Impact of mobile phone on the acculturation of South Asian migrant workers in Singapore

Rajiv George Aricat

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**IMPACT OF MOBILE PHONE ON THE ACCULTURATION
OF SOUTH ASIAN MIGRANT WORKERS IN SINGAPORE**

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WEE KIM WEE SCHOOL OF COMMUNICATION AND INFORMATION

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Wee Kim Wee School of Communication & Information

A thesis submitted to the Nanyang Technological University
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2015

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ABSTRACT

The study examines how migrants' communication over mobile phone as well as their appropriation of the technology affects their acculturation in host society. A pluralistic-typological approach towards acculturation helps understand the phenomenon as *assimilation*, *integration*, *marginalization* and *separation*. Previous research has shown that integration leads to migrants' optimal adaptation to the host society. This study investigated the effects of mobile phone calling and of acculturation on the adaptation of low-skilled migrant workers in the host country's social and work domains.

The study followed a mixed methods approach and drew on data from survey questionnaire and in-depth interviews with 462 male migrant workers from South Asia in Singapore. Scales representing the quadri-modal model failed in construct validity, suggesting that the model was not applicable for the population under study. Instead, scales of cultural identity and multiculturalism in workplace were used to represent acculturation. Cultural identity, multiculturalism, and mobile calling to host cultures had positive effect on migrants' organizational commitment, whereas multiculturalism in workplace positively affected migrants' social adaptation.

Analyses of qualitative data yielded four mobile phone user types – *convenience seeker*, *experimenter*, *group communicator* and *austere user* – and three acculturation types: *culture connoisseur*, *culture campaigner* and *culturally petrified*. Analysis also revealed the links between user types and acculturation types and produced the hyphenated categories: *convenience seeker/experimenter- culture connoisseur*, *group communicator-culture campaigner* and *austere user-culturally petrified*.

The research advances scholarship in acculturation by incorporating migrants' amount of mobile phone interaction with host and home cultures into the theoretical schema. The social constructivist position of technology's meaning being constituted dynamically by social usages has been verified in an intercultural context.

“‘Truth’ is not a feature of correct propositions which are asserted of an ‘object’ by a human ‘subject’ and then ‘are valid’ somewhere, in what sphere we know not; rather, truth is disclosure of beings through which an openness essentially unfolds.”

(Martin Heidegger, *On the essence of truth*, 1943)

CHAPTER ONE: INTRODUCTION

Although human history is replete with migration and cultural encounters, in modern economies migration is triggered mainly by economic reasons; globalization of financial markets, corporations and technologies has spurred cross border movements of migrants in the recent decades. Migration to industrial regions is a comparatively recent phenomenon in Asian economies. Nevertheless, the cross-border movements of people have been rapid and in large numbers so as to become a hot topic in many countries. Most of the industrial economies in Asia face the paradoxical challenge of becoming competitive players in the global financial scene in the face of a short supply of talent pool from among their resident population (Ahsan Ullah, 2010; Hewison & Young, 2006). On top of that, countries like Singapore lag behind in population growth, as the fertility rates are below replacement level, while coping with an increasing number of elderly people.

In 2013, there were 232 million transnational migrants (3.2% of the world's population) around the globe, compared to 175 million in the beginning of the millennium and 154 million in 1990 (UN, 2014a). Remittances from labor migrants have propped up the economies of several developing countries in Asia and the Pacific. In 2012, three of the top four remittance-receiving countries were in Asia (IOM, 2014). In the same year, foreign remittances accounted for 25% of GDP for Nepal; 10% for Philippines (USD 21 billion), and 4% for India (USD 67.6 billion). Around 1.5 million labor migrants from

South Asia travel to Middle East every year to take up low-skilled, temporary work (IOM, 2014).

The rise in migratory movements has generated debates on the phenomenon worldwide. United Nations Special Rapporteur on the Human Rights of Migrants François Crépeau recently observed:

“Politicians are still not up to the task of telling their populations that we need migrants — doctors and engineers, but we also need low-skilled or unskilled migrants. Germany and the UK have started to look at these issues. But it is not happening in France or Italy or other parts of Europe because then it becomes a quarrel over national identity. We should have a discussion on diversity policies — on who we are and how we see ourselves in 50 or a hundred years” (Naravane, 2013).

A wide range of phenomena related to migration has received scholarly attention, e.g. economic benefits for migrant-sending and -receiving countries, cross-border political activism and the differential treatment of ethnic migrant groups in host countries, to mention but a few (Sniderman, Hagendoorn, & Prior, 2004; Spencer-Rodgers & McGovern, 2002). The communication behavior of migrants has also been an area of scholarly interest ever since the advent of traditional media like print, radio and television. The diffusion of low cost communication technologies like the mobile phone has provided a fresh impetus to the research. Statistics show a steady increase in mobile phone diffusion around the world, including to the deprived population in the developing

regions. By end of 2014, there will be 7 billion mobile subscriptions in the world, of which more than 50% (3.6 billion subscriptions) will be in the Asia-Pacific region (ITU, 2012). Research data also suggest increasing intake of Information Communication Technologies (ICTs) by in-country as well as international migrants and the beneficial ways in which the technology has been put to use by them (Hamel, 2009).

This study focuses on the use of mobile phone by international migrants in Singapore in order to evaluate their acculturation to the host country. The focus is restricted to low- and semi-skilled male migrants from South Asia – mainly Bangladesh and India – in Singapore. Similar to other migrants, temporary labor migrants also face adaptation challenges like language difficulties, lack of emotional support and proneness to exploitation in the host country (Vedder & Virta, 2005; Yeh & Inose, 2003). A broader concept that summarizes the array of problems migrants face in the new culture and the latter's response to them is 'acculturation'. The standard definition of acculturation encapsulates those "phenomena which result when groups of individuals having different cultures come into continuous first-hand contact" (Redfield, Linton, & Herskovits, 1936, p. 149). Since the emergence of this concept, there have been several approaches that empirically validated how this phenomenon occurs in real life (Barry, 2001; Cai & Rodríguez, 1997; Ward, 2001). Some researchers consider acculturation as a derivative of the amount of time migrants live in the new culture (Gordon, 1964; Kim, 1989), while a substantial number of others considers that it would be possible for migrants to show behavioral, cognitive and emotional affinity to both the cultures they are acquainted with – the home and the host – no matter how long they have lived in the new culture (Berry,

1997; Horenczyk & Munayer, 2007). In both cases, communication plays a crucial role in migrants' engagement with host and home cultures. While interpersonal and mass media usage were given importance in early acculturation studies, in the emerging scenario of widespread use of mobile phones, the multiple layers of mediation in the acculturation process call for research attention.

Factors like immigration policies of the host government, host society's attitude towards immigration and ethnicity and class differences within the migrant population have impact on acculturation. Studies have highlighted how these factors act differently on migrant groups, thereby influencing their adaptation strategies in the host country (Ford, 2011; Teo & Piper, 2009). The interactions between migrants and the host society have appeared in shades of mutual acceptance, tolerance and hostility (Murray & Marx, 2013; Raijman, 2013; Stephan, Renfro, Esses, Stephan, & Martin, 2005).

