Intergroup Contact and Housing Selection of United States Study Abroad Students

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Abstract

Since its introduction by Allport (1954; Nature of Prejudice), the contact hypothesis has expanded beyond understanding the relationship between intergroup contact and prejudice reduction (Zuma, 2014). The contact hypothesis has also been used to understand the relationship between intergroup contact and intercultural attitudes and cross-group friendships (Tawagi & Mak, 2014). This research aimed to understand the impact of housing as a catalyst for intergroup contact as it relates to negative intercultural attitudes and intergroup anxiety for United States Semester Study Abroad students at the University of Cape Town (UCT).

A longitudinal quasi-experimental design was used to examine the impact of housing type on factors of intergroup contact, like quantity and quality of contact with SA students, negative and positive contact, intergroup anxiety and negative intercultural attitudes, over the US study abroad semester and when they return home. Two surveys were administered while US students were in-country and one administered when they returned home. Mixed linear models and longitudinal path models were used to analyze relationships between the variables over time. The current study showed an impact of program housing on the quantity and quality of contact with SA students and negative intercultural attitudes over time. US study abroad students living in UCT Residence and Campus Key reported more quantity of contact with SA students, especially Black SA students. The housing type of the US student impacted negative intercultural attitudes and quality of contact, moderated by time. This research expands the growing literature about the impact of intercultural and international contact on longitudinal effects of study abroad. Future research could expand on the current research by exploring the kind of contact US students have with SA students based on housing and expand on the preliminary results on where intergroup contact occurs with White and Black SA students.

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Chapter 1: Introduction to Contact Theory

Segregation of spaces into unjust and unequal segments has existed since ancient civilizations, creating an "us" versus "them" dynamic between groups of different religions, ethnicities, cultures, and - starting in the 1700s - races (Nightingale, 2012). In both the United States and South Africa, the current diversity from a history of racial and ethnic inequality, slavery, segregation, colonization and industrialization has created a racialized environment (Nightingale, 2012). The relationship between the racialized segregation in South Africa and the United States can be traced to an origin of shared British-led colonial notions of dominating urban real estate with legal and economic control through segregationist models and institutions. Due to this relationship and success in creating institutions that outlived legal segregation (Nightingale, 2012), South Africa and the United States make ideal environments to observe intergroup relations alongside the impact of desegregation and contact between groups.

The practice of desegregation in the United States in the 1950s and 1960s of neighborhoods, schools, work environments, political organizations, and public spaces lent itself to an opportunity to understand intergroup contact between previously segregated groups. In his 1954 book, *Nature of Prejudice*, Allport's contact hypothesis was developed to suggest a positive impact from intergroup contact, in which prejudice would be reduced with increased contact between groups. The theory was developed the same year that segregation in the US was deemed unlawful, and the theory would be evaluated, applied, challenged, and criticized for years to come. Additionally, it has been used to understand more than the impact on prejudice. Recent studies have used intergroup contact theory to explain and understand the influence of intergroup contact on intergroup attitudes, political beliefs and action, and intercultural intelligence (Pettigrew et al., 2011). Through this lens, the hypothesis does not require optimal conditions,

but optimal scenarios and environments can mediate the effects of intergroup contact for prejudice reduction to occur. By including the broader impact of contact, both positive and negative, there are more clear impacts of intergroup contact in a complex natural world where optimal circumstances are not easily created or observed (Dovidio et al., 2017).

Mediating and Moderating Factors of Contact Theory

Positive contact is the classic desired method for achieving reduced prejudice or improved intergroup feelings from intergroup contact. Prejudice feelings after contact are moderated by the environment and whether the optimal conditions for positive contact are present. In recent meta-analyses of intergroup contact literature, there are four identified conditions for positive, productive contact: contact free of anxiety, equal status of participants, cooperative instead of competitive attitudes, and variation of social settings (Pettigrew et al., 2011). In non-experimental social settings and everyday interactions, the opportunity for positive and productive intergroup contact has been impacted by socio-economic and historical segregation and desegregation movements.

The history of desegregation and studies into the effectiveness of desegregation policies and processes has shown that if contact is enforced unequally to groups, the contact is more negative, which reinforces prior prejudices (Forbes, 2004). Countries like South Africa and the United States, with deep-rooted racial and socio-economic inequality and segregation, create a challenge for equal status between social groups and optimal environmental conditions. The segregation that creates economic inequality also fosters intergroup anxiety, which can lead to negative contact or contact avoidance, through the lack of diverse public spaces like schools, churches, or parks. This segregation forms parallel lives where intergroup contact is forced

through busing or institutional social incentives (Nightingale, 2012), which makes meaningful contact more difficult (Dixon, Durrheim & Tredoux, 2005).

The conditions for successful contact are particularly relevant to explore with regards to the population of the United States study abroad students at the University of Cape Town, the main study site, because these students report limited local experiences, varying personal backgrounds, and varying levels of intergroup comfort. Intergroup contact on university campuses extends beyond a classroom or campus setting into housing arrangements and rooming. Study abroad and university residences create a space where students can be assigned to interracial and international shared living spaces and indirect intergroup contact. The segregation found in Cape Town can make it difficult for US students to meet with South Africans across the city, but planned housing assignment engineers an environment suitable for more optimal conditions for contact that are limited due to segregation seen on campus and the greater Cape Town area (Dixon, Durrheim & Tredoux, 2005).

Once the contact between interracial roommates over time is understood, there is an opportunity to obtain more understanding of how intergroup contact can be impacted and changed over time. In order to understand how interracial shared living spaces impact intergroup contact over time, Shook and Fazio (2008) conducted a study at a US first-year university residence. The participants were White first-year students that were assigned to rooms with either a White or Black roommate. They were asked to state their level of involvement and satisfaction with their roommates as well as to complete surveys to measure their intergroup anxiety and implicit racial attitudes. Shook and Fazio (2008) observed that as the semester progressed, interracial rooming arrangements improved implicit racial attitudes and lowered

intergroup anxiety experienced by the White roommates (the Black roommates were not surveyed).

In order to expand on the finding of lowered intergroup anxiety while living with interracial roomates, Shelton et al. (2010) investigated the daily interactions between interracial roommates at a university in the United States. The levels of intergroup anxiety in living arrangements were measured along with how the minority group roommate perceived the anxiety from their White roommate. Over time, the anxious behaviors were perceived by the outgroup roommate as the anxious person disliking the outgroup roommate. In another study with interracial university roommates, West et al. (2013) found that higher levels of intergroup anxiety experienced by a White roommate made ethnic minority roommates more likely to have negative perceptions of the roommate and low tracking accuracy which is low relationship between the White roommate's assessment of their roommate's interest in relation to the roommate's stated interest. During a 15-day study into the daily interactions between interracial roommates and in-group roommates, there was evidence that positive emotions toward ethnic minority roommates from the White roommates declined over time (Trail et al., 2008). The intra-racial rooming pairs experienced more positive emotions and intimacy behaviors than interracial rooming pairs. The other roommate's level of intimacy-building behaviors like self-disclosure mediated the negative effects of the roommate's race.

Interracial rooming is an example of how contact can produce both negative and positive effects. The investigation of negative contact is often overlooked in the contact literature, and the examples in these interracial roommate studies challenge the idea that more contact produces a reduction in prejudice (Barlow et al., 2012). The 'contact caveat' was introduced by Barlow et al., (2012) to describe the asymmetrical nature of contact effects on prejudice. The results of the

study supported the caveat that negative contact is a stronger predictor of increased prejudice than positive contact is a predictor of decreased prejudice. The moderating factor in prejudice effects rests in the valence of contact, and negative contact is a stronger predictor variable than positive contact. Along with the predictive nature of negative contact, the constancy and intensity of the contact predict overall intergroup negativity (Barlow et al., 2012; Hayward et al., 2017).

Further evidence for contact asymmetry comes from examining the varying experiences of intergroup contact felt by minority groups in the United States. The intergroup experiences for Black, Hispanic, and Asian Americans vary in intensity and rate of negative contact in the US (Hayward et al., 2017). For example, Hayward et al. (2017), found that Black Americans experienced more intense and more frequent negative contact than Hispanic Americans. The results of the study found that anger and intergroup anxiety acted as mediators between contact, prejudice, and avoidance from White Americans toward Americans from minority groups (Hayward et al., 2017). As negative contact does not carry the same mediating weight across minority groups, it strengthens support for the asymmetrical nature of contact.

In a recent meta-analysis exploring intergroup contact and intergroup bias, Dovidio et al. (2017) identified the mediating mechanisms and moderating factors of intergroup contact in addition to the moderating optimal conditions for positive contact. Perceived typicality and anticipation of discrimination by minority groups moderate the effects of contact in addition to optimal conditions. The perceived typicality refers to contact with an outgroup member that is viewed as typical of their social group. If the interaction is viewed as atypical or an exception, the contact is less effective in improving intergroup attitudes (Binder et al., 2009; Dovidio et al., 2017). Because the US is a diverse nation with segregation and inequality, opportunities for

intergroup contact vary for each individual case. Students who attend diverse schools or live in diverse neighborhoods are more likely to have more diverse social groups and attend multi-racial religious congregations in adulthood than students who attended less diverse schools or lived in less diverse neighborhoods (Emerson et al., 2002). Different forms of indirect extended contact can improve outgroup attitudes mediated by reducing intergroup anxiety and increasing positive perceptions of intergroup norms that could improve later direct intergroup contact (Turner et al., 2007; Vezzali et al., 2014). Vicarious contact, also known as indirect contact, can function as a form of contact that alleviates some of the intergroup anxiety and perceived outgroup uncertainty present in direct contact situations. It allows groups to build familiarity with outgroups to improve willingness to engage in contact and create more positive intergroup attitudes (Mazziotta et al., 2011).

In multiple meta-analyses, contact is shown to be more successful in improving attitudes toward disadvantaged groups by members of advantaged groups rather than the inverse (Dovidio et al., 2017; Tropp & Pettigrew, 2005). Anticipation and perceived discrimination from minority groups lessen the effects of contact, but the opposite effect has also occurred through the 'sedative effect'. The sedative effect (Cakal et al., 2011) refers to the disadvantaged group member's decreased ability to recognize discrimination and create a reduction of restorative policies with an increase in positive contact with the advantaged outgroup (Dixon et al., 2007; McKeown & Dixon, 2017). Contact can lead to assimilation or the reduction of differences (Forbes, 2004), which can be seen in the sedative effect of minority members with successful, positive intergroup contact (Dixon et al., 2007). In contrast, there is support to suggest that increased White South African contact with Black South African students can improve White

South Africans attitudes toward racial justice interventions in education, land and employment (Dixon et al., 2007).

Self- concept and social categorization are mediating factors in intergroup contact that are salient in the proposed study (Dovidio et al., 2017). For US study abroad students, there are multiple social identities present that may not be so salient during their experiences while in the US. For example, the American national identity would be more salient outside of the US than when the US students are on their home campus. Gaertner and Dovidio (2000) introduced the Common Ingroup Identity Model to understand the impact of social identity on intergroup bias and conditions for contact by proposing an induction of common ingroup identity, like a shared school team or shared student identity. Recategorization and de-categorization of social identity can reduce prejudice through contact by changing the way individuals categorize themselves (Dovidio et al., 2017). Recategorization refers to the change in conceptual understanding of "us" and "them" to a shared "we" identity between two individuals from different social groups, while de-categorization decreases the salience of any group identities. In relation to contact, social categorization mediates whether the contact will be competitive or cooperative, based on the perception of shared goals or common identity (Dovidio et al., 2017).

Common Identity Theory stems from the influence of common identity during interracial contact. The theory proposes that through a process of social categorization by recategorization into a shared or common social identity, outgroup members' attitudes toward one another will be mediated by emphasizing a shared identity (Nier et al., 2001). Emphasizing shared identity as a student or university club/sport membership over social categorizations related to racial, ethnic, or personal social identity would be an example of recategorization within a university setting. The present study explored the contact between US students and SA students on campus as

opposed to contact outside of the university environment where the common, student identity could be less emphasized. In the intergroup contact literature, contact quality shows to be more impactful than contact quantity for increasing positive intergroup attitudes. Also, intergroup or cross-group friendships have been identified as a source of quality contact helpful in developing positive intergroup contact (Dovidio et al., 2017; Pettigrew & Tropp, 2006).

Cross-group Friendships

The vast field of cross-group friendship is essential in understanding the mechanisms of intergroup contact between US study abroad students and full-time UCT students. Positive effects of intergroup contact, like prejudice reduction and improved intergroup attitudes, are mediated by cross-group friendship building and quality of contact. The mediating and moderating factors of adolescent cross-group friendships reveal how and why cross-group friendships are successful in improving intergroup attitudes and reducing prejudice (White et al., 2009). In a study of adolescent cross-group friendship and interracial contact, adolescents who identified as having outgroup friends reported lower levels of subtle racism than adolescents without outgroup friends, but the friendship quality did not moderate the prejudice levels (White et al., 2009).

There is a correlation between cross-group friendships and positive intergroup attitudes, but the origin of how friendship works to mediate intergroup attitudes has not been explored as much in the literature (Davies et al., 2011; Tropp & Pettigrew, 2005). In order to understand why friendship works to mediate attitudes, Davies et al. (2011) compared the conceptualizations of friendship and friendship attitude associations in the cross-group friendship literature. The study identified that time spent, and self-disclosure with outgroup friends had the most significant association with intergroup attitudes. Like the finding of improved interracial roommate

relationships, this finding supports the idea that positive behavioral engagement improves attitudes (Davies et al., 2011).

Often in segregated societies like the United States and South Africa, contact and cross-group friendship is difficult to foster between different cultural, racial, or ethnic groups. Spatial segregation is a major moderating factor of cross-group friendship (Turner et al., 2007). In integrated schools, factors that influence intercultural friendship include target socializing, similarities and differences in culture, and prior intercultural experience (Sias et al., 2008). Initiatives to foster intergroup contact and friendship can be hindered by intergroup anxiety and other intercultural barriers (Florack et al., 2014; Sias et al., 2008). Paradoxically, cross-group friendship reduces intergroup anxiety. Because intergroup anxiety predicts less quantity and quality of contact, it also mediates the formation of cross-group friendships (Turner et al., 2007).

Different forms of indirect extended contact can improve outgroup attitudes, and may be mediated by reduced intergroup anxiety and increased positive perceptions of intergroup norms that could improve later direct intergroup contact (Turner et al., 2007; Vezzali et al., 2014). These results were impacted by reducing the anxiety and affective emotions involved in intergroup interactions (Mazziotta et al., 2011). Cross-group friendship and intergroup contact, more generally, can be used to understand contact between individuals nationally and internationally. As the present study explicitly looks at the intergroup contact between US and SA students at UCT, the presence of cross-group friendship and other mediating factors of contact are pivotal in understanding the impact of the contact US students are engaging in during the semester.

