Abstract

Intergroup relations are an important social concern in South Africa, owing to the nation's history of apartheid and racial segregation. In spite of the country adopting a democratic legislation, now over 15 years ago, there is still evidence that segregation of an informal type persists. This segregation is evident, for example, in the social spaces (e.g. residence dining halls) of a multi-ethnic university that promotes integration. This study investigated students' levels of, and attitudes to, interracial contact and transformation in general at the University of Cape Town using both a social experiment and online questionnaire. The social experiment was an intervention aimed at facilitating intergroup contact an undergraduate university dining hall. Results of the intervention showed that racial segregation as measured by D and xPy*, indices of spatial segregation, were still evident in the dining hall. Although the segregation indices seemed to show less segregation when examined descriptively, this effect was not sustained nor generalized to nights outside of the intervention. In spite of this, results of the survey (n = 544) indicated an overwhelmingly positive response to the importance of interracial friendships and transformation initiatives.

Keywords: Intergroup contact, residence dining halls, segregation, intervention, survey, South Africa

Exploring Intergroup Race Relations and Transformation in a South African University: The Implementation of a Social Experiment and an Online Survey with Undergraduate Students

Integration and desegregation are important yet problematic issues in multi-ethnic societies such as South Africa, which has a history of segregation based on race. Race can be defined as a visible marker of difference, which fuels prejudice and segregation (Allport, 1954). In reality, intergroup relations and contact remain concerns in most multiethnic societies where segregation has been present for many years. It is superficial to think that correcting this will be simple. Studying intergroup relations improves understanding of segregation in post-apartheid South Africa. Although segregation is no longer enforced within South African society, research suggests that black African and white individuals continue to self segregate by race (Schrieff, Tredoux, Dixon & Finchilescu, 2005; Schrieff, Tredoux, Finchilescu & Dixon, 2010). With South Africa being more than 15 years post apartheid, we need to understand why segregation continues to persist. Perhaps part of this understanding lies in gaining some perspective on attitudes towards integration and segregation on an individual level. In addition, we need to investigate practical ways of facilitating and improving intergroup contact.

Post Apartheid, Racial Segregation

Apartheid facilitated racial separation between individuals and fuelled segregation. This left lasting effects, even after it was abolished in 1994 and a democratic legislation was introduced. After the introduction of this new legislation, there was an unrealistic idea that members of different race groups would automatically desegregate and integration would occur. The international community believed that South Africa had become an integrated non-racial society in 1994 (Christopher, 2001). However, numerous recent studies indicate that segregation persists within all domains of life. Examples of research on segregation in various environments include studies conducted in residence dining halls, (Alexander, 2007; Dixon, Tredoux & Clack, 2005; Schrieff et al., 2005, 2010), studies conducted on beaches (Dixon & Durrheim, 2003) and studies conducted in nightclubs (Tredoux & Dixon, 2009). These studies show that segregation still persists in informal settings in South Africa.

One of the main ways in which apartheid was upheld was through the use of space to effect segregation. Research suggests that such macro level processes seem to be recreated in micro-level contexts. Continued informal separation seems to be effected through spatial boundaries, as each group maintains their own ‘space’ (Alexander, 2007). Spatial boundaries

interfere with opportunities for contact and opportunities to start and develop relations (Dixon & Durheim, 2003). Investigation of interracial relations has resulted in numerous studies which attempt to investigate why segregation persists (Finchilescu, Tredoux, Mynhardt & Muianga 2007). These studies frequently draw on contact theory as the theoretical framework for research in this area.

The Contact Hypothesis

The contact hypothesis proposed by Allport (1954), suggests that regular interpersonal contact is one of the most effective ways to reduce prejudice between minority and majority group members. Regular contact between members of different groups results in interactions that are more favorable if the right conditions are present. These conditions include; equal status between individuals, a sense of cooperation or working towards a common goal, and support of an institutionalised authority. The contact hypothesis proposes that establishing strong social bonds between individuals of different race groups could dramatically improve attitudes (Pettigrew & Tropp, 2006; Sigelman & Welch, 1993). These ideas may provide good, non-prejudicial and meaningful interactions between different race individuals. In spite of this, recent studies (Alexander, 2007; Dixon & Durrheim, 2003; Schrieff et al., 2005, 2010) demonstrate that minimal contact occurs between black African and white students, even under Allport's (1954) optimal conditions, which suggests that it may not be as effective in practice as once thought.

Support for the Contact Hypothesis

Some studies which support the contact hypothesis propose that this hypothesis is one of the most influential ideas in social psychology (Brewer & Brown, 1998 as cited in Dixon, Durheim & Tredoux, 2005). Henry and Hardin's (2006) study on friendships between black and white individuals found reduced prejudice due to friendly contact, thereby supporting the contact hypothesis. A meta-analysis was carried out by Pettigrew and Tropp (2006) with 713 independent samples from 515 studies and found that intergroup contact does typically reduce intergroup prejudice. This research shows that improved intergroup contact results in lower levels of prejudice, especially between different-race individuals.

Criticisms of the Contact Hypothesis

In contrast to these results supporting the role of intergroup contact in improving intergroup attitudes, there are findings that suggest that intergroup contact can produce false expectations for equality amongst group members (Saguy, Tausch, Dovidio, Pratto, 2009). Although on the surface, some societies may be considered democratic or integrated and ideal

in terms of satisfying Allport's (1954) necessary conditions, intergroup race relations continues to show evidence of segregation when scrutinized more closely. Therefore, even when the ideal conditions seem to be met, segregation still persists. Contact may be promising for the majority group; it might relieve their anxieties about subordinate/minority group members, reduce their prejudice, broaden their experiences and perhaps allow for them to make friends. However, the effects for minority groups may be less favourable, for instance, in creating intergroup anxiety (Reicher, 2007). Dixon, Durheim and Tredoux (2005) acknowledge that contact cannot always occur under ideal conditions and even though the literature indicates that the hypothesis works, practice does not fully support the theory.

