tropp’s (2006) theoretical model (where empathy replaced cross-group friendships). The path analysis showed that each individual path was significant, but the model had poor fit ($\chi^2(2) = 11.75$; $p < .01$, RMSEA = .087). See Figure 7.4 for more detailed results.)

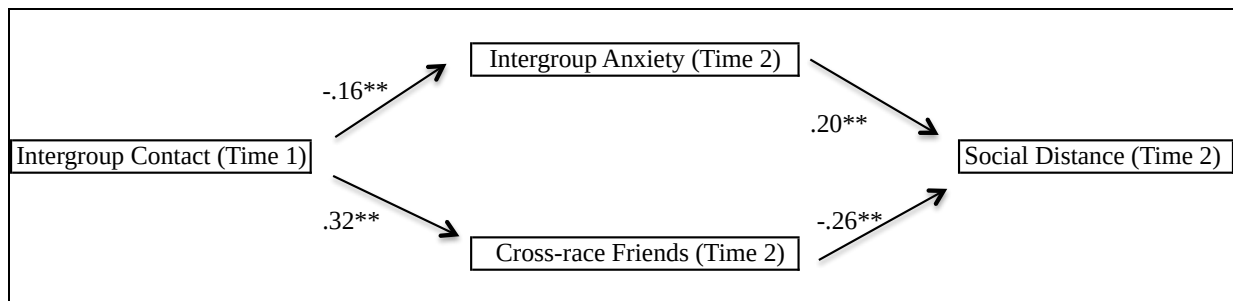


Figure 7.3. Path analytic model for indirect effect of contact on social distance. $\chi^2(2) = 11.75$, $p < .01$, CFI = 1.00; RMSEA = .09, 90% CI = .04 - .14, SRMR = .04.

* $p < 0.05$; ** $p < 0.01$

Table 7.9

Standard Error for Analyses in Figure 7.3

	Path		Standard Error
Anxiety_Time2	<---	Contact_Time1	.036
CRFriends_Time2	<---	Contact_Time1	.034
SocialDistance_Time2	<---	Anxiety_Time2	.066
SocialDistance_Time2	<---	CRFriends_Time2	.068

In the present study, I found that the model showing the indirect effect of social distance at Time 1 on contact at Time 2 via mediators—intergroup anxiety and cross-group friendship at Time 2—was poor-fitting: $\chi^2(2) = 24.80$, $p < .001$, RMSEA = .154, SRMR = .04. This finding supports previous claims (Pettigrew & Tropp, 2006; see also Swart et al., 2011) that although some studies have shown that prejudice can lead to a decrease in contact, the path from intergroup contact to prejudice was stronger than the path from prejudice to intergroup contact.

Discussion

Study B was designed to replicate Study A on a larger scale, so aside from expansion, other methodological elements remained the same. The aims of Study B2 were consistent with the aims of Study A2: to test whether the intervention program was related to changes in intergroup attitudes and contact patterns. The intervention program also remained the same, functioning to reduce intergroup anxiety, increase intergroup contact, and increase friendship potential through activities that enhance optimal conditions for contact. One additional aim was to test the relationships between the four main measures using path models.

When comparing the two groups, results from Study B2 were consistent with my original predictions from Study A2, and as anticipated, we found that Study B2 yielded stronger and clearer results than Study A2. Study A2 yielded few statistically significant results, but potential effects of indirect and extended contact made the interpretation of results unclear and more tentative. After controlling for this and modifying control and experimental group composition, I found that in Study B2, the group that received the intervention reported greater improvements in all four main measures than the group that did not receive the intervention. As indicated in results from Table 7.2, there were significant differences in changes between the experimental and control groups for cross-group friendship, intergroup anxiety, and social distance, and there was a marginally significant difference ($p = .055$) in changes for the intergroup contact variable.

Impact of cross-group friendship on outcomes. Results from this study support assertions of the aforementioned studies on friendship, which claim that students with more cross-group friends experience stronger positive outcomes of contact. Based on existing contact literature, I expected the experimental group to display an average decrease in social distance and intergroup anxiety, while increasing intergroup contact and cross-group friendships. Given the brief time-frame of two months, we did not expect large-scale changes, but as anticipated, I did find that increases in cross-group friendships were positively related to intergroup contact and negatively related to social distance and intergroup anxiety.

Notably, I found that all groups reported an increase in cross-group friends in both studies, but in Study B2, the intervention group reported a significant and considerable increase in cross-group friends, compared to the control group. Results from Study B2's experimental group translated to all students from these residences, regardless of the level of participation—even if they did not participate in any activities. For example, some students who did not participate still

reported meeting new people and making new friends on the intervention evenings.

Do prejudice and anxiety increase naturally? Interestingly, the control groups in both Study A2 and Study B2 showed significant increases in intergroup anxiety and social distance, whereas the experimental group reported only very slight decreases in both measures. So a question that arose was: why does prejudice and anxiety seem to increase naturally in this setting? A possible explanation could be that when students are placed in close proximity to one another, students tend to display avoidant behaviors (e.g., Schrieff et al. 2005, 2010), which may have a negative effect on attitudes mediated by anxiety (Pettigrew & Tropp, 2008), resulting in further increases in intergroup anxiety and negative attitudes. The opposite direction of this process may also help explain the significant increase in contact for the experimental groups and slight decreases for the control groups. Perhaps when students were provided with more opportunities for contact via the intervention, improved attitudes resulted, further increasing contact patterns post-intervention.

Pettigrew and Tropp's (2008) meta-analysis of contact studies highlighted the importance of intergroup anxiety for achieving improvements in intergroup attitudes from contact. This supports previous findings of self-reported reasons for avoidant behaviors (Schrieff et al., 2010). As predicted, in both Study A2 and B2, I found anxiety to be positively correlated with social distance, and negatively correlated with intergroup contact and cross-group friends. This implies that students who have more interactions with students of other races, also experience less intergroup anxiety when interacting with students of other races.

Implications for contact theory. In addition to intervention-specific findings, results from both studies show support for structured contact programs and for contact theory in general: bringing diverse groups of people together to interact with one another can lead to positive

outcomes in intergroup attitudes and behaviors. In a review of previous studies on structural optimal contact programs designed by researchers, Pettigrew and Tropp (2006) found that participants in these programs reported a significantly stronger inverse relationship between contact and prejudice, when compared to people who did not receive programs ($r = -.29$ vs. $r = -.21$, respectively; $p = .760$). Results from repeated measures analyses of variance in the present study showed support for structured contact programs, as the intervention was related to significant and positive outcomes for the experimental group.

Results from path analyses in Study B2 further supported contact theory and findings from recent contact studies that have examined mediators of the contact-prejudice relationship. The results showed that on average, regardless of intervention, intergroup contact led to improved intergroup attitudes for all students, through the mediation of intergroup anxiety and cross-group friendship.

