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Increasing Intercultural Contact in Cyberspace: How Does it Affect the Level of Prejudice among Malaysians?

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ABSTRACT

To date, the effect of intercultural contact on racial prejudice toward the out-group has been, for the most part, examined and studied by way of face-to-face encounters but the effect has seldom been investigated in a computer-mediated interaction. The objective of this research, therefore, is to look into the effect of intercultural contact on the level of prejudice among intercultural partners in both face-to-face and computer-mediated communication (CMC) environment from the perspective of the Intergroup Contact Theory. One hundred participants were involved in the time series experiment and they were randomly assigned to intra-cultural versus intercultural conditions in the two-channel conditions namely face-to-face and CMC. Participants were required to interact in pairs with their 'zero history' partners. Parallel to the premise of the theory, for the face-to-face group, the overall level of prejudice among the intercultural communicative partners was significantly lower as compared to those in the intra-cultural group. However, the effect of intercultural contact in the CMC group failed to yield significant findings despite the decreasing trend of the level of prejudice over the four-week period among the intercultural partners. The study provides greater insight into the issue of intercultural integration in Malaysia. With much intercultural interaction and collaboration conducted online nowadays, the study provides preliminary evidences on its effectiveness in reducing perceptual prejudice.

Keywords: Computer-mediated communication, Intergroup Contact Theory, intercultural communication, intra-cultural communication, prejudice

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INTRODUCTION

Intercultural harmony is extremely important, if not vital, in Malaysia. Considering the country's multi-ethnic, multi-lingual, and multi-religious social fabric, intercultural harmony is critical to preserve national security and stability. Past intercultural relations in the country have been, at best, cordial but remain fragile despite the country being portrayed as a moderate Islamic nation globally. There were several recorded upheavals and one major racial riot in May 13, 1969. This interethnic suspicion and tension has complicated the process of nation building for many decades since its independence from the British on August 31, 1957. And despite progressing to the 21st Century, the possibility of interethnic disintegration continues to haunt Malaysians and remains the greatest threat to the country's well-being and stability (Sundaram, 1989).

Forging intercultural unity in Malaysia is, and will continue to persist as, an inimitable challenge for the country's administration. It is a delicate task encumbered with various historical, political, sociological, and economic issues. Being the so-called 'people of the soil,' the *bumiputeras* have enjoyed many special privileges such as leading positions of authority in government, the armed forces, the civil service, and institutions of higher learning. *Bumiputeras* also enjoy the bulk of government scholarships for higher education, government aid, and social welfare. These privileges are guaranteed in the country's Constitution and administered via the New Economic Policy (NEP), a social re-engineering and affirmative action program crafted by the National Operation Council, in the aftermath of the 1969 racial riot. This policy was adopted in 1971 for a period of 20 years and it was succeeded by the National Development Policy in 1991, which has created discontent in the society and contributed to the different ethnic communities viewing each other with a jaundiced eye in addition to increasing the level of prejudice and stereotyping.

The Malaysian society is further divided by its antiquated political and education system. Since independence, Malaysian political parties have been largely race-based. Efforts to encourage mutual interaction at a tender age were hampered by the vernacular school system inherited from the British. Despite numerous government initiatives and efforts to promote national schools, parents still prefer to send their children to vernacular schools for fear of losing their mother tongue, traditions, and culture.

Economic disparity among the major ethnic groups has also not helped. It had, in fact, worsened the already dreadful situation. While the Malays enjoy political power, the Chinese dominate the economy. The Indians and the other smaller ethnic groups felt they were in 'no-man's land' and were the most marginalized group and this set the various communities further apart.

Efforts to close the widening economic and social gaps among the three major ethnic groups did not meet with much success. The one Malaysia concept, the

country's latest initiative in nation building, is based on a core doctrine that the people must perceive themselves as one nation despite the multiracial, multi-religious, and multilingual social tapestry. The campaign, championed by the former Prime Minister, was highly publicized in major media channels and has also spurred many social and educational programs aimed at promoting patriotism and national unity in both the private and public spheres. But this initiative is also quickly spiraling down to mere vapid sloganeering after a series of racial and religious shenanigans. While a low level of prejudice is acceptable to symbolize cultural partisanship and pride, a strong negative perception that often comes with hatred and repulsion may ruin efforts toward intercultural integration. In the long run, such embedded negativity will pose a serious threat to the country's well-being in terms of security and stability.