Vincent's (2008) qualitative study focused on stories of race and identity from undergraduate students of different races. Students give the appearance of having interracial group contact; however, informal barriers remain. Vincent (2008) argues that, "It (racial difference) continues to have an often unacknowledged and unseen power" (p. 1427).

Residence dining halls offer opportunities for contact under 'ideal' conditions, which may assist in improving interactions. However, black African and white individuals continue to self segregate in these settings as reported by Schrieff et al., (2005, 2010). These researchers found marked segregation in seating patterns although opportunities for interracial interaction were present.

Relevant Studies

Different studies conducted in the field have tried to understand the persistence of segregation from different methods of enquiry. Two of these methods of enquiry have included investigating the use of space and intergroup contact in naturalistic settings (observational and experimental methods) and directly asking individuals about intergroup race relations (survey methods). These two areas of enquiry are described below.

Observational Studies

As mentioned, one of the ways that apartheid was engineered was through separating people in space and we seem to see that same dynamic filtering from macro to micro intergroup relations. An observational study by Dixon and Durheim (2003) focused on observing and recording different racial groups in informal settings and their patterns of interracial interaction. They observed Scottsburgh's beachfront (in Durban, Kwazulu Natal) on three separate occasions using three aspects of contact. A similar conclusion was reached

on all aspects studied; that black African and white intergroup contact was virtually nonexistent in these informal settings and that segregation still persists.

A typical example of an informal setting is a residence dining hall. Residence dining halls provide excellent opportunities for regular intergroup contact to occur and for researchers to observe such intergroup relations and contact. In spite of this, international and local research findings on intergroup race relations in cafeterias and dining halls have not been favourable. On the surface intergroup relations in these settings seem acceptable, but on closer examination of the seating patterns, it is apparent that seating patterns are actually segregated by race (Clack, Dixon & Tredoux, 2005; Schrieff et al., 2005, 2010).

A naturalistic study on race relations in different night clubs on Long Street, Cape Town was conducted by Tredoux and Dixon (2009). Data collection was conducted through observations, recording the members of different race groups present and their interracial interaction within the clubs. Results indicated that segregation was apparent and that black African and white individuals had minimal contact in these night clubs. Boundaries appeared to exist between different races, even in small crowded areas. These findings suggest that segregation is still present even in environments where one might expect otherwise. Much of the literature available also indicates that segregation continues, problems in crossing the racial barrier remain and that informal segregation persists (Goff et al., 2008; Schrieff et al., 2010; Vincent, 2008).

Therefore, these studies reveal that segregation is still apparent. However, observational studies only provide descriptive evidence for the persistence of segregation and do not necessarily explain why this occurs. Survey data investigating these phenomena provide useful supplementary evidence.

Survey Studies

A number of South African studies using survey measures have been conducted to explore a range of issues relating to intergroup contact, prejudice, integration, transformation and related issues. Muianga (2006) states that racism and interracial surveys are two issues which are related and, as a result should require a considerable amount of attention. Tredoux and Finchilescu (2010) invited a large, diverse sample to complete an internet questionnaire that explored the relationship between contact and prejudice. This questionnaire measured the amount of intergroup contact, intergroup anxiety, friendship and stereotypes between racially different individuals. Findings demonstrated that the strongest mediator for contact- prejudice associations had been increased anxiety about intergroup contact from black and white respondents. It was also found that respondents had low levels of cross race friendships, even though it could be argued that in post apartheid South Africa, opportunities to create friendships across racial barriers were present. Tredoux and Finchilescu (2010) believe that within post apartheid South Africa, additional variables are needed and necessary for a decrease in the contact- prejudice relationship.

The persistence of informal segregation in post apartheid South Africa is well documented, with much of the research focusing on observing contact between different race individuals (Dixon & Durrheim, 2003;Tredoux & Dixon, 2009; Schrieff et al., 2005, 2010) A small but increasing number of survey studies investigated whether the lack of interracial interaction could be attributed to race, or other variables such as friendships or comfortability.

Finchilescu et al., (2007) explored the reasons for which students attribute their lack of interracial mixing at their universities. These researchers took a large number of students from four different universities and invited them to complete an internet questionnaire based on intergroup contact amongst different race individuals. They found a lack of interracial mixing due to specific characteristics between groups such as race and language barriers, as well as the tendency for groups to blame the other. Students still had a preoccupation with the issue of race and the idea that the "other" group had negative views about them. Finchilescu et al., (2007) found that students felt strongly that different interests, behaviour and coming from different backgrounds also affected friendship patterns and whether or not different race individuals will interact.

Schrieff et al., (2010) also had a questionnaire component in their study. The questionnaire was administered at three different intervals over a period of three months. The questionnaire consisted of closed- and open-ended questions which related to seating

patterns, intergroup anxiety and comfortability within a university residence dining hall. The results showed that that the majority of participants regularly sit with others who are of the same race. Although participants were fairly comfortable sitting with racially different individuals, black African individuals were more likely to experience intergroup anxiety.

Muianga's (2005) study investigated the diversity of friendships patterns across the University of Cape Town (UCT) campus. She reported that there were very few cross-race friendships between black African and white students. Therefore, students seemed to favour friends who belonged to their own racial groups. Govender (2008) investigated students who live at university residences using survey measures. The purpose was to assess student's views and perceptions of interracial contact. Results revealed that many students felt that there were few opportunities for intergroup contact and that more opportunities should be created. As a result, further emphasis should be placed on encouraging and facilitating intergroup contact. However, there are numerous factors which hinder intergroup contact which shall now be discussed.

Factors hindering intergroup contact

Intergroup anxiety and comfortability. International and local studies have proposed intergroup anxiety as an explanation for continued segregation. It has been reported that contact between race groups may elicit intergroup anxiety (Binder et al., 2009), which is an uncomfortable, awkward and a self conscious feeling experienced when interacting with different race groups (Schofield, 1979).