Civil society and low-skilled migrant population in Singapore

Ever since colonial times, there has been a steady in-bound stream of bonded and migrant laborers from China and India, which has made Singapore a multi-ethnic society (Lockhart, 2010; Sandhu, 1993). In order to accommodate the diversity of its population, the state policy of Singapore has drawn on from multiculturalism. This is evident in policies related to ethnic quota system for electoral constituencies, granting of permanent residencies and allotment of Housing Development Board flats based on ethnicities. The state policies have ensured peaceful and harmonious coexistence between ethnicities that include Chinese (74.3%), Malay (13.3%), Indian (9.1%) and other ethnicities (3.2%)

(Sing Stat, 2014). However, there has been growing concern among the resident population on government plans for allowing sustained immigration to the country. Civil society's apprehensions range from feeling of economic insecurity, overstraining of public infrastructure to feeling of cultural dilution.

“... foreigners feed our sense of insecurity. If that sounds like a poor reason for our mistrust of foreigners, we can lay claim to the second: Foreigners, through no fault of their own, cannot partake in a strong and pulsating Singapore identity” (Chang, 2010).

These concerns reflected in the civil society's opposition towards a White Paper on population promulgated by the government in early 2013. A roadmap to increase the population to 6.9 million by 2030, the White Paper proposed to open gates to 15 to 25 thousand immigrants to the country every year for the next one-and-a-half decade (Population White Paper, 2013). However, the idea of encouraging migration at such a high rate was subsequently rejected by the resident population (Goh, Yong, & Sim, 2013).

Since low-skilled migrant workforce constitutes the majority of migrants in the country (1.16 million; 72% of the total non-residents as of June 2014) (MoM, 2014), there is increasing intolerance among the residents towards the immigration of this class of workers. Low-skilled and low income migrants from certain nationalities suffer greater discrimination in social spaces in Singapore (Aricat et al., 2014; Chan, 2011; Jacobs, 2012). Although not a regular happening, hostilities towards these migrants find expression in online and mediated spaces, including stereotyping of migrant workers

based on nationality (Chia, 2014). Overt cultural and racial similarities between the residents and the new immigrants hide their underlying dissimilarities in worldviews.

Cultural similarities and differences

State-supported multiculturalism in Singapore has helped resident migrant groups to freely practice their religion and organize cultural festivals and events in public places. Cultural centers and public spaces for ethnic gathering like Little India and China Town are widely seen in Singapore. New migrants from Southeast and South Asia and China can identify themselves with a mixture of cultural symbols already existing in the host country, which can potentially facilitate their acculturation. Studies have shown that the similarities between host and migrant races and cultures positively affect intergroup harmony (Cheng & Lee, 2009; Ford, 2011).

However, behind the similarities of overt cultural symbols, there are differences in cultural values and ideologies between the same races that are settled in Singapore and that of the new migrants. For example, Chua (2003) observes that the racially defined cultural characteristics of the resident population eroded in the wake of “westernization” (Chua, 2003, p. 61). Although considered a lingua franca capable of bridging the racial differences, English has been incapable of bridging the class differences in the country. Rubdy and McKay (2013) observe how a “dominant standard language ideology” among Singaporeans disfavours the migrant workers, whose lack of proficiency in English language has been evoked for keeping them in the margins (p. 162). Goh (2013) observes

that cultural events and festivities in Singapore have become Debordian spectacles with hybridization of ethnic cultures as their central objectives:

“The dance [performed during the Racial Harmony Day carnival] could be interpreted as a critique of modernity, sending traditions to their graves and then desecrating the graves, in the process replacing traditional Malay matriarchy with patriarchy” (Goh, 2013, p. 233).

For new migrants, the similarities of cultural symbols, festivities and artefacts between the host and home countries can facilitate the acculturation process. Yet, the class differences between migrant segments and the resident population undercut the similarities in cultural practices. The differences surface during the migrants’ extended period of stay in the host country.

Migrant class differences and acculturation

Compared to the professional group of migrants, low-skilled migrants are disadvantaged in terms of economic and status entitlements. This group of migrants remains a transient workforce in the country, which helps the government to repatriate or retrench them at times of economic slowdown (Ahsan Ullah, 2010; Leong & Berry, 2010; Siew, 1986). Driven by an economic logic, migrant-receiving countries generally deny equal opportunities to migrants across professions to settle in and assimilate to the host culture in the long term. In Singapore, state policies retain migrant workers in low-skilled and semi-skilled categories as guest workers despite their long years of service and familiarity with the work and social systems (Kaur, 2010). On the other hand,

professionals in sectors like finance and Information Technology, although low in proportion among the migrant population (0.18 million or 13% of the total foreign workforce in Singapore) (MoM, 2014), are better incentivized to integrate to the host country compared to their counterparts in the low-skilled category. The differentiation between ‘foreign talent’ and ‘guest workers’ in Singapore is rooted in a neoliberal economic logic (Munck, Schierup, & Wise, 2013). In short, it is more a policy of containment and not a policy of integration that has been followed in Singapore in the case of migrant workers (Rahman & Kiong, 2012).

The policies of containment have resulted in a paradox of acculturation for low-skilled migrants in Singapore, reflected in their “long-term but perpetually temporary residency” (Thompson, 2009, p. 360). This potentially affects the migrants’ sense of belongingness in the host country, their work performance and socio-psychological well-being. Adding to the policy drawbacks is the low-skilled migrants’ day to day task to adapt to the host society as members of minority groups. On a regular basis they have to engage with the host residents in social spaces and with a multicultural work force in organizational spaces. Migrants also have to acculturate to a paradox of freedom of expression in the host country, wherein curbs on opinion expression in offline spaces are justified in the name of ensuring peace and harmony between racial and ethnic groups, whereas hostilities against guest workers go unchecked in virtual spaces (Lee, 2005).

Ethnic mass media (Christiansen, 2004; Croucher, Oommen, & Steele, 2009; Jeffres, 2000; Reis, 2009) and migrants’ interpersonal communication with the host society (Kim, 1978; Schwartz, Unger, Zamboanga, & Szapocznik, 2010) have bridged

divides between migrants and the host society. Ethnic media have helped migrants learn the local custom and assimilate to the new culture (Zubrzycki, 1958). Concepts like ‘cultural hybridization’ (Hall, 1996), biculturalism and ‘marginal man’ (Park, 1928) have long been promoted by ethnic media as progressive ideas that can help society advance in the path of multiculturalism. Likewise, mobile phones, with their widespread diffusion among low-skilled migrants, can potentially act as channels to bridge the divides between migrants and the host society. For example, co-ethnic migrant networks in host countries have increased manifold with the widespread diffusion of mobile phones, with beneficial outcomes like enhancement in social capital and information sharing among migrants, but also with negative consequences like ghettoization and their low engagement with the host society (Cohen, 2011; Ryan, Sales, Tilki, & Siara, 2008). Scholars also acknowledge that the relationship between acculturation and adaptation outcomes is far from being total and direct and varies with cultures (Jurcik, Ahmed, Yakobov, Solopieieva-Jurcikova, & Ryder, 2013). A thorough investigation into the effect of mobile communication is thus indispensable for understanding the process of migrant acculturation.