The role of international characteristics and environments are investigated in the following section to expand on general mediating and moderating factors of intergroup contact.

Chapter 2: International Contact

Intergroup contact on an international scale

The intentional international and intercultural contact while studying abroad in Cape Town varies according to program and personal characteristics. The literature about intergroup contact and study abroad is influenced by different areas of study, like education, international affairs, and intergroup relations. In order to understand international contact in the context of the population and the specific study abroad environment, this study will focus on the literature related to a university study abroad international contact.

As the world is continuing to become more interconnected through available mass information, quick news, and more accessible international travel, study abroad enrollment has increased. Even with the number of students steadily increasing since 2016 with a 1.6 percent increase in 2018 to 347,099 students (NASFA, 2017), the US government is continuing to expand the number of students and accessibility for those who study abroad as employers desire new hires to have international competence (NAFSA, 2017). With such an emphasis on global education, researchers have evaluated the impact of study abroad on intercultural attitudes and international intelligence through direct international contact and the personal motivations to study abroad.

The intergroup contact in the following study is both intentional and organic. Because the population of US study abroad students at UCT chose to travel and study abroad in Cape Town, there was intention to engage as well as ability to access international contact. Kim and Goldstein (2005) investigated the impact of intercultural attitudes before studying abroad as well as study abroad expectations of US students. The results of the study revealed that the intent to

study abroad is facilitated by intergroup attitudes before the intergroup contact. The predictors of positive expectations were identified as lower ethnocentrism, higher language interest, and lower intercultural communication apprehension (Kim & Goldstein, 2005). This intent for contact was seen in another study of student exchange which suggested that stereotypes become more negative longitudinally because students arrive in their host country with an overly positive perception of the country (Stangor et al., 1996).

Other researchers found some factors that impact the intent to study abroad, including social and cultural capital, subject of study, and socioeconomic status (Salisbury et al., 2009). Individuals with higher socioeconomic status and the means to explore and engage with different international communities often have more access to voluntary intercultural and international contact. Privilege and power impact the optimal conditions for positive contact under the circumstances of international intergroup contact for students participating in study abroad programs.

The goals and intentions of study abroad programs differ, which can impact the amount of contact with local members of the host country. The quantity of contact with local members was a strong predictor of positive attitudes toward the local country regarding the exchange students' stereotypes, international attitudes, and individual variability of members of the host country (Stangor et al., 1996). The sample included US students studying abroad in either Germany or England for a year. Ease to make contact with host country members, quantity and quality of contact, and housemate satisfaction were also strong predictors of positive attitudes of host country members (Stangor et al., 1996). The conclusions drawn from the study by Stangor et al. (1996) suggest that study abroad programs arranged to initiate and encourage direct intergroup contact will have a more successful effect on positive attitude changes in the US

students. Broadly, study abroad can provide students with an opportunity to enhance their personal development by gaining more intercultural competence of their own countries' culture and cultural differences from the host country through comparison and contrast (Maharaja, 2018). Self-awareness and global-mindedness are among some of the identified characteristics developed by visiting students during study abroad programs (Maharaja, 2018).

Utilizing a longitudinal multilevel analysis of study abroad students, Geeraert et al. (2013) evaluated the impact of intergroup contact abroad on cultural adjustment and intergroup relations and found that too much close contact with students from the same country as the visiting student can hinder cultural adjustment and increase stress over time. The results supported the conclusions drawn by Stangor et al. (1996) as more contact with host nationals was necessary for positive intergroup relations and longitudinal cultural adjustment. Close quality contact, with either host or co-national, has a strong positive impact on cultural adjustment and intergroup effect during the abroad experience, but as the program progresses the co-national relationships create stress whereas the relationships with host nationals do not. Over time, they have more co-national contacts than host national contacts, which was associated with a higher level of stress, reduced cultural adjustment and higher perception of derogation of host nationals (Geeraert et al., 2013), whereas cross-group friendship with host nationals longitudinally predicted support for adaptation of foreign culture and perceived group similarity (Hässler et al., 2019).

Close friendships between co-nationals abroad have been described as having family-like qualities (Pazil, 2019). Program characteristics affect both negative and positive attitude change toward the host country. As discussed earlier, attitudes toward the host country are heightened upon arrival (Stangor et al., 1996), and the change in attitude is impacted by situational

experiences and the fulfillment of personal, motivation, or expectations when studying abroad (Paris et al., 2014). Study abroad programs are experienced with a combination of a tourist and student experience in a foreign country. Students' expectations of study abroad and the reality of their experiences were captured using a pre- and post- non-experimental design by Paris et al. (2014). The results suggested that contact while studying abroad doesn't alway have a positive impact, especially if the contact is limited to academic spaces, because there are not as many optimal conditions for quality contact to occur with host national students. Suggestions from the results of the study indicated that education programs should allow for more time for students to take control of their local experiences and have a sense of control where intergroup contact occurs and plan events that take place outside of an academic setting. By allowing for a sense of freedom, study abroad programs allow visiting students to create circumstances abroad to increase positive attitudes toward the host country at the end of the program (Paris et al., 2014).

In a more recent examination of study abroad programs, Terzuolo (2018) compares the influence of personal characteristics of students to the program characteristics in their impact on intercultural development. In this study, none of the study abroad program characteristics had a statistically significant impact on the change in intercultural development from before and after the program. Several personal characteristics, like "identifying as female, identifying as a multi-national culture, or having a grandparent born and raised outside the United States" (Terzuolo, 2018), were significantly associated with intercultural development score changes. These results suggest that personal characteristics outweigh program characteristics when looking to increase intercultural competence during study abroad programs.

Barriers to contact

As discussed earlier, when intergroup contact is positive, it reduces prejudice. Intergroup contact also reduces intergroup anxiety and avoidance, but intergroup anxiety, threat, and uncertainty create contact avoidance. Adverse experiences, like negative contact, may influence adverse expectations of future contact and initiating more contact avoidance (Paolini et al., 2018). It introduces the cycle between intergroup avoidance, intergroup contact, and seeking intergroup contact that complicates the contact paradox (Paolini et al., 2018). Mental and emotional resource depletion between intra-group and intergroup contact has been used to understand contact avoidance. Due to outgroup uncertainty and threat inducing feelings, intergroup interaction seems to be more resource depleting due to expected adverse outcomes, like rejection or communication barriers, than intra-group interactions (Paolini et al., 2018).

Davies et al. (2011) discusses the barriers to cross-group friendship, such as intergroup anxiety at appearing prejudiced or receiving a prejudiced response to initiating contact, which is not active when interacting with an intragroup member. For individuals with higher levels of prejudice, intergroup interaction is more resource depleting in mental and emotional capacity and threatening. This resource depletion can contribute to further avoidance and confirmation of prejudiced beliefs (Paolini et al., 2018). A manifestation of supporting intra-group identity and familiarity, media consumption trends show that an individual's media consumption is primarily intragroup content rather than outgroup content (Paolini et al., 2018). Paolini et al. (2018) suggested that a history of diverse (negative, positive, indirect, and direct) contact experiences can eliminate adverse responses or emotions and contribute to less resource depletion interactions. These adverse emotions refer to feelings of anxiety, impatience, or frustration, resulting from communication difficulties, and continued and recurring intercultural interactions

which lead to increased prejudice and discriminatory behavior (Spencer-Rodgers & McGovern, 2002).

Intercultural barriers to contact. Understanding contact avoidance and contact seeking in the context of international contact is even more complicated as there are more intercultural barriers besides intergroup anxiety and threat. Language and cultural differences create a significant barrier to intercultural interactions and friendship development (Battye & Mak, 2008; Sias et al., 2008; Spencer-Rodgers & McGovern, 2002). On the surface, a language barrier would not seem to affect intergroup relations between UCT students and US students because English is the common instructional language. However, outside of the classroom, language is a contributing factor that impacts intercultural contact for students who do not speak multiple South African national languages (which many South African students do).

Communication difficulties due to cultural and language differences invoke aversive emotions that impact intercultural contact, creating a new complexity in intergroup contact experiences. The term "intercultural communication emotions" has been used to understand how adverse emotions impact contact, intercultural attitudes, and prejudice. Spencer-Rodgers and McGovern (2002) found that intercultural contact did not moderate intercultural communication barriers and global attitudes because the intercultural communication effect was strongly related to prejudiced attitudes with both amounts of high and low intercultural contact. Battye and Mak (2008) expand on the initial intercultural communication emotion literature by retesting the results and analyzing the relationship between different forms of contact quality and quantity, intercultural communication barriers, and intergroup attitudes. The study suggests that exposure to international students' different ethnic practices and languages heightened discomfort for local students while the contact had measurably small positive effects on intergroup attitudes.

Intergroup anxiety and intercultural communication emotions are both found to mediate the relationship between intergroup contact and attitudes. In line with the conclusions of previous contact literature, Mak et al. (2014) found that positive intercultural communication emotions, like feelings of curiosity or interest in the cultural differences (Spencer-Rodgers & McGovern, 2002), and quality intercultural contact, mediated more positive attitudes toward international students. Intercultural communication emotions, when compared to intergroup anxiety in the same study, had a more significant relationship with intergroup attitudes because cultural and linguistic differences experienced negatively contribute to negative contact (Mak et al., 2014). Mak et al. (2014) conclude that international higher education programs should be careful to organize and cultivate experiences and opportunities of positive contact by creating a space where cultural and linguistic differences are positively experienced. Specifically, intercultural communication training is encouraged to reduce intercultural barriers before and during times of intercultural contact.

Intercultural barriers to contact and studies of contact on an international scale are often explored with many different cultural subgroups and nationalities. The proposed study will be investigating the contact between full-time UCT students and US study abroad students. As the above studies did not focus on the US student intergroup contact abroad specifically, it is essential to understand the American (US) identity abroad because of its importance in this study.

American Identity Abroad

In understanding the relationship between contact and social identity, the salience of shared intragroup identities or intergroup identities impacts the intergroup bias following the contact. Mechanisms of identity recategorization and de-categorization allow for intergroup

identities to become less salient during contact. US students abroad can experience a change in social identity once they leave the United States. Savicki and Cooley (2011) completed research with American study abroad students studying in European programs to understand how the American identity abroad impacted their mental well-being and adjustment to a foreign culture.

The salience of national group identity may be increased for students participating in an abroad program more so than for US students who complete a semester at their home university, which can also increase the importance of group membership over individual characteristics in students (Savicki & Cooley, 2011). Interracial contact through study abroad interactions is also intertwined with the American identity abroad. White US students' ethnic and racial identifications are challenged abroad more than in the United States, and when asked about their culture, some believe that there is no White culture (Savicki & Cooley, 2011). The US White majority does not have a rival majority population, which makes cultural comparison difficult, and racial segregation nationwide continues to impact the accessibility for contact (Nightingale, 2012). Although the United States was initially a nation made up of Native Americans and immigrants with varying cultures and ethnic identities, third-generation White US nationals' ethnic identity has often become their national identity (Nightingale, 2012).

In a US university setting, the collective national identity of "American" is not salient, yet for White Americans, it acts as an ethnic identity as well. When traveling abroad, the national identity becomes a very salient identity within intergroup contact with host nationals, and this ethnic-national identity can play an interesting role in behavior and identity understanding when the student returns to the US, compared to US students who did not travel abroad. Host students in the study abroad countries commented and evaluated the US students on their American identity, which other American students would not do in their home universities. In turn, the US

students evaluated host students on their group membership more than they would other students at US universities. With an emphasis on national group salience, study abroad experience can work as a catalyst for identity re-examination or understanding by the visiting student (Savicki & Cooley, 2011).

American Identity in South Africa. UCT hosts over 5,000 international students a year, which creates a global presence on campus in addition to the over 30,000 diverse South African students (Semester Study Abroad, 2020). The population for the present study was limited to only US participants due to the variability between international students from varying countries and cultural backgrounds that would be interacting with an already diverse South African population. In order to explore the American-South African relationship, Ferguson and Adams (2015) researched the specific presence and impact of Americanization on young adults in Johannesburg. They measured the influence of remote acculturation or Americanization through the levels of individualistic values, family conflict, and psychological well-being. American pop culture and fast food chains were identified as impactful influences on South African acculturation. The presence of American study abroad students could increase the overall American cultural presence and contact in South Africa. The demographics of American study abroad students and UCT students create a diverse environment for not only intercultural contact but also interracial contact through the presence of US students on the UCT campus. However, the process of forming meaningful multi-cultural or interracial friendships is made more difficult with the micro-ecological segregation found on South African integration campuses more broadly (Dixon, Tredoux & Clack, 2005).

UCT as a diverse environment

For both US and South African university students, intergroup contact is experienced between intersectional social groups including but not limited to race, ethnicity, nationality, gender, and religion. With the different integration in the US compared to South Africa, the quantity and quality of intergroup contact is not equivalent from student to student.

In this particular study, the environment in which contact is being measured and understood is a more racially diverse space than what would describe South Africa as a whole, which is 80.6% African/Black, 8.1% White, 8.7% Colored, and 2.1% Indian according to the 2016 census (Statistics South Africa, 2017). The racial demography of Cape Town is 38.6% African/Black, 15.7% White, 42.4% Coloured, and 1.4% Indian (Statistics South Africa, 2017). The racial demography at UCT in 2018 (University of Cape Town, 2018) differed: 22% White, 25% African/Black, 13% Colored, 6% Indian, 17% SA unknown and 17% international. This specific segregation on campus and the other nuances of UCT are essential to consider when evaluating the intergroup contact between incoming US study abroad and SA students.

The contact hypothesis was first developed during a civil and social movement in the United States when the racial integration of schools, neighborhoods, and public spaces started to be implemented. Integration and intergroup contact seemed to be associated and often discussed together. A more recent review of intergroup contact decades after integration in the United States and more than 20 years after the Apartheid in South Africa has shown that public space are not spaces where organic intergroup contact would always occur. Micro-ecological segregation of public spaces, such as beaches, public transit, and schools, revealed that within an integrated society like South Africa, there are patterns of racial and ethnic segregation between groups (Dixon, Durrheim & Tredoux, 2005; Tredoux et al., 2017). This organic segregation

impacts the opportunity and effectiveness of intergroup contact to reduce prejudice or improve intergroup feelings.