This effect of intergroup anxiety on interracial contact was purported in recent studies in university resident dining halls. In these studies, Schrieff et al., (2005, 2010) proposed a related concept of a 'zone of comfort' to explain their findings of continued segregation in university residence dining halls. The study refers to friendship and a need for 'comfortability' as organising factors for how groups sit and interact and why they remain in their 'comfort zones'. In addition to comfort zones, Schrieff et al, (2010) found that friendship and quality of friendships influence the spaces where people sit, how they interact and how intimate they are. These are important factors in fostering and maintaining good intergroup contact. The relationship between contact and friendship has become increasingly important. "There is no need to turn to "outgroups" for companionship" (Allport, 1954, p. 17). This is one compelling reason for people to remain in their own friendship groups with similar individuals.

It is interesting to note that research done by Goff, Steele and Davies (2008) has shown that white individuals who are concerned with appearing prejudiced or racist may

distance themselves from black African individuals and in doing so, they come across as prejudiced or racist. In their first study, Goff et al., (2008) found that white participants distanced themselves more from black African participants under conditions of threat. This distancing activated the "white racists" stereotype.

It seems that a number of factors may inhibit the progression of more favourable intergroup relations and these few factors discussed here only provide a snapshot. As a result, expecting intergroup relations to improve independently may be unrealistic. It seems that we need to find ways of facilitating contact through more purposeful efforts, for example interventions, juxtaposed against a continued effort to understand why it is occurring, through a survey component.

Facilitating intergroup contact

An international study that examines prejudice control was done by Crisp and Turner (2009) suggesting that intergroup relations reduce prejudice. Desegregation may be achieved by introducing a concept called "imagined contact". According to these researchers "this provides a simple, flexible and effective means of promoting a more positive perception of 'outgroups' (p. 231). Conflict between individuals reduces when members have the opportunity to engage positively thereby promoting friendship or contact that excludes prejudice or segregation. Their idea centres on imagined positive contact between individuals of different racial groups and effectively decreasing prejudice. From the study the authors developed a system that the 'ingroup' needs to adopt in order to reduce 'outgroup' hostility. Studies have yet to be extended however; development of this approach may offer an alternative means of promoting intergroup contact.

Intervention Studies

Regarding the causal impact of intervention projects in reducing prejudice, Paluck and Green (2009) recommend that more field experiments should be done. They state:

> The contact hypothesis, which benefited from early and innovative field and laboratory studies, remains unproven in the real world. This is due to the limited number of randomized studies conducted in field settings and the narrow range of prejudices tested in those studies. Researchers should aspire to extend real-world experimental tests to domains such as summer camps, multinational peacekeeping units, and refugee settlements (p. 359)

We infer that further avenues of research need to be constructed in 'real world' settings. Alexander's (2007) study took a slightly different direction to other South African

studies in this regard (Tredoux & Dixon, 2009; Schrieff et al., 2005, 2010).The objective of the study was to investigate the use of space as a way of restoring (reinstating) racial barriers and boundaries between groups. Alexander assessed how space was occupied, organized and used within the dining hall by black African and white occupants. Confederates were used to disrupt the spaces between homogenized groups however; these homogenized groups were highly resistant to intrusions and violations of group boundaries. The study demonstrated that groups are more likely to avoid contact with each other, even when there are numerous opportunities for intergroup contact to occur. Additional research needs to be conducted to understand the demonstrated persistent segregation between different race individuals in countries like post-apartheid South Africa and whether this can be improved through active intervention.

The Current Study

It is clear that a gap exists in the knowledge about segregation and interracial contact in naturalistic settings. The motivation for conducting additional observational research in the current study was to observe black African and white students seating patterns in a residence dining hall. This was to assess whether there were changes in the levels of interactions between racially different individuals since previous studies in this setting (for example, Schrieff et al., 2010). We also introduced an intervention to promote intergroup contact and to assess whether this had an effect on students' seating patterns. The aim of the intervention was to provide students with regular opportunities for intergroup contact over a specific period of time. Owing to limited research on active interventions on promoting intergroup contact in naturalistic settings, implementing an intervention would assess and discover whether facilitated contact has an effect on students' interactions. An additional aim of our study was to gather information regarding UCT students' views and suggestions on integration and transformation initiatives. An online survey was designed for this aspect of our study.

Method

The study was comprised of two components: an intervention component and an online survey component. The former component also included a brief survey.

Design

Intervention. We used an observational quantitative, pretest-postest experimental design. This design allowed for research to be conducted using observational and numerical

data collection. This study is, effectively, an extension of previous studies (Schrieff et al., 2005, 2010) and a contribution to a larger research programme concerning informal segregation at the university. The pre- and post-intervention analysis required an exploratory and descriptive design component. This was to record the extent of any change in contact due to the intervention. This also allowed researchers to analyze and compare data effectively. We used this specific dining hall because a previous observational study had been conducted in the same dining hall, which provided comparative data.

Intervention survey. An intervention survey which included three closed ended questions was designed and carried out in the dining hall where observations were taking place. This survey asked questions regarding the intervention (please see Appendix A).

Online survey. An open and closed ended online survey was designed which focused more generally on students' views on integration and transformation initiatives at UCT (please see Appendix B).

Participants

Intervention. Participants were students from two (one male and one female) of the undergraduate residences at the UCT. These students share a common dining hall. Recruitment was not necessary as we were intervening in a natural space (the dining hall). Owing to the negligible number of other race individuals, besides black African and white individuals, and the fact that the indices used in the analyses can only compare two racial groups at a time, we will only focus on the latter two race groups for this study. Disproportion in numbers of white (minority, 34.8%) and black African (majority, 50.2%) participants were considered when results were interpreted as this may have affected the observed level of interaction. The sample size may vary on a daily basis as it will be equivalent to the number of students who eat at the residence hall on specific evenings. Table 1 below represents the demographics of the residence dining hall ($N = 466$).

Table 1
Demographics of students in residence dining hall

Residence	White	Black African	Chinese	Coloured	Indian	NA/Unknown	Total
Female residence	76	121	1	15	12	6	231
Male residence	86	113	-	10	14	12	235
Total Population	162	234	1	25	26	18	466

Note. Although we only focused on black African and White participants, this represents the total sample of the dining hall which included other race groups.