Intercultural and interreligious conflicts have caused hostilities, death, and injuries in many parts of the world including those in Palestine, Israel, Bosnia and Herzegovina, India and many others. Increasing intercultural contact has been offered as a workable solution to resolve the problem (Amichai-Hamburger & MacKenna, 2006; Harwood, 2010; Weaver, 2007). However, less is known on its impact in reducing the level of prejudice especially in computer-mediated interactions (CMC). In the current digital age we are living in, CMC offers greater chances for sustained contact and interaction between the conflicting groups, especially the context where face-to-face contact may not be feasible or limited. CMC with its unique qualities can transverse geographical and physical barriers to enable continuous interaction between the conflicting parties. According to Amichai-Hamburger et al. (2015), although CMC has now become an important medium of communication, its potential in reducing prejudice and intercultural conflict has not been fully explored. Hence the following research questions were proposed. What is the effect of intercultural contact on the level of prejudice in face-to-face and synchronous CMC? How does time affect the level of prejudice in face-to-face and synchronous CMC? To what extent does the level of prejudice vary in face-to-face and synchronous CMC?

Prejudice in Face-to-Face Encounters and CMC

It is a known fact that prejudice is very damaging to intercultural relationships. A study by Tropp (2003) showed that exposure to prejudice even in a single expression of an out-group member, would have negative implications on how group members feel in intergroup contexts and their expectations for future cross-cultural interactions.

The expectation of being the target of prejudice is also found to be a determinant in a person's positive or negative experience during intercultural communication. Richeson et al. (2005) observed how people from different cultures participated in the same interaction but walked away with contradicting experiences because of this prejudicial bias. In their study, students

from ethnic minorities who were expected to be treated with prejudice reported a more negative experience, felt less authentic, and disclosed more information during intercultural interactions. Caucasian students, on the other hand, had more positive experiences and even liked their partners more (Richeson et al., 2005).

In view of the complexities in intercultural interaction and how they may hinder positive intercultural relations, Allport's (1954) Intergroup Contact Theory laid out four conditions that must be met before positive intercultural relations can take place. They are: (a) equal status among groups, (b) common goals, (c) intergroup cooperation, and (d) authority sanction for the contact. The theory has received numerous empirical supports and spurred extensive research in various contact settings. A longitudinal study by Kerssen-Griep and Eifler (2008) that supported Allport's theory, observed changes in intercultural communication abilities of pre-service teachers over their eight months as academic mentors for members of an African American cultural group, from whom they themselves learned the realities of institutional racism. Weaver (2007) also found that prejudice declined as contact increased between Hispanic Whites and non-Hispanic Whites. The decline in prejudice, however, occurs differently among cultural groups. In his study, Weaver (2007) noted that both Hispanic and non-Hispanic groups were prejudiced in different ways, with the decline in prejudice observed more significantly in non-Hispanic groups. Thomsen (2012), based on a nation-wide study in Denmark, found that intergroup contact generated ethnic tolerance by weakening threat perception and stimulating disclosure of personal information. Mickus and Bowen (2017), in a recent study, found stronger intercultural relations as contact increased among U. S. and Mexican students who participated in a three-week learning project in Mexico. A similar finding was generated from Becker's (2017) study involving secondary school students in Bosnia and Herzegovina. The study found that cross-ethnic contact in schools increased tolerance of the out-group members.

The postulation of contact hypothesis however had received mixed findings. Wortley and Homel (1995) in one longitudinal study examined the level of prejudice among 412 Australia police recruits who underwent one-year training program and data collected found that the recruits became more prejudiced after the training. A recent study in Australia by Khan and Pedersen (2010) obtained similar findings with negativity toward Black African immigrants corresponded to the increased quantity of contact. Schumann et al. (2012) explained on the reversed impact of contact by stressing that contact could only lead to reduced prejudices if it occured in an intergroup as compared to an interpersonal setting. Intergroup contact will lead a generalized impression and attitude toward the whole out-group, while an interpersonal contact will only lead to a personalized and idiosyncratic impression and perception toward the communicative

partner. Similarly, Amichai-Hamburger and MacKenna (2006) postulated that intergroup communication in a face-to-face setting could be problematic due to physical, language, and contextual differences highlighting contrasting social status among participants.

Clearly, review of past literature has often generated conflicting findings on the beneficial effect of intercultural contact. In response to this debate, Pettigrew and Tropp (2006), conducted a meta-analysis across 516 separate studies, 714 independent samples with 250,000 subjects from 39 different countries around the globe and concluded that intergroup contact typically reduced intergroup prejudice. However, there were great variations in effect sizes across these studies and this vast heterogeneity of effects was shaped by the varying conditions under which the contact occured. Based on the meta-analysis conducted, Walther et al. (2015) further reinstated that the contact hypothesis was so strongly supported and future research should shift focus from the question of whether contact was important to question of how and under which conditions contact had an impact on people's attitude and behaviors.

