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1Malaysia Empathy - Towards Empathic Design Social Technology: A Preliminary Investigation on Inter-Cultural Empathy of Facebook Users

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Abstract: Examining inter-group empathy in a multiculturalism environment is crucial to maintain positive relationship and encourage social circle expansion. However, less research focus on inter-group empathy among social media users. This is important for future design of empathic centric social technology development to support inter-group empathy in social network. The objectives of this preliminary investigations are twofold: (1) to capture the demographic information, social media activities and friends network distributions among Facebook users, (2) to assess the empathic level of the Facebook users. A Facebook app named *1Malaysia Empathy* is built for the online survey purpose. A total of 1200 Malaysian Facebook users across different races participated in this study. A descriptive outcomes showed high positive results on the empathic assessment among the female respondents. Whereas commenting/posting/liking is the top Facebook activities among the users and racial bias exists in friends network preferences. Limitations, significance and future directions are discussed.

Keywords: Empathy, Intergroup Empathy, Social Technology, Social Media, Facebook.

1. INTRODUCTION

Our motivation on this project stems from the aspiration of 1Malaysia social integration national agenda. It is a concept that encapsulates the very idea of unity in diversity and emphasize on the importance of national unity regardless of race, background, or religious belief [1]. For the past five decades, Malaysia has achieved rapid economic growth and maintaining racial harmony by eradicating poverty and restructuring the Malaysian society which consists of majority the Malay (Muslims) followed by Chinese (Buddhist), India (Hindu) and other minority ethnics. In order to sustain this development, a multiracial country desperately needs peaceful coexistence among various socio-cultural groups. Hence, one way to promote pro-social behavior in a multiculturalism environment is to understand the societal empathic level [2].

It was reported that by June 2016, there were 19 000 000 Facebooks users in Malaysia [3]. The preliminary work is attempt to capture the demographic information on Facebook users' activities, friends network distributions preferences as well as assessing their empathic level using the Davis' Interpersonal Reactivity Index (IRI) [4]. A Facebook app called *IMalaysia Empathy* is designed and developed as an online survey instrument for this purpose. The results enable us to shed some overview on the general empathy level and potential racial biases on friends' preferences among social media users in Malaysia. Implications of this project are eminent towards our future social technology design requirements for intercultural and cross-cultural adaptation training purposes.

2. RESEARCH BACKGROUND

A. What is Intergroup Empathy?

Empathy in the literature is defined as multifaceted and multidimensional constructs. Empathy is often referred as "understanding others" feelings and subjective psychological states or "the ability to see others from their points of view" [5] [6]. Empathy contribute to the successful pro-social behavior and emotional communication in our social life. Failures of empathy matters because they are related to diminish helping responses [5]. However, in the multiculturalism environment, often one empathic capacity fail to respond to another's suffering. This may be because people are less likely to detect and attend to another's suffering when the victim is distant in space, time, or kinship or belongs to a different racial, political, or social group [5].

According to Contact Hypothesis [7], one of the potential ways to reduce prejudice and discrimination between majority and minority group members that are experiencing conflict and conversely to induce empathy is intergroup contact. If one has the opportunity to experience or communicate involving other's way of life, point of view or suffering, new understanding and appreciation emerged and thus prejudice, discrimination, stereotypes should be reduced. Hence, intergroup empathy focuses on means by which social groups exhibit extraordinary pro-social behaviours towards members from other social groups. Examining empathy at the intergroup level is particularly important because intergroup conflicts engender significantly more aggression than interpersonal interactions [2] [7] [8] [9].