Intervention survey: This intervention survey was completed by a total of 99 participants in the dining hall ($n = 99$).

Online survey. Participants for the online survey ($N = 544$) were students at UCT. Participants included first, second and third year psychology students who earned one Student Research Participation Program (SRPP) point for participating in the online survey. Demographics for the online survey respondents are depicted in Table 2 below.

Table 2
Demographics of the online survey

	White	Black African	Coloured	Indian	Asian	Other	Total
Male	40	25	14	8	2	2	91
Female	212	112	89	30	7	13	453
Total	242	137	103	38	9	15	544

Measures

Intervention. Observations for the proposed study were recorded through pencil-and-paper measures. The data capturing tool utilised for the observations was a simple approximate sketch of the dining hall (please see Appendix C for an example). We used 12 maps for each observation session and 10 maps for each observation during intervention nights. The advantage of utilizing this tool provided us with accurate recordings and reduced error of recording participants more than once. It also provided us with a visual depiction of the dining hall.

Intervention survey. The intervention survey used pencil and paper measures. The survey included three questions that about the intervention experience.

Online survey. The online survey was carried out on UCT's intranet site, Vula. The survey was developed using Zoomerang which is an online survey design programme. A link was provided for students on UCT's Vula site which allowed for students to take part. Questions centred on the idea of transformation; asking students if they were aware of any transformation initiatives at UCT and what they suggest could be done to develop a more integrated and transformed campus. These questions were generated through discussion by students and staff working on a larger project.

Procedure

Intervention. Ethical approval was sought and received prior to commencement of the observation and intervention evenings (Ref #: 2010-01). In order to assess whether the intervention had had an effect on seating patterns and level of intergroup contact amongst

students, we observed students' seating patterns before, during and after the intervention had taken place.

The pre-intervention observations were conducted over two evenings in May. Students seating patterns were observed in order to assess whether there was segregation amongst different race individuals before the intervention was implemented. Observations were also used to assess whether seating patterns had changed since an earlier study conducted in the same dining hall. The procedure for collecting data involved observing and recording individual students' seating patterns in the residence dining hall every 10 minutes between 17h40 and 19h30 on these designated days. The dinner period ran from 17h30 till 20h00 however, 17h30 and the last half hour were excluded as there were too few students present in the dining hall during such times. We recorded the race and gender of the students at each table as well as their location at that particular table, using the map of the dining hall. 'BM' and 'BF' indicated black African male and black African female, respectively. Similarly, 'WF' and 'WM' indicated white female and white male, respectively.

The reason that there was a delay between the initial observations and the intervention was due to the university mid-year vacation period. It was also important to measure specific patterns before the start of a new semester as it is interesting to note which patterns evolved after one semester. The intervention took the form of a 'get to know your neighbour evening' that occurred every Wednesday evening for four weeks during the month of August. Students were not told the true nature of the study as race is still a sensitive topic in South Africa and we wanted to observe them as naturalistically as possible. Thus, they were told that it was a get to know your neighbour evening, which would enable them to meet and make new friends in the residence. Posters were displayed around the residences to notify students about the get to know your neighbour evenings (please see Appendix D). Tuesdays and Thursdays were chosen as the observation days. These observation days assessed whether the effects of facilitated interracial contact would generalize to non-intervention days.

As participants entered the dining hall, they would draw numbers randomly out of a box filled with table numbers. These table numbers assigned participants to their respective tables where they would sit and have dinner. Research assistants were used to encourage participants to participate and sit at their correct tables. Participants were then recorded the same way as the pre- and post- intervention observations were conducted.

In order to correctly assess whether the intervention had had an effect on segregated seating patterns and level of intergroup contact amongst students, we observed students'

seating patterns for a further three days in September. The post-intervention observations were conducted on Tuesday, Wednesday and Thursday in the first week of September.

In total, we had 11 observation evenings which consisted of 12, ten minute periods where students were observed. There were four intervention evenings which consisted of 10, ten minute observations. Therefore, there were 16 observation nights with 180 observations in total.

Intervention survey. The intervention survey was distributed on a Wednesday evening during the post observation week to students in the dining hall on that particular evening.

Online survey. Students were notified of a survey in which they could participate in order to receive one SRPP point. An announcement was made on Vula to notify students of the opening of the survey. We guarded against multiple submissions.

Statistical Analysis

For the observational component of our study, headcounts for each observation were entered into an Excel spreadsheet and analysed using standard indices of spatial variation as recommended by Massey and Denton (1988) for the measurement of residential segregation. These incorporated the dissimilarity (D) and exposure (xPy*) indices. D represents the degree of evenness in the spread of black African and white students seated in the dining halls. The xPy* dimension refers to the amount of contact or possibility of interaction between minority (white) and majority (black African) group members. The results for both indices range from 0 to 1. However; for D-values, 0 represent an unsegregated pattern and 1, a completely segregated picture. Sores for xPy* are interpreted conversely, 0 represents no exposure and hence high segregation and 1 represents a high degree of exposure and hence no segregation/prejudice.

Results

Intervention

The table below describes the descriptive statistics as well as the D and xPy* scores relating to pre-, during and post- intervention. Monte Carlo simulations were used to determine significance of each observation ($N = 180$). These simulations presented us with a result that would tell us if the patterns were created by random evening fluctuations that occurred by chance. The number of D's that were statistically significant across the 16 observations evenings ($N = 180$) were 154. The number of xPy*'s that were statistically significant ($N = 180$) were 160. D ranged from 0 to 1. xPy* ranged from 0 to 0.67. The range

of the average D and xPy* values across the 16 observations are 0.66 to 0.9 and 0.2 to 0.6 respectively. These results are presented below in Table 3.