To further contribute to contact theory, I tested the relationship between the two mediators using two models: one commonly explored mediator—intergroup anxiety, and one unconventional mediator—cross-group friendship. The study reported by Swart et al. (2011) is one of few longitudinal studies that have explored the relationship between these two mediators. In their three-part study, which also included empathy, anxiety was a significant predictor of cross-group friendships. However, Pettigrew and Tropp (2008) argue that cross-group friendships reduced prejudice through affective ties, of which the reduction of anxiety was the most important. Swart et al. (2011) also looked at changes in intergroup anxiety and cross-group friendship over time, and found that when looking at simultaneous mediation effects, each served as a mediator for the other. In other words, intergroup anxiety changed (from Time 1 to Time 3) as a function of cross-group friends (at Time 2), and cross-group friends also changed via the

mediation of intergroup anxiety over time. Thus, evidence supports both models, and can help to explain the goodness of fit that I found for both models.

Differences between Study A and Study B. There were two interesting discrepancies between results from Study A and Study B, one concerning the effects of participation dosage, and the other regarding different trends in intergroup attitude improvement. First, in Study A2, students who participated in more intervention activities reported slightly greater improvements in intergroup attitudes and behaviors, suggesting that greater frequency of initiatives can yield more positive outcomes. However, in Study B2, there were no significant differences based on the amount of participation. The effects seen in Study A were relatively weak (only marginally significant) and seem to have been isolated to the small sample, untranslatable to the much larger sample in Study B. This may indicate that if the study is replicated, even one intervention could potentially have positive effects on a sample population. Alternatively, this could suggest that there may be inherent differences between residences in Study B2. Upon initial investigation of demographic data and Time 1 variables, there were no significant differences between residences in control and experimental groups. Thus, this option seems unlikely, though further investigation would be necessary to be certain.

Second, in Study A2, I found that all groups reported an average significant decrease in social distance, but in Study B2, the control group reported the opposite: a significant increase in social distance. This may be due to the difference in design: in Study A, the control and experimental groups were from the same dining hall, and thus, students who did not participate in the intervention may have been affected by the intervention because they were exposed to and had knowledge of the intervention. In Study B, the control groups occupied completely separate dining halls, so there was no exposure to or knowledge of the interventions.

Other limitations. As discussed in Chapter 5, the social distance measure may have been problematic, so it was slightly altered for this study. It asked students whether they would be very likely to do any of the following: “work on a group project” (6), “hang out” (5), “invite over to my home for a meal” (4), “share a flat/house” (3), “date” (2), and “accept into my family through marriage” (1). The differentiation between the fifth and sixth levels was intended so that “work on a group project” would be limited to the academic setting, and that “hang out” would refer to social settings. The remaining four choices were according to increasing levels of intimacy in social settings. The newly created labels, and lack of specifics in labeling, such as academic vs. social setting, may have limited the accuracy of this measure, but students did not express that they were confused by this measure like they did in the previous study. Also, as mentioned in Chapter 5, the collapse of the traditionally multi-item scale into one item may be considered another potential limitation of this measure, though participants’ responses showed that this did not pose a problem in both the previous study and the present study. (Please refer to “Other Limitations” section in Chapter 5).

Chapter 8: Concluding Discussion

Restating the Problem and Rationale

Dozens of studies from all over the world have provided evidence that people tend not to interact across group lines on the *micro-ecological* level—in everyday occasions and spaces where it would be possible (e.g., Alexander & Tredoux, 2010; Dixon et al., 2005b; Hughes et al., 2007; Schrieff et al., 2005, 2010; Schofield et al., 2010). This is the crux of the issue at hand: when diverse groups of people are present in the same place, members of different groups do not spontaneously engage with one another. The contact hypothesis has shown, as seen in the meta-analyses by Pettigrew and Tropp (2006, 2008), that intergroup contact is an effective way to improve intergroup attitudes. Yet, a major piece of this formula is missing in everyday situations: intergroup contact, defined as face-to-face encounters (Pettigrew & Tropp, 2011), does not seem to occur in settings where it might be presumed. This problem has been well documented at the University of Cape Town, as several studies have revealed the persistence of patterns of ‘self-segregation’ (e.g., Alexander, 2007; Alexander & Tredoux, 2010; Gibbs & McGivern, 2010; Govender, 2008; Schrieff et al., 2005, 2010). In response, I created and tested an intervention in a particular everyday setting within this University where this issue was prevalent—university dining halls. Results showed that the intervention accomplished the facilitation of intergroup interactions, and led to positive outcomes of contact.

Although it is now widely accepted that contact leads to reductions in prejudice (Pettigrew & Tropp, 2006), observed and marked patterns of ‘segregation’ may reveal that this change in attitude does not translate to changes in behavior that involves more intergroup contact or greater integration. An intervention was used to determine whether observed behavioral patterns of ‘self-

segregation’ could be disrupted. Results from Study B showed that changes produced by the contact intervention were also reflected in changes in levels of ‘self-segregation’ as seen in an observed behavior pattern—seating choice. In other words, not only did attitudes improve, but dining hall tables also started to appear more integrated, as students began to mix up tables that were previously separated along racial lines.

In Chapter 2, I explained that ‘self-segregation’ does not always produce negative outcomes; yet it does create certain issues in university settings. The ‘self-segregation’ observed at UCT, like many other universities, shows that although compositional diversity may have been achieved, students maintain patterns of racial isolation (e.g., Alexander, 2007, Alexander & Tredoux, 2010; Schrieffer, et al., 2005, 2010). This may prevent students from enjoying the potential benefits of integration, which include individual, educational, and social benefits of being part of a diverse student body⁴⁵.

In addition to creating an obstacle for integration initiatives on university campuses, the persistence of ‘self-segregation’ in structurally diverse spaces can lead to other problems such as *increases* in intergroup anxiety, conflict, and prejudice (Forbes, 2004). These additional problems do not come as a surprise, as even early contact researchers such as Allport (1954), Bramfield (1946), and Williams (1964) predicted that, with a lack of meaningful interaction, intergroup contact could lead to increases in prejudice or conflict. Bramfield (1946) found early on that when different groups were placed in close proximity to one another but did not interact, the result was an increase in prejudiced attitudes. Williams (1964) found similar findings when studying four U.S. cities, and in addition found that a greater frequency of interactions

⁴⁵ Benefits of integration in university settings are discussed in Chapter 2.

corresponded to a lower prevalence of prejudice. Allport (1954) further noted that the contact hypothesis would work better in situations of true acquaintance than in situations of casual contact, so he made a distinction between these kinds of contact early on. He recognized that instances of casual contact alone might not lead to the intended benefits of intergroup relations.

In making this distinction, Allport (1954) made the claim that one type of contact—true acquaintance, such as friendship—is better for achieving reductions in prejudice than casual encounters. Yet, casual encounters may still play an important role in prejudice reduction because, from an integrationist perspective, more true acquaintance requires more casual contact (Anderson, 2010). In other words, it seems likely that individuals who have more casual encounters would have a greater number of meaningful encounters, simply because there are more opportunities for the casual to become meaningful.

Therefore, given that members of different groups are not encountering one another in compositionally diverse everyday spaces, the facilitation of these encounters seems warranted. This takes us directly to the interventional design presented in this work. The idea was to use a practical interventional strategy that would initiate the process and increase the potential for integration benefits. The first thing the intervention did was initiate contact in an everyday space—the dining hall—where various groups were co-present but maintained spatial boundaries along group lines. The facilitation of contact was initiated through two very simple means, starting with mixing students up into small groups with residents whom they do not normally sit, at tables they might not normally occupy. Next, the facilitation of actual interaction began by providing the basic prompt to introduce oneself to the people at their table.

