



Understanding the influence of cross-cultural Consumer-to-Consumer Interaction on consumer service satisfaction [☆]

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ABSTRACT

Managing Consumer-to-Consumer Interaction (CCI) is an essential task for service providers since the presence of other consumers within the same service setting may spoil or enhance one's service experience. CCI management becomes even more critical in multicultural societies as it implies the integration of consumers from different cultural backgrounds. The present research, through an experiment in South Africa, demonstrates the fundamental influence of cultural compatibility, intergroup anxiety and cross-group contact on consumers' evaluations of CCI and their service satisfaction. Results confirm Allport's (1954) contact hypothesis within the field of marketing, and highlight its key influence on consumer behavior in a culturally diverse marketplace.

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1. Introduction

Interaction with other consumers is an important aspect of a consumer's overall service evaluation (Grove & Fisk, 1997; Harris & Baron, 2004; Huang, 2008; Martin & Pranter, 1989; Moore, Moore, & Capella, 2005). Fellow customers may spoil a service experience through inappropriate behavior (e.g., cutting into the line, talking loudly, smoking), but also positively enhance it by providing informational or social support (Harris & Baron, 2004; Parker & Ward, 2000). As a result, other consumers can be the very reason why a consumer chooses one service firm over another one. Managing Consumer-to-Consumer Interaction (CCI) is therefore a fundamental mission for any service provider (Baron, Patterson, Harris, & Hodgson, 2007; Clark & Martin, 1994).

Managing CCI becomes especially challenging as the characteristics of the consumers diversify (Henderson, Williams, Grantham, & Lwin, 1999). Marketplaces worldwide are experiencing increasing multiculturalism. In the U.K., the minority ethnic population grew by 53% from 1991 to 2001, and predictions of the 2010 U.S. census figures

propose a new picture of the American population in which minorities are the new majority of a complex and multidimensional market (Johnson, 2009). CCI is critical in these societies since it frequently implies the integration of consumers from different cultural backgrounds within a particular setting. This study examines the influence of cross-cultural CCI on consumers' service satisfaction. The study proposes and tests cross-group contact and intergroup anxiety as moderating and mediating variables of this relationship. Results enrich the understanding of the processes underlying the influence of cross-cultural CCI on consumer satisfaction with the service and the service provider. Findings provide insights for managing CCI in increasingly multicultural societies worldwide.

1.1. Background

Customer-to-Customer Interaction (CCI) is the active or passive interaction between two or more customers inside or outside the service setting. CCI may or may not involve verbal communication (Venkat, 2007). Unlike Consumer-to-Employee Interaction (CEI), CCI occurs both while the service happens and during the pre- or post-purchase stage, and is very complex to predict and monitor (Venkat, 2007). For instance, in a movie theater the patrons who sit beside or nearby another customer can have an impact on that customer's movie experience, even if neither ever directly sees or talks to each other (Venkat, 2007). Thus, CCI occurs indirectly, because consumers are part of the same environment, and also directly, through specific interpersonal encounters (Huang, 2008). Consumers might act as part-time marketers (Gummesson, 1991) by supplying each other with product or service-related information that

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employees would normally provide (Harris & Baron, 2004). Similarly, conversations between strangers after a service failure have the potential to alleviate frustrations and reduce dissatisfaction (Harris & Baron, 2004). Overall, CCI has an important influence on the service experience and subsequent satisfaction with the service provider (Baron et al., 2007; Moore et al., 2005).

Past studies find that individuals' evaluation of their interaction with other consumers relies significantly on their perceived compatibility with them (Grove & Fisk, 1997; Martin & Pranter, 1989; Raajpoort & Sharma, 2006). Perceived incompatibility engenders negative affect towards the service that leads to dissatisfaction and negative behavioral responses such as negative word-of-mouth, complaining and switching (Bougie, Pieters, & Zeelenberg, 2003). Individuals evaluate other customers' compatibility according to observable characteristics such as generational, social and cultural differences (Grove & Fisk, 1997). The present study focuses on one particular cultural characteristic (i.e., race) and investigates how marketers can manage the relationships between consumers from different cultural backgrounds.

Few past studies examine the complexity of cross-cultural service encounters (e.g., Bailey, 2000; Baker, Meyers, & Johnson, 2008; Barker & Härtel, 2004; Hopkins, Hopkins, & Hoffman, 2005; Ryoo, 2005; Warden, Liu, Huang, & Lee, 2003). These studies find that cultural compatibility between service customers and employees strengthens interpersonal bonds, facilitates communication, increases the predictability of behavior, and fosters relationships of trust and reciprocity. On the other hand, cultural incompatibility increases the complexity of the exchange relationship, particularly when problems arise and the communication needed becomes ineffective and inherently lacking (Hopkins et al., 2005). As a result, and considering contemporary societies' unceasing growth of cultural diversity, managing cross-cultural service encounters is critical for many service providers.