Barriers to Intergroup Contact at UCT. As the primary and secondary schools were desegregated, so were the universities across South Africa and specifically, Cape Town (Tihanyi & Du Toit, 2005). The segregated nature of primary school and university campuses in South Africa have provided an environment to study integration and contact between different cultural and racial groups in the post-apartheid era. UCT was a historically White-only university during the Apartheid era. Tihanyi and Du Toit (2005) investigated the reality of post-Apartheid South African primary schools ten years after legal de-segregation. The research suggested that only private schools and formerly White-only schools were integrated, which left formerly Black and Coloured schools to remain segregated and disadvantaged. Since the beginning of the Post-Apartheid era, the university has experienced an influx of Coloured and Black students with the implementation of new admission policies based on race. With the rapid increase of racial and ethnic diversity at the University of Cape Town, new students entered university without accommodations made for the aversive racism and social exclusion that were likely to ensue on a previously White university and western curriculum (Kessi & Cornell, 2015). Photos and stories revealed the negative impact coming to UCT had on Black student's self-esteem, sense of belonging, and academic performance during a recent Photovoice study (Kessi & Cornell, 2015). Academic transformation through affirmative action policies left Black students with decreased confidence in their academic ability compared to their peers' and perceived resentment from White students.

US students at UCT get a better understanding of race relations and political engagement in Cape Town and South Africa that would have been more hidden to international students

without the publicity of the local UCT student voices. The presence of active political and public display of student engagement on campus was embodied in the Rhodes Must Fall and Fees Must Fall movements in 2015 and 2016 (Luescher, 2016). Both movements were calling out alienating monuments to colonialist narratives and harmful inequality on campus facing Black and Coloured students. The continuation of primarily western curricula and norms were also points of protest by students which were documented in the 2015 Photovoice study through Black students' perspective on the curriculum at UCT (Kessi & Cornell, 2015). The academic success of the student relied on the assimilation into "whiteness" and required relatability to western-centered content for demonstrating capabilities (Kessi & Cornell, 2015). Additionally, the Fees Must Fall movement aimed to push the South African government towards free university education as a means of bridging the racial gap when it comes to affording higher education (Luescher, 2016).

Contact on the UCT campus between previously segregated groups is experiencing unequal power relations due to the ever-present 'whiteness' left over from the Apartheid-era (Vincent, 2008). Studies into power inequality within interracial contact in South Africa have found that the contact is more beneficial for White South Africans than for other racial groups (Dixon, et al., 2010; Vincent, 2008). When examining the racial segregation in UCT tutorial groups, Alexander and Tredoux (2010) found that White students were more uncomfortable in multi-racial rooms when race was discussed while Black students enjoyed the contact and discussion. One White student elaborated on the discomfort, saying she felt "attacked" (Alexander & Tredoux, 2010). The varying response to the racialized discussion expresses the power dynamic that is set on campus where discussion of race seems to be an act of 'challenge' to White students. Dixon et al. (2010) identified that Black South Africans experiencing more

positive contact with White South Africans had lower perceptions of relative national deprivation and racial discrimination, supporting the findings of the sedative effect referenced earlier (Dixon et al., 2010). Positive contact in this case does not necessarily improve intercultural attitudes or intergroup attitudes from White South Africans students toward Black South African students, but instead, assimilates Black South Africans to the dominant White cultural presence.

The power relation between South African students is not the only mediating factor in intergroup contact in a South African context. Swart et al. (2010) examined mediating factors of intergroup contact in post-Apartheid South African schools. The results of their study conclude that cross-group friendships were a positive mediating factor for outgroup attitudes and negatively associated with negative action tendencies. Also, the study supports prior research that suggests contact increases promoted perspective- taking, which in turn decreases intergroup anxiety (Aberson & Haag, 2007).

The micro-ecology of the University of Cape Town has been studied in various public spaces on campus, such as the 'Jameson Steps' (now the Sara Bartman steps), lecture halls, and residence dining halls, to understand the informal segregation on campus. In university dining halls, Schrieff et al. (2010) observed the patterns of racial segregation where there was substantial evidence of informal segregation between White and Black students. During the study, it was observed that there were de facto "designated" tables for White or Black students that were situated to a specific side of the cafeteria. The initial explanatory hypotheses for the informal racial segregation were that there is a comfort in shared social identity, and the formation of friendships shaped the seating as the study was conducted in the middle of the year (Schrieff et al., 2010). When evaluating the impact of informal spatial organization within learning environments, informal segregation on campus plays a crucial role in reducing the

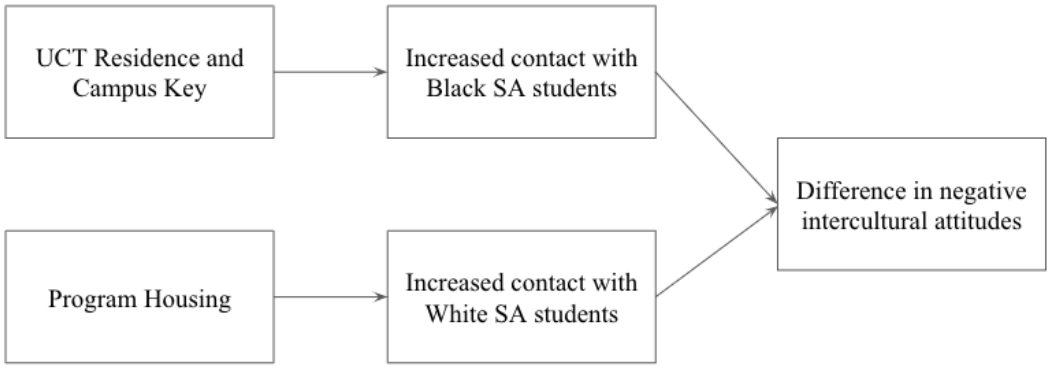
accessibility for interracial contact for students (Alexander & Tredoux, 2010). The UCT campus, as a unique environment, acts as a mediating factor within the current study as it regulates the potential for interracial and intercultural contact.

The present study aimed to understand the impact and nature of intergroup contact between US students and full-time UCT students moderated by a quasi-experimental subgroup, housing-type. Study abroad students at UCT were given a choice between living on campus, local student housing, or housing provided by US Study Abroad programs. International and intercultural contact research has provided support for predictions regarding the effects of contact quality and quantity between the housing subgroups. The present study predicts that the US students in UCT residence housing will have a higher quality of contact with full-time UCT students than the US students staying in exclusively US student housing. Also, the literature review provides support that the US students in UCT residence housing will have a higher quantity of contact with full-time UCT students than the US students staying in exclusively US student housing.

Cross-group friendship-building and interracial rooming research provides support for a prediction that US students in UCT residence will build more friendships with South Africans than the US students in US student housing. As the students in UCT residence have more opportunity for contact, there is a heightened risk for negative contact that the US student housing participants would be less likely to experience, which will impact their intergroup attitudes and anxiety. The US students in UCT residence housing will have higher scores of positive and negative contact than the students living in exclusively US student housing. Because there is a higher percentage of Black SA students in UCT Residence than White SA students, it was predicted that US students are likely to have more quantity contact with more Black than

White South Africans, as moderated by their housing choice as shown in Figure 2.1 below. This hypothesis was made because the UCT campus is segregated and if UCT residence housing students were more likely to have more contact with Black SA students then the Program Housing students would have more contact with White SA students. UCT was unable to release public official reports on the racial demographics of the UCT residences the previous UCT vice-chancellor, Max Price, acknowledge that there is a higher percentage of Black SA students than White SA students in UCT residence (TMG Digital, 2016).

Figure 2.1 The proposed relationship between housing type, quantity of contact, and intercultural attitudes



Chapter 3: Method

The current experiment had a mixed repeated measures design over time: the between-subject factors were population group (Race) and housing selection (Program Housing, UCT Residence/Campus Key), and the within-subject factor was the repeated measurement over the course of the semester, and beyond. The variables were Intercultural Attitudes, Negative/positive Contact, Intergroup Anxiety, Quality of Contact & Quantity of Contact. Both

quality and quantity of contact were also measured separately for subgroups with which US students may have contact (SA students, White SA students, Black SA students).

The quasi-experiment had 3 surveys administered throughout the duration of 4 months. It is considered a quasi-experiment because the participants were able to choose the kind of housing they wanted for the semester, Program Housing or UCT Residence/Campus Key. They were not randomly placed into these groups. The first survey was conducted within the first 2-4 weeks of the first semester, the second survey was conducted in the middle of the semester before the US students were relocated back to the US, and the final survey was conducted 3 months after they arrived home. The surveys were created using the platform SurveyMonkey, and students received them via email. The participants were tracked using their name and email provided. The names were then replaced with participant numbers to keep the survey results confidential.

Participants

The sample consisted of 44 participants. The participant sample was recruited from the population of United States students in Semester Abroad Programs at the University of Cape Town, which had a total of 203 US students enrolled for the semester according to the International Academic Programmes Office (IAPO). The intended sample was 100 participants but the sample size was smaller than expected despite various recruitment methods which are discussed in the following section. As the experiment continued, the total sample decreased to 25 during the second survey and 26 during the final survey. The sample varied due to procedural disruptions described in the next section. Additionally, not all of the questions were required to be answered in the survey which resulted in some of the questions left unanswered. A demographic summary of the sample can be found in table 3.1 below:

Table 3.1 Distribution of age and population group of US Study Abroad participants

Population Group	Female	Male	Total
White/Caucasian	21	8	29
Black/African American	8	1	9
Asian/ Asian American	3		3
Biracial	1	1	2
Hispanic/Latino	1		1

This table describes the self-assigned population group and gender labels in the study sample.

According to a U.S. Department of Education study (Espinosa et al., 2017), the race and ethnicity distribution of U.S. undergraduates is as follows: White (52%), Black (15.2%), Asian (5.7%), Hispanic/Latinx (19.8%), 2 or more races or biracial (3.3%), American Indian or Alaska Native (0.8%), Native Hawaiian or other Pacific Islander (0.4%) and International Students (2.8%). The demographic distribution for this current study as described in Table 2.1 was White (70%), Black (21%), Asian (7%), Hispanic/Latinx (2.3%), and 2 or more races or biracial (5%). The distribution of the present sample was not significantly different to the population of US university students as demonstrated with a Pearson's Chi-squared test ($\chi^{2=}$ 7.6, df = 4, p > 0.1), but this test may be under-powered. Visual inspection suggests that the present sample perhaps had an over-representation of White and Black students, and an under-representation of Hispanic/Latinx students.

The participants self-reported their housing selection at UCT, constituting 2 groups. Participants were not assigned to groups as they chose their housing selection prior to arriving in Cape Town through their individual study abroad programs. The first group, named here as "Program Housing," consisted of students who identified that they lived in a housing

accommodation separate from the university accommodation and other local student accommodation. The other group was identified as either “Campus Key” or “UCT Residence” housing, which also houses local South African students. These groups were used to understand the moderation of quality and quantity of contact with South African students experienced by US Study Abroad Students depending on their housing selection.

Table 3.2 Housing selection participation demographics for each survey

Housing Selection	Number of participants Survey 1	Number of participants Survey 2	Number of participants Survey 3
Program Housing	20	11	15
UCT Residence & Campus Key	24	14	11

The table describes the breakdown of the participants in each quasi-experimental group by survey time point. UCT Residence and Campus Key were combined into one group as location is not limited to solely only US study abroad occupants.

Recruitment of participants. Due to the small population and specificity of participation requirements, participants were recruited through a variety of advertisements. The first advertisement was implemented during the International Student Orientation in which there were presentations done by previous international students and an announcement made about the upcoming quasi-experiment with the US student population at UCT. Emails were sent to all of the US study abroad programs to send the advertisement through their individual channels. Additionally, the International Academics Programmes Office (IAPO) sent an announcement on the UCT student platform, VULA, advertising the experiment, with a reminder email sent before the first survey ended. To create a more meaningful connection and to reach out to the US population, there was a presentation given to the African Dance class and a Council on

International Educational Exchange (CIEE) leadership class where students agreed to become participants. Paper advertisements were also left at the CIEE office for students to see when they were returning home or attending a CIEE class.

All participants were given a consent form (Appendix A) to sign at the beginning of the study as it was included and required on a SurveyMonkey survey. Additionally, they were given a debriefing form (Appendix C) at the completion of the study where they were told where they may find the results of the study and learn more about the research they participated in.

In order to create an incentive for students to continue to participate throughout the duration of the study, there was a $50 Amazon gift card as a prize drawing advertised to be chosen at the end of the study. Due to complications and unforeseen global circumstances caused by the COVID-19 pandemic, the prize was drawn after the second survey to encourage more participation from the students following the US call for all international semester students to return home. For the final survey, the incentive presented to the participants was $2 sent via Venmo for completing the survey.

Materials

Multiple repeated measures were used to understand the intercultural attitudes and intergroup contact between US study abroad students and UCT full-time students. Additionally, due to the unique nature surrounding the global impact of COVID-19, questions were added to both the second and last surveys to understand how the shortened semester experience and social distancing impacted the US study abroad students.

Quality and quantity of contact. In order to measure the quality and quantity of contact at three different points, the survey contained 9 questions adapted from Islam and Hewstone's

(1993) contact quality and twelve questions from the contact quantity scale (Lolliot et al., 2015). The questions were rated on a 1-5 scale, 1 = not at all to 5 = very often. The twelve questions were separated into population groups: Black South African, White South African, and South African. The measure was broken into subgroups to explore the difference in quantity of intergroup contact between racial population groups in South Africa as it relates to housing location or preference. Participants were asked about quantity of contact with South Africans as a whole to give context into the amount of international contact the housing groups were having despite the specific hypotheses about racial segregation. This study explores both international and interracial contact between US study abroad students and South African UCT students.

The quality of contact was not separated into separate population groups because the hypotheses were focused on the difference in quantity of contact with Black and White SA students based on housing type. Binder et al. (2009) measured the test-retest reliability of the quality contact measure and found an acceptable test-retest reliability of r = .73 for the use of the quality of contact scale. Also, the measure was used in an interracial South African study, and the scale demonstrated metric invariance between 2 racial groups (Swart et al., 2010). In the current study, items were excluded to improve the internal validity of the scales used in previous studies.

In the current study, the reliability of the scale was tested for each survey and population scale in Table 2.3 because some of the questions on the scale were not applicable in the third (final) survey as the students were no longer physically present for the study. In Appendix D, the alpha coefficients for each question at each survey round will be displayed with a table to show the internal reliability of the scale without the excluded questions. Although the Cronbach's alpha coefficients for the survey were low for some of the items, the average inter-item average r

are not low. The alpha was heavily influenced by the low number of items on the scale. Items were excluded to achieve a higher alpha for the scale.

The first survey in the current study, the fourth question on the quantity of contact with Black and White SA student scales, "*How often do you visit the homes of [Black/White] SA UCT students?*", was excluded from all survey rounds to improve internal reliability of the scales. The quantity of contact with SA students scale, the first question of the scale, "*How much contact do you have with SA (South African) UCT students on UCT Campus?*", and second, "*How much contact do you have with SA UCT students as neighbors, while staying in Cape Town?*", were excluded to improve internal reliability of the scale in the first survey, and the second question was excluded in the second survey.