The contact literature review presented in Chapter 3 displayed that beneath the surface of ‘self-segregation’ exists the complex entanglement of social psychological and socio-historical

components like intergroup anxiety, intimate relationships, prejudice, and racism. Intergroup contact research has addressed these topics in great length over the past sixty years, showing that these effects are consistently enhanced by the classic optimal conditions within the contact situation: institutional support, cooperation, and the presence of common goals (Allport, 1954). Thus, the intervention also took these elements into account. In addition, meta-analytic analysis of a long tradition of studies found that intergroup anxiety and friendship formation emerged as being among the most important factors in reducing prejudice from intergroup contact (Pettigrew & Tropp, 2006, 2008, 2011).

Accordingly, various additional elements were incorporated into the facilitation process adopted in Studies A and B. First, in order to enhance the experience of institutional support, student leaders from university residences were recruited to facilitate the process. Next, each activity prompted members of the group to work together cooperatively toward a common goal, such as solving a puzzle or a mystery. Furthermore, in effort to limit and counteract the anxiety often experienced in intergroup settings (Stephan & Stephan, 2000), the intervention sought to induce positive emotions through facilitated prompts that took the form of fun tasks. This was based on Wolpe's (1958) Theory of Reciprocal Inhibition, which claims that positive emotions, such as enjoyment, have the ability to reduce negative emotions like anxiety, as one cannot experience both emotions simultaneously. Thus, the type of contact facilitated in the intervention included asking and answering questions that were humorous or generated feelings of closeness—both of which are related to experiences of positive emotions. Lastly, the intervention activities provided opportunities for interactions that had friendship potential, including transactional engagements, which meta-analysis has shown to be an effective predictor of intergroup attitudes (Davies, Tropp, Pettigrew, Aron, & Wright, 2011).

Increasing Competence in Intergroup Interaction

Despite the critical voices of both integration and contact theory, I have argued that integration may still be a worthwhile endeavor and that intergroup contact can still be useful for improving intergroup relations. However, improvements to our approaches may be necessary. Advocates for comprehensive approaches to a pervasive campus climate of diversity might point in the right direction. A more comprehensive approach is necessary for reducing prejudice—one that includes practical elements like learning how to interact better, in more mutually beneficial ways.

Critics have pointed out problematic assumptions of contact theory regarding prejudice, and have further argued that these assumptions may mask potential negative effects of contact for members of disadvantaged groups (e.g., Dixon et al., 2005a; Dixon et al, 2012; Reicher, 2007; Wright & Lubensky, 2008). The prejudice-reduction focus is also problematic because it has become increasingly difficult to accurately determine changes in prejudice. At present, this issue is still part of ongoing debate about whether to move beyond the prejudice-reduction model, but this debate remains unsettled and without a viable solution (Hewstone, Swart, & Hodson, 2012). Although there is still uncertainty around the nature of prejudice, throughout history and at present, its harmfulness and dangers have been made evident. Therefore, ceasing to combat prejudice, especially without a feasible alternative, may not be desirable.

Pettigrew (2008) responded to critics by stating that intergroup contact research does not set out to or claim to influence social change. Yet, it may be possible to demonstrate that contact can have practical applications for intergroup relations. For example, the prejudice-reduction model may yet have positive applications for universities, when placed in the context of a pervasive campus climate of diversity. Tropp (2012), in compiling a handbook on intergroup conflict,

determined that intergroup conflict is established at different levels of analysis, from interpersonal to societal. She points out the tension between, on the one hand, the effort to improve relations between individuals of different groups with unequal status that can unintentionally further societal inequalities by making disadvantaged groups less likely to recognize differences or act collectively toward social change (Cakal et al., 2011; Dixon et al., 2010; Wright & Lubensky, 2008). On the other hand, there is the effort to foster peace or integration through policies and practices in societies where individuals may not be equipped to accept them while living with legacies of conflict (Tropp, 2012, p. 5). Thus, the issue may require dealing with the issue on multiples levels using various approaches.

One issue that most critics and advocates alike would be able to agree upon has to do with finding better—more efficient, comfortable, and mutually beneficial—ways to coexist. Thus, it may be useful to widen the focus onto improving ways for different groups to interact with greater ease and competence. This could be done on an individual level—among family members, roommates, neighbors, peers, or colleagues—or on a larger scale—among residents of a state, country, or continent. This notion of improving competence in intergroup interactions is distinct from prejudice reduction but not that far removed. It may be a more practical, measurable, and productive way to think about prejudice reduction. Arguably, prejudice reduction may be necessary in order for competence to occur. This suggests that a reduction in prejudice may be presumed when intergroup competence improves, and is perhaps better measured through intergroup interactions.

Gaining competence would mean getting better at initiating, engaging in, and managing intergroup relationships over time. An increase in competence can help individuals realize benefits of integration, and beyond the scope of the studies presented in this thesis, other

educational research has shown that this may cause people to live more integrated lives (Chang et al., 2004; Hurtado et al., 2003; Muthuswamy et al., 2006). For example, university students who engage across racial lines have been found to be more likely to engage in interracial interactions and relationships, and live in and work in more racially diverse settings after graduation (Hurtado et al., 2003).

In places like universities, where intervention has taken place on the institutional level to diversify student bodies, it seems that the next logical step toward gaining this type of social intergroup competence would be to facilitate these interactions, at least to some extent. This facilitation is particularly relevant in contexts where groups are accustomed to segregation, and spontaneously and persistently self-segregate. Facilitating the initiation of intergroup interactions seems to be necessary for encounters to occur on the micro level—in everyday, one-on-one interactions. As discussed in Chapter 2, institutions have many reasons to engage in this type of intervention, with regard to realizing benefits for all groups of students, both long-term and short-term, and for the campus climate as a whole. Moreover, the pervasive patterns of ‘self-segregation’ have shown that, without intervention, intergroup anxiety and negative intergroup attitudes may persist.

One could argue that racial isolation in the midst of compositional diversity is a sign that integration efforts have not ‘worked.’ Different groups are present in the same place but are not interacting with one another, which could indicate that efforts to integrate have failed. But it could also be argued that racial isolation in the midst of compositional diversity is a sign that integration efforts have not been implemented properly. Perhaps the lesson to be drawn is that bringing diverse groups of people together is not enough. Integration efforts must also provide ways for those groups to meaningfully interact with one another.

As discussed in Chapter 2, the integration debate is not yet over, and with valid reason. Integration still warrants exploration, both because of the potential benefits, and the risks involved in allowing things to unfold spontaneously. It has been documented that, when left to natural devices, ‘self-segregation’ is persistent and resistant to change (e.g., Alexander & Tredoux, 2010; Gibbs & McGivern, 2010; Schrieffer et al., 2005, 2010). Moreover, patterns of ‘segregation’ have been linked to inequality and racial disparity in many forms—from infant mortality to educational achievement to household income (Massey & Denton, 1993).