Acculturation and mobile phones

Although statistics on the diffusion of mobile technologies among migrant population around the world is not comprehensive, rapid diffusion of the mobile phone in the developing world helps extrapolate on low-income migrants’ adoption and use. A related question is how far the low-skilled migrants have overcome the digital divide that they might have experienced in their home countries. Comparative statistics on mobile

phone subscriptions in the home and host countries provide the background for this study. India crossed 900 million mobile subscriptions in August 2012 (Census India, 2011; PIB, 2013), representing 73% penetration, whereas mobile subscriptions in Bangladesh stands at 114.8 million (BTRC, 2014), representing 74% penetration. In Singapore, mobile phone penetration is 151.8% as of mid-2012, whereas 3G subscriptions by mid-2013 touched 0.56 million (around 10% penetration) (iDA, 2014). A comparison of GDP per capita of Bangladesh, India and Singapore would provide further evidence for the stark differences in infrastructure. As of 2013, Singapore had a GDP per capita of USD 55,182; for India it was USD 1,499; whereas for Bangladesh, it was USD 829 (World Bank, 2014). It may be surmised that subscription-wise, Singapore has bridged the divide between mobile users and non-users.

The target population of this study – low-skilled migrant workers – has also enjoyed the infrastructural cover reflected by the high penetration of mobile subscriptions in the host country. In other words, when rural regions in Bangladesh and India still remain underserved by the mobile service providers, migrants from these countries have overcome the shortcoming in mobile communication infrastructure in the country they have moved in to.

Studies on mobile technologies in the international migration context have concentrated on their ability to provide social connectivity (Qiu, 2009) and social and emotional support to migrant populations (Chib, Wilkin, & Mei Hua, 2013), whereas the acculturation paradigm has rarely been used in such studies. This research addresses the research gap and focuses on the cultural adaptation of the migrant. There are multiple

advantages in using the acculturation paradigm in the study: (i) An acculturation paradigm discredits the need for permanence in migration, thereby bringing temporary low-skilled migrants to the theoretical fold, despite their economic backwardness in the host country; (ii) Unlike the assimilationist approach, which dominated the studies on intercultural contact in early years, the acculturation paradigm does not preclude migrants' sustained ties with their ethnic culture; and, (iii) The acculturation paradigm helps understand the effects of mobile phone not as a derived phenomenon or an end goal in itself – like gaining social support, overcoming employee control – but as an ongoing phenomenon situated in communication practices.

An added emphasis in the thesis is on the acculturation of low-skilled migrants to the work sector, along with their acculturation to the social sector. It is also theorized that migrants' acculturation attitudes would determine their level of adaptation to the host society. Given the nature of the formal work sector focused on in the study, organizational commitment has been considered the best index of migrants' adaptation. However, in the macro-economic context of present day migration, there is a danger that organizational commitment of migrant workers would be subjected to a value judgment, especially because empirical studies support a positive link between organizational commitment and labor productivity (Groff, 1971; Mowday, Steers, & Porter, 1979; Westover, Westover, & Westover, 2010). If employees with higher organizational commitment perform well in jobs and are better productive compared to workers with low organizational commitment, discourse can induce a value judgment that migrant adaptation actually means their enhanced labor productivity. This equation reflects the broader economic contingencies of

migration, which conceives “temporary labor migration solely in terms of the material benefits that accrue to sending and receiving societies” (Lenard & Straehle, 2010, p. 286). The thesis highlights this pitfall of defining acculturation and consequent adaptation of low-skilled migrants from an economic, managerial perspective. As an alternative, the thesis emphasizes on a migrant-oriented interpretation of acculturation, which is non-deterministic and dynamic.

In sum, with rapid diffusion of mobile technology into the migrant population worldwide (Law & Chu, 2008; Law & Peng, 2007, 2008; Vertovec, 2004), it has become inevitable that the acculturation models are rethought incorporating the interpersonal and mass communication aspects of this medium. In the case of Singapore, the host country communication infrastructure allows the migrant workers to overcome the digital divide that they have witnessed in their home countries before migration. Lack of financial resources, ICT skills and language barriers still prevent the migrants at the lower end of the economic spectrum to gain access to and also benefit from advanced mobile devices (Qureshi, 2012; Warschauer, 2002). This research addresses the issue of migrants’ extant communication relations with the home culture, facilitated by plummeting cost of international calls, saturated diffusion of low-end phones and rapid diffusion of smartphones, in the framework of intercultural communication.

The second chapter begins with a review of studies and theoretical positions related to technology, with greater emphasis on social shaping of technology approach. The chapter then reviews mobile communication studies among migrants and adopts the circular model of mobile phone appropriation to guide the research. The model highlights

two trends in mobile communication studies – the functional approach and the appropriation approach – that provide the foundation for the research analytically and methodologically. The third chapter reviews acculturation based on a bi-dimensional model that characterizes migrants' cultural relations as (i) retention of cultural heritage and identity; and, (ii) relating to other cultures. A critique based on diaspora studies that explain acculturation in non-essential terms has also been introduced to describe the qualitative exploration that follows. Research questions and hypotheses have been formulated based on the review of studies in technology and acculturation. Chapter four describes the mixed methods approach followed in the study. Results from quantitative statistical tests as well as from qualitative analysis are presented in chapter five. Chapter six synthesizes the quantitative and qualitative findings and discusses the theoretical and practical implications of the study. The thesis concludes with an elaboration on the limitations of the study and recommendations for future research.

CHAPTER TWO: SOCIAL SCIENCE OF TECHNOLOGY APPROPRIATION AND IMPACT

Since the time of industrial revolution, sociological analysis of technology attempted to engage with the impact of technology on society. Often studies followed a macro-perspective in the analysis, while considering how industrialization changed the lives of populations. Fitting well into the colonial ideas of empire building and progress, technology as a partner in human advancement was often analyzed under a positivist paradigm (Ellul, 1964; Ogburn, 1964). From this perspective, technology was accorded enormous powers in determining the characteristic of societies, which was later tagged as technological determinism. A counter argument was that it is naïve to believe that technology has a unilateral effect on society without accounting for the human agency behind the development, adoption and appropriation process. As a result, an anti-essentialist (or social constructivist) position emerged highlighting the power of technology to generate meanings for users. Conceived as a text that can be interpreted in multiple ways depending on the social and cultural context of users, technology for anti-essentialists was also venues for power negotiation between different social classes. Mobile communication studies reflect these larger trends followed by earlier studies on technology. In the case of studies on migrants' usage of mobile phones, the research trajectory has largely been anti-essentialist, as most studies focused on the daily usages and social appropriation of the device. The objective of this chapter is to provide a brief outline of the debates on the sociology of technology, leading to a review of studies on migrants' usage of mobile phone in daily lives. In order to guide the research, a mobile

phone appropriation model has been introduced. The chapter further demarcates mobile phone usage in two domains of migrant acculturation: work and social life. The discussion leads to research question on migrants' appropriation of mobile phone, and hypotheses on the link between mobile phone calling and its effect on adaptation in the domains of work and social life.