The quality of contact with SA students scale used in this study excluded the second question, "*To what extent do you experience contact with UCT students as involuntary?*", of the scale to improve internal reliability for all survey rounds. The third question, "*To what extent do you experience contact with UCT students as superficial?*", was also excluded from the second survey and the fourth question, "*To what extent do you experience contact with UCT students as pleasant?*", was excluded from the third survey.

Table 3.3 Internal reliability of quantity and quality of contact scales for each survey round

Scale	Survey	Cronbach's alpha coefficient	Number of items	Number of respondents	Average inter-item r
Quantity of contact with Black SA students	Survey 1	*0.60*	3	41	*0.37*
	Survey 2	*0.68*	3	23	*0.44*
Quantity of contact with	Survey 1	*0.73*	3	41	*0.47*

White SA students	Survey 2	*0.60*	3	23	*0.37*
Quantity of contact with SA students	Survey 1	*0.69*	2	41	*0.63*
	Survey 2	*0.60*	3	23	*0.32*
Quality of contact with SA students	Survey 1	*0.60*	3	41	*0.36*
	Survey 2	*0.49*	2	23	*0.34*
	Survey 3	*0.63*	2	26	*0.49*

This table describes the internal reliability of the scale questions after excluding questions that did not correlate sufficiently highly with other scale items. The quantity of contact scales were conducted in the first and second surveys only because the questions were reliant on a participant's physical presence in Cape Town.

Intercultural attitudes. The survey also included an eleven-point scale adapted from Spencer-Rodgers and McGovern (2002), which measured intercultural attitudes toward local students. The measure has been tested for reliability and validity as it has been used to measure intergroup attitudes toward a diverse variety of social groups. It seems to have high test-retest reliability with a Cronbach's alpha coefficient of $\alpha = 0.90$ (Spencer-Rodgers & McGovern, 2002).

On a scale of 1 (favorable) – 11 (unfavorable), participants were asked to respond with their general attitudes toward experiences with UCT full-time students with no differentiation of race: helpful-unhelpful, friendly-unfriendly, and good-bad. This scale was adapted and used in a study of American students studying abroad in Australia with a Cronbach's alpha coefficient of 0.94 (Tawagi & Mak, 2014). In the current study, the scale was tested for reliability for each survey round. There was a significant decrease in participants for these survey questions as participants were not required to complete them before moving on to the next section. The first

survey had a Cronbach's alpha coefficient of α = 0.91 (*n= 25 , number of items included = 4 , average r = 0.72*), the second survey had a Cronbach's alpha coefficient of α = 0.87 (*n= 22, number of items included = 4, average r = 0.62*) and the third survey had a Cronbach's alpha coefficient of α = 0.81 (*n= 21, number of items included = 4, average r = 0.52*). These were deemed adequate for the current study data collection.

Intergroup anxiety. In order to measure the level of intergroup anxiety surrounding intergroup contact between US study abroad students and full-time UCT students, six questions were adapted from the short form Intergroup Anxiety Scale introduced by Paolini et al. (2004). The scale was used to measure cross-group friendship in South Africa by Swart et al. (2010) and was found to be applicable to be a valid South African measure. The US students were asked, "If you were the only US student and you were interacting with UCT students, how would you feel compared to the occasions when you are interacting with other US students in Cape Town?", on a scale of 1-5 using the adjectives happy, awkward, confident, self-conscious, relaxed and defensive.

In the current study, the scale was recoded for a reverse score on the questions of happiness, confidence and relaxability to represent a lower score on intergroup anxiety. There was a significant decrease in participants for these survey questions as participants were not required to complete them before moving on to the next section. There were no questions excluded from the scale in the first and second surveys with a raw Cronbach's alpha coefficient α = 0.72 (*n= 29, number of items included = 6, average r= .28*) for the first survey, a raw Cronbach's alpha coefficient α = 0.81 (*n= 17, number of items included = 6, average r= .38*) during the second survey. In the third survey in the study, defensiveness was excluded from the

scale due to missing responses for a raw Cronbach's alpha coefficient α = .82 (*n= 21, number of items included = 5, average r= .0.45*)

Negative and positive contact. Negative and positive contact measures were included in this current study in addition to the quality of contact scale described above. Lolliot et al. (2015) had indicated that the quality of contact scale scores positively correlated with positive experiences with outgroup members. The quality of contact scale used does not explicitly isolate whether the contact was negative or positive, and negative contact has been used in the literature as a separate measure to avoid any bias leaning toward positive measures (Lolliot et al., 2015; Pettigrew & Tropp, 2006; Pettigrew et al., 2011). This measure used the Valenced Contact Scale adapted from Barlow et al. (2012) to make a scale with two questions: "On average, how frequently do you have [positive/negative] contact with [Black/White/General UCT full-time students]?". The validity of Barlow et al.'s (2012) items were found in a significant negative correlation between the negative and positive items on the scale with $r \leq -.26$. In this study, these items required participants to answer them before moving on so this measure had full participation during survey 1 (*n = 41*), survey 2 (*n = 23*), and survey 3 (*n = 26*)

Situational measures. Due to the extenuating circumstances of the first semester of 2020, there were other measures taken for the second and final (third) surveys. Weeks before scheduled, the second survey was administered by email because the South African government issued a State of Emergency related to the COVID-19 pandemic. This announcement meant that all international students in programs were sent home or encouraged to fly home within the week. As the current research was interested in contact between US study abroad students and UCT students, an additional section was added to investigate how these announcements impacted US students' quantity of contact with different groups. They were asked, "*How many (South Africans/US students/other international students) have you had interpersonal contact with since becoming aware of COVID-19*?"

By the time the final survey was issued, the world had been greatly impacted by the pandemic, and modes of communication and friendship were reduced to primarily digital platforms. This shift in communication is important in regards to intergroup contact between UCT students and US study abroad students, so a few questions were added to explore the modes of communication and quantity of long-distance communication. The questions, "*Have you kept in touch with any South African friends you met while studying abroad at UCT?*" and "*How many South African friends have you kept in touch with since returning to the United States?*" were used to understand if the participants had been in any communication with SA students they met at UCT. Additionally, they were able to expand on their extent of communication with the questions, "*If you have kept in touch, how frequently did you do so?*" and "*If you have kept in touch, through which medium did you do so*?".

Reflective questions were also added to the end of the final survey to provide more information on their intercultural experience and thoughts on their housing choice. The questions

were introduced with the first more general question, "*If you had a chance to travel to Cape Town for an extended amount of time, would you choose to*?". Participants were then asked, "*If you had to choose your housing selection for the semester again, which selection would you make?*" and "*If a friend was planning to study at UCT next semester, which housing selection would you suggest for them?*". The final questions were added to investigate the segregated nature of UCT reported by previous research into intergroup contact on campus and in South African public spaces (Dixon, Tredoux & Clack, 2005; Tredoux et al., 2017). It was predicted that US students are likely to have more quality contact and build more friendships with more Black or White South Africans moderated by their housing choice and the environments in which they had intergroup contact would differ. Participants were asked, "*During your time at UCT, where did you tend to have contact with (White/Black) SA students?*" with multiple choice answers that included the list provided: *Lecture or Tutorial, UCT Residence, UCT public campus spaces (Jammie Steps, campus, Jammie buses), club meetings or events, UCT community or sporting event, Off-campus community or sporting event, On a social media platform, Bar or restaurant, Shopping (retail or grocery), Traveling.* Due to the features of the survey created on Survey Monkey, participants were only able to choose one option from the list. This fault in the survey feature is a limitation to the question as participants were not able to choose all of the locations they tended to have contact with White and Black SA students.

The choices in locations can be separated into 2 groups: campus and off-campus locations. Because of the larger percentage of Black SA UCT students living in residence than White SA students as described by previous UCT vice-chancellor Max Price in 2016 (TMG Digital, 2016), US students were hypothesized to have more contact with Black SA students at campus locations and have more contact with White SA students at off-campus locations.

Procedure

Intended Procedure. The intended procedure was updated to accommodate for the unforeseen external circumstances surrounding participation and environment. The intended procedure of the study would have been administering four surveys in total, which started in February 2020 and ended 3 months following the end of the study abroad semester.

The planned schedule for the four surveys was to be sent via email, advising a survey once at the start of the semester, once a week before mid-semester vacation, once at the end of the semester and the final survey three months after the US students had traveled home. The advertisement of the follow-up surveys was intended to be through email and other in-person interactions to ensure that the study would maintain the highest number of participants. Through relationships built with the study abroad programs like CIEE, a nonprofit study abroad and intercultural exchange organization, and IES (Institute for the International Education of Students), there were avenues to communicate with participants via their UCT emails and program communication newsletters. The actual procedure was interrupted by the global pandemic and lockdown protocols.

Actual Procedure. Due to the global COVID-19 pandemic, the original schedule was no longer an option. Participants were recruited and sent the first survey during the first three to four weeks of the semester as planned between the dates of February 12, 2020 - March 5, 2020. A variable was created to represent the number of days from the start of the study from the first day of the semester for study abroad students (days_since_start). It was used to investigate whether participants starting the study at varying time points were significantly different on the measures of contact and negative intercultural attitudes. There were no statistically significant correlations between the predictor variable days_since_start and the scales: quantity of contact with SA

students (r = -0.02), quality of contact with SA students (r = 0.14), intergroup anxiety (r = -0.07), negative intercultural attitudes (r = -0.15) or negative (r = 0.09) and positive contact with SA students (r = 0.06). The correlations are shown in Appendix F, along with p values representing significance tests.

The second survey was administered two to three weeks earlier than expected as President Cyril Ramaphosa declared a State of Disaster in South Africa on March 15, 2020 due to the COVID-19 outbreak across the globe and the rising number of cases in South Africa (Ramaphosa, 2020). The survey was completed by participants from March 16-27. After the declaration, US Semester Study Abroad students were sent back to the US for the remainder of the semester. A few weeks later, the UCT campus shut down for all students, and all students were vacated to their homes as South Africa was placed on a National Lockdown. The movement of students and social distancing measures greatly impacted the initial structure of the study focused on intergroup contact within different subgroups of housing and environments. The disruption also impacted the level of involvement from students, which caused a significant drop in participation from the first survey onward.

Additionally, following the second survey, the participants were no longer easily contactable with their UCT emails and international communication platforms that would make it easier to send the surveys out. The original survey procedure was no longer viable as the duration of the US study abroad experience was cut in half. The final survey was administered and advertised from June 29-July 8 through email communication three months from the time the international students flew back home. In order to attract participants for the final survey, there was an additional incentive of $2 for a completed survey that was redeemed on Venmo, a cash sending app and a digital wallet that operates in the US. As the nature of the current study

centers on international and intercultural contact, the impacts of the COVID controls, social distancing and communication, will be discussed in a later section.

Results

Quality and Quantity of Contact between US Students and SA UCT Students

In order to examine the impact of housing selection on intergroup contact between US study abroad students and SA UCT students, the quality and quantity of contact scales provided a repeated measurement across two time periods over the duration of the study. The quantity of contact scales were used in the first and second survey only as the scale items required the participants to be physically in Cape Town. The quality of contact scale was used in all three surveys as the scale items were not impacted by the participants' premature return to the US. The quantity of contact with SA students was measured for 3 groups (Black SA Students, White SA Students and SA students, generally) as described above. During the first survey, the quantity of contact scores with Black SA students significantly correlated with the quantity of contact with SA students in general, but not in the second survey. The quantity of contact with White SA students correlated with the quantity of contact with SA students generally in the first survey and second survey, as displayed in Table 4.1.

Table 4.1 Correlations between contact with SA students in general, and with Black and White SA students.

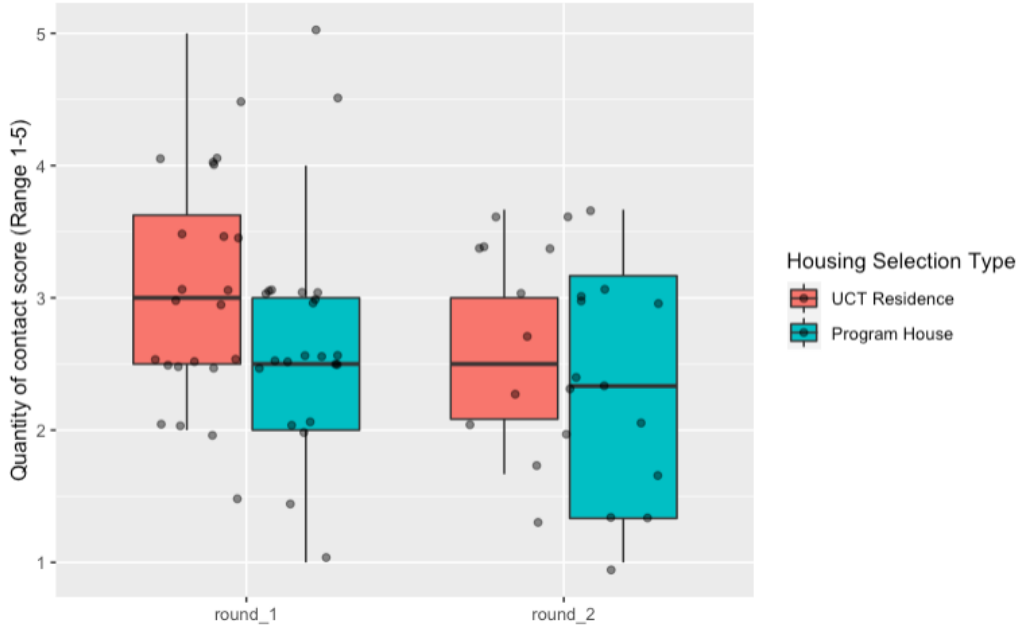
Survey Round	Quantity of contact with Black SA students	Quantity of contact with White SA students
Survey 1	0.64***	0.42**

Survey 2	0.38	0.41*

*This table represents the correlations between the intergroup contact subgroups and intergroup contact with SA UCT students. The first survey had 44 respondents for each question and the second survey had 25 participants. The stars next to the correlation indicates the significance of the correlation, *** (p<.001), ** (p<.01) and * (p<.05).*

Based on previous intergroup contact studies, the US students in UCT Residence or Campus Key were expected to have more contact with SA students than the US students living in the program house. Using a linear mixed-effects model to measure the impact of housing type and time (survey round), there were 2 significant main effects of survey round (*F(1, 30.05)= 4.27, p= 0.04*) and housing type (*F(1,43.7) =11.21, p= 0.044*) with no statistically significant interaction between quantity of contact, housing type and time (*F(1, 32) = 1.32, p = 0.26*). The main effects are visualized in Figure 4.1 below.