Although significant critiques, previously discussed in Chapter 3, argue that the prejudice-reduction model of improving intergroup relations may not be the most effective, I contend that prejudice reduction, although problematic, continues to have an important role in intergroup research. In general, studies have shown that prejudice is still a useful measure for intergroup relations and attitudes, and evidence counter to that provided by critics have also been presented (Pettigrew & Tropp, 2011). The studies I report in this thesis also support the notion that prejudice reduction remains a useful construct in contact studies; and further, I found that measures of prejudice like the social distance scale, which has been used for over 70 years (Bogardus, 1933), were still significantly related to important findings such as changes in intergroup anxiety and cross-group friendship. Although other authors (e.g., Dixon et al., 2010; Durrheim & Dixon, 2010; Fraser, 2011; Nosek, Hawkins, Reicher, 2007) have argued that these types of direct self-report scales that measure prejudice are no longer accurate measures, this does not seem to be the case, given that the social distance measure in my studies as well as several others were correlated with the other important measures and outcomes (e.g., Binder et al., 2009; Tredoux & Finchilescu, 2010).

More Contact, More [Necessary] Problems

Another point to consider is that, although more intergroup contact—whether facilitated or not—may lead to more cross-group friends, less intergroup anxiety, and less prejudice, it can also lead to more intergroup problems. If an individual has more intergroup contact, we can expect that there may be more positive interactions, but there may also be more uncomfortable interactions. Thomas Pettigrew (2011), based on his research in Northern Ireland, southern parts of the U.S., and South Africa, concluded that intergroup interaction is generally characterized by “reticence and awkwardness... together with widespread intergroup avoidance (Pettigrew, 2011, pp. 187).” Pettigrew & Tropp’s (2006) meta-analysis also presented research that has shown that some contact experiences are negative, and they can cause setbacks for improving attitudes towards outgroups. Yet these negative experiences do not necessarily provide sufficient evidence against the positive outcomes of intergroup contact and integration. One could argue that, over time, the negative consequences may be outweighed by one positive outcome in particular: learning how to coexist, or more specifically, increasing competence in intergroup interactions.

One way that individuals and groups can learn to live together more effectually is through experience—most likely a vast number of experiences that include both positive and negative interactions. By negative interactions, I refer to the more commonplace experiences of discomfort and unease. If these experiences are extremely negative—such as situations of intense hostility, aggression, and ongoing conflict—intergroup contact may have a different set of adverse effects that would stifle the learning process.

Some level of discomfort might serve a positive purpose in intergroup situations because it can be a source of self-protection from potential harm, and perhaps challenge people to think differently, as I discuss in the following section. Thus, while individuals will likely experience

negative and positive interactions, both kinds of experiences – including those that initially seem negative – may contribute to a positive outcome. Hence, despite group differences and negative interactions, intergroup contact may have an impact on groups learning how to interact. Forbes (2004) supports this notion with his theory on *ethnic conflict*, stating that:

Contact may have an effect on the conflict variables (prejudice, discrimination, hostility, etc.) because of its effects on cultural differences, rather than on stereotyping, and it may be a cause of antagonistic relationships more often than a cure for them, because, given cultural differences between groups, contact sets up conflicts of interest regarding how exactly groups are to converge on a common culture or common norms in their dealings with each other (p. 79).

In his review of 250 studies, Forbes (2004) found overwhelming support for a negative relationship between contact and prejudice on an individual level, but this was in contrast to a strong positive relationship on an aggregate level. As a resolution to the two findings that seem in opposition to one another, he proposed an ‘ethnic conflict theory’ in which both ideas can exist harmoniously. To do this, he argued that the intent was to figure out how to deal with differences amongst groups when members of these groups interact with one another.

From an integrationist perspective, Anderson (2010) adds that in contexts where groups meet, group members have usually been accustomed to segregation. She further argues that stereotyping and related bias may be inextricably linked to these interactions. Yet, rather than place the focus on reducing prejudice, she focuses on whether integration can lead to better ways of interacting. Thus, when they come together, ideally:

...their interactions will predictably engage racially stigmatizing ideas, manifested in various forms of discrimination and unhappy interaction. The issue, then, is not whether

racial conflict increases in more integrated settings. It is rather whether integration, over time, enables people to learn better ways of interacting across racial lines (p. 183).

If these positive and negative interactions are experienced within a supportive environment, figuring out how to interact in better, and more efficient and comfortable ways might be achieved sooner. As supported by contact studies, institutional support is an optimal condition that enhances contact effects. Here, it can also serve as a safeguard for these negative experiences. For example, in a supportive university environment, anti-discrimination policies and practices are usually put in place to control and protect students against negative experiences. This, different from negative experiences one might have in unregulated settings, might limit interactions from being exceedingly negative or continuing further. Thus, given that integration naturally yields increases in both positive and negative intergroup interactions the challenge for individuals to gain competence in these interactions would be fitting in contexts that have institutional support.

Facilitating Contact: Potential Impact and Implications

Empirical data from the two longitudinal studies presented here support the implementation of a structured intergroup contact intervention that facilitates intergroup contact in a university setting with marked patterns of ‘self-segregation’. Programs structured to create optimal conditions of contact in lab settings have already shown that they result in a significantly stronger effect on prejudice reduction (Pettigrew & Tropp, 2006). In addition to enhancing optimal conditions, the interventions described in this thesis addressed intergroup anxiety—one of the main hindrances to intergroup contact in diverse spaces on this campus—by trying to instill positive emotions. An interventional strategy that is practicable with regard to time, cost,

and administration, was also employed. In an environment where racial isolation and discomfort prevented integration from occurring in everyday exchanges, the intervention made this possible using a method that could easily be reproduced in similar settings.

The intervention served to facilitate and increase in comfort in everyday contact situations through simple ‘icebreakers’⁴⁶. Positive outcomes from Studies A and B showed that intervening might be necessary for easing the difficulties that emerge in intergroup situations such as intergroup anxiety and avoidance. In both Study A2 and Study B2, residents who did not receive the intervention showed more discomfort in intergroup interactions and preferred further physical and relational distance from people of other groups. Granted, when groups experience more exposure to one another, we would expect more positive and negative experiences and feelings. Studies A2 and B2 showed that naturally, without intervention, intergroup anxiety (A2) and negative attitudes (B2) tended to emerge. This makes ‘icebreakers’ even more appropriate, since they are meant to be positive and comfort-boosting in nature, and are often useful for generating positive emotions that keep anxiety in check. Students confirmed that they felt very positive during the ‘icebreakers’, and these feelings may have contributed toward minimizing discomfort, since negative emotions do not usually occur in the presence of positive ones.

Fredrickson & Branigan (2001; 2005) have also supported a broadening effect that positive emotions can have on people’s self-concept to include others to a greater degree as well as their repertoires of possible thoughts and actions. In this effect, positive emotions may expand an individual’s set of ideas about thinking and behaving, which can potentially build lasting intellectual, social, and psychological resources over time. These resources, in turn, can aid

⁴⁶ An ‘ice-breaker’ is an activity or game used to facilitate comfortable interaction by ‘warming up’ conversation, used in meetings, team building, and other events.

people in surviving and thriving (Fredrickson & Branigan, 2001). Over time, broadening is hypothesized to build stronger social connections, and better group climates (Fredrickson, 1998). Thus, positive emotions may have the potential to transform groups because they can reduce intergroup anxiety. This was supported by results from Study B, which revealed not only that intervention participants showed stronger contact effects but also that they felt significantly more positive during the intervention than they did just before. Since positive emotions are believed to widen a person's array of thoughts and actions, using a positive and enjoyable medium for intervention may have also encourage students to think beyond habitual seating and friendship patterns, and propose new thoughts and actions such as new types of friendships and new seating patterns in the dining hall.