B. Digital Technology and its Influence Towards Intergroup Empathy

Digital technologies were reported to enhance intergroup empathy by breaking down barrier between (the in-group) and them (the out-group). In the study by [10], Contact Hypothesis [7] was used as the theoretical background of a project Dissolving Boundaries Project in 1999 with the aim to use ICT to link schools across the political borders in Ireland through a collaborative educational program to increase mutual understanding and it was reported as success in increasing North-South understanding. In addition, a blog called Good Neighbors for which different representatives from the different communities living in the Middle East were invited to write articles on political and cultural views in order to improve relationship between groups [11]. Another examples are game development for conflict resolution, "Peacemaker" [12] that allow users playing both sides of the Israel – Palestinian conflicts and "Breathtaking Journey" [13] a multisensory mixed-reality game providing a first-person perspective of a refugee's journey to engage societal awareness. While other researchers addressed intergroup empathy in the area of online/offline support group and community [14] [15] [16] [17], clinical situations [18], civic engagement [19].

C. Empathy and Social Media

With the rise of social technology applications (e.g. social networks, Web 2.0), the society have used these platforms not only to communicate, exchange messages, share knowledge but also for support – emotional, social and psychological. We tend to leave digital traces an electronic records of our behaviours and interactions

within these environments that can reveal much about who we are as people. For instance, it has been shown that one's Facebook profile is correlated to aspects of one's true personality [20] and self-prevalence [21], rather than simply a form of self-idealization as was once believed. Given this intimate link between online and offline identities, there is a growing interest in using this data to understand what users do in these environments, with the purpose of inferring *who users are..* Furthermore, it is said that people holding different political views or ideology are "trapped" in "echo chambers", rarefied discussion environments in which those with dissenting opinions are excluded, producing an enforced consensus [23]. This is usually happened in the online discussions, online chatting and forums. The creation of echo chambers online may intensify group polarisation effects through an enforced homogeneity of opinion [24]. Therefore it is important to counter the echo chamber effect through future design of empathic centric technology, supporting intergroup empathy development in social media interaction.

3. RESEARCH METHODOLOGY

A. Data Collection and Analysis

For the data collection, we developed a Facebook app named "*1Malaysia Empathy*" as an online survey instrument. (Figure 1). We send private message as well as using public announcement to invite Facebook users to participate in the study. For this study, we only considered Facebook users who are Malaysians with age 18 years old and above. The data collection was conducted for a period of 3 months in order for us to obtain substantial amount of participants. A total of 1200 Malaysian Facebook users participated in this online survey.

The online survey questionnaire is a closed ended questionnaire. Prior to participation, the participants were initially asked for their consent on the information disclosure and privacy matters. (Figure 2). In the first section of the app, the Facebook user's personal profile, user's activities on Facebook and friends distributions were captured. In the second section, participant's empathic level assessment were captured using the Davis' Interpersonal Reactivity Index (IRI) [4] in a form of a short quiz (Figure 3). The questionnaire is based upon five different types of empathy traits which are perspective taking (measures the tendency to take the psychological point of view of others), fantasy (measures the tendency to get caught up in fictional stories and imagine oneself in the same situations as fictional characters), personal distress (measures the kind of feelings e.g. anxiety that gets in the way of helping others) and empathy concern (measures sympathy and concern for others). The instrument used a five-point Likert scales rating from 1 (strongly disagree) to 5 (strongly agree).

For the data captured, we used descriptive statistics to analyze all items in a form of Frequency (%), Mean (M) and Standard Deviation (SD). This is because at the preliminary stage we aimed to understand the characteristics of the Facebook users rather discovering inferences or causal relationship.

4. RESULTS AND DISCUSSIONS

Based on Table 1, a large number of respondents come from the Malay (80.3%), followed by the Chinese (14.5%) and a small crowd of Indian (5.2%). The female respondents (74.8%) make up the majority of the survey participation while the male respondents consists of (25.3%). Whereas a large group of respondents are between 18-30 (62.5%) of age followed by 31-50 (31%) age range and a smaller group with 51 and above (6.5%) of age.

On the Internet usage, (63.9%) of respondents spend more than 5 hours per day on the Internet. While on the Facebook activities, commenting/posting/liking (54.3%) score the highest, followed by photo tagging/friending (31.6%), private messaging (12.7%) and fewer (1.4%) with an interest to update their location. It is also shown that (54.2%) of respondents have more than 500 friends distribution in their Facebook network. Meanwhile,



Figure 1: The first page of 1Malaysia Empathy Facebook app



Figure 2: The consent page of 1Malaysia Empathy Facebook app



Figure 3: The empathy quiz of 1Malaysia Empathy Facebook app

(41.5%) of respondents have chosen race/culture/beliefs/religion as their friends preferences criteria followed by no preference (32.8 %) and (25.7%) would go for social preference and similar interest criteria.