Figure 4.1 Quantity of contact of US students reported with SA students over time



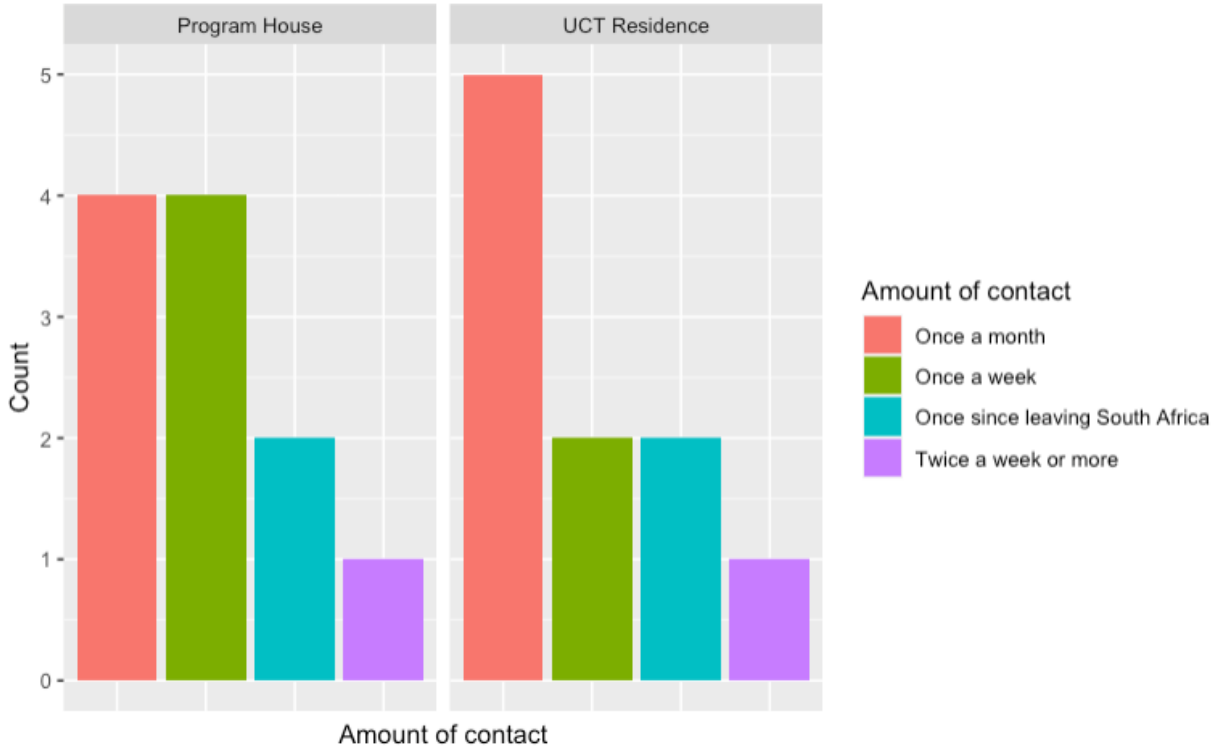
This box plot visualizes the main effects of time and housing type on the quantity of contact that US study abroad students report with SA students. The line in the center of the box plot represents the median score per housing group with points representing individual scores. The first survey consisted of 44 total participants (Program House n = 20, UCT Residence and Campus Key n = 24) and in the second survey consisted of 25 total participants (Program House n = 11, UCT Residence and Campus Key n = 14).

From the first to the second survey, there was a decrease in quantity of contact with SA students for both housing type groups. For the UCT Residence and Campus Key students, there is more contact during both surveys than shown by program housing students. This finding supports the hypothesis that UCT Residence and Campus Key students would have more quantity of contact with SA students than program housing students would have. The program housing group mean for quantity of contact scores for the first survey was $\bar{x} = 2.48$ *(SE = 0.18)* and $\bar{x} = 3.12$ *(SE = 0.16)* for the UCT Residence and Campus key group. At the second survey, the UCT Residence and Campus Key *($\bar{x} = 2.57$, SE = 0.24)* group mean score for quantity of contact with SA students was higher than the program housing group *($\bar{x} = 2.31$, SE = 0.21).*

In the third survey once the US students were home for three months, the scale to measure the quantity of contact could not be used as before, as the questions were no longer applicable because the scale was constructed assuming the participants to be physically present while investigating the quantity of contact with SA students. Instead, students were asked if they had any contact with SA students since returning home and how much contact they had, if any. There was no significant difference between the average program housing score ($\bar{x} = 2.0$, $s = 1.46$) and the UCT Residence and Campus Key score ($\bar{x} = 2.8$, $s = 1.03$) in regard to any contact with SA students ($t = -1.63$, $df = 23.52$, $p < 0.12$). There was also no difference in the average

amount of contact US students in program housing ($\bar{x} = 1.69, s = 1.70$) and UCT Residence and Campus Key ($\bar{x} = 2.3, s = 1.42$) had with SA students if any ($t = -0.99, df = 21.86, p < 0.33$). The US students who had indicated they had contact with SA students since returning were asked a follow-up question to measure the frequency of contact. When asked the frequency of contact with SA students, from contact once since leaving South Africa to contact twice a week or more, there was no significant difference between the housing groups, demonstrated by a Pearson's Chi-squared test ($\chi^2 = 0.73, df = 3, p < 0.87$).

Figure 4.2 Quantity of contact US students reported with SA students once back in the US

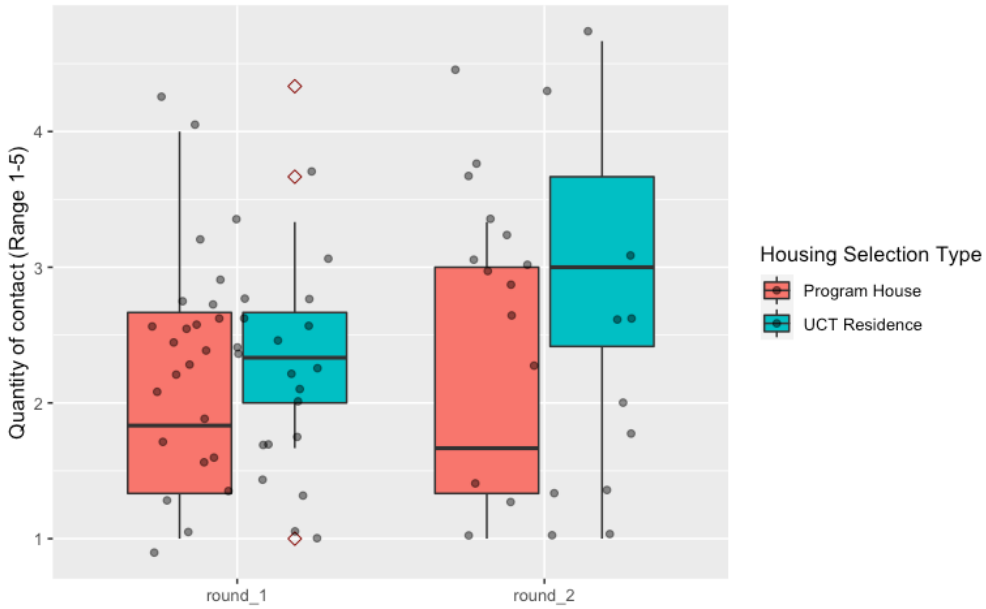


The graph describes the amount of contact US students had with SA students once they returned to the US, grouped by their housing type. It excludes answers from students who reported not having had any contact with SA students. 4 US students in the Program House housing type

recorded a score of 0 contact. There were 26 total participants in the final survey (Program House n = 16, UCT Residence and Campus Key = 10).

To expand on the impact of housing type on quantity of contact with SA students, the same test was run with quantity of contact scales between US and Black and White SA students separately, and there was a different trend. There was a significant difference in housing type group means with the quantity of contact with Black SA students as determined by a mixed linear model (*$F(1,47.43)= 8.5217, p < 0.005$*). The program housing group mean for quantity of contact scores for the first survey was *$\bar{x} = 2.00(SE = 0.19)$* and *$\bar{x} = 2.49(SE = 0.17)$* for the UCT Residence and Campus key group. At the second survey, the UCT Residence and Campus Key *($\bar{x} = 2.98, SE = 0.21$)* group mean score for quantity of contact with Black SA students was more than the program housing group again *($\bar{x} = 2.04, SE = 0.24$).* In contrast, there were no statistically significant differences between group means over time or by housing type in regards to the quantity of contact with White SA students as determined by a mixed linear model (*$F(1,38.86)=1.49, p< 0.2292$*).

Figure 4.3 US student reported quantity of contact with Black SA students over time



The graph visualizes the relationship between the quantity of contact that US study abroad students reported with Black SA students over time based on their housing type. The points included are individual scores with red diamonds representing the outliers. The box plot includes a horizontal line in the middle of the box representing the median score per housing group. In the first survey there were 44 total participants (Program House n = 20, UCT Residence and Campus Key n = 24) and in the second survey there were 25 total participants (Program House n = 11, UCT Residence and Campus Key n = 14).

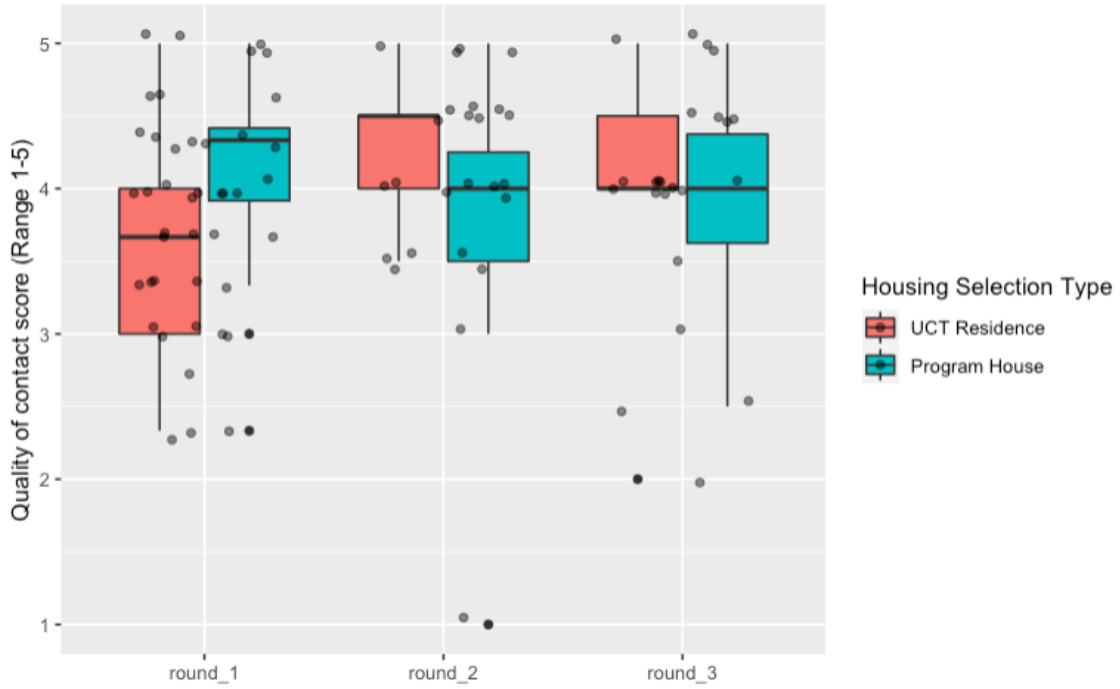
This difference between contact with Black SA students supports the hypothesis that students living in UCT Residence and Campus Key have more contact with Black SA students. There is no statistically significant support to the original hypothesis that students in the program house would have more quantity of contact with White SA students.

To measure the quality of contact between US students and SA UCT students, there was one scale used. It was used as a repeated measure across all 3 surveys during the study. There was a statistically significant interaction between group means over time by housing type

determined by a mixed linear model ($F(2,85)= 5.18, p < 0.008$). During the first survey, the program housing average was $\bar{x} = 4.13(SE = 0.17)$ and $\bar{x} = 3.58 (SE = 0.16)$ for the UCT Residence and Campus key group. At the second survey, the UCT Residence and Campus Key $(\bar{x} = 4.32, SE = 0.20)$ group mean score for quality of contact with SA students was $(\bar{x} = 3.68, SE = 0.23)$. In the third survey, the program housing average was $\bar{x} = 3.89(SE = 0.20)$ and $\bar{x} = 4.11(SE = 0.20)$ for the UCT Residence and Campus key group.

Over time, the differences in the quality of contact between housing type changes, as visualized in Figure 3.4. During the first survey, the students living in UCT Residence and Campus Key had higher quality of contact with SA students on average than the program housing students ($t(85) = 2.37, p< 0.02$), but at the second survey, the difference was reversed as demonstrated with a pairwise comparison of average quality of contact scores between housing types ($t(85) = -2.08, p< 0.04$). During the first survey, the program housing students had significantly higher quality of contact. Once the students returned home to the US, the median line between the groups was no longer different.

Figure 4.4 US student reported quality of contact with SA students over time



The graph visualizes the interaction between housing type and quality of contact of US study abroad students with SA students over time. Individual scores have been represented with dots and outliers represented with red diamonds. The horizontal line in the middle of the box plot is used to visualize the median of scores per housing group. There were a total of 44 participants in the first survey (Program House n = 20, UCT Residence and Campus Key n = 24), a total of 25 participants in the second survey (Program House n = 11, UCT Residence and Campus Key n = 14) and a total of 26 participants in the third survey (Program House n = 16, UCT Residence and Campus Key = 10).

These findings do not support the original hypothesis that the UCT Residence and Campus Key housing group would have more quality contact with SA students. Instead, it reveals a complex relationship with the type of housing and the stage of the study (indirectly suggesting the effect of time). Also, it suggests that there is a complex effect of housing type on quality of contact over time.

In order to examine the locations and activities that US students had contact with Black and White SA students, the participants were asked to identify where they met SA students during their stay in Cape Town. These questions were used to test the hypothesis that US students living in UCT Residence and Campus Key would have more contact with Black SA students and come in contact with Black SA students in different locations than the US students living in program housing. Additionally, it was hypothesized that US students in program housing would have more contact with White SA students and have contact with them in different locations than US students living outside of program housing. In Table 4.2 below, the frequency of response to questions were recorded to compare if there is a difference between the locations of contact with White and Black SA students depending on the type of housing.