However, marketing management should not only focus on the compatibility between consumers and employees, but must also consider the perceived compatibility amongst consumers themselves, since the latter has the power to influence the former (see Baker et al., 2008). CCI has an important influence on the service experience and subsequent satisfaction with the service provider (Baron et al., 2007; Moore et al., 2005). What is missing is an understanding of the processes underlying the influence of cross-cultural CCI on consumer satisfaction with the service and the service provider. Understanding the mechanisms underlying CCI is important in order to design strategies to manage its effects on consumer service satisfaction. The present research paper proposes that intergroup anxiety, which occurs when people anticipate that interactions with out-group members will result in negative consequences (Plant, 2004; Stephan & Stephan, 1985), predicts CCI. At the same time, increased cross-group contact outside of the

service setting may result in more positive responses to CCI. The following section presents the conceptual framework and related hypotheses.

2. Conceptual framework and hypotheses

The research framework proposes that cross-group contact and intergroup anxiety are important social processes that underlie the influence of perceived cultural compatibility on customers' service satisfaction (see Fig. 1).

Consumers tend to evaluate the quality of their interaction with other consumers based on their perceived compatibility. This phenomenon of perceived compatibility between people is referred to as homophily, which is the extent to which individuals who interact share similar attributes such as beliefs, values, education, social status, racial group and gender (Rogers & Bhowmik, 1970). The literature on homophily demonstrates the positive effects of homophily (e.g., Aaker, Brumbaugh, & Grier, 2000; Torres, 2007), which is consistent with research on similarity in advertising. Although research examines the notion of cultural compatibility in a variety of contexts including group formation, organizational structures, education settings, social situations and advertising (Simpson, Snuggs, Christiansen, & Simples, 2000), existing studies overlook the relevance of cultural compatibility to CCI. In a cross-cultural context, H1a proposes that individuals should perceive themselves to be more compatible to their fellow consumers when those latter share the same cultural background (i.e., perceived cultural compatibility effect).

H1a. (main effect): Consumers will perceive themselves more compatible with culturally-congruent consumers (vs. culturally-incongruent consumers).

However, cultural congruency is not the only explanation for perceived cultural compatibility. Contact with out-group members may also drive cultural compatibility. According to the contact hypothesis (Allport, 1954), cross-group contact, which is the extent of contact a consumer has with members of other groups, can lead people to have a more favorable attitude towards out-group members (Gibson, 2006), and so feel more compatible. Research suggests that voluntary contact, such as in cross-group friendship, is more likely to induce favorable out-group attitudes than other types of contact, such as that between fellow employees or residential neighbor (Pettigrew & Tropp, 2006). Therefore, H1b proposes that consumers' level of cross-group friendship moderates their perceptions of cultural compatibility with members of other groups:

H1b. (moderator effect): The level of cross-group contact moderates the influence of cultural congruency on consumers' compatibility

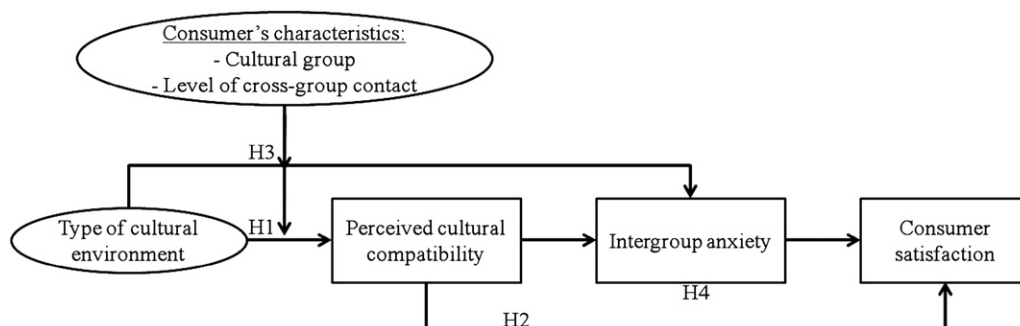


Fig. 1. Conceptual framework: consumers' responses to cross-cultural Consumer-to-Consumer Interaction.

perceptions. The more cross-group contact individuals have, the more they will perceive themselves as compatible with culturally-incongruent consumers.