In relation to this, research to date has tested the effect of various contact settings namely direct face-to-face contact (Allport, 1954), extended contact (Vezzali et al., 2012), imagined contact (Turner et al., 2013), parasocial contact (Schiappa et al., 2005, 2006), computer-mediated contact (Tavakoli et al., 2010) and video- and text-based CMC (Cao & Lin, 2017) on people's attitude and behavior. Despite the large consensus on the impact of direct face-to-face contact on intergroup relations, less is known on the effect of the other types of indirect contact. The effect of the other types of indirect contact such as extended contact (the knowledge that in-group members have friends in the out-group) and imagined or para-social contact on various attitudinal and behavioral responses is shown to be mediated by other variables such as intergroup trust and anxiety ((Turner et al., 2013) and its effect is also found to be weak and short lived.

Compared to other types of contact, the computer-mediated contact is considered as a direct contact (Schumann et al., 2012) and it comes with several variations such as text-based synchronous or text-based asynchronous contact or video-based contact and its combination. However, despite its vast application and usage in business, educational, and social settings due to globalization and internationalization, little is known about the effect of computer-mediated intercultural contact in reducing prejudice. While prejudice is obvious in face-to-face settings and tends to decline as intercultural contact increases, not much is known on how salient the perceptual barrier is in computer-mediated interactions. The important question here would be: "How apparent is prejudice in a computer-mediated communication?" Efforts to understand this situation are limited since much literature on prejudice is derived from intercultural studies in a face-to-face environment. However, the growing body of

research evidences on the positive relational outcomes such as trust, affection and equality in various online collaboration (Li & Rau, 2014; Walther, 1996); intercultural interaction (Ma, 1996; Mustafa et al., 2012) and e-learning and distance learning environment (Almonte-Acosta et al., 2013; Han & Zhang, 2009; Merryfield, 2003; Stepanyan et al., 2014) may provide stronger argument toward a gradual reduction of prejudice online.

Similar to face-to-face interaction, perceptual barrier, like prejudice, could exert considerable influence during online interactions especially during initial encounters. However, once the relationship reaches the friendship stage, the differences between these relationships would be too insignificant to consider, even between people of the same ethnic group. Similar to the perspective of Intergroup Contact Theory, Altman and Taylor (1973) asserted that perceptual barriers were broken down in an intimate relationship. Thus, prejudice may affect relational development during initial encounters, but would diminish over time as partners shared and disclosed more personal information in CMC. However, compared to some relational dimensions such as immediacy and similarity, prejudice may take longer to diminish as it is more fundamental, internalized, and deeply rooted in one's cognitive process and personality. It is also learnt at a younger age (Vezzali et al., 2012) and is more enduring due to its connection to various psychological, social, economic, and cultural environment (Dovidio et al., 2005).

We also examine several CMC theories to provide clues on the effect of online contact among intercultural partners. Burgoon and Walther (1992) in a series of experiments found that those interacting within CMC, regardless of race and gender, had exhibited significant development of trust, immediacy and perceived similarity over four experimental sessions. Consequently, Burgoon and Walther proposed the Social Information Processing Theory (SIP) which posited that positive online interactions did occur in CMC despite the obvious limitations of the medium in transmitting verbal and non-verbal cues which were essential for the development of positive human relations. The Hyper-personal Theory (Walther, 1996), which was an extension of the SIP Theory, reiterates that CMC users could develop a more positive relationship or hyper-personal relationship because the medium allows both the sender and the receiver of the messages to strategically edit and enhance their online self-image presentation. In other words, CMC users have greater control over the presentation of their "self" by strategically selecting positive information to be revealed to the other communicative partners and concealing negative information that may disrupt the process, which in turn leads to better presentation of oneself and a positive interaction effect (Walther, 1996; Walther et al., 2015). The self-image presentation affordance would facilitate a smooth intercultural interaction amongst intercultural partners in a CMC setting.

Rodino (1997) later proposed the 'equalization view' of CMC. This view is imperative in relationship studies since it suggested that CMC democratized communication because of the medium's reduced reliance on social cues such as physical appearance, gender, and race. Van Gelder (1991) held a similar opinion. He believed that since some barriers, for example, race, gender, physical appearance, and language accent that were common in face-to-face communication were non-existent in CMC a more egalitarian situation could be created at some stage. Meanwhile, people judge each other in CMC through the mind rather than appearance, race, gender, and accent. While face-to-face communicative partners have to conform to the social expectation and sanction in the medium, CMC partners exhibited less concerns about social expectation, which in turn leads to lower communication apprehension (Bazarov & Yuan, 2013) and active participation in intercultural collaboration.

With three notable theories in CMC proposing a more positive relational development in an online setting regardless of race and other physical and social barriers, we predict that the level of prejudice would also work in the opposite direction to relational development. Similar to face-to-face intercultural interaction as evidenced in the Intercultural Contact Theory, the level of prejudice would decrease as intercultural contact is repeated. However, since physical and social barriers are almost non-existent in CMC, we predict that the level of prejudice would fall at a faster rate when compared to face-to-face interaction.