Table 4.2 Locations where US students report they had contact with Black and White SA Students based on their housing type

Location	Program House - Black SA Contact	Program House - White SA Contact	UCT/Campus Key - Black SA Contact	UCT/Campus Key - White SA Contact
Bar or Restaurant	0	1	0	0
Lecture or Tutorial	7	8	5	6
UCT community event or sport	2	3	1	3
UCT Public Space	2	0	2	0
UCT Residence	2	0	1	0
Other	1	2	0	0

The table categorized the locations of contact with Black and White SA students identified by US study abroad students from a list of locations presented in the survey. The table is grouped by housing type and SA student population group to explore if the locations of contact with Black

and White SA students differs, if the locations of contact with SA students differs based on housing type or if there is an interaction of difference based on housing type and SA population group.

There was no statistically significant difference between the housing groups and the reported locations of contact with Black and White SA students as demonstrated by a Pearson's Chi-squared test for reported locations of contact with Black SA students ($\chi 2 = 0.96, df = 4, p = 0.91$) and with White SA students ($\chi 2 = 2.30, df = 3, p = 0.51$). This data was used to create more context and explore locations of contact but not to test the current hypothesis of the study. The significance of the results was likely impacted by low participation and interrupted data collection. Although not statistically significant, there were responses only chosen as a location of contact with Black SA students, UCT Residence and UCT public space (Jammie Steps or now the Sara Bartman steps, Jammie bus, Cafeteria, Campus Grounds). Bar or restaurant was a response only chosen for a location of contact with White SA students.

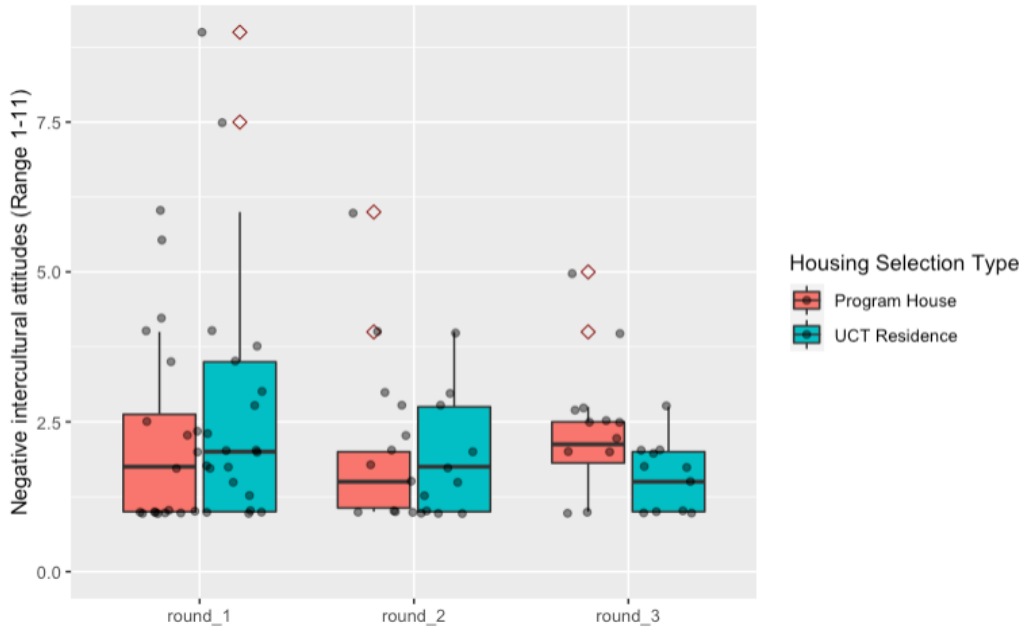
Negative intercultural attitudes and intergroup anxiety

A linear mixed-effects model was designed to test the impact of housing type on negative intercultural attitudes over time. The negative intercultural attitudes scale was administered during all of the survey rounds. There was a statistically significant interaction between group means over time by housing type determined by a mixed linear model ($F(2,38.68) = 4.02, p < 0.026$). Further analysis into the significant relationship between housing type, round and negative intercultural attitudes revealed that there is a significant drop in average negative intercultural attitudes scores from survey 1 to survey 3 for UCT residence and Campus Key students ($t(39.8) = 2.71, p < 0.03$). There was no significant difference in the average negative intercultural attitudes score from the first survey to the third survey for program housing students

(t*(40.3) = -1.199, p< 0.46*). There was no significant difference in the average negative intercultural attitudes score between groups at any survey time point.

During the first survey, the program housing average was $\bar{x}$ *= 1.99(SE = 0.37)* and $\bar{x}$ *= 2.88(SE = 0.34)* for the UCT Residence and Campus key group. At the second survey, the UCT Residence and Campus Key *($\bar{x}$ = 2.11, SE = 0.46)* group mean score for negative intercultural attitudes was *($\bar{x}$ = 2.22, SE = 0.41)*. In the third survey, the program housing average was $\bar{x}$ *= 2.49(SE = 0.40)* and $\bar{x}$ *= 1.60(SE = 0.47)* for the UCT Residence and Campus key group.

Figure 4.5 US student negative intercultural attitudes towards SA students over time



The graph visualizes the interaction between housing types on negative intercultural attitudes over time. The scale is analyzed as the higher score representing more negative intercultural attitudes and lesser scores representing less negative intercultural attitudes. The box plots have a horizontal line in the center of the box to represent the median score per housing group and points that represent individual scores. The red diamonds are used to represent the outliers in

each survey. There were a total of 44 participants in the first survey (Program House n = 20, UCT Residence and Campus Key n = 24), a total of 25 participants in the second survey (Program House n = 11, UCT Residence and Campus Key n = 14) and a total of 26 participants in the third survey (Program House n = 16, UCT Residence and Campus Key = 10). The response rate by participants in each survey total for the intercultural attitude questions varied. In the first survey the response rate for the negative intercultural attitudes scale questions were (64 - 82%), in the second survey (92%) and in the third survey (77- 96%).

These findings do not support the original hypothesis that the UCT Residence and Campus Key housing group would have less negative intercultural attitudes during the duration of the study. Instead, the results suggest that while living out of the program house, students have more negative intercultural attitudes. Also, it suggests that the longitudinal effect of housing type on negative intercultural attitudes would support the original hypothesis that students in UCT Residence and Campus Key would have less negative intercultural attitudes over time.

Intergroup anxiety. In order to examine whether housing type and time impact US students' intergroup anxiety, a linear mixed-effects model was conducted including the three surveys. There was no significant difference between the housing groups ($F(1,34.03) = 0.02$, $p = 0.89$) as a main effect or any significant interaction ($F(2,51.76) = 1.56$, $p = 0.22$) with time as determined by a mixed linear model. The program housing group averages at survey 1 ($\overline{x} = 2.45$, $SE = 0.18$) , survey 2 ($\overline{x} = 2.82$, $SE = 0.25$), and survey 3 ($\overline{x} = 2.40$, $SE = 0.21$) were not significantly different from the UC Residence and Campus Key group averages at survey 1 ($\overline{x} = 2.75$, $SE = 0.17$), survey 2 ($\overline{x} = 2.45$, $SE = 0.22$), and survey 3($\overline{x} = 2.56$, $SE = 0.26$).

Reflective responses

The reflective questions in the third(last) survey had a low response rate and did not yield any significant difference between the housing groups. All participants who responded to the question, *"If you had a chance to travel to Cape Town for an extended amount of time, would you choose to?",* responded "*Yes*" (*N = 23*). Regarding their housing selection if they were to return to UCT and Cape Town, there was no significant support for a change in preference after their housing experience. A Pearson's Chi-square test was used to compare the current housing type and the indicated selection of housing for a future study abroad experience in Cape Town showed no difference between the groups ($\chi^{2=}0.79$, $df = 2$, $p < 0.67$). There was also no significant difference between the current housing type and the housing selection suggestion they would give a friend ($\chi^{2=}1.04$, $df = 2$, $p < 0.60$). These results could be due to a small sample of students in the third survey.

Positive and negative contact with SA students

Positive and negative contact scales were used as a repeated measurement across the full duration of the study. The positive and negative contact that US students had with SA students was separated according to the three SA groups of interest (Black SA Students, White SA Students and SA students generally), just as the quantity of contact with SA students was separated in the earlier analysis.

Table 4.3 Correlations between negative contact with SA students in general, and with Black and White SA students.

Survey round	Negative contact with Black SA students	Negative contact with White SA students

Survey 1	.75***	.70***
Survey 2	.27	.59**
Survey 3	.55**	.75***

*This table reports the correlations between the scores on negative contact with Black and White SA students and scores on negative contact with SA UCT students generally. The first survey had 44 respondents for each question, the second survey had 25 participants and the third survey had 26 participants. The stars next to the correlation indicates the significance of the correlation, ***(p<.001), **(p<.01) and *(p<.05).*

Negative contact with White SA students had a significant positive correlation with negative contact with SA students generally in each survey round. Negative contact with Black SA students had a significant positive correlation with negative contact with SA students generally during the first and third survey. During the second survey, there was no significant correlation between the variables.

Table 4.4 Correlations between positive contact with SA students in general, and with Black and White SA students.

Survey Round	Positive contact with Black SA students	Positive contact with White SA students
Survey 1	.76***	.75***
Survey 2	.87***	.80***
Survey 3	.61**	.71***

*This table represents the correlations between the scores on positive contact with Black and White SA students and scores on positive contact with SA UCT students generally for all three surveys. The first survey had 44 respondents for each question, the second survey had 25 participants and the third survey had 26 participants. The stars next to the correlation indicates the significance of the correlation, ***(p<.001), **(p<.01) and *(p<.05).*

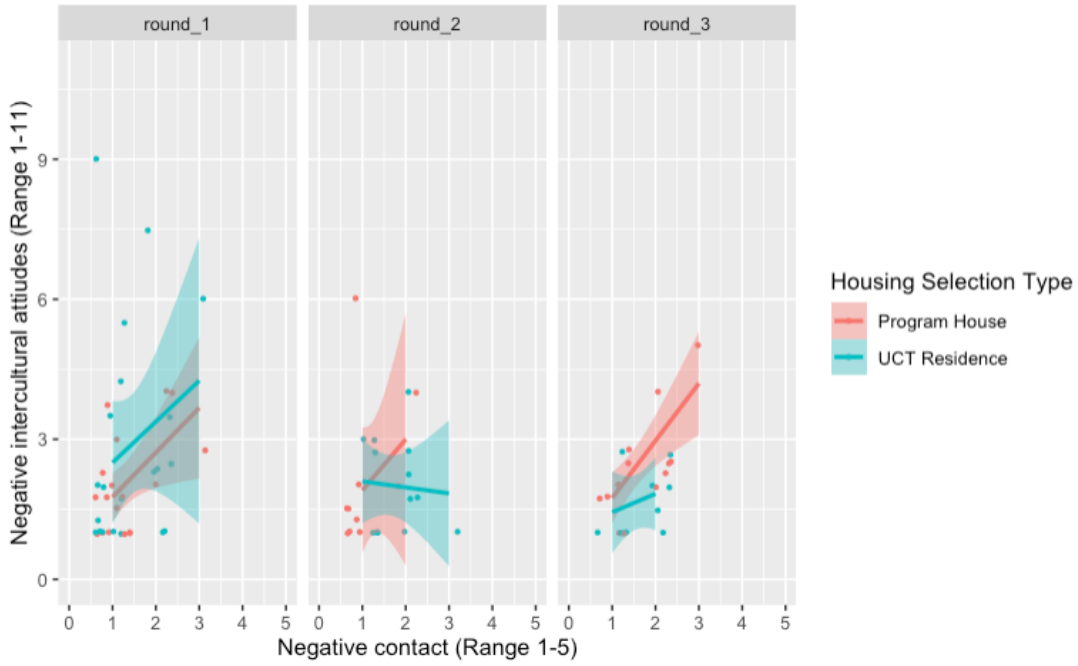
Positive contact with Black SA students and White SA students also had a significant positive correlation with positive contact with SA students generally during each round of the study.

In the final survey when the US students returned to the US, the students were asked the quantity of contact they had with SA students since returning home, including contact via email, Skype, Whatsapp, Facebook and other social media platforms. Negative contact with Black SA students was negatively correlated with the single-question scale of quantity of contact with SA students generally in the final survey ($r = -.60$). In contrast, there was a statistically significant correlation between positive contact with White SA students and the quantity of contact with SA students upon returning home ($r = .61$). More positive contact with White SA students positively correlated with more contact with SA students while less negative contact with Black SA students correlated with more contact with SA students.

Positive and negative contact as predictors. Due to the increased contact with SA students for US students living in UCT Residence and Campus Key, it was hypothesized that the increased contact would increase the likelihood of negative and positive contact. This increase in negative and positive contact would then create a difference in intergroup anxiety and negative intercultural attitudes between the housing groups. To determine the relationship between positive and negative contact on negative intercultural attitudes and intergroup attitudes, as a

function of housing types, mixed linear models were conducted with positive and negative contact as separate predictors of negative intercultural attitudes towards SA students and intergroup anxiety. There was a statistically significant interaction between time and housing type on negative intercultural attitudes determined by a mixed linear model ($F(2,34.61) = 3.28, p < 0.05$) and a main effect of negative contact on negative intercultural attitudes ($F(1,75.59) = 4.31, p < 0.04$). There was no statistically significant effect of positive contact on negative intercultural attitudes.