Research suggests that consumers' perception of compatibility with other consumers positively influences their overall satisfaction towards a service (Barker & Härtel, 2004; Grove & Fisk, 1997; Martin & Pranter, 1989; Raajpoort & Sharma, 2006). Specifically, Martin and Pranter (1989) argue that service providers should engage in compatibility management to enhance the likelihood of bringing together the appropriate mix of consumers. For instance, a restaurant could seat families with young children on one side of the restaurant while seating couples elsewhere (Martin & Pranter, 1989), and allow consumers to go to another restaurant if they feel a high level of incompatibility (Raajpoort & Sharma, 2006). Compatibility management is critical to companies' broader relationship marketing strategy (Clark & Martin, 1994) as it can lead, if successful, to desirable outcomes such as consumer satisfaction, loyalty and repatronage (Grove & Fisk, 1997). However, despite the important social, legal and ethical issues that such management could raise in a multicultural society (i.e., segregating consumers according to perceived cultural compatibility), no study empirically examines the influence of cultural compatibility on consumer satisfaction. Therefore, H2 proposes:

H2. The more individuals perceive cultural compatibility with their fellow consumers the more satisfied they will be with the service.

The hypothesized preference of consumers for service settings consisting of compatible consumers results, in part, from the anxiety consumers feel when interacting with incompatible consumers. Indeed, interactions between people of different cultural groups hold the potential for tension and miscommunication, which may result in awkward interactions as well as avoidance of interactions (Plant, 2004). Typically, anxiety is one of the main factors shaping the quality of an interracial interaction and plays a central role in theorizing modern forms of racism (Plant, 2004; Plant & Devine, 2003). For instance, Gaertner and Dovidio's (1986) theory of aversive racism points out that many white people's responses to black people do not result from hostility but instead reflect discomfort and uneasiness (Plant & Devine, 2003).

Anxiety tends to grow as the number of out-group members in the same environment increase (Inzlicht & Good, 2006). In accordance with Distinctiveness Theory (McGuire, McGuire, Child, & Fujioka, 1978), individuals in situations where out-group members are in the majority are more mindful and aware of the personal characteristics that make them distinctive. This situation may make minorities feel self-anxious about out-group members evaluating them along stereotypical lines, and create a threatening environment where one apprehensively expects discrimination and/or rejection (Inzlicht, Aronson, Good, & McKay, 2006; Inzlicht & Good, 2006). This process is characteristic of a solo-status situation (Sekaquaptewa & Thompson, 2002), which occurs when an individual is the only member of his/her social category (e.g., gender or culture) in a given social group (Keller & Sekaquaptewa, 2008). Applied to services marketing, a solo-status effect should amplify consumers' anxiety since the potential cultural incompatibility of other consumers may be more salient. Thus, H3a proposes:

H3a. (main effect): Consumers will feel more anxious about interacting with culturally-incongruent consumers (vs. culturally-congruent consumers).

However, Stephan and Stephan (1985) argue that the crucial issue in terms of intergroup anxiety is the amount and nature of contact that an individual has experienced with the groups in question. In

other words, high anxiety will more likely occur if individuals have negligible contact with other groups or if a historic conflict exists between the groups (Finchilescu, 2005). Consequently, H3b states that the level of cross-group contact will moderate the level of anxiety a consumer feels in a situation where they perceive others as culturally incongruent:

H3b. (moderator effect): The level of cross-group contact moderates the influence of cultural congruency on consumers' felt anxiety. The more cross-group contact individuals have the less anxious they will feel about interacting with culturally-incongruent fellow consumers.

Finally, extant marketing research points out the influence of anxiety on consumers' behavior and satisfaction (e.g., Harris & Baron, 2004; Hill, 1987; Richins, 1983). Some consumers are anxious when interacting with representatives of marketing institutions, and will comply with any requests (even if unreasonable) to reduce this anxiety (Richins, 1983). Past research also finds that consumers look for interactions with fellow consumers to reduce their anxiety about a service. For instance, sharing negative consumption experiences with other consumers serves as catharsis and reduces the anxiety associated with the event (Henning-Thurau, Gwinner, Walsh, & Gremler, 2004). Similarly, conversations between unacquainted travelers reduces anxiety about travel uncertainty (e.g., train platforms, travel times) and leads to a more enjoyable service experience (Harris & Baron, 2004). However, no marketing study directly examines how consumers' interaction with other consumers might increase their anxiety and affect their service satisfaction. This study proposes that individuals in a context where out-group members are in the majority will experience anxiety due to their solo-status situation (Inzlicht et al., 2006; Niemann & Dovidio, 1998; Sekaquaptewa & Thompson, 2002). The anxiety will negatively affect their overall service experience and reduce their satisfaction with the service. Thus, H4 proposes:

H4. Individuals' level of intergroup anxiety mediates the relationship between consumers' perceived cultural compatibility and their overall service satisfaction.