With due consideration to the paucity of literature on the topic, the present study aims to explore and investigate on the effect of intercultural contact on the level of prejudice among intra-cultural and intercultural partners in face-to-face and synchronous CMC.

Measuring Prejudice

From the available body of literature, there are a myriad way and approaches to measuring prejudice. There exists, however, a high levelof ambiguity in the measuring concepts. While prejudice is widely defined and conceived as a negative attitude toward the out-group (Allport, 1954; Brown, 1995), diverse measures using different dimensions and indicators can be found in the literature (Griffiths et al., 2011; Kosic et al., 2012; Olson & Fazio, 2003). Prejudice is often viewed as a multifaceted and multidimensional construct with various scholars offering different dimensional concepts, for example, positive and negative dimensions (Czopp & Monteith, 2006) as well as subtle and blatant dimensions (Meertens & Pettigrew, 1997). Additionally, a three-dimensional construct of belief, feeling, and intentional behavior of prejudice is often mentioned in the literature even though the precise measurement of its multidimensionality was not fully explored or tested using appropriate statistical tests such as confirmatory factor analysis.

Furthermore, since a good portion of studies on prejudice were conducted in Western countries, especially the United States, the measure of prejudice is more often than not narrow in scope and confined to the social, political issues and the cultural perspectives of Americans. In most measures (see Blatant Prejudice Scale by Meertens & Pettigrew, 1997, for example), the respondents are asked to provide responses based on a series of statements developed based on the specific political or social issues of the country such as "welfare system really just allows Black people to "mooch" money from the government" or "white people lose a lot of jobs to Black people because of racial quotas in hiring processes." Czopp and Monteith (2006) were of the opinion that many measures of prejudice, even in the U.S., were outdated as they refered to "issues that are no longer particularly salient" to the current situation or the specific context of the study.

Despite the challenges and criticism on the precise measurement of prejudice, a number of scholars believed that since it is regarded as an attitude, the three-component concept of attitude comprising the cognitive, affection, and conative components must be applied to better understand the nature of this often unreasonable, unjustified, and incorrect attitude (Luque et al., 2011). Prejudice is often operationalized based on a summative score of the belief or opinion (cognitive component), feeling or emotion (affective component) and behavioral intention to establish social or physical distance from the out-group (conative component).

The measure of prejudice must also be subjected to a more stringent test to effectively determine its reliability and validity. A good measure should have greater convergent and divergent validity. In the context of prejudice, various earlier research has revealed that prejudice is inversely proportional to interpersonal relationship. Altman and Taylor (1973), meanwhile, had also asserted that perceptual barriers such as prejudice and ethnocentrism were broken down in an intimate relationship. Burgoon and Walther (1992), in a series of their experiments, also found those interacting face-to-face and in CMC, regardless of race and gender exhibited significant development in the relational dimension, for instance, in factors such as trust, immediacy, and perceived similarity.

Feddes and Turner (2011), in a longitudinal study among university undergraduates who were asked to nominate one out-group and in-group friend and report their intimacy of self-disclosure in the first week of their encounter and 6 weeks after, found intimacy of self-disclosure predicted a more positive attitude toward the out-group than it was for the in-group. Boatswain et al. (2006) found that anticipated prejudice partially mediated the effects of out-group members' reference to group membership on feelings of trust and acceptance.

MATERIALS AND METHODS

To achieve the objectives of the study, we used a time series experimental design. Specifically, we employed the Two-Groups Repeated Measures Design (Campbell &

Stanley, 1963), which involved repeated measurements of dependent variable over time, on two groups representing differing levels of independent variables.

Subjects in face-to-face control group had to attend four sessions conducted once a week for four weeks. They were placed in a classroom and were required to interact in pairs. Each pair was given up to three hours to complete the task assignment. Subjects were assigned four different tasks throughout the four sessions. In each task, they were given five questions to discuss with their partners. All the questions were personal in nature. This method was intentionally used to encourage participants to disclose more private information to each other.

Examples of the questions used include: "What do you like most about yourself?" and "What are the worst things that have ever happened to you?" The questions in the first session revolved mostly around personal background and experience. In the second and third sessions, the questions were mostly related to family, friends, and their life in the university, while the questions in the final session were mainly related to ambitions and future undertakings. After they had completed the tasks, they were given questionnaires to be completed.

Participants in the synchronous CMC group had to attend four experimental sessions conducted once a week over the four-week period. Participants were also separated from their partners. They were located in two different computer laboratories. Subjects in the synchronous CMC group interacted with their partners using Yahoo! Messenger 9.0. Each session was scheduled for up to three hours to provide ample time for the participants to complete the related tasks. After they have finished the tasks, they were given questionnaires to complete. And when that was done, they were duly briefed of the date, time, and venue for the next session. The same procedure was employed by both Burgoon and Walther (1992).