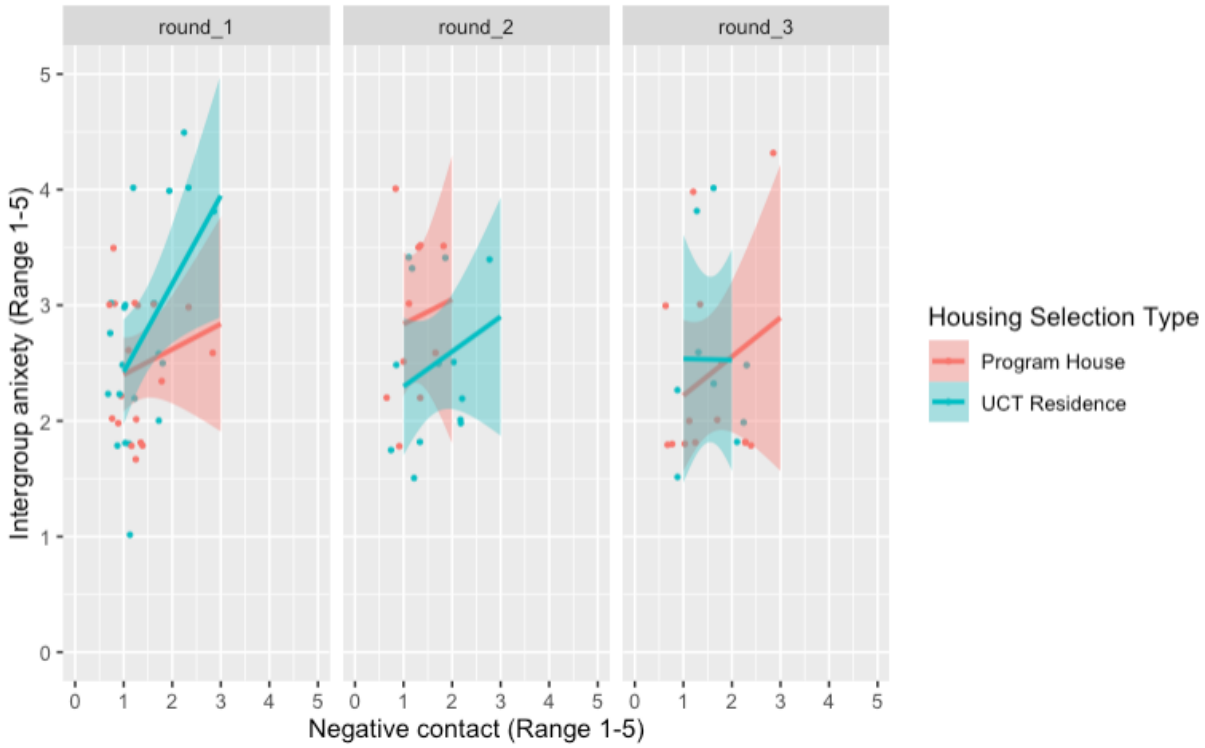
Figure 4.6 US students' negative intercultural attitudes towards SA students and negative contact with SA students by housing type, over time



The graph visualizes the interaction between housing type, negative contact, and time on negative intercultural attitudes. The scale is analyzed as the higher score representing more negative intercultural attitudes and lesser scores representing less negative intercultural attitudes. The graphs have been separated into 3 panels by housing type and survey round to display the relationship between negative contact and negative intercultural attitudes scores at each time point for the housing types. There were a total of 44 participants in the first survey (Program House n = 20, UCT Residence and Campus Key n = 24), a total of 25 participants in the second survey (Program House n = 11, UCT Residence and Campus Key n = 14) and a total of 26 participants in the third survey (Program House n = 16, UCT Residence and Campus Key = 10). The response rate by participants in each survey total for the negative intercultural attitudes questions varied. In the first survey the response rate for the negative intercultural attitudes scale questions were (64 - 82%), in the second survey (92%) and in the third survey (77- 96%).

Negative contact as a predictor of intergroup anxiety. There was a significant main effect of negative contact with SA students on intergroup anxiety scores for US students. As determined by a mixed linear model ($F(1,76.35) = 8.08, p < 0.01$), across the housing types and over time negative contact did increase intergroup anxiety as negative contact increased.

Figure 4.7 US students' intergroup anxiety towards SA students and negative contact with SA students by housing type over time



The graph visualizes the relationship between intergroup anxiety and negative contact with SA students by housing type and round. Each panel includes the individual points for each participant at each round and housing type. A line was added to represent the linear relationship between the 2 variables. There were a total of 44 participants in the first survey (Program House n = 20, UCT Residence and Campus Key n = 24), a total of 25 participants in the second survey (Program House n = 11, UCT Residence and Campus Key n = 14) and a total of 26 participants

in the third survey (Program House n = 16, UCT Residence and Campus Key = 10). The response rate for the intergroup anxiety scale questions varied by each survey. In the first survey the response rate for the negative intercultural attitudes scale questions were (47-62%), in the second survey (42-64%) and in the third survey (44-77%).

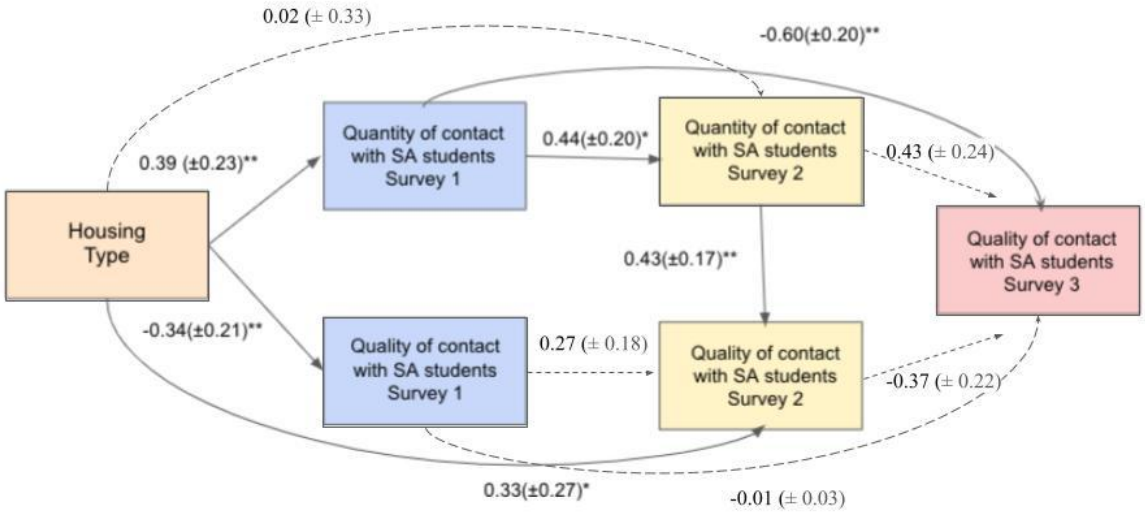
These results support the original hypothesis that there is a main effect of negative contact on intergroup anxiety and negative intercultural attitudes but no support for the effect of positive contact. This finding is aligned with the literature suggesting that negative contact predicts increased prejudice more than positive contact increases prejudice reduction (Barlow et al., 2012).

Longitudinal path effects

Preliminary investigation showed few to no cross-lagged relations between variables, and the models shown here were arrived at by pruning direct paths and longitudinal paths. A longitudinal path model, shown as Figure 4.8, was tested to investigate the relationship between housing type with the quantity and quality of contact with SA students over all surveys. A Chi-Square for model fit was used and suggested that the lack of model fit was not significant ($\chi^2(3,45) = 5.33, p = 0.149$). Regression coefficient estimates were reported using standardized or beta coefficients. The relationship between housing type and quality of contact was not stable over time. At the time of the first survey, there was a significant negative relationship between housing type and quality of contact scores ($\beta = -0.34, SE = 0.21, p < 0.05$) but a significant positive relationship with quantity of contact ($\beta = 0.39, SE = 0.23, p < 0.01$). By the second survey, housing type did not significantly predict quantity of contact with SA students, but housing type did predict that UCT Residence and Campus Key students would have higher quality of contact scores than the program housing students ($\beta = 0.33, SE = 0.27, p < 0.05$). The

quality and quantity of contact with SA students during the second survey did not significantly predict the quality of contact score for the third survey when the students were back in the US. Instead, there was a stronger, significant negative relationship between the quantity of contact scores during the first survey and the quality of contact scores at the third survey ($\beta = -0.60$, $SE = 0.20$, $p < 0.01$). More contact with SA students during the first survey predicted lower quality of contact scores on the third survey. The relationship is visualized in Figure 4.8 below.

Figure 4.8 Longitudinal path model of the relationship between housing type, quantity of contact with SA students and quality of contact with SA students over time.



This diagram visualizes the relationship between housing type, the self-reported quantity of contact with SA students generally, and the self-reported quality of contact score. Only the relationships that were statistically significant are shown in the diagram. The numbers indicated next to the arrows are the standardized regression coefficients between variables in the direction of the arrow. The stars next to the coefficients indicates the significance of the coefficients,

****(p<.001), **(p<.01) and *(p<.05). The standard error is included next to the regression coefficients.*

The longitudinal path model supports the hypothesis that housing type does have an impact on initial intergroup contact for US study abroad students, but over time, the housing type no longer predicts the quality of contact. The model results are difficult to interpret given the change in the regression coefficient signs over time in the path model. It could suggest that the timing of the surveys had an impact on the quality of contact that the US students had with SA students. The first survey was conducted during the first few weeks of the semester and during orientation programming while US students are still adjusting to living abroad. By the time of the second survey, there would have been time to adjust and the quantity of contact with SA students could have impacted the quality of contact differently than it did during the first survey.

Due to a small sample and unanswered questions, there was not enough data to compute a longitudinal path model exploring the predictive effects on negative intercultural attitudes or intergroup anxiety over time. The longitudinal models seen exploring these relationships, in Appendix F, did not support the hypothesis that contact with Black SA students over time impacted the negative intercultural attitudes in the last survey. Additionally, intergroup anxiety scores over time had no significant effect on the quality of contact with SA students in the last survey or throughout the semester.

Discussion

Through a series of three surveys over six months, the current study tested multiple hypotheses in order to understand the relationship between housing type, time and the identified predictor variables involved in intergroup contact. The variables included quality and quantity of

contact with SA students, negative and positive contact, negative intercultural attitudes and intergroup anxiety. The quantity of contact scales were used during only the first and second surveys because the scale had a physical requirement for the participants to be in Cape Town. The final survey was administered once the US students returned back to the US.

This research served to expand on the recent intergroup contact literature specific to the conditions of contact in international and intercultural environments. The current study was conducted longitudinally based on the previous research into US study abroad student expectations upon arriving abroad (Stangor et al., 1996). Once students first arrive, the intercultural attitudes are more positive toward the host country as US students have lower ethnocentrism, lower communication apprehension and higher language interest at the start of the program (Kim & Goldstein, 2005). Over time, the intercultural attitudes became more negative as the US students continued through the semester but more direct contact with host members improved longitudinal intercultural attitudes for the US students (Stangor et al., 1996). The previous research suggested that there is a relationship between intercultural attitudes, time and amount of contact with host country members. Terzuolo (2018), found that program characteristics like housing with host-country members was not a significant predictor of improved intercultural competence during study abroad programs.

The current study hypothesized that housing would predict improved intercultural attitudes over time under the suggestion that US students living with host-country members, like in UCT Residence and Campus Key, would have more quantity of contact with SA students. There was support for the starting hypothesis that US study abroad students living in UCT Residence and Campus Housing would report higher quantities of contact with SA students than US students living in all-US Program Housing across the first two surveys completed in-country

surveys, but not once the US students returned home. Both groups had an increase in the quantity of contact with SA students over time. The higher quantities of contact may have been made more complex by racial segregation on UCT campus and the over-representation of Black UCT students in UCT Residence compared to the percentage of Black SA students enrolled at the university as a whole (TMG Digital, 2016). UCT Residence and Campus Key US students had significantly more contact with Black SA students than those US study abroad students in program housing.

In order to examine where US students were in direct contact with Black and White SA students, the final survey included a question asking the participants where they had contact with options on-campus and off-campus. Due to the decrease in the number of participants by the final survey and the disruption to the in-person semester, the sample for these questions was too small to indicate whether there was a difference between housing types or SA population groups. Neither the UCT Residence and Campus Key or program housing students indicated having contact with White SA students in UCT Residence or UCT public spaces, like Jammie Steps (now the Sara Bartman steps), Jammie bus, Cafeteria or Campus Grounds, but they were indicated for contact with Black SA students. The spatial segregation on UCT campus described in the intergroup literature would support these exploratory results in regards to the difference in locations where intergroup contact with White SA and Black SA students would differ for US students (Alexander & Tredoux, 2010; Schrieff et al., 2010).

As in the study conducted in Stangor et al. (1996), there was an interaction of negative intercultural attitudes and time. While in-country, the UCT Residence and Campus Key students reported higher negative intercultural attitudes than the students staying at the Program House, but once students returned home to the US, the Program House students reported higher scores

on the negative intercultural attitudes scale than the UCT Residence students. The scores on the final survey for the Program House were higher than the reported scores while in-country. These findings support the hypothesis that there is a longitudinal difference in negative intercultural attitudes between the housing types because over time US students in the program house had more negative intercultural attitudes than the students who lived in UCT Residence and Campus Key.

Based on the recent research into the contact caveat and the asymmetrical nature of negative contact (Barlow et al., 2012), the current study expanded on the impact of increased contact with host country members on improved intercultural attitudes (Stangor et al., 1996). It was hypothesized that upon assumption of more contact in UCT Residence and Campus Key housing than students in program housing, there was a risk of increased negative and positive contact. There were no significant results to support the assumption in the second hypothesis that the UCT Residence and Campus Key students had more positive or negative contact with SA students than the Program Housing group. Negative contact with SA students moderated the reported negative intercultural attitudes across both groups by increasing negative intercultural attitudes as negative contact with SA students increased.

The literature indicates that more positive contact reduces prejudice, improves intergroup and intercultural attitudes and reduces intergroup anxiety and avoidance (Hayward et al., 2017; Paris et al., 2014; Stangor et al., 1996). Hayward et al. (2017) identified intergroup anxiety as a mediator between prejudice, avoidance and contact, revealing a paradox. Adverse experiences felt during negative contact situations can influence negative expectations for future contact and increase intergroup anxiety (Paolini et al., 2018). As US students begin their study abroad experiences with heightened positive expectations (Kim & Goldstein, 2005), the threat of

negative contact was hypothesized to impact the intergroup anxiety of the US students over time. In the current study, there was no significant evidence that intergroup anxiety differed between the groups or over time. Negative contact was identified as a mediator of intergroup anxiety across the groups. Negative contact with SA students had a positive correlation with intergroup anxiety for both groups. For both housing types, more negative contact correlated with an increase in intergroup anxiety.

With regard to the quality of contact, time moderated the difference between the housing groups. At the time of the first survey, the UCT Residence and Campus Key students reported lower quality of contact than the Program House students, but by the second survey, the UCT Residence and Campus Key students reported higher quality of contact with SA students. In the survey administered after the US students had returned to the US for three months, the reported quality of contact was not significantly different.

As both groups had a decrease in quantity of contact with SA students over time but a shift in quality of contact, the results could suggest a difference in the quality of contact students have with SA students over time depending on the housing type. While both groups had a decrease in contact with SA students, the UCT Residence and Campus Key students had an increase in quality of contact with SA students while the Program Housing students reported a decrease in quality of contact by the time of the second survey.

When the first survey was conducted, the US students were attending UCT orientation and reaching out to UCT clubs to start exploring the area and campus. Both housing groups would have had the opportunity to have contact with SA students not limited to academic spaces like lectures or tutorials. By the second survey conducted a month later, the UCT Residence and Campus Key students most likely had more contact opportunity with SA students in their

housing with an increase in quality of contact, and previous research indicates that these social/cultural interactions outside of academic settings improve intercultural attitudes over time (Paris et al., 2014).