Table 3
Observational, D and xPy data*

	White	Single white	Black African	Single black African	Mixed	D	xPy*
Pre Observations							
Observation day 1	51	14	66	7	35 (20.23%)	.73	.13
Observation day 2	50	7	71	10	41 (23.00%)	.84	.11
Mean	50.5	10.5	68.5	8.5	38 (21.59%)	0.78 (0.08)	0.12 (0.02)
Intervention							
Observation day 1	50	14	67	24	24 (13.41%)	.87	.07
Observation day 2*	35	32	16	12	38 (28.57%)	.73	.18
Observation day 3	62	12	63	21	25 (13.66%)	.89	.07
Mean	49	19.3	48.6	19	29 (17.59%)	0.83 (0.09)	0.11 (0.07)
Observation day 4	50	9	75	20	23 (13.00%)	.90	.06
Observation day 5*	38	39	17	11	34 (24.46%)	.78	.15
Observation day 6	41	12	63	20	31 (18.56%)	.82	.08
Mean	43	20	51.7	17	29.3(18.20%)	0.83 (0.06)	0.09 (0.05)
Observation day 7	39	9	55	24	37 (22.56%)	.74	.10
Observation day 8*	41	26	16	10	57 (38.00%)	.69	.18
Observation day 9	55	45	24	12	16 (10.53%)	.90	.06
Mean	45	26.7	31.7	15.3	36.7(23.62%)	0.77 (0.11)	0.11 (0.07)
Observation day 10*	33	31	14	11	53 (37.32%)	.66	.20
Observation day 11	51	54	16	1	25 (17.00%)	.83	.19
Mean	42	42.5	15	6	39 (27.00%)	0.75 (0.12)	0.20 (0.01)
Mean of Intervention	45	25.7	38.7	15	33 (20.95%)	0.80(0.08)	0.12 (0.06)
Post Observations							
Observation day 1	59	53	19	10	23(14.02%)	.89	.06
Observation day 2	53	59	21	22	29(15.76%)	.88	.09
Observation day 3	26	10	53	19	44(28.95%)	.68	.18
Mean	46	40.6	31	17	32(19.21%)	0.82 (0.12)	0.11 (0.06)

Note. 'Mixed' represents mixed race tables that includes both black African and white students.
* indicates intervention evenings.

Depicted below is a visual representation of D and xPy*, pre, during and post intervention. The connected dots represent observational evenings while the single, unconnected dots represent the evenings during which the intervention was implemented.

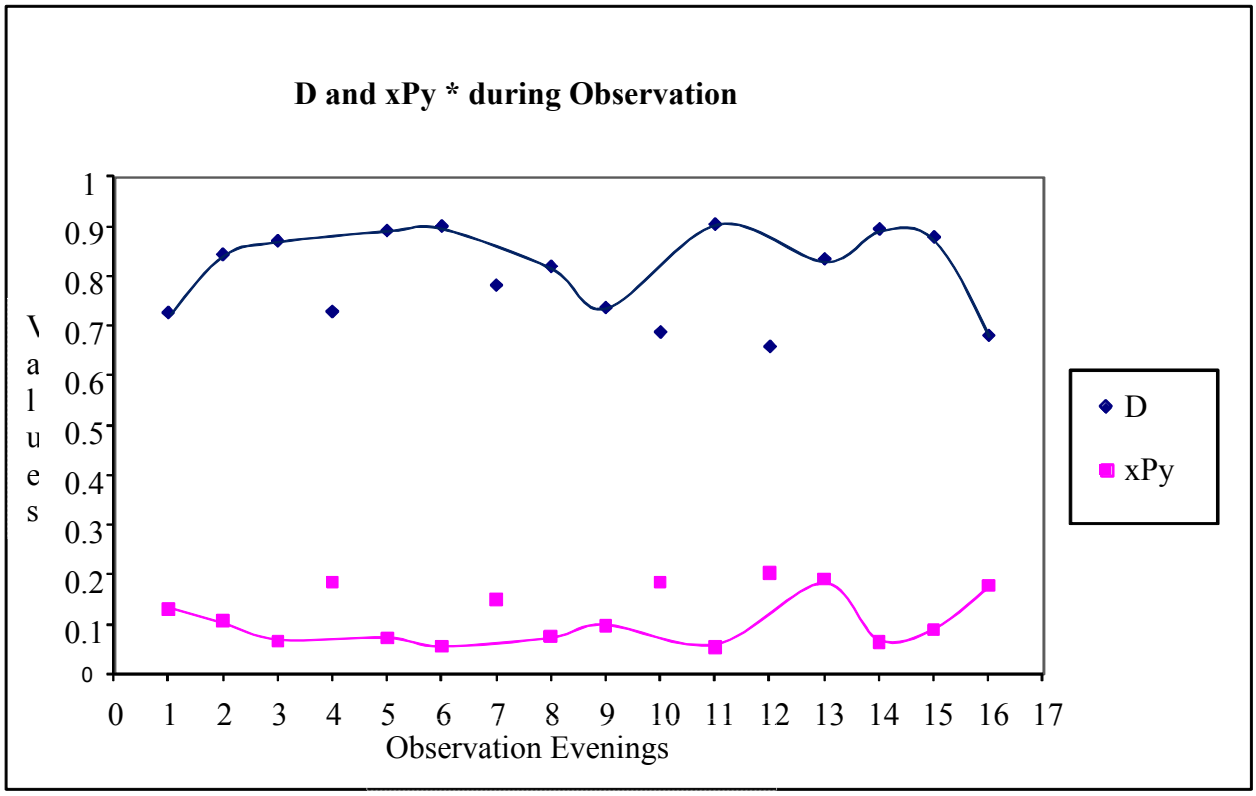

Figure 1. Visual representation of D and xPy*

Intervention Survey

A short three question informal survey was completed by participants to get a sense of their thoughts and feelings regarding the intervention.

There was a total of 99 responses (n = 99). The results for the first question: "How did you find the get to know your neighbour evening experience?" is presented in Table 4. The majority of participants (36%) responded that they felt neutral towards the experience. 68.42% of respondents did not report negative feelings towards the get to know your neighbour evening.