Participants

The participants in this experiment were 100 undergraduate students of a large public university in Malaysia. Since the experiment required zero-history partners with no outside interaction except those held during the experiment, three-step procedures were imposed. First, the participants were sourced from two different schools of the university: the School of Communication and the School of Mathematics. The distance between one faculty's buildings to another was about 600 meters, hence, making outside acquaintance and interaction among partners difficult. Second, each participant was asked whether they knew their partners before the experiment. This question was asked after treatment condition in Time 1, but in Time 2, Time 3 and Time 4, the question was replaced with another question asking whether the participant had contacted his/her partner since the previous experimental session. None responded in the affirmative. Third, as an additional precaution for the synchronous CMC

group, all participants were separated from their partners in two distant computer laboratories. Using Yahoo! Messenger 9.0 allowed the researcher to monitor and control the experiment from any outside interaction as the program would provide notification and conversation history about who among the participants were previously online outside the experimental sessions.

Several announcements were made during class hours inviting students to participate in the experiment. Students who volunteered were asked to attend a short briefing prior to the experiment. A short briefing was conducted for the Communications students in a classroom at the School of Communication building. Another similar briefing was conducted at the School of Mathematics. During the briefing, the participants were given detailed information of the experiment. They were told that participation in all four experimental sessions were key to their being awarded a full course credit.

This requirement was imposed to avoid the likelihood of sample attrition. Participants were told that they would be interacting in pairs and would remain with the same partners throughout the four sessions. They were reminded not to make any outside contact with their partners except until the experimental sessions were completed. The participants were duly informed that the experiment was conducted to better understand the communication process across different media channels. The actual objective of the study was withheld from the participants until the fourth session so as not to contaminate the results.

The assignment of subjects involved a two-step process. Subjects were first randomly assigned to either the face-to-face control group (50 students) or the synchronous CMC group (50 students). Within each group, they were randomly assigned based on intra-cultural and intercultural conditions. Chinese participants in both intra-cultural and intercultural conditions were asked to indicate their attitudes toward the Malay ethnic and vice versa. An equal number of participants were assigned for the two conditions in the face-to-face group, with 25 participants each. In the synchronous group, 26 participants were assigned to the intra-cultural group, while another 24 participants were assigned to the intercultural group. And in accordance with the Intergroup Contact Theory, the experimental procedure was set to fulfill four conditions. All participants in the experiment were of equal status. They were all undergraduates in their freshman and sophomore years. The second and third conditions were common goals and intergroup cooperation. The participants were asked to cooperate in order to complete a common task. The final condition was authority approval for the contact. While participation in the experiment was strictly voluntary, all participants were granted the necessary approval from their respective lecturers to participate in the experiment.

The age of the participants was between 19 and 22 years, and the mean age for the entire sample was 21 years (SD=1.23). A majority of the participants (80%) were female with the remaining 20% male with

equal number of Malays and Chinese participants.

Measures

Thirteen attitudinal items comprising cognitive, affective, and behavioral components were developed to measure prejudice. Most of the items were developed based on Luque et al.'s (2011) measure. The cognitive component comprised four items – the participants were asked to rate on four main socio-cultural areas of the out-group members namely social, family, cultural, and religious values from Likert's scale of 1 to 7 with 1 denoting very bad and 7 denoting very well. The scale was reversely coded so that higher scores would indicate greater level of prejudice.

The affective component comprised six items evaluated based on Likert's scale of 1 to 7. The participants were instructed to rate their emotions toward the out-group based on their level of: (a) trustworthiness, (b) friendliness, (c) insincerity, (d) ungratefulness, (e) insecurity, and (f) helpfulness. As for the conative component, the participants were asked to rate on their willingness to do the following four items (again, evaluated based on Likert's scale of 1 to 7) namely: (a) to have neighbors from the out-group, (b) to work with people from the out-group, (c) to have a close friendship with people of the out-group, and (d) to have intimate/marital relationship with people of the out-group. The response format consisted of seven options ranging from 'strongly disagree' to 'strongly agree.'

Since the experiment was conducted at four points of times, four sets of questionnaires were developed. All questionnaires in Time 1, Time 2, Time 3, and Time 4 used the same questions which might lead to the testing effect. Testing effect was the learning effect caused by administrating the same questions overtime which could sensitize the participants to response in a particular manner. In order to overcome the effect of testing, the sequence of the questions was arranged differently for each time period.

Another issue is the social desirability effect, which may impair the validity of prejudice assessment. Several preventive measures were utilized to reduce the social desirability bias. Following recommendations by Nederhof (1985), the present study used self-administered questionnaires to reduce the effect of social desirability by isolating the participants from the experimenter. In the study, the participants completed the questionnaires in the absence of the experimenter and efforts were made to reduce direct person-to-person contact between the experimenter and the participants. Nederhof (1985) also recommended the use of a professional, task-oriented experimenter than a warm, people-oriented experimenter to reduce the effect of social desirability bias, which was duly adopted in the present study.