3. Method

3.1. Context

South Africa is an appropriate context for the research. Before 1994, the apartheid system regulated most forms of interracial interaction. The regime asserted that because certain races are incompatible with each other in terms of culture and civilization (Cocks, 2001), they must be kept apart and developed separately. Apartheid rhetoric confused notions such as culture and race in accordance with the dominant South African school of anthropological thought at the time, which provided the regime with the intellectual authority to claim that Africans were different from and inferior to Europeans (Van der Waal & Ward, 2006). The law prohibited interracial marriage, determined where people could live in accordance with their skin color, and obliged racial separation in public areas such as schools, hospitals, transport, toilets, beaches and other service settings (Omer-Cooper, 1994). Since 1994, which marked the end of this regime, a new South Africa has emerged where the emphasis is on the non-racialism of the society (Adam, 1995). The government encourages corporations to reflect multiracialism in their ownership and human resource practices as well as in their marketing strategies (Leibold & Hugo-Burrows, 1997). Nevertheless, the legacy of several centuries of systematic segregation, discrimination and conflict is still apparent (Finchilescu, 2005). Considerable parts of the country remain racially segregated and the

social class division between blacks and whites is substantial (Gibson, 2006).

Further, despite the distinct meanings of race and culture, the concepts have become tightly interwoven (Ndletyana, 2003). While aspects of culture may be visible or invisible, physical or subjective (e.g. nationality, group practices), race is merely a physical characteristic (Betancourt & Lopez, 1993; Bhopal, 2004). However, race exists as a social construction with much meaning beyond the physical definition (Bhopal, 2004). In addition to the vast cultural diversity *within* racial groups (e.g., the black South African population can be subdivided into ethnic groups such as Xhosa, Zulu, Pedi, and Sotho, and the white population into English- and Afrikaans-speaking people as well as people of Greek descent), manifestation of the cultural differences between racial groups exists in a wide range of customs and social practices such as sport, entertainment, fashion, food and music (Finchilescu, 2005). Accordingly, perceptions based on race tend to loom larger than those based on ethnicity, and South Africans have created in-group and out-group cultural identities according to perceived racial lines. These differences contribute to vivid perceptions of incompatibility which, in turn, heighten intergroup anxiety (Finchilescu, 2005). Finchilescu (2005) argues that in South Africa, intergroup contact becomes undesirable or strained, both because individuals may worry that the out-group members will behave wrongly and badly in their milieu, or because individuals may fear that they themselves will act inappropriately and offend the out-group members. Consequently, understanding cross-cultural CCI is of vital importance for South African service providers and their successes in such a tense multicultural environment may become exemplary for other service providers across the world.

3.2. Sample, design and procedure

The design of the experiment is a 3 (cultural service environment: all-black, all-white or multicultural) × 3 (levels of cross-group contact: high, medium or low) × 2 (participants' cultural group: black or white) between-subjects design. The experiment was conducted with 113 white and 125 black subjects who were randomly drawn from a major South African university. Forty-four percent were male. Their ages ranged from 17 to 38 years ($M = 21$ and $SD = 2.3$). They all had obtained at least a high school degree.

The participants were first presented with a statement indicating that the research project concerned consumers' responses to services marketing. On the following page they were presented with a scenario and a picture and were instructed to imagine themselves as being the consumer involved in the scenario. This procedure was consistent with previous studies on imagined intergroup contact which have shown that by simply imagining a particular social context, individuals experience cognitive and behavioral outcomes similar to those they would have felt in the context itself (see Husnu & Crisp, 2010). The scenario depicted a consumer going for the first time on vacation to an unnamed South African city. On a Saturday night, this consumer decides to go alone to a nightclub. The nightclub is depicted as being one of the 'hottest spots in town', located in a lively neighborhood and attracting the 'in-crowd' of the city. Descriptions of nightclubs in Vancouver, Montreal, Cape Town and Johannesburg were combined to create a realistic and contemporary service setting. The objective was also to make the description of the nightclub's ambiance appealing enough for participants to imagine themselves in such a place and feel engaged. At the end of the scenario a picture was included which was said to represent the nightclub. This picture depicted a group of all-black consumers, a group of all-white consumers or a multicultural group of consumers. All three pictures represented both young male and female consumers in order to control gender biases and match with the sample characteristics (Simpson et al.,

2000). After reading the scenario and viewing one of the pictures, participants were given a questionnaire booklet to complete.