In contrast, Geeraert et al. (2013) found that study abroad students living with students of the same home country can hinder cultural adjustment over time. The relationships built between co-nationals during a study abroad experience has been compared to having family-like qualities (Pazil, 2019). This increase in stress over time could account for the decrease in quality of contact due to reduced cultural adjustment and higher outgroup derogation. It may not create an environment for US students in program housing to report contact with SA students to be genuine and pleasant or allow them to feel SA students to be equal partners during the contact (Paris et al., 2014). In the current study, the hindrance in cultural adjustment over time could contribute towards the reverse impact of housing type on quality of contact with SA students from the first survey to the second survey presented in the longitudinal path models.

Overall, the current study supports the finding that US students living in UCT Residence and Campus Key have a greater quantity of contact with SA students, specifically Black SA students. The housing type of the US student impacts negative intercultural attitudes and quality of contact, moderated by time. At the time of the first survey, the US students in the program housing had higher quality of contact with SA students and less negative intercultural attitudes than the students living in UCT Residence and Campus Key. By the second survey, the UCT Residence and Campus Key students had more quality contact with SA students but more negative intercultural attitudes than the program house students. Longitudinally, the quality of contact with SA students was not statistically different but the students who lived in UCT Residence and Campus Key had statistically significant less negative intercultural attitudes.

Additionally, there is a main effect of an increase in negative contact with SA students and an increase in intergroup anxiety across both housing types.

Limitations and Recommendations for Future Research

There were quite a few limitations to the current study that future research should aim to resolve if there is a desire to replicate or expand on this study. The first major limitation was the sample size of the study. There were 203 US semester study abroad students enrolled in the first semester of 2020 starting in February, and the study started with a sample of 22% of the population with 44 participants and decreased to 25 participants in the second survey and 26 participants in the final survey. The small sample size resulted in a decrease in statistical power and may have affected the reliability and validity of the results. Additionally, the students were able to choose their housing type, which would be an example of how limited the generalizability of results in this study are in relation to naturally occurring intergroup contact outside of this study (Dixon, Durrheim & Tredoux, 2005).

Another limitation to the methodology of the study was the impact of the global COVID-19 pandemic. This caused the study to be cut short by two months and shortened the in-person international contact for the US study abroad students with SA students, with two implications. The first implication of the repatriation of the US students caused a decrease in participation in the first and second survey due to communication disruptions and distractions. It was more difficult to reach the students as they scrambled to move back to the US and to encourage them to complete the survey. The second implication was related to the analysis of longitudinal effects of intergroup contact. The US students were in South Africa for two months rather than four and a half months, which is not representative of the normal study abroad structure, where students spend the entire semester in-country. For further research, it is

suggested that the study be conducted during the entirety of the semester and have more than two surveys completed during the semester.

In order to continue the research about the impact of housing on intergroup contact and intercultural attitudes of US study abroad students in Cape Town, future research should explore the nature of voluntary and involuntary contact with SA students depending on housing. Because the second question regarding the quality of contact was removed for internal validity for all surveys, future research should dive deeper into the kind of contact US students are having with SA students. Paris et al. (2014) found that more voluntary contact with host country members improved intercultural attitudes because the US students were able to formulate and control the environment for intergroup contact. Future research could expand on the relationship between negative contact and intercultural attitudes by determining if the negative contact was influenced by a feeling of lack of control.

Further exploration into the locations of contact with Black and White SA students would expand on the results from the current study about the role of spatial segregation on UCT campus on the US study abroad experience of intergroup contact. Specifically, future research could expand the results from Turner et al. (2007) and spatial segregation moderating impact on cross-group friendship building. Due to the smaller sample of participants in the current study and disruption to the proposed length of the study, cross-group friendship building measures were not adequately utilized. Further research could investigate the impact of segregation at a host university on the cross-group and international friendship building for US study abroad students with Black and White SA students. Additionally, due to the small sample size of the study, deeper analysis into the role of ethnicity of the participants could not be accurately

explored in this study. Further research could look closer into how the US racial and ethnic identity impacts the intercultural and intergroup contact with South African students at UCT.

With the results of the current study, future research could explore the differences in experiences between the housing groups, in addition to quantity and quality of contact US students experience with SA students, that mediate the difference in intercultural attitudes. An investigation into the intercultural barriers to contact could further be explored based on the housing types. Housing has been identified as a strong predictor of cultural adjustment, anxiety, and stress throughout the study abroad experience (Geeraert et al., 2013). Other adverse emotions hindering intercultural contact, like impatience or frustration from communication difficulties, could be explored as mediating factors in the difference between students living in different housing types.

Personal characteristics, like gender, cultural identification and family background, were significantly associated with intercultural development scores where personal characteristics outweighed program characteristics like housing (Terzuolo, 2018). Since the intent to study abroad is impacted by social and cultural capital, field of study and socio-economic status as well, future research should include personal characteristics in their measures to account for this impact of personal characteristics and variance between individuals.

For a more robust data collection, opening the participant population to include previous US study abroad students at UCT would allow for more participants and provide insight for longitudinal effects of housing type on negative intercultural attitudes and intergroup contact once US students leave Cape Town. Additionally, there should be further research into more in-depth daily measures of contact throughout the semester to expand on the quantitative

findings in the current study and provide more clarity in the locations of contact and type of contact US students have with SA students.

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Appendix A: Consent Form and Introduction

Thank you for taking the time to participate in my study. The results of this study will contribute to a larger understanding of the study abroad experience for US students at the University of Cape Town.This survey is not mandatory, so at any point, you do not have to continue or complete the survey if you become uncomfortable.

Study Aim:

You are being invited to participate in a study being done by researchers from the Department of Psychology at the University of Cape Town. The aim of this study is to learn more about the study abroad experience on campus for United States students.

Study Procedures:

If you participate in this study, there will be 4 different points where you will need to complete a survey that will take about 10 mins. At the end of the study, you will be debriefed on the background information about the study topic with an email from me and a link to follow the results of the study on Open Science.

Possible Risks:

You will experience no greater risk in the course of this study than you would experience in the course of a normal day.

Possible Benefits:

You will be given the opportunity to reflect on your international experience in a confidential weekly journal. Also, at the end of the study, you will be placed in a drawing for a $50 Amazon gift card.

Costs:

The only cost involved is the time that you will give up in order to take part in the study. There will be a requirement of 5-10 minutes required to respond to the survey that will be distributed 4 times during the study.

Voluntary Participation:

Your participation in this study is completely your choice. You will not suffer any consequences if you decide not to take part in this experiment or if you choose not to answer a certain question. You are also free to leave the study at any time. Your relationship with UCT or your home university, or the organization that helped with your study abroad placement, will not be affected in any way, whether you choose to participate or not.

Confidentiality:

Information that you provide during this study will be kept private. Your identifying details, such as your name, student number and demographic information, will only appear on the participant information and consent forms. These forms will be kept privately by the researchers behind password locked files. The names will be changed to participant numbers in the use of analysis and conclusions. Any reports from the study will talk about the findings in general; no-one will be able to identify you from the reports.

Questions:

If you have any questions or comments relating to the study you may contact the following primary researcher and research supervisor:

Elizabeth Frekot frkeli001@uct.ac.za Prof. Colin Tredoux Colin.tredoux@uct.ac.za

Please feel free to contact Rosalind Adams (the Research Ethics Committee administrator) via email at rosalind.adams@uct.ac.za if you have any complaints about the study or concerns about your rights as a research participant.

* 1. By signing below you are acknowledging the following:

I have understood what participating in this study will involve. I am aware of the risks and benefits. I have no further questions about the study and voluntarily consent to participate.

Full Name

Date

Email Address

Appendix B: Survey Questions

Please respond on a scale of 1= *none at all* to 5= *a great deal* to questions 1- 9:

1. How much contact do you have with UCT students on UCT Campus?

2. How much contact do you have with Black UCT students at school?

3. How much contact do you have with White UCT students at school?

4. How much contact do you have with UCT students as neighbors?

5. How much contact do you have with Black UCT students as neighbors?

6. How much contact do you have with White UCT students as neighbors?

7. How much contact do you have with UCT students as close friends?

8. How much contact do you have with Black UCT students as close friends?

9. How much contact do you have with White UCT students as close friends?

[Quality Measure]

Please respond on a scale of 1= *not at all* to 5= *very often* to questions 10-12:

10. How often have you visited the homes of UCT students?

11. How often have you visited the homes of Black UCT students?

12. How often have you visited the homes of White UCT students?

13. To what extent did you experience the contact with UCT students as equal?

14. To what extent did you experience the contact with UCT students as involuntary or voluntary?

15. To what extent did you experience the contact with UCT students as superficial?

16. To what extent did you experience the contact with UCT students as pleasant?

17. To what extent did you experience the contact with UCT students as competitive or cooperative?

[Positive/negative contact measure]

18. On average, how frequently do you have negative contact with UCT students?

19. On average, how frequently do you have positive contact with UCT students?

20. On average, how frequently do you have positive contact with Black UCT students?

21. On average, how frequently do you have positive contact with White UCT students?

22. On average, how frequently do you have negative contact with Black UCT students?

23. On average, how frequently do you have negative contact with White UCT students?

[Intergroup anxiety scale]

If you were the only US student and you were interacting with UCT students, how would you feel compared to the occasions when you are interacting with other US students in Cape Town?

On the scales below, please respond with a rating from 1(Not at all) – 5(Very much) based on your experienced feelings for each emotion.

24. Happy

25. Awkward

26. Self-conscious

27. Confident

28. Relaxed

29. Defensive

[Intercultural attitudes scale]

On the scale below, please respond with a rating from 1(favorable) – 11(unfavorable) to represent your general attitude given the statement presented.

30. During your semester thus far, I have found local UCT students to be:

(Helpful - Unhelpful)

31. During your semester thus far, I have found local UCT students to be:

(Friendly - Unfriendly)

32. During your semester thus far, I have found local UCT students to be:

(Favorable - Unfavorable)

33. During your semester thus far, I have found interactions with local UCT students to be:

(Good - Bad)

Additional Questions for Survey 2

1. How many South Africans have had interpersonal contact since becoming aware of COVID-19?

2. How many Americans have had interpersonal contact since becoming aware of COVID-19?

3. How many other International students have had interpersonal contact since becoming aware of COVID-19?

Additional questions for Survey 3

1. Have you kept in touch with any South African Friends you met while studying abroad at UCT? Respond on a scale of 1= none at all to 5= a great deal.

2. How many South African friends have you kept in touch with since returning to the United States? Options: 0 | 1 | 2 | 3 | 4 | 5 or more

3. If you have kept in touch, how frequently did you do so?

Options: Once a week| Twice a week or more | Once a month | Once since leaving South Africa | Other (please specify)

4. If you have kept in touch, through which medium did you do so? (All mediums had a choice of "No Contact"). Respond on a scale of 1= none at all to 5= a great deal.

Email

Whatsapp

Facebook/instagram

Zoom/Skype/other video-calling platform

SMS

If you kept in touch through a different medium from the ones listed above, please list them below.

5. If you had a chance to travel to Cape Town for an extended amount of time, would you choose to? (Yes/ no)

6. If you had to choose your housing selection for the semester again, which selection would you make?

Program housing

UCT Residence

Campus Key

7. Please let your top 3 factors you used to make your choice in #26:

8. If a friend was planning to study at UCT next semester, which housing selection would you suggest for them?

Program housing

UCT Residence

Campus Key

9. What 3 reasons would you give your friend for the housing selection you suggested in question #28?

10. During your time at UCT, where did you tend to have contact with White SA students?

Lecture or Tutorial

UCT Residence

UCT public campus spaces (Jammie Steps, Jammie bus, Cafeteria, campus grounds)

UCT community or sporting event Off-campus community or sporting event

On a social media platform

Bar or restaurant

Shopping (retail or grocery)

Traveling

Public park or beaches

Other (please specify)

11. During your time at UCT, where did you tend to have contact with Black SA students?

Lecture or Tutorial

UCT Residence

UCT public campus spaces (Jammie Steps, Jammie bus, Cafeteria, campus grounds)

UCT community or sporting event Off-campus community or sporting event

On a social media platform

Bar or restaurant

Shopping (retail or grocery)

Traveling

Public park or beaches

Other (please specify)

*** Quantity of contact items not included in the final survey due to the fact the participants were not physically present

Appendix C: Debriefing Document

Thank you for committing time to my study during your busy semester abroad!

The next step will be to analyze the results and address the questions found below. I anticipate that the final report will be finished in about a year, so you can follow the rest of my project titled, Intergroup Contact and Housing Selection of United States Study Abroad Students at UCT, on Open Science, here.

This research aims to understand the experience of United States Semester Study Abroad students at The University of Cape Town. The experience of US students at UCT is both an academic and cultural experience. The study will strive to answer questions in regards to:

1. Where and how do US students make friends at UCT?
2. Who do US students become friends with?
3. What impact does intercultural contact have on friendship building and intercultural attitudes as a study abroad study?

Below, you can find some background information about Contact Theory and Study Abroad Programs as it relates to my study:

There were two groups of students participating in this study, as some US students elect to live in UCT residence and some students elect to live in US study abroad program housing. In the international education literature, students abroad who have more than one in-group co-national member in their main social network while abroad had higher levels of intergroup anxiety and lower levels of cultural adjustment than students with more local friends abroad (Geeraert et al. 2013).

The study was designed based on recent advancements in intergroup contact theory. The hypothesis began in 1954 in the book, *Nature of Prejudice*, written by Gordon Allport, where

Allport explored the relationship between contact between different cultural, interracial groups and the effect the contact had on prejudice. Since then, the contact hypothesis has been used to understand the relationship between intergroup contact and intercultural attitudes and cross-group friendships (Tawagi & Mak, 2014, Geeraert et al. 2013).

Study abroad programs create an international environment that allow for intercultural and intergroup contact studies to be conducted and explored in an academic space.
The study is comparing the friendship building and intercultural attitudes between the groups to reveal the access to intercultural contact that differs between the two groups. I hypothesize that living in the UCT residence will increase both negative and positive contact, which would impact differences in intergroup attitudes. In the case of those living in the study abroad housing, I hypothesized that contact with Full-time UCT students will be less and the contact would increase overtime.

At the end of this study, all information will be kept confidential and no names will be used in the analysis or conclusions of the final report. All data will be stored on a password-protected computer, and will only be available to the research team and faculty advisor. Written and oral reports of the research will not make any references or comments that could potentially link participants to the study and its results.

I hope that by participating in this study you have been able to reflect and learn about your international experience at UCT. If in any case this study has given you harm, please reach out to your Student Wellness Center on campus or a wellness center in your area.

If you have any questions, comments or complaints regarding your experience of study, do not hesitate to contact us:

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