RESULTS AND DISCUSSION

Two steps were involved in the validation of the prejudice measure. First, the Principle Component Factor Analysis using Varimax

Rotation was conducted. The criteria for a factor was at least an eigenvalue of 1, primary loadings of at least 0.40, with secondary loading above 0.20 difference. In addition, scree plot was used to determine the number of factors to be considered in the study. The final factor analysis produced three factors that accounted for 69.8% of the variance. Factor 1 which consists of three items (social, cultural, and religious values), explained 15.6% of variance and was labeled as the "cognitive component."

The second factor which had five items (trustworthiness, insincerity, ungratefulness, insecurity, and helpfulness) explained 34.8% of variance and was labeled as "affective component" while the final factor which had 4 items namely (items include- to have neighbors from the out-group, to work with people from the out-group, to have close friends with people from the out-group, and to have intimate/marital relationship with people from the out-group) explained 19.4% of variance and was labeled as a "conative component." All items in each factor had acceptable reliabilities of greater than 0.7.

The second step involved scale validation with other concepts related to interpersonal dimensions namely immediacy/affection, composure/relaxation and receptivity/trust (Burgoon & Hale, 1987). Immediacy/affection was measured using five items namely "He/She was intensely involved in our conversations", "He/She did not want deeper relationship between us", "He/She seemed to find conversation stimulating", "He/She created sense of distance between us", and "He/She communicated coldness rather than warmth". Four items were used to measure composure/relaxation and these include "He/She seemed very tense interacting with me", "He/She seemed very relaxed communicating with me", "He/She seemed nervous", and "He/She seemed comfortable interacting with me". Finally, receptivity/trust was measured using five Likert scale items namely "He/She was sincere" "He/She wanted me to trust him/her", "He/She was willing to listen to me", "He/She was open to my ideas" and "He/She was honest in communicating with me".

The results showed significant negative correlation between prejudice and immediacy/affection ($r = -0.263$, $p < 0.000$), composure/relaxation ($r = -0.241$, $p < 0.000$), receptivity/trust ($r = -0.151$, $p < 0.003$) (Burgoon and Hale, 1987) which added to the divergent validity of the measure prejudice.

The primary objective of the study was to test the effect of intercultural contact on the level of prejudice among intra-cultural and intercultural partners in face-to-face and synchronous CMC. Interestingly, both groups (intra-cultural and intercultural) in all the two channels showed a low level of prejudice (below mid-point) during the four time periods of the survey (Table 1). The intercultural group in the face-to-face setting scored the lowest in Time 1 as compared to those in the intra-cultural condition which reflects the significant effect of the intergroup contact. The same trend continued especially in Time 3 and 4.

Table 1
Mean scores of prejudice among intra-cultural and intercultural partners by times and channel

Channel	Relationship Types	Time 1	Time 2	Time 3	Time 4	Overall
Face-to-face	Intra-cultural group (Control Group)	2.34	2.41	2.56	2.62	2.48
	Intercultural group (Treatment Group)	1.75	1.75	2.10	2.49	2.02
Synchronous CMC	Intra-cultural group (Control Group)	2.08	2.06	2.14	2.07	2.09
	Intercultural group (Treatment Group)	2.35	2.26	2.25	2.01	2.22

Note: Based on Likert's scale of 1-7, with higher score denoting higher level of prejudice vice versa. Prejudice scores range from 1.7_2.62 indicating low level of prejudice.

As shown in Figure 1, the level of prejudice over time was higher in the intra-cultural group when compared to the intercultural group, which clearly reflected the negative preconception that was present even in the absence of physical face-to-face intercultural contact. The intercultural group, on the other hand, demonstrated a significantly lower level of prejudice especially in Time 1 and Time 2, which might suggest the positive effect of intercultural contact on the level of prejudice especially during the initial encounters.