Table 1
Participants Demographic Profiling

Items		Total	Frequency (%)
Race	Malay	964	80.3
	Chinese	174	14.5
	Indian	62	5.2
Gender	Male	303	25.3
	Female	897	74.8
Age	18-30	750	62.5
	31-50	372	31.0
	51 above	78	6.5
Internet usage per day	Less than one hour	6	0.5
	2-4 hours	427	35.6
	5 hours above	767	63.9
Facebook activities	Commenting/Posting/Liking	652	54.3
	Photo tagging/Friending	379	31.6
	Checked in place	17	1.4
	Private messaging	152	12.7
Friends distribution	<100	158	13.2
	101 - 500	392	32.7
	501 above	650	54.2
Friends preference criteria	Social preference/Similar interest	308	25.7
	Race/Culture/Beliefs/Religion	498	41.5
	No preference	394	32.8

Based on Table 2, the female have higher empathic concern ($M = 7.23$), fantasy ($M = 8.41$) and in personal distress ($M = 8.77$) compare to its counterpart. Whereas the male respondents have higher perspective taking ($M = 13.41$) compare to the female. The results for the four scales are consistent with the general pattern found in empathy research. Female score substantially higher than male on the emotional reactivity and less strongly in the perspective taking ability [4]. The results support previous theorizing about the development of empathic tendencies by Hoffman [25], that is, greater perspective-taking ability is associated with greater feelings of empathic concern for others and less feelings of personal unease in the face of others' negative experiences. The overall findings also conform to the assumptions that gender differences in self-reported empathy may be due to differences in general emotional responsiveness [26] [27].

Table 2
Davis Interpersonal Reactivity Index (IRI) based on gender

Personality	Male		Female	
	M	SD	M	SD
Empathic Concern	7.03	3.19	7.23	3.43
Fantasy	8.33	4.70	8.41	4.74
Personal Distress	8.65	4.34	8.77	4.46
Perspective Taking	13.41	3.84	13.37	3.78

5. LIMITATIONS, CONCLUSION AND FUTURE DIRECTIONS

The highlight of the survey have shown potential bias issues does exists on one's preference of social circles expansion with commenting/posting/liking received most favourable Facebook activities. These issues need further propagation in order to understand the phenomenon and how it effects the offline/online inter-group empathy interaction. On the other hand, the IRI shed some positive results consistent with previous studies.

Nevertheless there are few limitations in our study. The research is at a preliminary stage and the survey is designed to capture an overview of the Facebook user's characteristics and online preferences. Hence, the study does not generalize the outcomes to represent a specific race. Whereas the IRI measurement tend to measure empathy-related dimensions which need to be analysed separately rather than as categorical measures e.g. high empathy vs. low empathy. Therefore the survey instrument is not appropriate if we want to study detail experience of people's inter-group interaction in social network based on racial distribution and its association to empathy.

Having identified the limitations, we will proceed through a work-plan comprising of (1) formulating a multi-racial focus group study as primary data collection in order to understand one social interaction on Facebook - offline and online (2) design and develop a digital technology prototype that support new mode of expressing empathy and social interaction (3) modeling empathic-design practice for social technology to support societal building across and between community members as well as for intercultural training.

In conclusion, although tremendous work has been done to ensure this peaceful inter-racial co-existence in the physical world through power and wealth sharing, what is happening in the cyberspace is becoming less clear to the government. This is especially important as more and more daily and political activities are moving online, and as people online identities are gradually connected with their offline identities. Overcoming prolonged online flaming of racial issues is crucial. It is hoped that the research will cast some light onto this important issue as the first step to secure sustainable, harmonious economic and social development in Malaysia.

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