3.3. Measures

The measurement instrument collected information for three dependent variables: overall satisfaction towards the service, intergroup anxiety, and perceived cultural compatibility; and two independent variables: participants' cultural group and level of cross-group contact. The measure used to capture consumers' satisfaction towards the nightclub involved a scale comprised of four semantic differentials: "unhappy/happy", "disgusted/contented", "displeased/pleased", and "frustrating/enjoyable" (Reynolds & Beatty, 1999). A satisfaction scale was created by averaging the mean scores from each of the four items ($\alpha = .96$). Consumers' intergroup anxiety was assessed within the service setting with a scale comprised of the six following items: "I would feel – anxious, tense, nervous, relaxed (reverse coded), calm (reverse coded) and self-confident (reverse coded) – in the presence of the customers of this nightclub" (Sekaquaptewa & Thompson, 2002) ($\alpha = .90$). The items were measured on seven-point likert scales ranging from not at all (1) to very much so (7). Participants rated their degree of perceived homophily with the other consumers in the nightclub in terms of four items: overall lifestyle, cultural background, dress and appearance, and basic values (McKirnan, Smith, & Hamayan, 1983). The items were measured on seven-point likert scales ranging from disagree completely (1) to agree completely (7). A perceived cultural compatibility scale was created by averaging the mean scores from each of the four scales ($\alpha = .85$). To assess level of cross-group contact, participants indicated the racial composition of their closest friends (i.e., at present my closest friends are members of: only 1 racial group/primarily 2 racial groups/3 or more racial groups) (Grier, Deshpandé, & Johnson, 2009). Participants were then divided into three levels of cross-group contact: low level of cross-group contact consisted of participants having friends from only 1 racial group ($n = 91$), medium level of cross-group contact included participants with friends only 2 racial groups ($n = 69$), and high level of cross-group contact included participants with friends from 3 or more racial groups ($n = 78$). A pre-test confirmed the readability of the scenario and questionnaire.

4. Results

A three-way multivariate analysis of covariance (MANCOVA), including participants' cultural group, level of cross-group contact and cultural service environment as independent variables; perceived cultural compatibility, level of anxiety, and satisfaction towards the service as dependent variables; and gender, age and strength of cultural identity as covariates, is significant, $F(4, 217) = 2.60, p < .04$. The covariates gender and strength of cultural identity are not significant in any of the analyses, whereas the age covariate is significant on anxiety ($p < .04$), marginally significant on perceived cultural compatibility ($p < .06$) and not significant on satisfaction ($p > .20$).

A series of analyses of covariance (ANCOVA) tests the hypotheses. The results of the covariates in each ANCOVA are the same as in the

Table 1
Mean ratings of perceived cultural compatibility.

Cross-group contact		White participants			Black participants		
		Low	Medium	High	Low	Medium	High
Perceived cultural compatibility	Multicultural	3.6	3.3	3.6	4.1	2.8	4.2
	All-black	2.6	3.1	3.1	2.7	3.6	3.6
	All-white	5.4	3.9	3.8	2.4	2.7	2.5

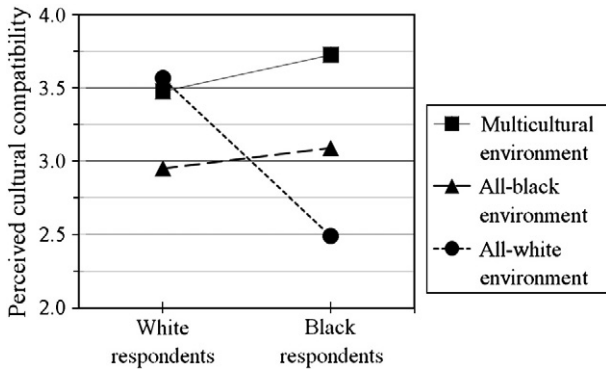


Fig. 2. Mean ratings of perceived cultural compatibility by white and black participants as a function of the type of cultural environment.

MANCOVA. This section presents and discusses the results of the experiment according to the research hypotheses. For the sake of clarity, this section details the results of black and white participants separately. Below, the discussion deals only with the effects which are statistically significant at the 95% confidence level ($p < 0.05$) or marginally significant ($p < 0.10$).

A three-way ANCOVA tests the first two hypotheses. The ANCOVA includes participants' cultural group, level of cross-group contact and cultural service environment as independent variables; perceived cultural compatibility as the dependent variable; and gender, strength of cultural identity and age as covariates. Table 1 details the results.

H1a proposes that consumers perceive themselves more compatible with culturally-congruent consumers (vs. culturally-incongruent consumers). In this vein, a two-way interaction between participants' cultural group and the type of cultural environment influences consumers' perceived cultural compatibility, $F(2, 217) = 9.85, p < .001$ (see Fig. 2).

A Bonferroni post-hoc test reveals that white participants perceive marginally more cultural compatibility with their fellow consumers in the all-white environment than in the all-black environment ($M_{all-white} = 3.6$ vs. $M_{all-black} = 2.9, p < .10$). Conversely, a Bonferroni post-hoc test shows that black participants perceive more cultural compatibility in the multicultural environment than in the all-white environment ($M_{multicultural} = 3.7$ vs. $M_{all-white} = 2.5, p < .001$). Black participants also express marginally more cultural compatibility in the all-black environment than in the all-white one ($M_{all-black} = 3.1$ vs. $M_{all-white} = 2.5, p < .09$). Thus, the type of cultural environment influences consumers' perceived cultural compatibility. These findings support H1a.