Table 4
Intervention survey: Likert scale

	Very Comfortable	Comfortable	Neutral	Uncomfortable	Very Uncomfortable
Responses	11	20	34	14	16

33% of the respondents reported that they made new friends on the intervention evenings. A total of 88% of respondents said that they do not think that the get to know your neighbour evening should be made a regular part of the dining hall experience. Please see Table 5 for a breakdown of these responses.

Table 5
Intervention survey: Questions and responses

Question	Yes	No
Did you make new friends?	32	64
Should this be made a part of the regular dining hall experience?	20	74

Online Survey

The racial breakdown of the student body at UCT is: 37% white; 21% black African; 15% coloured and 7% Indian. 544 students completed the online survey ($N = 544$). The racial breakdown for our online survey is 44.49% white; 25.18% black African; 18.93% coloured; 6.99% Indian and Asian 1.65%. The majority of respondents were white students and black African students were the second highest number of respondents from our survey. Only 27% of the respondents reside in a UCT residence. The respondent's ages ranged from a minimum of 16 years and a maximum of 46 years.

Table 6 below represents the racial breakdown of the necessity of transformation initiatives at UCT. 79.41% of respondents reported that transformation initiatives were necessary. 77.69% of white, 87.59% of black African, 80.58% of coloured, 68.42% of Indian, 66.67% of asian and 60 % of others said that transformation initiatives were necessary at UCT.

Table 6
Racial breakdown on necessity of transformation initiatives at UCT

Transformation Initiatives	White	Black African	Coloured	Indian	Asian	Other	Total
Yes	188	120	83	26	6	9	432
No	54	17	20	12	3	6	112
Total	242	137	103	38	9	15	544

Below in Table 7 is the racial breakdown of those that are aware and unaware of transformation initiatives. 97.61% of respondents were aware of transformation initiatives at UCT. 47.11% of white, 56.93% of black African, 28.16% of coloured, 26.32% of Indian, 44.44% of Asians and 33.33 % of others were aware of transformation initiatives.

Table 7
Racial breakdown of awareness of transformation initiatives at UCT

Aware of transformation initiatives	White	Black African	Coloured	Indian	Asian	Other	Total
Yes	114	78	29	10	4	5	531

No	128	59	74	28	5	10	13
Total	242	137	103	38	9	15	544

98% of students reported that they had friends from other racial groups. 6% White and 7% black African students reported that they did not have interracial friendships.

The majority of respondents (72%) said that they had made these friends at UCT. Respondents reported that regular social interactions occur in places such as: university public spaces (36%), lectures (23%), tutorials (16%), outside of UCT (11%), university residences (9%) and dining halls (4%).

Below in Figure 1 is the response to the question, "In your everyday life at university, how often do you have social interactions with fellow students from different racial groups." Respondents said that in their everyday lives they converse with other races; 52.20% converse everyday; 22.61% said more than once a week; 10.66% said a few times a month; 11.58% said once in a while and 2.94% said never.

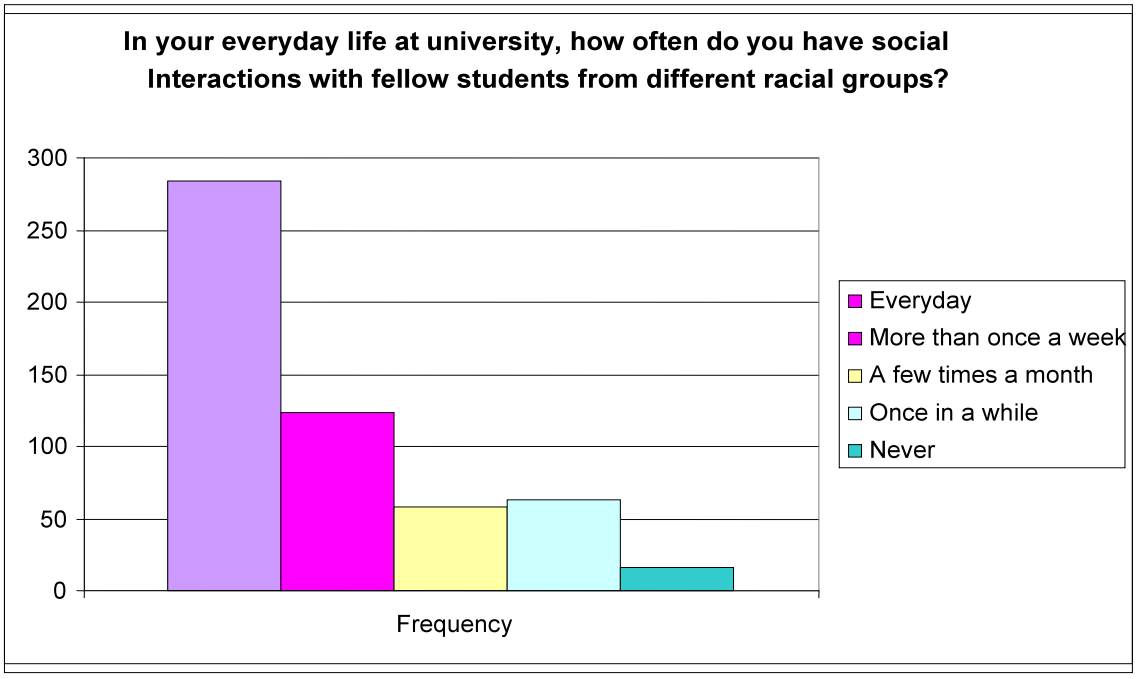

Figure 1. How often students converse with individuals from other races

Below in Table 8 represents the racial breakdown of frequency of social interactions.

Table 8
Racial breakdown of social interactions

	White	Black African	Coloured	Indian	Asian	Other

Everyday	127	63	56	8	7	8
More than Once a week	56	32	21	5	1	5
A few times a month	25	17	9	1	1	1
Once in a while	26	22	13	1	0	1
Never	8	3	4	15	0	0
Total	242	137	103	38	9	15

The majority of the respondents (86 %) thought that it is necessary that students at UCT socialize and have friends with students from racial groups other than their own.

79% of respondents viewed UCT as integrated. Table 9 below represents the breakdown by race for responses to this question. 80.57% of the white students that responded said that they viewed UCT as integrated, and 75.18% of the black African students saw UCT as integrated.