Despite the hopeful prospect that cross-group encounters would occur 'naturally', facilitating these types of experiences seems essential towards creating opportunities for contact to occur. Since placing individuals in close proximity to one another often does not lead to engagement, an opportunity for interaction may more likely take the form of an introduction—a third party presence that introduces or even prompts an introduction between people. The intervention presented in this work, on the most basic level, did this—at the very least, it prompted introductions and greetings with 'icebreakers'. In order to increase the likelihood of meaningful encounters, one might presume that an increase in casual, as in basic, encounters—from which some meaningful or intimate encounters eventually emerge—would be necessary. The results from both Studies A and B appear to support this notion: interracial contact had a consistently significant positive relationship to the number of close cross-group friendships—the more casual contact that students had in university, residence, and social settings, the more likely they were to have more meaningful relationships. Further, the residents who were given more

facilitated opportunities to engage in intergroup contact via intervention activities, reported significantly more casual contact as well as more close friendships with students of other races.

Limitations

Limitations⁴⁷ of the intervention include the impact of the intervention, since many students opted out of the activities each night, and the experiment did not include further investigation of these students and why they did not participate. Student resistance could affect the feasibility of this type of intervention. However, observational seating data measured all students, regardless of level of participation, and results in the expanded study showed significant increases in overall integration in seating patterns of all students. Although this particular intervention program would not be suitable for all universities, the specifics of the intervention criteria could be worth considering on many campuses where ‘icebreakers’ are already an integral part of orientation, residence hall, and team agendas.

Despite limitations, based on the empirical work presented in this thesis, this type of intervention appeared to produce changes in direct measures of intergroup attitudes and behaviors, which were present alongside changes in observed behavior patterns. The impact of the indirect effects of contact—namely, anxiety, and cross-group friendship—was also reflected through behavioral changes in the form of seating patterns. Although sitting with people at a table in the dining hall while consuming meals at best involves casual interaction, an increase in this type of casual contact may be necessary for an increase in personal acquaintances. Results from Studies A and B, as reported in Chapters 4 through 7, also affirmed that more cross-group friendships may have stemmed from an increase in casual contact during the intervention period.

⁴⁷ See also ‘Limitations’ sections in Chapters 5 and 7.

Moreover, in Study B2, dining tables were significantly more integrated in the dining halls that received the intervention. Furthermore, path models supported the proposition that intergroup interactions may have led to the changes in attitudes through the reduction of intergroup anxiety and an increase in cross-group friendship.

This suggests that a practical intervention can lead to changes in intergroup attitudes and behaviors in this University, and possibly other university settings and beyond. This work also contributes to intergroup literature by highlighting the importance of improving competence in intergroup interactions. In addition, the conclusions challenge the problematic assumptions about prejudice in contact theory, while affirming its basic tenets and role in intergroup research. The studies presented here have demonstrated that facilitating the initiation of intergroup interaction can improve integration efforts, and continuing social psychological interventions may be a worthwhile endeavor. These findings are significant for assessing the impact of racial integration initiatives and facilitated contact interventions on university campuses.

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Appendices

Appendix A. Activity 1 (Study A): Murder Mystery Game – clues and instructions.

WHEN THE ELEVATOR MAN SAW MR. KELLEY, MR. KELLEY WAS BLEEDING SLIGHTLY, BUT HE DID NOT SEEM TOO BADLY HURT.	MR. KELLEY GREATLY UPSET MR. JONES BY STEALING ALL OF HIS CUSTOMERS AND DESTROYING HIS BUSINESS.	THE ELEVATOR MAN SAW MR. KELLEY GO TO MR. SCOTT'S ROOM AT 12:25 A.M., JUST BEFORE HE WENT OFF DUTY.	WHEN HE WAS DISCOVERED DEAD, MR. KELLEY HAD A BULLET HOLE IN HIS THIGH AND A KNIFE WOUND IN HIS BACK.
A KNIFE WITH MR. KELLEY'S BLOOD ON IT WAS FOUND IN MISS SMITH'S YARD.	MR. KELLEY'S BLOODSTAINS WERE FOUND IN MR. SCOTT'S CAR.	WHEN POLICE WERE UNABLE TO LOCATE MR. JONES AFTER THE MURDER.	ACCORDING TO A MEDICAL EXPERT, MR. KELLEY HAD BEEN DEAD FOR 1 HOUR WHEN HIS BODY WAS FOUND.
MR. KELLEY'S BODY WAS FOUND AT 1:30 A.M. IN THE PARK.	MISS SMITH SAW MR. KELLEY GO TO MR. JONES APARTMENT BUILDING AT 11:55 P.M.	MR. KELLEY'S BLOODSTAINS WERE FOUND ON THE CARPET IN THE HALL OUTSIDE MR. JONES' APARTMENT.	THE KNIFE FOUND IN MISS SMITH'S YARD HAD MR. SCOTT'S FINGER-PRINTS ON IT.
THE ELEVATOR MAN SAW MR. KELLEY'S WIFE GO TO MR. SCOTT'S APARTMENT AT 11:30 P.M.	THE BULLET TAKEN FROM MR. KELLEY'S THIGH MATCHED THE GUN OWNED BY MR. JONES.	MR. JONES SHOT AT AN INTRUDER IN HIS APARTMENT BUILDING AT 12:00 MIDNIGHT.	THE ELEVATOR MAN SAID THAT MR. KELLEY'S WIFE FREQUENTLY LEFT THE BUILDING WITH MR. SCOTT.

MURDER MYSTERY RULES

Choose a team name: _____

Team Members: _____

Mr. Kelley was murdered. Use the clues to solve the murder mystery.

Make sure someone takes down your time before you begin and also when you submit your answers.

Pass the packet of clues around, taking 2 clues at a time, until the bag is empty.

You may only **READ** the clues to your team. You may not show or give your clues to anyone.

As fast as you can, find out:

1 -WHO murdered Mr. Kelley _____

2 -WEAPON used _____

3 -PLACE of the crime _____

4 -MOTIVE of the crime _____

5 -TIME of the murder _____

Submit your answers to a House Comm member & Return clue pack.

START TIME _____ **FINISH TIME** _____

Appendix B. Activity 2 (Study A & Study B): People Bingo—Instructions and Bingo Card

PEOPLE BINGO INSTRUCTIONS:

1. Ask people on your team to sign if they fit the criteria in the boxes.
(You may be asked to PROVE all items in boxes!)
2. For empty spaces, find something everyone on your team has in common and fill in the space. (Not including living in the same Res!:))
3. Work with your team to fill in as many boxes as you can.