Debates on technological determinism and social constructivism

Technological determinism posits that the nature and growth of societies are unidirectionally determined by newly introduced technologies (Ellul, 1964; Ogburn, 1964; Toffler, 1981)¹. A common tendency among scholars who follow this approach is to 'black box' the technology elements while studying their impact. This results in the treatment of technologies as given and having power in determining the character of societies.

A number of scholars countered the techno-determinism approach, from the perspective of social constructivism and other interpretive approaches (Bijker, Hughes, & Pinch, 2012; Mackay & Gillespie, 1992). Assuming a social constructivist position from a macro perspective, scholars like Raymond Williams (1974) and Ruth Cowan (1979) analyzed the social forces that shaped the adoption of technology, ranging from television to domestic appliances. Since these technologies were introduced during times of social

¹ Hutchby (2001) considers this an overstatement by later sociologists of science and technology, as none of the writers "who tend to be situated in this category [of technological determinism] explicitly made the claim that technological change *determines* social change" (p. 454).

transformation that witnessed increasing privatization and individualization, their adoption by users were influenced by these phenomena. The users co-opted them to facilitate the transformation: "... the development of domestic technologies should be seen as an important sign in the processes of individualization and privatization – as a symptom of the broader social changes taking place" (Mackay & Gillespie, 1992, p. 689). In the area of ICTs, the unexpected success of certain mobile phone technologies and of affordances like SMS and E-mail vindicate the view that the adoption phenomenon is neither inevitable nor pre-determined (Donner, 2007; Qiu, 2007).

In tune with the idea of social construction, the idea of appropriation of technologies later acquired greater importance. The question changed from 'how technologies triggered social changes' to 'how society determined the character and usage of a technology'. However, the renewed focus on the social and cultural shaping of technology was sometimes stretched to limits such that the anti-essentialist stance treated every possibility of the technology as a text awaiting interpretation by users (Woolgar, 1991). It became realistically untenable to argue that any and every interpretation of a technological possibility was equally valid. As a middle path between the extreme dualism of the technical and the social, an affordances perspective emerged (Hutchby, 2001). The affordance approach neither shuns the idea that technology provides real and essential possibilities of being used in particular ways, nor does it assume a deterministic stand that technology always has uni-dimensional and essential influences. Affordance approach merely posits that interpretations related to the functionalities of technologies are possible only to the extent to which interpretations are allowed by each functionality

in ontological terms: “Rather than restricting the analytic gaze to the construction of accounts and representations of the technology, we need to pay more attention to the material substratum which underpins the very possibility of different courses of action in relation to an artefact...” (Hutchby, 2001, p. 450). Affordances, or action possibilities, then becomes a user-oriented concept that not only bridges the extremities of the social and the technical, but also helps avoid the ‘black boxing’ of technological possibilities. Within mobile communication research, the affordances approach has gained relevance, as scholars increasingly acknowledge that the technology is a convergence of several communication possibilities that are to be studied individually (Reid & Reid, 2010; Sundar & Bellur, 2010).

In mobile communication studies, the social constructivist paradigm motivated research on appropriation of mobile phone (Aricat, Karnowski, & Chib, 2015; Ureta, 2008), whereas, the affordances approach was loosely followed by studies that focused on the functional benefits of mobile phones (Qiu, 2009). However, none of these approaches was mutually exclusive, as they informed each other in understanding the everyday usages of the mobile phone. The following section reviews mobile communication studies among migrants, identifying the functional and appropriation patterns followed by the studies.

Migrants, mobile communication and mobile phone appropriation

Literature suggests that mobile communication research has broadly followed four main trends: adoption, impact, social consequences and appropriation (Donner, 2008; Katz, 2006). The adoption and impact approaches focused on functional benefits to users

like economic empowerment and opportunity enhancement, whereas a focus on social consequences helped understand the effect of mobile phone on broader social structures. The appropriation approach focused on patterns of usages, the cultural determinants of usage and the social and cultural meanings ascribed to the usages. These approaches have a history that can be traced back to the time when research focused on the traditional media – print, radio and television – use by migrants: The impact and adoption approaches focused on the content consumption patterns of ethnic migrants (Fathi, 1973; Hwang & He, 1999), whereas the appropriation approach investigated changing usage patterns under varying socio-cultural conditions (Daliot-Bul, 2007; Jamison & Hard, 2003; Yapple & Korzenny, 1989). However, a major difference between traditional mass media which were widely popular among migrants and today's mobile phones is that the former is a 'stand-alone' technology, whereas the latter, when used as an interpersonal channel, allows for mediated dyadic communication. This implies that mobile phone facilitates social interaction in a way that other technologies such as print and TV do not (Ling, 2008; Ling, 2012). The following review of mobile communication studies focuses on the functional and appropriation dimensions of mobile phone usage among migrants, with references to traditional media and interpersonal communication channels. In order to guide the research, the circular model of mobile phone appropriation has been adopted (see Figure 1). The circular model integrates a range of approaches in diffusion and adoption research, such as frame analysis, cultural studies, and uses and gratifications. As a result, issues such as the symbolic appeal of new communication devices for their users and meta-communication related to the process of appropriation have received increased

attention in this model. The three components of the model – *usage and handling*, *prestige and social identity* and *meta-communication* – explain the process involved in appropriation, and open up the possibility to analyze the appropriation phenomenon in the migrant context. The model incorporates the functional side of mobile phone usage in one of its components – *usage and handling* – suggesting an overlap of the two approaches in everyday experience.

Figure 1. The circular model of mobile phone appropriation (Karnowski, von Pape, & Wirth, 2008)

Mobile phones and functional benefits for migrants

The component of the circular model that focuses on the functional benefits of the mobile phone is *usage and handling*, denoting the ways of using the mobile phone for practical purposes as well as specific ways in which these have been melded into users' lives. Migration studies report that *usage* is contingent on technological skills related to various affordances of the phone (Chib et al., 2014), but also users' communication requirements and financial resources (Donner, 2007; Thompson, 2009; Sey, 2007). Technology-related factors that are ontological (as existent in the new technology) and psychological – “audience's value-laden assessment of the technology's ‘personalities’” (Lin, 2003, p. 353) – play significant roles in determining *usage and handling*. Apart from portability and easiness of operation of mobile devices (ontological factors), the perception that mobile phone can recreate a ‘social presence’ has been decisive in migrants' use of the device for functional reasons (Law & Peng, 2008; Rice, Grant, Schmitz, & Torobin, 1990). The regular contact migrants maintain with their home culture through a wide range of mobile communication channels, from mobile calling to watching videos in vernacular, testifies the importance of ‘social presence’ in the migration context.

In addition, task equivocality – personal focus and possibility of instant feedback (Lin, 2003) – and richness of the medium help produce ‘realism’ in the mobile communication environment, triggering seamless appropriation of the device among migrants: “discussions across a kitchen table... in real time across oceans” (Vertovec, 2004, p. 222). Situational factors also determine patterns of *usage and handling*. E.g.

domestic workers' low-cost texting may be a combined effect of the spatial constraints of domestic employment and the exigency of maintaining regular familial contact (Thomas & Lim, 2011; Yeoh & Huang, 2010). In all such cases, *usage* is conjoined with goals and motivations, of which the pragmatic goals sought by users – maintenance of relationships (Law & Peng, 2008), management of daily life (Qiu, 2009), and distraction as a pastime (Wei, 2008) – constitute a major part. Often it involves tailor-making the features of the phone to suit the requirements of the users, similar to the work of a *bricoleur* (Lévi-Strauss, 1966).