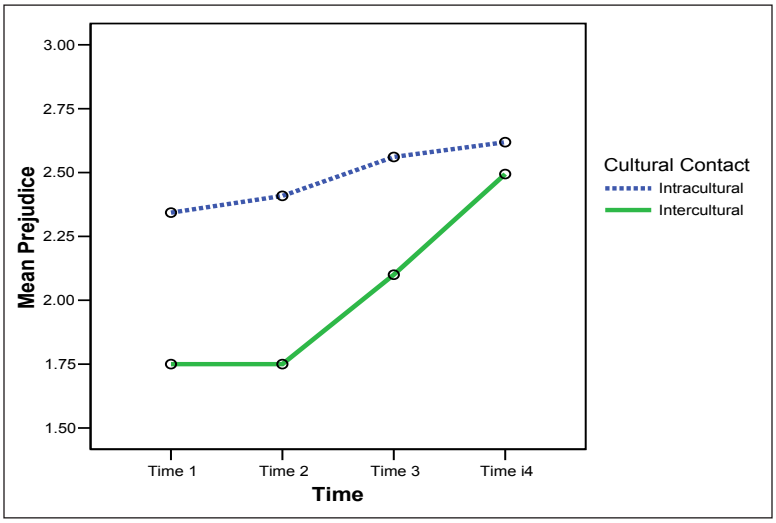

Figure 1. The level of prejudice among intercultural partners and intra-cultural partners by time in face-to-face group
Note: Based on Likert's scale of 1-7, with higher score denoting higher level of prejudice and vice versa

As shown in Figure 2, the intercultural partners in CMC exhibited a higher level of prejudice than those in intra-cultural setting in Time 1, but this inclination trended down from Time 2 onwards indicating that prejudice is salient only at the beginning of the interaction but not beyond that. The level of prejudice, however, was significantly lower among intra-cultural group in Time 1 and was stable over the four time periods.

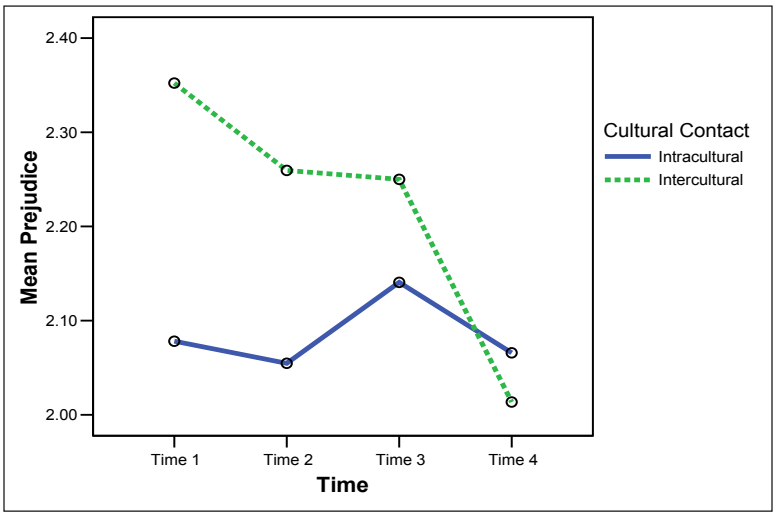

Figure 2. The level of prejudice among intercultural partners and intra-cultural partners by time in synchronous CMC group
Note: Based on Likert's scale of 1-7, with higher score denoting higher level of prejudice and vice versa

The research question of the study was assessed with a 2 x 2 x 4 Mixed Between and Within Analysis of Variance. The between-group factors were channel (face-to-face and CMC) and intercultural contact (intra-cultural verses intercultural) while the within-subjects factor was time (Time 1, Time 2, Time 3, and Time 4) and the dependent variable was prejudice. No significant effect of channel ($F=0.20$, $p > 0.05$), intercultural contact ($F=2.86$, $p > 0.05$) and time ($F=0.30$, $p > 0.05$) were observed. No significant interaction effect between time and intercultural contact ($F=0.04$, $p > 0.05$), time and channel ($F=0.48$, $p > 0.05$) and time, channel and intercultural contact ($F=0.19$, $p > 0.05$).

Interestingly, there were significant interaction effects between intercultural contact and channel [$F=5.86$, $p < 0.05$, partial $eta^2 = 0.15$]. Following a significant interaction effect between intercultural contact and channels, a follow-up test was conducted by splitting the sample based on channel (Pallant, 2011) and Independent Sample t-test was carried out to explore on the effect of intercultural contact separately for face-to-face and CMC groups. Results indicate significant mean difference in the level of prejudice between the intra-cultural ($M=2.48$) and intercultural groups ($M=2.02$), $t = 2.82$, $p < 0.05$ in the face-to-face condition which provides empirical evidence on the effect of intercultural contact in reducing the level of prejudice in the face-to-face group. However, there is no significant difference in the level of prejudice between intra-cultural ($M=2.09$) and intercultural ($M=2.22$), $t = -1.04$, $p > 0.05$ in the CMC group.

Independent Sample t-test was conducted to test the effect of gender on the level of prejudice. Results indicated non-significant mean difference between

male (M=2.28) and female (M=2.22), t=-0.37, $p > 0.05$ on their level of prejudice. The same statistical test was also conducted to test the effect of the participants' ethnic group (Chinese versus Malay) on the level of prejudice. Results indicated significant mean difference between Chinese (M=2.39) and Malay (M=2.06), t=-2.85, $p < 0.05$ on their level of prejudice which reflected that intercultural contact had larger beneficial effect in reducing the level of prejudice among the majority group members compared to minority group members.