H1b proposes that consumers' level of cross-group contact moderates consumers' perceived cultural compatibility with members of other groups. A three-way interaction between participants' cultural group, level of cross-group contact and cultural service

environment significantly influences consumers' perceived cultural compatibility with other consumers, $F(4, 217) = 2.50, p < .05$.

White participants with a low level of cross-group contact perceive more cultural compatibility with consumers in the all-white environment than with consumers in the multicultural and all-black environments ($M_{all-white} = 5.4$ vs. $M_{multicultural} = 3.6, p < .01$; $M_{all-white} = 5.4$ vs. $M_{all-black} = 2.6, p < .001$), $F(2, 22) = 19.04, p < .001$; whereas white participants with medium ($F[2, 34] = .95, p > .30$) and high ($F[2, 39] = .91, p > .40$) cross-group contact do not perceive a difference in terms of cultural compatibility across the three cultural service environments. Fig. 3 presents these results.

Results also show that black participants with a low level of cross-group contact perceive more cultural compatibility with consumers in the multicultural environment than with consumers in the all-black and all-white environments ($M_{multicultural} = 4.1$ vs. $M_{all-black} = 2.7, p < .02$; $M_{multicultural} = 4.1$ vs. $M_{all-white} = 2.4, p < .01$), $F(2, 57) = 7.30, p < .01$. Black participants with medium cross-group contact do not perceive a difference in terms of cultural compatibility across the three cultural service environments ($F[2, 23] = 1.68, p > .20$), whereas those with high cross-group contact perceive more cultural compatibility with consumers in the multicultural environment than with consumers in the all-white environment ($M_{multicultural} = 4.2$ vs. $M_{all-white} = 2.5, p < .09$), $F(2, 27) = 3.02, p < .07$. Consequently, the level of cross-group contact moderates the influence of the cultural service environment on consumers' perceived cultural compatibility for white participants only. These findings provide partial support for H1b.

A regression analysis tests H2, which proposes that the more individuals perceive cultural compatibility with their fellow consumers the more satisfied they are with the service. The regression analysis includes perceived cultural compatibility as the explicative variable and service satisfaction towards the service as the dependent variable. Results indicate that perceived cultural compatibility with other consumers significantly influences participants' satisfaction with the service ($\beta = .52, p < .001$), supporting H2.

H3a proposes that the type of cultural service environment influences consumers' felt anxiety, whereas H3b proposes that the level of cross-group contact moderates this relationship. Table 2 presents these results.

Unexpectedly, the three-way interaction between participants' cultural group, cultural service environment and consumers' level of cross-group contact does not influence consumers' anxiety, $F(4, 217) = .97, p > .40$. Additional statistical analyses on each cultural group separately reveal that the interaction between the type of cultural environment and cross-group contact does not have the same impact for black and white participants. Results indicate that white consumers, regardless of their level of cross-group contact, feel significantly more anxious in the all-black environment than in the all-white and multicultural environments ($M_{all-black} = 4.1$ vs. $M_{all-white} = 3.5, p < .05$; $M_{all-black} = 4.1$ vs. $M_{multicultural} = 3.3, p < .04$), $F(2, 101) = 4.38, p < .02$;

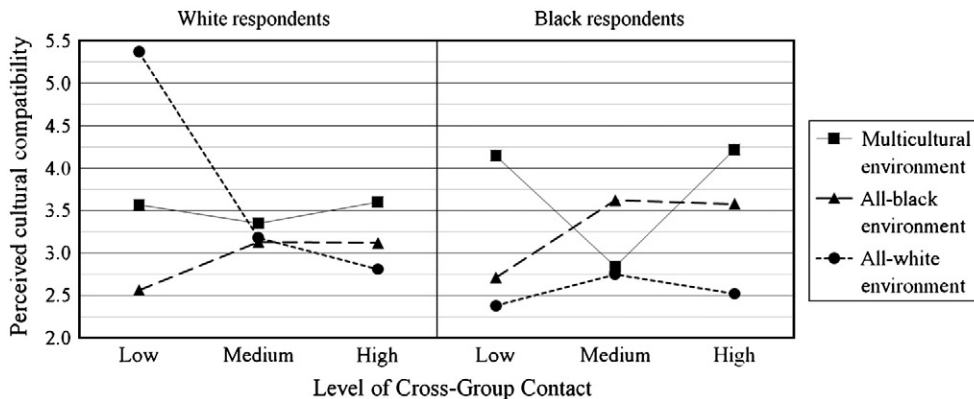


Fig. 3. Mean ratings of perceived cultural compatibility by white and black participants as a function of the type of cultural environment and their level of cross-group contact.

Table 2
Mean ratings of intergroup anxiety.