Table 9
Racial composition of view of UCT as integrated or segregated

	White	Black African	Coloured	Indian	Asian	Other	Total
Integrated	195	103	86	29	6	11	430
Segregated	47	34	17	9	3	4	114
Total	242	137	103	38	9	15	544

Students were asked for suggestions about ways to improve integration at UCT. Out of the total responses, there were 313 suggestions and the remainders were opinions. The majority of responses (20.13%) suggested that social events should be employed to encourage integration. Group work (14.38%) and tutorials (13.74%) were high on the suggestion list while multicultural societies (10.86%) and events (8.31%) were also seen as ways of encouraging integration. Please see Table 10 for all the suggestions made by the respondents.

Table: 10
Coding of question 17: Respondents suggestions on ways of promoting integration

Suggestions	Respondents
Social	63
Group work	45
Tutorials	43
Multicultural societies	34
Events	26
Sport	20
Lectures	16
Residences	16
Cultural Education	13
Celebrations of different cultures and races	12
Awareness	9
Equality	7
O-week	6
Discussions	3
Total	313

Discussion

The contact hypothesis, proposed by Allport (1954), suggests that regular interaction between members of different racial or ethnic groups (under certain ideal conditions) should promote favourable intergroup relations. As a result, it was expected that when the opportunity for intergroup contact was given in a context that might be perceived as encouraging integration, this would foster intergroup contact. In previous research (Schrieff et al., 2005, 2010) however, marked segregation was reported in spite of these 'optimal condition' settings. These finding have been confirmed in our study.

The aim of our study was to observe intergroup contact naturalistically in a dining hall at UCT. We also aimed to go beyond an observational study by implementing a social experiment. This experiment took the form of a get to your neighbour evening intervention with the aim of facilitating integration and intergroup contact. We then explored the experience of the intervention using a brief survey. An online survey was also conducted to explore students' responses to intergroup relations and transformation initiatives in general at UCT.

Previous Studies

A previous study conducted by Schrieff et al., (2010) revealed that hyper-segregation occurred at an undergraduate residence dining hall. The mean Dissimilarity Index (D) mean results of Schrieff et al., (2010) spread over 3 separate months were 0.895 (0.050) in February, 0.894 (0.118) for March and 0.94 (0.085) in August. The Exposure Index (xPy*) means across those three observation periods were 0.037(0.041), 0.033(0.043) and 0.046(0.064). The scores of D ranged from 0.767 to 1. The scores of xPy* ranged from 0 to 0.046 across the entire 3 observation periods.

Intervention

Pre intervention. As above, compared to a previous study (Schrieff et al., 2010) conducted in the same residence dining hall at UCT, our results depict similar segregation patterns. The D and xPy* values found in the pre intervention period range from 0.73 to 0.84 and xPy* ranged from 0.10 to 0.13. These values, although high, show a slight decrease in segregation when compared to previous studies (Schrieff et al., 2005, 2010).

Intervention. Regarding the intervention, students were told that every Wednesday night there would be a get to know your neighbour evening, as mentioned previously in methods. On two of the four intervention evenings there was a decrease in segregation from the previous observation evenings. D values decreased from 0.74 to 0.69 and xPy* decreased from 0.90 to 0.66. Therefore, intervention evenings showed a slight decrease in segregation patterns although this would not generalise to other evenings.

Our naturalistic behavioural observations suggested that, especially during the first week of the intervention, individuals were reluctant to sit at the tables that they had been assigned to. Once we started intervening in the space results showed that after an intervention evening, there seemed to be a slight increase in segregation as shown by the increased D and decreased xPy* scores. The increase in the D and decrease in xPy* values could be accounted for general fluctuations in scores which can be seen by the dining hall pattern in Figure 1. Another reason that could account for the increase in D and decrease in xPy* values could be intergroup anxiety. Intergroup anxiety as reported by Alexander (2006) is a determining factor when individuals are interacting with different races. Students seemed to resist the intervention, reporting that *"we know everyone, we're comfortable with them so we don't need to change our seating patterns."* This statement appears to be contradictory as individual's state they are comfortable and know everyone yet in practice this is not apparent. Therefore, there still seems to be a preference to sit with others of the same race.

This type of anxiety and the 'unknown,' could have encouraged segregation. Even though black African and white individuals still occupied the same tables, there seemed to be

little communication or interaction between these individuals. We recruited individuals to assist us to encourage the intervention evening. It is interesting to note that when we as the researchers, who are white females, encouraged students to participate in the 'get to know your neighbour evening' they were resistant but when a coloured male encouraged participants to take part, they complied. However, over the course of the intervention, individuals seemed to be much more willing to spread out and sit at their assigned tables. Some students even thanked us for the opportunity to make new friends.

Post intervention. Post intervention results suggest that segregation of an informal type is still evident among black African and white students in the university resident dining hall. With regard to our formal data analyses, these results do not show any major changes, from pre-intervention to post -intervention, in terms of patterns of segregation during the observed mealtimes. Resistance and (lack of) comfortability during the intervention evenings could account for the slight increase in segregation during the post observation period. Comfortability, as mentioned by Schrieff et al., (2005), suggests that 'zones of comfort' among same race individuals are used as a method of organising seating patterns amongst individuals in the dining hall. There does appear to be improvements in terms of the number of mixed-race tables in the dining hall. Our mixed raced tables over the 16 observation evenings ranged from 1.33 to 5.7 compared to Schrieff et al., (2005) whose mixed tables did not increase over 1.00

Intervention survey. A survey was conducted to assess participant's experience of the get to know your neighbour evenings. Drawing on the likert scale, it is interesting to note that nearly three quarters of respondents (68.4%) stated that they felt neutral, comfortable and very comfortable regarding their experience despite the resistance expressed by individuals on intervention evenings. In addition, numerous students (34%) claimed that they had made new friends although it cannot be confirmed whether it was due to the intervention or a natural process. Further research should be conducted to assess friendships patterns in this regard. In spite of this, more participants claimed that they did not make new friends even though there were opportunities to do so. Although no space was intentionally provided on the questionnaire for comments, some participants felt compelled to make comments on the page. Some participants reported that they "knew everyone" or that they had met new people but that the friendship was not sustained. The majority of respondents (87%) did not want the intervention evening to become part of their weekly dining hall experience. Some respondents stated that it was "stupid" and "annoying." One participant stated:

> I don't usually have a problem with meeting new people, but we all know each other here and I think that it's pretty pointless having to sit at a table when you are stuck with people you usually wouldn't sit with because you don't get along. Race is not a factor, it's a matter of personality, clashes of personality and social politics within the res.