TEAM NAME: _____ MEMBERS: _____

B	I	N	G	O
I carry a picture of a family member in my wallet. Name _____	I grew up in Mpumalanga. Name _____ Where? _____	I'm wearing glasses. Name _____	I have an April birthday. Name _____ Date: _____	We all have this in common: _____ _____ _____
I grew up outside of SA. Name _____ Where? _____	I have 3 or more siblings. Name _____	I have a cool scar. Name _____ How did you get it? _____	We all have this in common: _____ _____ _____	I can say hello in five languages. Name _____ List all 5: _____ _____
I can roll my tongue Name _____	I have at least 3 piercings. Name _____ Where? _____ _____ _____	We all have this in common: _____ _____ _____	I've climbed at least 3 mountains. Name _____ List all 3: _____ _____ _____	I can name 5 Bafana Bafana players. Name _____ Fill in the list below!
I'm left-handed. Name _____	We all have this in common: _____ _____ _____	I'm double-jointed. Name _____	My toe nails are painted. Name _____ Color: _____	I have a famous dopple-ganger Name _____ Who?: _____
We all have this in common: _____ _____ _____	I have a tattoo. Name _____ What is it?: _____	I can "do the Dougie". Name _____ Who started it? _____	One of my ears is bigger than the other. Name _____	Something I'm wearing is from Mr. Price. Name _____ What is it? _____

Appendix C. Activity 3 (Study A): Pub Quiz

PUB QUIZ!

Introduce yourselves & Create a team name: _____.

Team members: _____

Have House Comm member record start and finish time.

The team with the **MOST** correct answers in 10 minutes wins!

START TIME: _____ END TIME: _____

QUESTIONS: -No Smart Phones!-

Name the wearers of these glasses:



What was the strike in Cape Town on March 7th 2012 about? _____

What country was the first female African Nobel Prize winner from? _____

What team is currently in first place in the South African PSL? _____

Who is the Chief Justice of the SA constitutional court? _____

Who scored the first goal of the 2010 World Cup? _____

Where does bunny chow originate? _____

Which letters make a clicking sound in isiXhosa? _____

Name the cartoonists:



Name the artist who sings "How to Love": _____

*Name a tattoo on her/his face: _____

Name the artist who sang "Pata Pata": _____

*What year did she/he die? _____

Name the artist who sings "Cooler as Ekke": _____

*What language does she/he sing in? _____

Who never got his/her visa to attend Desmond Tutu's birthday party last year? _____

Name all of the official languages of SA. _____

Appendix D. Activity 4 (Study A): Fast Friends

Get To Know Your Res-Mates!

Pair or triple up with people you haven't met or don't know well.

Take turns answering these questions starting with #1, to get to know your res-mates.

1. Given the choice of anyone in the world, whom would you want as a dinner guest?
2. What would constitute a "perfect" day for you? Where would go? With whom?
What would you do?
3. Name 3 things you and your partner appear to have in common.
4. For what in your life do you feel most grateful?
5. Tell your partner your life story in as much detail as possible in 60 seconds.
6. If you could wake up tomorrow having gained any ability, what would it be?
7. If a crystal ball could tell you the truth about your life or the future what would you want to know?
8. What is your greatest accomplishment?
9. What do you value most in a friendship?
10. What is your most treasured memory?
11. Share with your partner an embarrassing moment in your life.
12. Tell your partner something that you like about them already.

Appendix E. Posttest Survey Items—Study A1

When I heard about the activity nights I felt (circle ALL that apply): accepted embarrassed interested rejected positive anxious bored keen disappointed comfortable irritated excited confident vulnerable other
During the activity nights I felt (circle ALL that apply): accepted embarrassed interested rejected positive anxious bored keen disappointed comfortable irritated excited confident vulnerable other
After the activity nights, I have interacted with someone I've met during the activity nights: No Yes *If yes, CIRCLE one: facebook email meet up conversation other *If yes, were they were from the same or a different racial group to your own? Same Different
Do you think activity nights should be part of Orientation week for first year students? Yes No
I would like to see my residence hall more integrated. Agree Disagree Not sure
Do you see your university as segregated? Yes No

Appendix F. Intervention Activity Mini-surveys for Study A1

- [All intervention sessions]:

○ How would you rate tonight's activity?

▪ 1(very poor) 2 3 4 5(excellent)

- [Session 1]:

○ Did you exchange information with someone new tonight?

▪ Yes No

- [Session 2]:

○ Would you like to learn more about someone you met tonight?

▪ Yes No

- [Session 3]:

○ Would you be open to meeting up with someone you met tonight?

▪ Yes No

- [Session 4]:

○ How positive do you feel right now? (circle one)

1(not at all positive) 2 3 4 5(extremely positive)

Appendix G: Pretest Survey for Study A2

Residence Hall Survey #1																			
Thanks so much for completing the FIRST of our two survey series. Your input is very important to us. ☺ Please note that these surveys are completely voluntary, but for participating, you will be entered into a lottery to win several PRIZES including an IPOD! If you have questions please feel free to contact the researcher, Caroline Kim (Psychology department) at kmxcar001@uct.ac.za																			
Student Number*:	<table border="1" style="width: 100%; height: 20px;"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																		
<i>*Your student number will NOT be connected with your answers in any way. It will be used to notify you if you win a prize, and it will be replaced with a code for data recording purposes.</i>																			
<i>For each question please circle or tick to your response. Please read each question CAREFULLY.</i>																			
• Gender: ☐ M ☐ F																			
• Race: ☐ Black ☐ White ☐ Colored ☐ Indian ☐ Asian Other:																			
• How many of your interactions are with people of a different race to you: <table style="width: 100%;"><tr><td style="width: 20%;">o <u>at university?</u></td><td style="width: 15%;">☐ None</td><td style="width: 15%;">☐ Few</td><td style="width: 20%;">☐ About Half</td><td style="width: 15%;">☐ Most</td><td style="width: 15%;">☐ All</td></tr><tr><td>o <u>at your residence?</u></td><td>☐ All</td><td>☐ Most</td><td>☐ About Half</td><td>☐ Few</td><td>☐ None</td></tr><tr><td>o In social settings?</td><td>☐ None</td><td>☐ Few</td><td>☐ About Half</td><td>☐ Most</td><td>☐ All</td></tr></table>		o <u>at university?</u>	☐ None	☐ Few	☐ About Half	☐ Most	☐ All	o <u>at your residence?</u>	☐ All	☐ Most	☐ About Half	☐ Few	☐ None	o In social settings?	☐ None	☐ Few	☐ About Half	☐ Most	☐ All
o <u>at university?</u>	☐ None	☐ Few	☐ About Half	☐ Most	☐ All														
o <u>at your residence?</u>	☐ All	☐ Most	☐ About Half	☐ Few	☐ None														
o In social settings?	☐ None	☐ Few	☐ About Half	☐ Most	☐ All														
• Name your 5 closest friends (<i>first name or initials only</i>): _____																			
• 20. Of the friends above, _____ are of a different race to you: <table style="width: 100%;"><tr><td style="width: 15%;">o ☐ 0</td><td style="width: 15%;">☐ 1</td><td style="width: 15%;">☐ 2</td><td style="width: 15%;">☐ 3</td><td style="width: 15%;">☐ 4</td><td style="width: 15%;">☐ 5</td></tr></table>		o ☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5												
o ☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5														

I would accept people of a different race to me being _____.