Cross-group contact		White participants			Black participants		
		Low	Medium	High	Low	Medium	High
Intergroup anxiety	Multicultural	3.2	3.7	2.8	3.7	3.9	2.9
	All-black	4.4	4.0	4.0	4.0	4.4	3.3
	All-white	2.3	3.6	4.0	3.4	3.3	3.9

whereas the type of cultural service environment does not influence black participants' anxiety, $F(2, 113) = .99, p > .30$. Consequently, these results provide only partial support for H3a.

Additionally, a two-way interaction between the cultural service environment and the level of cross-group contact marginally influences white participants' anxiety, $F(4, 101) = 2.17, p < .08$. A Bonferroni post-hoc test reveals that white participants with a low level of cross-group contact feel more anxious in the all-black environment than in the all-white environment ($M_{\text{all-black}} = 4.4$ vs. $M_{\text{all-white}} = 2.3, p < .02$), $F(2, 22) = 5.60, p < .02$. On the other hand, white participants with medium ($F[2, 34] = .17, p > .80$) and high ($F[2, 39] = 2.28, p > .10$) cross-group contact do not express a different level of anxiety as a function of the type of cultural environment. Conversely, results show that the interaction between level of cross-group contact and the cultural service environment does not influence black participants' anxiety, $F(4, 113) = 1.40, p > .20$. Fig. 4 details these results.

Thus, participants' level of cross-group contact moderates the impact of the cultural service environment on consumers' anxiety for white participants only. These results provide only partial support for H3b.

H4 proposes that anxiety mediates the relationship between consumers' perceived cultural compatibility and their satisfaction towards the service. The test of this mediating influence follows the four-step procedure of Baron and Kenny (1986) as in Table 3.

First, the relationship *a* between the independent variable (perceived cultural compatibility) and the dependent variable (consumer satisfaction) is statistically significant (see H2; $\beta = .52, p < .001$). Next, results support the relationship *b* between the independent variable and

the mediator variable (anxiety, $\beta = -.40; p < .001$). Then, the relationship *c* between the mediator variable (anxiety) and the dependent variable (satisfaction) is significant ($\beta = -.56, p < .001$). Finally, when controlling relationships *b* and *c*, the previously significant relationship *a* between the independent and dependent variables should lose its statistical significance (Baron & Kenny, 1986). However, a multivariate regression shows that both perceived cultural compatibility ($\beta = .36, p < .001$) and anxiety ($\beta = -.42, p < .001$) conserve their impact on consumers' satisfaction when controlling relationships *b* and *c*. Consequently, anxiety is not a full mediating variable (Baron & Kenny, 1986). Nevertheless, a Sobel test reveals that anxiety acts as a partial mediator on the relationship between consumers' perceived cultural compatibility and satisfaction ($Z = 5.03, p < .001$). Anxiety mediates approximately 32% of the total effect of perceived cultural compatibility. As a result, anxiety is a partial mediator of the relationship between perceived cultural compatibility and consumer satisfaction, providing partial support for H4.

5. Discussion

The research framework identifies key constructs (i.e. perceived cultural compatibility, intergroup anxiety and cross-group contact) that are relevant to understanding the impact of cross-cultural CCI on consumers' satisfaction with a service and examines the relationships among these factors. The experiment demonstrates that perceived cultural compatibility with consumers present in the same service setting significantly influences consumers' satisfaction towards the service. Further, consumers' felt anxiety when interacting with other out-group consumers partially explains this effect. Results also demonstrate that the presence of culturally-incongruent consumers within the same service environment does not necessarily produce a negative effect (i.e., in which culturally-incongruent consumers perceive less compatibility, have increased anxiety and reduced satisfaction). Indeed, the findings highlight the fundamental role of consumers' cross-group contact in their service experience. Results confirm Allport's (1954) contact hypothesis and suggest its importance to understanding consumer behavior in an increasingly

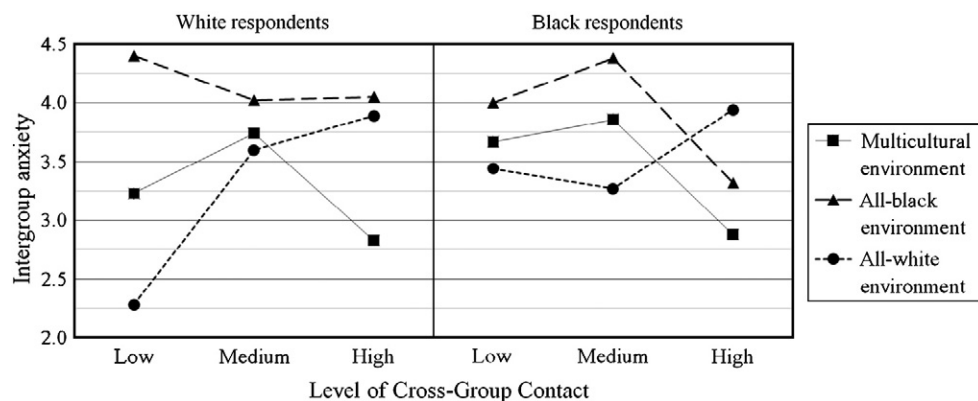


Fig. 4. Mean ratings of intergroup anxiety for white and black participants as a function of the type of cultural environment and their level of cross-group contact.