This suggestion could very well be true as friendship patterns could affect where the individuals sit and with whom as established by Schrieff et al. (2010). However, if this was a deciding factor, then it reveals a preference for same-race friends as students primarily sit with individuals that are of the same race as them. This was also reported in Schrieff et al. (2010) where 89.05% of students' closest friendships were same-race friendships. It is apparent that even though participants did not explicitly know what the true nature of the study, as it was never stated, they seemed to gauge what it was really about.

Online Survey

In addition to the social experiment, an online survey was carried out to gauge what a sample of UCT student's views were towards integration and transformation initiatives at UCT in general. Our sample could be argued to be fairly representative of UCT's racial demographics. Individuals responded positively regarding the necessity for transformation at UCT. However, when students are given the opportunity to integrate, such as the get to know your neighbour evening, they fail to do so. Even though students made a point of saying they had friends that were of different races (98%), these types of friendships were not observed in a naturalistic setting such as the seating patterns of individuals in the dining hall. In addition, students were asked to make suggestions as to how UCT could promote integration and transformation amongst students. The main suggestions focused on social aspects. Students raised awareness of wanting an increased number of racially different individuals to get together in more social contexts.

In 2005, Muianga investigated the diversity of friendships patterns across the UCT campus. She reported that there were very few cross-race friendships. Only 29.95 % of the white population group reported that they had friends that were of a different race group. The black African population had a slightly higher percentage of friends that were racially different (31.76%). In general, the participants in Muianga's (2005) study favoured friends who were ingroup members belonging to their own racial groups. This is a shift in comparison to our survey, as a substantial number of white (98%) and black African (95%) students replied yes to having friends from different racial groups. This shows us that the

percentage of cross race friendships between individuals in our survey is remarkably higher than Muianga's (2005) survey and yet the observational data do not show the same trend.

It is interesting to note that in our survey, the few students (2.39%) who reported that they did not have interracial friendships only included black African and white individuals. These groups are, however, overrepresented, when compared to the coloured and Indian groups. These findings are consistent with Govender (2008) who reported that coloured and Indian students have more diverse friend groups than either black African or white individuals. Govender's (2008) study reported that students stated that there were not enough opportunities for individuals to have contact with others who were racially different to them. In our survey, we offered individuals the opportunity to suggest what they think would encourage interaction. Student's listed social activities, tutorials and multicultural societies as activities which should be implemented at UCT to encourage integration. Therefore, overall, our findings show that students' attitudes and opinions regarding intergroup contact and transformation initiatives are much more open and positive than previous studies and research.

Limitations of Intervention

The lack of information regarding the purpose of the intervention could have affected student's motivation to participate in the intervention or get to know your neighbour evening. Participants were unsure of why they were being observed and instructed where to sit and this uncertainty could have created anxiety.

There appeared to be little or no intergroup communication between different race individuals who did share tables. This could be described as 'tables within tables' (Domenico & Phillips, 2009). Sitting in a space with racially different individuals does not guarantee that interaction takes place. There were often clear physical boundaries in body language such as turning one's body away from certain individuals. This was observed between racially different individuals who shared a table. Therefore, the opportunity for intergroup contact was provided however, participants failed make the most of these opportunities.

Individuals may have been more willing or compelled to participate without much resistance if it were compulsory or implemented by the wardens or student housing committee members. Greater public endorsement of the intervention might facilitate more positive results.

Future Recommendations

Although most of our observations for D (154 out of 180 observations) and xPy* (160 out of 180 observations) proved to be significant, it cannot be concluded that the intervention

was significant overall. This is an area of research that has not generally been used and is recommended for future studies.

If an intervention such as this were to be implemented again, we recommend that it be introduced during students' first week of varsity ('Orientation week'). This could reduce the issue of friendship patterns which have already been formed which can hinder the encouragement of new interracial relations. Furthermore, the intervention's power might be increased by having it occur more than once a week, or for more than 4 weeks at a time. An adaptation phase that allows students to get use to this intervention might be a useful addition to this process.

UCT dining halls should create tables that are more "integration friendly". This could include the use of condiments such as tomato sauce, a jug of water and salt and pepper shakers in the middle of the tables. By doing so, this could allow for a verbal exchange between different individuals seated at the table. By having a common item that all individuals at the table could use and need, it would allow for eye contact and spoken intergroup contact between the individuals at the table to occur (Domenico & Phillips, 2009). As reported by the online survey, more social activities should be considered and included in future studies wanting to implement similar interventions.

A recommendation for Intervention survey is to conduct a control survey with students of a different residence dining hall to investigate whether friendships are created in the dining hall independent of an intervention. In Schrieff et al., (2010) respondents reported that they had made friends in the dining hall. This would demonstrate whether individuals naturally make friends in the dining halls or whether the intervention actually serves to encourage the formation of new friendships.

Conclusion

Our findings show that segregation still persists in naturalistic settings such as the dining hall. However, there does appear to be some positive changes in terms of the increase in the number of mixed tables (since previous studies) and the reports of more interracial friendships. Regarding the intervention, one might say that in the short-term (during the mealtimes that we implemented the intervention) the intervention showed promise, but the patterns of behaviour encouraged there did not generalize to student behaviour outside of the intervention settings. However, we do think that the intervention is promising in terms of facilitating the opportunity for interracial contact, but that it requires further evaluation to be more effective and consequently to effect any real change.