Handling denotes the specific ways in which mobile users hold, store, wield and interact with the mobile device and the intensity and frequency of use of various affordances (Ishii, 2006). Blue-collar migrant work conditions demand skillful handling of the device, often necessitating “choreography of the body in public space” (Katz, 2006, p. 63).

Studies have focused on the economic and social benefits gained by migrants as a result of their usage of mobile phones (Law & Peng, 2007, 2008; Qiu, 2009; Thomas & Lim, 2011). Law and Peng (2008), in their study among in-country migrant workers in China's Guangdong province, narrated stories of low-skilled workers in a historical perspective. In the pre-mobile era, when workers were not adequately connected to the rest of their kinsmen and lacked knowledge of employment opportunities elsewhere in the province, the employers could more easily exploit, mistreat and even assault them. But, as the workers began using mobile phones, they found a plethora of opportunities out there for them to explore. According to Law and Peng (2008), they were no longer afraid of

being fired since they knew that they would be able to find work elsewhere in the same province thanks to their well-connected networks. Qiu (2009) observed how the informational needs of a burgeoning section of workers migrated from various provinces of China to the cities of the Pearl River Delta fuelled the growth of working class ICTs in a short span of time. Even while leading a precarious economic life, the workers nevertheless spent money on mobile phones and calling cards, seen as a means to enhance their opportunities in the new and competitive atmosphere: “Each of these many phone numbers [on the walls in Guangzhou or the back streets of Shanghai, advertising various services] represents a have-less individual or a group of them who do not have a stable job but can afford a mobile phone” (Qiu, 2009, p. 108).

Beyond identifying the development potential of mobile phones, attempts have also been made to situate mobile phones within the context of users’ everyday life and the ways in which mobile phones constructed and strengthened users’ position. Wallis (2008) looked at the ways in which female migrant workers (rural-to-urban) in China negotiated their identity and agency in the urban environment using new communication technologies, especially internet and mobile phones. Owing to limited literacy, financial resources, technical expertise and their gender, the migrant women could be seen as being on the losing side of the digital divide (Fink & Kenny, 2003; Warschauer, 2002). While documenting the ways in which these young women tried to overcome the structured patterns of social hierarchy and power, Wallis nevertheless argued that ICTs “at the same time can potentially preserve, or even strengthen, these same [patriarchic] structures” (2008, p. 200). Wallis summarizes that like other technologies, mobile phones also

reinforce existing asymmetrical power relations and create new modes of exploitation and control.

Lin and Sun (2011) were more optimistic in their analysis as they juxtaposed employers' control against the opportunities for connectivity that mobile phones provided for foreign domestic workers in Singapore. Mobile phones allowed the domestic workers to develop intimate relationships, although often supplemented with intermediaries and face-to-face interactions: "... the availability of mobile phones helps the foreign domestic workers improve their isolated working conditions and living status, as well as provide a communication channel to maintain close ties with their families overseas and broaden their local social networks" (Lin & Sun, 2011, p. 189). In their estimation, mobile phones empowered migrant workers psychologically and practically in their interactions with authoritative figures.

Studies have also shown that among poor families engaging in transnational communication, the cost of communication has remained an issue (Mahler, 2001; Schmalzbauer, 2004). In US, but also in countries in Western Europe, the documented and undocumented migrants who arrived after the economies' shift from manufacturing to services suffered from low wages, in addition to job insecurity at the hands of sub-contractors. Schmalzbauer (2004) explored the transnational family experience of migrants from Honduras to US and observed that transnationalism threatened family proximity, which was more evident in the case of poor families divided by migration. Tzanu (2015) examined expectations associated with remittances by non-migrants towards migrants. These were often conveyed to them over mobile phone: "many young

people assessed the state of their relationship with migrants in terms of frequent phone calls and material and financial support they received or expected from the *bushfallers*²” (p. 25).

Mobile communication studies among different migrant groups in Singapore have revealed how such external factors as work regulations and financial resources constrained the usage of the phone. Thomas and Lim (2011), in their ethnographic study among Filipino and Indian domestic workers in Singapore, noted how mobile phones could bring relief to the domestic workers from their repetitive daily chores and drudgery. Calling and sending text messages to their family members back home became private rituals using the phones. This ritualistic communication also helped them escape the physical constraints they faced in their life as domestic workers within the four walls of the employer’s house. Thompson (2009) described the ironic situation of mobile technology’s rapid diffusion into the most immobile portion of the population in Singapore – the migrant workers: “As utilitarian devices, handphones are transformed by the uses to which foreign work put them – for example, from devices for mobile people to devices that help people overcome constraints of their own restricted mobility” (2009, p. 360).

For migrant mothers, the demands of ‘mothering’ their own children in their home country could never be met even though both sides regularly communicated using internet and mobile phone calling and texting. These technologies also created dialectical tension

² A term used in Cameroon to denote migrants who have moved to ‘greener pastures’, even if temporarily.

between different identities of transnational mothers, which was resolved by the latter with the help of unique and counterintuitive communication strategies like actively disengaging from mobile phone usage. (Chib, Malik, Aricat, & Kadir, 2014). Vancea and Oliviera (2013) note the emergence of an E-migrant wherein technological and geographical spaces are constantly reconfigured by new media technologies. However, for migrant mothers in the study, the social spaces by far remained the same: “E-migrant women cannot always escape family and community-based social networks, and continue to maintain their traditional roles as mothers, daughters, sisters, and spouses from a distance” (p. 199). Emigrant parents from Jamaica in United States and Britain “participate(d) in the day-to-day affairs of their children” with the help of mobile phones (Horst, 2006, p. 149). Mobile phones have also become effective communication channels through which migrants can protest against low wages and poor working conditions (Ngan & Ma, 2008). As conduits of latest data and information, mobile phones helped workers compare their work conditions and remuneration with that of their peers in other regions. If inequities were found, protestations were often aired through mobile phones as short messages and snippets: “The real-time conversations and virtual face-to-face interactions available through this technology have strengthened their sense of community and reinforced their local identity, which would otherwise be threatened in unfamiliar host cities” (Law & Chu, 2008, p. 44).

Mobile-migrant studies reviewed above generally follow the premise that if the migrant workers can interact with friends from their own ethnic community in the new society, it alleviates many of the problems associated with their cultural adaptation (Chen,

2010; Holmes & Janson, 2008; Green & Lockley, 2012). However, studies have also observed how coherent ethnic groups remain aloof from the mainstream host society, thereby imposing a ‘ghettoization’ upon themselves. Ryan, Sales, Tilki, and Siara (2008) argued that overreliance on dense networks constituted by one’s own ethnic group members reinforced migrants’ dependency on niche markets. It worked as a disadvantage to migrants in the long run: “(F)ar from generating economic capital, tight networks of co-ethnics may signal social disadvantage and ghettoization” (Ryan et al., 2008, p. 686). Already existing ethnic networks became impenetrable for new entrants, as existing members began to take a critical view of their fellow ethnics newly migrating to the host country. In short, tightly-knit ethnic groups may not always be an optimal condition for migrant adaptation; inter-group trust remains low and community participation is hardly attained (Portes, 1998; Ryan et al., 2008).