CONCLUSION

In the face-to-face setting, the present study has provided strong empirical evidence on the contact hypothesis as demonstrated in many previous studies. Results derived from Mixed Between and Within ANOVA and the follow-up test provided additional support to the Intergroup Contact Theory. Continuous face-to-face interaction between communicative partners or group members of different cultures encourages affable interpersonal relations leading to a reduction of prejudice (Walther et al., 2015).

The study, however, failed to provide empirical support toward the beneficial effect of CMC in reducing the level of prejudice between the intercultural communicative partners. The overall level of prejudice between the intra-cultural and intercultural communicative partners in the CMC group remained relatively similar. While it is believed that increasing intercultural contact between online communicative partners would lead to the inhibition of cultural differences and eventually a decrease of perceptual prejudice, results of the present study however may suggest the influence of time factor for acquaintance development and gradual progression of interpersonal relations among the intercultural communicative partners. Given adequate time through repeated electronic interaction or increased used of the medium, users are able to adapt to the textual cues system and later, use these cues to transmit interpersonal and social information to their communicative partners. As such information accumulates over a period of time, participants' uncertainty and prejudice about their partners is reduced and gradually interpersonal relationships develop (Walther, 1996).

Despite this unexpected finding, we observed a gradual decrease of prejudice across the four time periods of the study especially for the intercultural partners in the CMC group (see Figure 2). These preliminary findings could provide further support to the "equalization view" of CMC (Rodino, 1997), which in essence, holds the view that CMC democratizes communication among its communicative partners due to the medium's reduced reliance on social cues such as culture, physical appearance, gender, and race in the media. The absence of physical intercultural contact in the CMC group may led to greater reliance on other non-social and non-cultural cues such as textual, typographic cues, and emoticons to help in impression and relationship development as highlighted by the Social Information Processing

Theory (Burgoon & Walther, 1992; Walther & D'Addario, 2001). Such intercultural participants in the CMC group may need more time to develop trust and reduce their uncertainty and perceptual prejudice toward their out-group members.

The present study thus provides strong theoretical innovation for the Intergroup Contact Theory or the Contact Hypothesis, a widely-known sociological theory in intercultural relations, by testing it on an online platform. While more empirical evidence needs to be accumulated, clearly, the finding of the present study could provide preliminary information on the beneficial effect of a text-based CMC medium in reducing interracial prejudice.

The findings of the study should be interpreted with its limitation in mind. Firstly, it is an experimental study that was designed without the element of pre-testing. Secondly, the level of prejudice was not measured before experimental manipulation was introduced. It would, therefore, be difficult to appreciate the effect of the treatment condition before the manipulation. We, however, opted for this design because of two issues. Firstly, we cannot administer the measures of prejudice without identifying the ethnic group of the partners. Secondly, we believe that the time-series post-test design used in the study is adequate to detect the effect of manipulation as each of the four post-tests would act as a comparison base for each other.

It must be noted here, that the present study was predominantly designed as a quantitative research inquiry relying solely on quantitative questionnaires in evaluating the level of prejudice. While recording the thread of conversation in both face-to-face and CMC setting may provide richer description and interpretation of the data, it may increase the social desirability bias hence posing another threat to the internal validity of the findings. Future studies, however, may consider incorporating some qualitative dimensions with regard to relational discursive interaction among dyads while controlling for social desirability bias. Such an approach was deemed important in order to provide richer understanding of the data, thereby lending greater depth to the study.

That said, this study is also limited to only one type of CMC that is text-based CMC. Future studies should examine intercultural differences in relational development between text-based CMC (synchronous CMC and asynchronous CMC) as well as other CMC channels such as audio-conferencing and video-conferencing. More importantly, future study should extend the period of interaction to enable ample amount of online contact between the intercultural communicative partners.

The limitations notwithstanding, the results of this study are particularly noteworthy because they provide conclusive evidence on the beneficial effect of interracial contact in reducing prejudice in the face-to-face setting. More importantly, the result of the present study shed new light on the promising impact of repeated intercultural contact in reducing the level

of prejudice in the CMC group as evidenced in a decreasing pattern of prejudice over the four periods of time. Clearly, online interactions through the Internet also have enormous potential in reducing negative preconceptions in intercultural interactions, which in turn, lead to improved intercultural understanding and relations (Zhang, 2012) and reduced stereotypes (Tavakoli et al., 2010) as evidenced in many e-learning environments (Almonte-Acosta et al., 2013; Han & Zhang, 2009).

Research on intercultural relationships in cyberspace is still limited to date. As such, the findings of this study are particularly significant, especially for multiethnic, multicultural countries like Malaysia. It appears the journey toward achieving intercultural unity will continue to be a challenging one in light of the complexities of intercultural relationships.

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