Table 3
Results of regression analyses for intergroup anxiety as mediating variable.

Paths	Beta ^a	Standard error	t-value	Sobel test
<i>a</i> Perceived cultural compatibility → Consumer satisfaction	.52	.07	9.41***	
<i>b</i> Perceived cultural compatibility → Intergroup anxiety	-.40	.06	-6.64***	
<i>c</i> Intergroup anxiety → Consumer satisfaction	-.56	.07	-10.37***	
<i>a'</i> Perceived cultural compatibility → Consumer satisfaction (after controlling <i>b</i> and <i>c</i>)	.36	.06	6.59***	5.03***

^a Standardized coefficients.

*** $p < .001$.

culturally diverse marketplace. Interestingly, black participants, even those with low cross-group contact, perceive more compatibility with consumers in the multicultural environment than in the all-black environment. This finding suggests that perceived cultural compatibility depends on multiple dimensions such as social aspiration. Findings may reflect a greater desire to integrate among consumers who have less opportunity and social standing. Future research in this area can shed light on how social structure and dynamics influence consumer response.

The partial support of H3b, whereby whites with low contact were more anxious in the all-black environment, but not vice-versa, is also notable. These results suggest the influence of chronic distinctiveness on consumer responses to mono-cultural and multicultural marketing environments (Grier & Deshpandé, 2001; Wooten, 1995). Chronic distinctiveness occurs when a characteristic (e.g., race) becomes persistently salient to an individual because other people in his/her reference group are continuously different from him/herself on that particular characteristic (McGuire & McGuire, 1981). Members of numeric and social minority groups may be more accustomed to solo status and respond to servicescapes of different cultural composition in different ways than members of numeric and social majority groups. This proposition is ripe for future research.

Results contribute insights with regard to the management of cross-cultural CCI. One could easily argue that the obvious practical implication of this study is that segregating services settings according to (perceived) cultural compatibility is the most effective tactic to control anxiety and increase consumers' satisfaction. However, although some service providers implement this strategy (see Harris, Henderson, & Williams, 2005), such segregationist practices, in addition to raising obvious ethical and legal issues, may be discriminatory and not economically viable in modern (i.e., post-apartheid) multicultural societies. Instead, service providers must take into consideration the growing cross-group contact within the society, and how this contact might influence consumer behavior. While the creation of segregated servicescapes might satisfy consumers who find cross-group contact unwelcome, it may also discontent a growing majority of consumers who do (or are willing to) connect with different cultural groups (Grier, Brumbaugh, & Thornton, 2006). Consequently, a more viable strategy may be for marketers to assess the demographic composition of their services, understand the role CCI may play, and work to remove any related barriers that impede consumer satisfaction. For example, a service provider might use contextual cues such as music, themes and elements of decoration to reduce the anxiety that a distinctive consumer may experience and make him/her feel welcome (Grier et al., 2006). Similarly, targeted sales promotions and communications that signal that consumers of all cultures are welcome can also dismantle actual or perceived barriers.

6. Conclusion

One limitation of this study involves the use of a scenario to evaluate consumers' interaction with other consumers as well as service satisfaction. Future research can investigate consumers' cross-cultural interaction through a diary study or a laboratory experiment in multiple service settings. Research might consider more detailed measurements of the nature and amount of cross-group contact. Additionally, sampling from a university student population may be debatable (Bello, Leung, Radebaugh, Tung, & Van Witteloostuijn, 2009; Calder, Phillips, & Tybout, 1981). However, despite the fact that students may be more familiar with and open to mixed race situations, friendship and contact amongst South African students, as in the US and many other countries, still remain highly segregated (Alexander & Tredoux, 2010; Massey & Denton, 1993). The participants with a low level of cross-group friendship were the largest population of the dataset ($n=91$). Nonetheless, futures studies

should investigate broader demographic groups as well as additional cultural characteristics besides race.

Overall, results provide a base for integrating consideration of CCI into the understanding of related marketing challenges. Results also answer research calls to consider the role of social contact for understanding how a consumer will respond to marketing efforts (Grier & Deshpandé, 2001; Henderson et al., 1999). Consideration of these social realities can only enhance marketing practitioners and researchers' ability to understand, explain, manage and predict consumer behavior in modern multicultural societies.

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