Even within the same culture, scholars have noted how mobile phone can act as a communication medium that homogenizes one’s relationship with the larger world: “...the cell phone has a generalized capacity (or even, an effect) to direct the free-time resources of individuals to the sphere of personal interaction: thus shielding them from new acquaintances in their environment as well as from messages originating in the larger world” (Geser, 2006, p. 9). The “particularistic social bonds” (p. 10) thus developed are considered a regression into the pre-modern lifestyles, which are alien to the social theories developed for modern industrial societies. Dahlberg (2007) argued that diaspora’s engagement in computer-mediated spaces can result in non-engagement with host society, as debates are fragmented according to the ideological position of each virtual group.

Sunstein's (2001) "deliberative enclaves" also denotes a similar phenomenon of non-engagement between people of different cultures and worldviews (p. 67).

Problems related to close communication linkages between migrants from the same ethnic community have also been studied (Aricat, 2011; Kathiravelu, 2012). In Aricat's (2011) study, the male low-skilled workers related to the host society in a materialistic manner, devoid of any plan for long-term engagement with its cultures. Increasing amount of mobile phone communication that the migrant workers had with their home culture resulted in their lack of sense of belongingness to the host culture. The migrants used only one-to-one communication modes like voice call and short messages on mobile phone to relate to host society members, whereas their relation to home culture was more varied. However, migrants' enhanced bonding with home culture occurred not at the expense of severing ties with the host society. Instead, there existed a chasm between migrants' intensive engagement with the home culture and their superficial engagement with the host culture. One explanation for migrants' disproportionate engagement with host and home cultures is the increasing amount of home-culture oriented communication facilitated by mobile technologies (Aricat, 2011). Horst (2006) notes that migrants' increased ties with the home culture has posed challenge to their eventual settlement in the host country: "the comfortable distance many transnational migrants may have enjoyed or even required for a successful settlement in the country of migration may dissipate with the expanding availability of telecommunications such as the mobile phone" (p. 155). Similarly, Kathiravelu (2012) observed that co-ethnic

networks can turn exploitative if family or friendship ties are involved, which makes breaking out of the network difficult.

The section reviewed studies on the usage of mobile phones among migrant workers, focusing on its impact on social relations and the benefits gained by the migrants as a result of the usage. This functional approach has been captured by the usage and handling component of the circular model, suggesting that usage aimed at achieving pragmatic goals is a sub-set within the larger domain of appropriation. As the following chapter reviews studies on migrant acculturation, a link is drawn between the functional or impact approach and the acculturation model that creates a typology based on essential cultural identities. The following section reviews the appropriation approach, which will subsequently be linked with a more fluid conceptualization of diasporic identities in the following chapter.

Mobile phone appropriation by migrants

Appropriation is an interpretive schema used by studies to explain the phenomenon that occurs after technology adoption. Bar, Pisani and Weber (2007) define appropriation as the “process through which [technology] users take something external (alien, or foreign, something given to them by others), and make it their own” (p. 3). In this sense, appropriation is always a political act of re-negotiation with the power structures that determined the structural and functional aspects of a given technology in advance. Appropriation research has explained the social shaping of technology (Lievrouw & Livingstone, 2002), the symbolic meanings derived by users (Fulk, 1993;

Katz & Aakhus, 2002), and the various ways in which a new technology is used (Leung & Wei, 2000). The appropriation patterns of mobile phone have been studied in the context of different populations, including aged people (Karnowski, von Pape, & Wirth, 2008); youth (Ling & Yttri, 2002); and migrants (Ngan & Ma, 2008). Technology as text metaphor, which is widely prevalent among social constructivists, has greater importance in appropriation studies, as it highlights users' multiple readings of the technology and their unique ways of creating meanings in everyday practices (Grint & Woolgar, 1997).

The circular model postulates that the multiplicity of meanings produced as a result of mobile usage, and the meanings that determine the self/social identity of the user are as important as the goal-oriented, pragmatic conceptions related to the phone. The *prestige and social identity* component highlights symbolic appropriation of the technology, "how does the user present him/herself with the innovation? Does he/she use it as a *prestige* symbol to enhance his/her *social identity*?" (Karnowski et al., 2008, p. 184). The mobile phone has emerged as a prestige symbol for youth (Ling, 2007), and as a marker of social identity for mainstream society (Lievrouw & Livingstone, 2002). Mobile phone usage has influenced the personal and social identities of migrants, improving their self-esteem, ensuring membership in ethnic groups, thereby helping them gain peer recognition (Chib & Aricat, 2012; Rahman & Lian, 2005; Wallis, 2008). In addition, instrumental uses of the mobile phone has resulted in greater coordination among members of a team of low-skilled workers (Chib & Aricat, 2012), which has resulted in easy completion of tasks, and higher amount of leisure for the migrants. On one hand, such instrumental uses have the potential to increase the work productivity, but on the

other the time gained as a result of greater coordination over mobile phone is used for leisure.

Meta-communication

Linking the two phenomena of ‘functionally beneficial uses’ and ‘appropriation’ is meta-communication, which is defined as communication on communication. Users, in the process of using a technology, reflect on their experiences, share them with others, while seeking information and advice from different sources. New migrants perceive earlier migrants as opinion leaders on the host society (Cohen, 2011), further influencing their mobile phone adoption and usage decisions. Meta-communication includes advertisements and news related to mobile services, but also interpersonal exchanges between users and non-users related to mobile devices and services (de Souza e Silva, Sutko, Salis, & de Souza e Silva, 2011).

Meta-communication is the process through which both *usage and handling* and *prestige and social identity* are interlinked, thus reflecting the circular nature of the model. Both the *prestige and social identity* and *usage and handling* aspects of a certain mobile phone behavior can potentially trigger meta-communication, which again will initiate mobile phone behavior, leading to a circular process. The circular model refers to this process as symbolic and usage cycles. In the case of migrants, it is important to assess how meta-communication connects both the symbolic and usage cycles, since such an investigation would reveal the tensions between actual usage of the phone and the meanings and social perceptions related to such usages.

To summarize, the affordances approach reconciled the extreme positions of ‘real’ and ‘social’ in the sociology of technology. In mobile communication studies, this reconciliation is observed in the pragmatic and functional usages of the mobile phone, determined by users’ immediate preoccupations of using the phone, and their constant negotiations with the enabling and constraining action possibilities (affordances) of the phone in order to achieve pragmatic goals. Similarly, the ‘technology as text’ position of social constructivism finds expression in the appropriation process, wherein meaning creation and symbolic functions of technology receive greater attention. The circular model has captured both these approaches – the functional and appropriation approaches – and has linked the perpetual cycles of ‘usage’ and ‘symbolism’ with ‘meta-communication’. The two approaches also inform this thesis methodologically – a functional approach is followed by identifying the factors that determine the adaptation of migrants in the sectors of work and social lives and quantifying the former’s influence on the latter. Whereas, an appropriation approach is followed to understand adaptation of migrants, as they create, negotiate and redefine meaning of cultural interactions in the mediated spaces of mobile phones.