***Tick ALL that apply to you.**

- ☐ close relatives by marriage
- ☐ close personal friends
- ☐ neighbours on the same street
- ☐ coworkers at the same office
- ☐ citizens in my country
- ☐ only visitors to my country
- ☐ people excluded from my country.

- **When interacting with people who I do NOT know, of other racial groups, I feel:**
(Please read each one carefully and circle one)

- Not at all Comfortable -----Extremely **Comfortable**

1 2 3 4 5

- Not at all UNcertain -----Extremely **UNcertain**

1 2 3 4 5

- Not at all Confident -----Extremely **Confident**

1 2 3 4 5

- Not at all Awkward -----Extremely **Awkward**

1 2 3 4 5

- Not at all Anxious -----Extremely **Anxious**

1 2 3 4 5

- Not at all At Ease -----Extremely **At Ease**

1 2 3 4 5

Appendix H. Posttest Survey

Residence Hall Survey #2

Thanks so much for completing the SECOND of our two survey series.

Your input is very important to us. ☺

Please note that this survey is completely voluntary,
but for completing you will be entered to win several PRIZES including an IPOD!

If you have questions please feel free to contact the researcher,
Caroline Kim (Psychology department) at kmxcar001@uct.ac.za

Student Number*:

--	--	--	--	--	--	--	--	--

**Your student number will NOT be connected with your answers in any way. It will be used to notify you if you win a prize, and it will be replaced with a code for data recording purposes.*

For each question please circle or tick to your response. Please read each question CAREFULLY.

- I participated in activity nights.

- How many of your interactions are with people of a different race to you:

- ☐ at university?
- ☐ at your residence?
- ☐ In social settings?

- Name your 5 closest friends (*first name or initials only*):

- 20. Of the friends above, _____ are of a different race to you:

- ☐

I would accept people of a different race to me being _____.

*Tick ALL that apply to you.

- ☐ close relatives by marriage
- ☐ close personal friends
- ☐ neighbours on the same street
- ☐ coworkers at the same office
- ☐ citizens in my country
- ☐ only visitors to my country
- ☐ people excluded from my country.

- When interacting with people who I do NOT know, of other racial groups, I feel:
(Please read each one carefully and circle one)

- o Not at all Comfortable -----Extremely Comfortable

1 2 3 4 5

- o Not at all UNcertain -----Extremely UNcertain

1 2 3 4 5

- o Not at all Confident -----Extremely Confident

1 2 3 4 5

- o Not at all Awkward -----Extremely Awkward

1 2 3 4 5

- o Not at all Anxious -----Extremely Anxious

1 2 3 4 5

- o Not at all At Ease -----Extremely At Ease

1 2 3 4 5

Appendix I. Activity 2 (Study B): Unsolved Mystery Game–Instructions and Clues

UNSOLVED MYSTERY Instructions

Choose a team name: _____

Team Members: _____

Sam Sicke, a first year med student at UCT, walks into your office with curious symptoms, some of which are believed to be part of a new infectious disease spreading quickly throughout UCT. Use the clues to solve the medical mystery!

Pass the packet of clues around, taking 1 clue at a time, until the bag is empty.

You may only READ the clues to your team. Don't show/give your clues to anyone!

As fast as you can, find out:

1 What symptoms were caused by the disease _____

2 When Sam Sicke was infected _____

3 How Sam Sicke was infected _____

4 Who else is most likely to also be infected _____

When finished, submit your answers & return clue pack.

While camping in the national park, Mr. Sicke and Mr. Lindt went swimming in the lake and hiking through the woods.	On Tuesday, the 24 th of April, Mr. Sicke went camping with his friend Mr. Lindt in Table Mountain National Park.	Mr. Beam and Mr. Sicke shared a water bottle and several other drinks while watching the rugby game.
Mr. Sicke arrived in your office at 10 AM, the 2 nd of May, for an appointment. During the physical examination, you discover a purple rash on Mr. Sicke's lower back.	On Monday, the 30 th of May, Mr. Sicke and Ms. Weathers had dinner together at Ocean Basket where they shared a pot of mussels and a plate of calamari and chips.	Park rangers in the national park recently reported strange sightings of many animals with large purple spots on their bodies.
The effects of the toxic algae are unknown but, according to a local ecologist, anyone who comes in contact with the algae is in danger of absorbing the toxic chemicals.	On Friday, the 27 th of April, Mr. Sicke attended a rugby match with Mr. Beam where Mr. Sicke reports they yelled a lot and avidly cheered on their team.	On Monday, the 30 th of May, Mr. Sicke discovered small patches of itchy bumps all over his arms while he was showering.
Mr. Sicke reported that the national reserve banned all campers from fishing in the dam due to an increase in toxic algae which contaminated the water source.	Based on other similar cases, a specialist believes that the symptoms of this new disease take at least 5 days to appear, but all symptoms appear within 8 days of the infection.	An allergy test revealed that Mr. Sicke is mildly allergic to shellfish, an allergy that often causes hives, or patches of small itchy bumps, to form on his skin.
On Sunday, the 29 th of April, Mr. Sicke was in bed all day with a sudden high fever.	After their dinner date, Mr. Sicke and Ms. Weathers watched a movie at her house and he returned home the next morning.	Mr. Sicke remembers that on Friday, the 27 th of April, he had a sore throat.

Appendix J. Activity 3 (Study B): Word Scramble—Instructions and Words

WORD SCRAMBLE!

INSTRUCTIONS:

Introduce yourself to your team.

Create a Team Name. _____

Team members:_____.

UNSCRAMBLE each set of words from different languages to figure out what the question is. Each Question is in a different font!

Write down the answers. (Each group member must answer!)

Question 1: (English translation)

??

Answers:

-

Question 2: (English translation)

??

Answers:

-

Question 3: (English translation)

??

Answers:

-

Question 4: (English translation)

??

Answers:

-

Question 5: (English translation)

??

Answers:

What's your kakhulu oomblik? embarrassing Waar wena zalwa? were
 WHAT IS GROOTSTE VREES? YAKHO **Wat do you**
funda? is your Wat in ihlabathi? gunsteling
 plek jy kan pheka? is Wat een thing What do wena thanda to doen op
 die impela-veki?

Note. English translation: What is one thing you can cook? What is your favorite place in
 the world? What do you study? What is your most embarrassing moment? What do you
 like to do on weekends? Where were you born? What is your greatest fear?

Appendix K. Activity 4 (Study B): Mad Libs Dating Guide Game—Instructions & Dating

MAD LIBS!—HOW TO FIND THE PERFECT DATE!

Instructions:

Introduce yourself to your team 😊

Create a Team Name: _____

Team members: _____

Make sure your group includes new people you don't already know well!

One person records while each member takes turns answering different questions for each blank. When finished, you'll receive a dating guide!

Write in each word next to the matching number in the story, then one person reads the story aloud to the group.