While there is a small body of work on cross-border mobile phone use, there is a need to investigate the issues related to acculturation from a holistic perspective. Cutting across the two approaches of functional benefits and appropriation, a concept that is of relevance in this discussion of migrants’ usage of mobile phone is the cultural salience of mobile phone communication. Cultural salience denotes the various ways in which a message or the activity of communicating itself utilizes shared symbols, language and

idiom of a particular culture. The remaining part of this chapter maps the communication links of migrants from existing literature and categorizes them as making migrants' own culture salient and/or making the host society's dominant cultures salient. Although these communication links with cultural salience are observed in both social life and work life, there is no attempt to demarcate the two domains, as studies have observed that mobile communication has permeated into migrants' social and professional lives alike, often to the point of blurring the boundaries between the personal and the professional (Donner, 2009). Nevertheless, while identifying the adaptation outcomes in the subsequent chapters, a differentiation between the social/personal domains has been made.

Cultural salience of mobile phone communication

Studies investigating the cultural implications of different communication practices of migrants are mostly found in the field of ethnic mass media. These studies have pointed out the differential impact of ethnic media mainly in the personal/social domain. A tension between migrants' desire to retain ethnic characteristics and their need to relate to the host society was apparent in these studies: Subervi-Velez (1986) noted that ethnic media promoted assimilation of migrants to the dominant host culture only in selected socio-political domains, but otherwise stood for cultural pluralism and maintenance of ethnic culture; Zubrzycki (1958) observed how the foreign language press respected the feelings of migrants towards their home culture, but also endeavored "to inculcate an understanding and respect for the institutions of the country of settlement and to explain to its readers the significance of native customs" (p. 79). In the mediated and

networked environment provided by the mobile phone, the cultural salience has been observed in various ways. More pertinent to this study is the mobile phone communication that makes home culture or host society culture salient.

Mobile communication to home culture

Mobile phone studies among migrants have reported a range of communication ties they develop in the host country (Chib & Aricat, 2012; Law & Peng, 2008). Primary among them are connections with members of the same ethnic community or co-ethnics, which are of importance at the initial stages of migration. Owing to migrants' difficulty in host society language and their lack of information about the host country, they usually take guidance from the co-ethnics in the initial period. The connections with co-ethnics are then maintained generally throughout migrants' sojourn in the new country, often to the latter's advantage in their professional and personal life. Co-ethnics belong to different formal and informal organizations in the host country, depending on their interests, demographics and the cultural heritage to which they originally belonged. While work and earnings take precedence in professional organizations, migrants benefit from "socializing, training, and resource-sharing" (Roldan, 2009, p. 8) by participating in informal and voluntary organization. Regulations in formal and informal groups mandate different communication patterns among migrants in these spaces, e.g. a hierarchical communication protocol exists in the professional space, whereas an informal communication pattern is followed at weekend gatherings and religious groupings (Rahman & Lian, 2005). In the organizational context, communication among co-workers, employees' perception of work climate and job satisfaction together affect their

work acculturation. Jablin and Sussman (1983) identified a ‘duty motive’ for communication between coworkers, which in the case of migrant workers also includes workers from the same ethnic group, which is characterized by their motivations to talk about company policies, obtain information about the tasks and to solve problems.

Mobile phone has also helped migrants retain sustained ties with family and friends in their country of origin (Law & Peng, 2007; Roldan, 2009; Vertovec, 2004). Voice call over mobile phone, often supported by video, and short messages have been identified the most widely used modes of communication (Aricat, 2011; Chib et al., 2014). The importance ascribed by migrants to the retention of regular connection with family has cultural reasons. Lindsley (1999) observes that Latino diaspora increased communication with family since trust and family stability are two crucial aspects that mark their culture. Similarly, mutual trust and support have been identified as key in maintaining cohesion among Asian families (Yi, 2013). Further, sustained communication links have been observed between migrants belonging to the same culture – often family members or friends – but working in different countries other than their country of origin. In all the three cases – i.e. (i) co-ethnics in the host country; (ii) family and friends in the country of origin; and (iii) family members or friends working in a third country – the communication exchanges are in the same language as that of the migrant. For this reason, the study categorized such exchanges under ‘mobile phone communication to home culture’ in its theoretical framework.

Mobile communication to dominant cultures in host country

In addition to the communication networks with co-ethnics, migrants also develop connections with host society members (Kim & McKay-Semmler, 2013). As Singapore's workforce is multicultural, a migrant from Bangladesh or India would invariably be connecting with Thai, Malay and Chinese, along with native Singaporeans (Rahman & Lian, 2005). A good amount of such mobile communication with other cultures happens in the context of organization. Studies have identified the importance of communication within organization. Irrespective of the cultural diversity of the workforce, better communication leads to good relationships among co-workers (Anderson & Martin, 1995). Employees tend to have positive attitude towards organizational climate and better job satisfaction, if communication between them is unhindered (Muchinsky, 1977). This motivated scholars to conclude that "communicating... contribute(s) to employees' satisfaction at work" (Anderson & Martin, 1995, p. 251). Similar relationships between communication and satisfaction at work were found to be true for organizations that employ migrant workforce (Guo & Al Ariss, 2015). Organizations also want to promote communication links between employees, so as to improve their commitment towards the organization, which will eventually "reduce withdrawal behaviors and turnover" (Mathieu & Zajac, 1990, p. 171).

Similarly, mobile phones have been instrumental for migrant workers to establish relationships with host mentors, as such connections ensure benefit to the workers: "Through their employer's connections, low-wage migrants often secure employment and promotions for family members and friends" (Kathiravelu, 2012, p. 110). NGOs and

charity groups that support informal care system for migrants seek patronage from host mentors, in order to ensure the sustainability of their work (Roberts & Portes, 2006). The study categorized migrants' exchanges to other cultures, in both the domains of social life and work, as 'mobile phone communication to other cultures'.

Summary

This chapter reviewed the affordances and social constructivist approaches in the sociology of technology and identified how these two approaches have been utilized in mobile communication studies. A parallel was drawn between affordances approach and the mobile communication studies that focused on the functional benefits to migrants; and, social constructivist approach and mobile communication studies focusing on appropriation. The circular model of mobile communication included components related to these two trends: e.g., *Usage and handling* represented functional and pragmatic usage of the mobile phone, whereas *prestige and social identity* represented the symbolic use of the phone that is more decisive in the appropriation process. In addition, the 'usage' and 'symbolic' cycles were conjoined by *meta-communication*.