One adjective to describe your hairstyle or fashion: _____

One adjective to describe your favorite food: _____

If someone were to make a movie on the story of your life, which actor/actress would you pick to play you? _____

Name your favorite musician (one person): _____

One adjective to describe your least favorite class at UCT: _____

Something you did a lot as a baby: _____ (present verb)

What's your favorite store? _____

Name one of your pet peeves (something that gets under your skin):
_____ (present verb)

Name one adjective that describes a pet you've had: _____

One adjective to describe your favorite season? _____ +y

How many kids do you want to have in the future? _____

What's your favorite popcorn flavor? _____ +y (i.e. butter+y=buttery)

A family member you're close with _____ +s (i.e. sister+s=sisters)

What's one adjective to describe Julius Malema? _____

What's your favorite candy/sweet? _____

What's your favorite movie genre (i.e. comedy, romance, horror, sci fi, etc.)? _____

One adjective to describe the food you're eating now: _____

Something you like to do on vacation/holiday:
_____ +ing

Name an animal that you resemble or that's most like you: _____ +s

Mad Libs—Dating Guide

How to Find the Perfect Date!

Sometimes it just seems like there aren't *any* (1) _____ guys out there! The only even slightly (2) _____ guys like (3) _____ and (4) _____ either are famous or not real! It's a (5) _____ situation that most people can relate to. But do not (6) _____!

Step 1: How often do you go to (7) _____ without having any idea of what you're looking for? Know what you are looking for. Many girls like guys who can (8) _____. Many guys like (9) _____ girls.

Step 2: To find a (10) _____ date, it helps to constantly be meeting lots of people. Try going to (11) _____ more parties a month, and make sure you talk to all the potential (12) _____ (13) _____ there. Give even the more (14) _____ ones a chance--get to know them!

Step 3: When you've found potential (15) _____, to get them to date you, let them see all the (16) _____ in you. Don't hide the (17) _____ you!

I wish you luck and successful (18) _____. And remember to have some (19) _____ along the way.

Appendix L. Posttest Survey Items—Study B1

When I heard about the activity nights I felt (circle ALL that apply):

☐ accepted ☐ embarrassed ☐ interested ☐ rejected
☐ positive ☐ anxious ☐ bored ☐ keen
☐ disappointed ☐ comfortable ☐ irritated ☐ excited
☐ confident ☐ vulnerable ☐ other _____

During the activity nights I felt (circle ALL that apply):

☐ accepted ☐ embarrassed ☐ interested ☐ rejected
☐ positive ☐ anxious ☐ bored ☐ keen
☐ disappointed ☐ comfortable ☐ irritated ☐ excited
☐ confident ☐ vulnerable ☐ other _____

After the activity nights, I have interacted with someone I've met during the activity nights:

☐ No ☐ Yes

*If yes, CIRCLE one:

☐ facebook ☐ email ☐ meet up ☐ conversation ☐ other _____

*If yes, were they from the same or a different racial group to your own?

☐ Same ☐ Different

*If yes, were they from the same or a different social circle to your own?

☐ Same ☐ Different

Do you think activity nights should be part of Orientation week for first year students?

☐ Yes ☐ No

I would like to see my residence hall more integrated.

☐ Agree ☐ Disagree ☐ Not sure

Do you see your university as segregated?

☐ Yes ☐ No

How well did your team cooperate during the activity night(s)?

Circle one

Did NOT Cooperate-----Cooperated Extremely Well

1

2

3

4

5

Appendix M: Pretest Survey Items

Residence Hall Survey #1

Thank you very much for completing this survey, the first of our **two-survey series**. For completing **Survey #1 AND Survey #2 (available in April)** you will be entered into a lottery to win prizes, including an IPOD! Your Student Number will be used to notify you if you win. It will not be connected with the data you provide in any way. Your Student Number will be replaced with a code for our records. You are free to withdraw from this survey at any time. If you have questions please contact the researcher at caroline.kim@uct.ac.za (Psychology Department)

STUDENT

--	--	--	--	--	--	--	--	--

NUMBER:

For each question please tick ✓ one box, unless otherwise indicated.

1. What year are you? ☐ 1st ☐ 2nd ☐ 3rd ☐ 4th

2. Gender: ☐ Male ☐ Female

3. My racial group is: ☐ Black ☐ White ☐ Colored ☐ Indian ☐ Asian ☐ Other:

4. My 5 closest friends are (by first name or initials only):

i) _____ ii) _____ iii) _____ iv) _____
v) _____

5. Of the friends above, how many are of a different racial group to you?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

In the following environments, how many of your interactions are with people of a different race than your own:

6. at university:	☐ All	☐ Most	☐ About Half	☐ Few	☐ None
7. in your residence hall:	☐ All	☐ Most	☐ About Half	☐ Few	☐ None
8. in social settings:	☐ All	☐ Most	☐ About Half	☐ Few	☐ None

When interacting with people who I do not know, of other racial groups, I feel _____:

	not at all...	somewhat...	moderately...	very...	extremely...		
9.	☐	☐	☐	☐	☐	comfortable.	(Tick ✓ 1)
10.	☐	☐	☐	☐	☐	anxious.	(Tick ✓ 1)
11.	☐	☐	☐	☐	☐	uncertain.	(Tick ✓ 1)

13. If I had the opportunity, I would be very likely to do the following: (tick ✓ ALL that apply to you)

- ☐ work on a group project with someone of a different race to my own
- ☐ hang out with someone of a different race
- ☐ invite someone of a different race over to my home for a meal
- ☐ share a flat/house with someone of a different race
- ☐ date someone of a different race
- ☐ accept someone of a different race into my family through marriage
- ☐ avoid the situations above

Residence Hall Survey #2																													
Thanks so much for completing the SECOND of our two survey series. Your input is very important to us. Please note that this survey is completely voluntary, but for completing this you will be entered to win several PRIZES including an IPOD! If you have questions please contact the researcher: kmxcar001@uct.ac.za (Psychology Department)																													
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Which games did you participate in? (tick ☒ ALL that apply) None <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">People Bingo</td> <td>Solving a Murder or Medical Mystery with clues</td> </tr> <tr> <td>Mad Libs "Dating Guide"</td> <td>Unscramble Questions in SA languages</td> </tr> </table>						People Bingo	Solving a Murder or Medical Mystery with clues	Mad Libs "Dating Guide"	Unscramble Questions in SA languages																				
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Appendix O. Intervention Advertisement

NOTICE TO STUDENTS

Dear Kopano and Baxter students,

Starting Weds, Sept. 14, there will be fun activities going on in the dining hall during dinner. Of course, you are not required to participate, and you may withdraw at any time. But, it's the perfect opportunity to meet and interact with your neighbours and different people; and who knows, you might even meet some cool new people!

You will be mixed up into teams by table and will have a short 15-minute table game that you can play while eating. You will compete against other tables, and the winning team will be announced at the end of dinner each Wednesday night from Sept 14-Oct 5.

These activities are part of a study, which will include surveys and observations, with the support of the wardens and House Committees of Kopano and Baxter, as well as Psychology, Student Affairs, University Housing, and the University Ethics Committee.

Hopefully this will be a nice little break in between studies!

If you have any further questions, please feel free to contact any of the following team members involved in this study. Our details are listed below.

cak608@mail.harvard.edu, leigh.schrieff@uct.ac.za, colin.tredoux@uct.ac.za