The focus on functional uses and appropriation of the mobile phone has implications for the conceptualization of acculturation, and for the methods adopted by the study. Functional use of mobile phone has parallels with the conceptualization of acculturation typologies having essential cultural identities – the topic of the first part of the following chapter. The appropriation focus of mobile phone studies has parallels with the conceptualization of acculturation based on fluid identities that are highlighted by

diasporic studies (Bhatia & Ram, 2009) – the focus of the second part in the following chapter. Methodologically, the focus on functional benefits of the mobile phone identified with the typology of acculturation evaluates migrant adaptation in quantifiable terms, whereas, the focus on appropriation linked to a conceptualization of fluid migrant identifies evaluate the phenomena in descriptive and qualitative terms.

Recapitulating the kind of connections maintained by migrants, the chapter described them as ‘mobile phone communication to home culture’ and ‘mobile phone communication to dominant cultures in the host country’. Despite the diversity in professional, social and cultural persuasions observed in such connections, a pattern observed is that they either make salient migrants’ affinity with home culture or they make salient migrants’ attempts to relate to other dominant cultures in the host country. Theoretically, such a pattern mirrors the typology of acculturation based on a bi-dimensional approach to the phenomenon. A discussion on the bi-dimensional acculturation model, its use in mobile communication studies among migrants, and a critique of the model have been included in the following chapter.

CHAPTER THREE: ACCULTURATION AND MOBILE PHONES: ESSENTIAL TYPES AND NON-ESSENTIAL PATTERNS

The phenomenon of migration has been studied from different perspectives, among which the most relevant for this study are: (i) cultural adaptation of migrants in the host country; and, (ii) transnational spaces created by migrants as a result of their interaction with different cultures. Although these approaches inform each other, the political, racial, economic, cultural and technological persuasions of each approach vary. This chapter reviews key concepts and the empirical studies that are motivated by these approaches, while identifying the relevance of technology in each case. In the first approach of cultural adaptation, individual and group characteristics are at play, as it considers migrants as active agents in adaptation, i.e. when they negotiate their affinities with the culture in which they are rooted (the home culture) and the dominant cultures of the host country. In the second approach, transnational spaces highlight the importance of migrants' crossing of national borders, which entails questions of citizenship, political entitlements, basic rights and migrants' role in the creation of a public sphere in the liminal space of neither here nor there (Turner, 1969). As the chapter draws on from the discourses on adaptation and transnationalism, it also links them to the previous chapter on mobile phone usage among migrants in two ways: (i) it extends the 'functional use' approach discussed in the previous chapter by introducing a typology of acculturation. The 'functional use' approach as well as the acculturation model then lead to the quantitative methods, which is premised on an essentialist conceptualization of the

phenomena; and, (ii) it extends the ‘appropriation’ approach of mobile phone studies by linking it to a conceptualization of acculturation that goes beyond the typology.

Acculturation and communication technologies: A typology

Traditional studies on the diffusion and impact of ethnic media on the diasporic populations focused on print, radio and television (Fathi, 1973; Zubrzycki, 1958). From earlier on it was evident that migrants relied on communication media in their attempt to gain information about the new country they had migrated to, but also to retain links with their home culture. Depending on the nature of migration, the status of migrants in the new country, and the long term ambition of the migrating group, different orientations towards the host society were identified. Defined using terms like assimilation, enculturation and biculturalism, academic scholarship attempted to create a model for migrants’ cultural experience in the host country (Gordon, 1964; LaFromboise, Coleman, & Gerton, 1993). A more sophisticated approach to the phenomenon emerged with the concept of acculturation.

Acculturation is an integrated approach towards analyzing the varied problems migrants face in the new culture, and eventually categorizing and predicting the migrant adaptation outcomes (Arends-Tóth & Van De Vijver, 2003; Liu, 2007; Piontkowski, Florack, Hoelker, & Obdržálek, 2000). A bias towards dominant host cultures was retained by academic scholarship, which betrayed its assimilationist leanings until recently (e.g. the bias shown by Chicago School in mid-twentieth century in reifying Americanness among migrants) (Park, 1971; Thomas & Znaniecki, 1958). However, this

trend has since been challenged by more pluralistic approaches. Currently there are two main approaches towards acculturation (Berry, 1997; Kim, 1989): an older approach of defining acculturation as a *cumulative-progressive* phenomenon and a more recent *pluralistic-typological* approach that defines acculturation in multiple and mutually exclusive categories of cultural bonding (Berry, 1980). The following sections review these approaches.

The cumulative-progressive approach

The cumulative-progressive approach describes acculturation as a step-by-step manner in which migrants adapt to the new culture (Kim, 1977, 1978, 1984). This approach has been characterized by a uni-directional model in which acculturation is a linear process beginning with low level of adaptation and ending in ‘assimilation’ or one’s complete blending to the new culture. The uni-directional model describes acculturation in proportion to the amount of time a migrant spends in the new culture. It also follows a normative, deterministic path which maintains that a total blending to the host culture is attained only at the expense of forsaking migrants’ native cultures. For Kim (1977, 1978, 1984, 2001), one of the main proponents of this approach, migrants’ perceptual consonance with the host society’s culture represents their acculturation. If migrants have attained a nuanced and differentiated understanding of the host society culture, they are considered acculturated with the host society. For attaining perceptual consonance, migrants’ interpersonal communication with host society as well as the level of access and usage of host society mass media needs to be qualitatively and quantitatively high. Kim’s

findings have vindicated the stance of earlier researchers who saw migrants' engagement with ethnic media as an important factor that strengthens their ethnic identity (De Fleur & Cho, 1957; Graves, 1967; Spindler & Goldschmidt, 1952).

The communication-acculturation theory developed by Kim (1977, 1978) was followed by a series of empirical studies conducted in different cultures, giving importance to different factors, and thereby strengthening the assimilationist argument (Hao & Zhu, 2005; Johnstone, 1974). For instance, ownership of a radio or a television set, exposure to host society media and migrants' income have been linked to better acculturation (Goldlust & Richmond, 1974; Yum, 1982). Similarly, pre-immigration conditions like similarity between the original culture and the host culture, age at the time of immigration, educational background, personality characteristics such as gregariousness and tolerance for ambiguity and familiarity with the host culture before immigration have also been found to be important determinants of acculturation (Kim, 1977). Assuming an 'assimilationist' approach, these studies recapitulated that more of host society-oriented communication means more acculturation, whereas more of ethnic media translates to strengthened ethnic identity (Barry, 2006; Hao & Zhu, 2005; Kim, 1977). In this approach, since time has an additive effect on acculturation, it is often termed 'cumulative-progressive' view.

One of the major drawbacks of this approach is that it does not give sufficient attention to the possible state of 'regression' in migrants' relationship with the host culture due to their extant ties with their country of origin. In the emerged communication technology scenario, mobile communication to home represents this possible state of

regression, as it results in migrants' prolonged engagement with their home culture (Vertovec, 2004). Studies have shown how the reduced cost of international phone calls via mobile phones has increased migrants' communication with their country of origin (Law & Peng, 2008; Vertovec, 2004). Diminescu (2008) observes that migrants, with the help of ICTs, increasingly maintain their remote relations as "relations of proximity and ... activate them on a daily basis" (p. 567). Migrants' sustained relationship with the home culture also has the downside that ethnic enclaves that resist integration with the host culture may develop in the host country, e.g. the Hasidic Jews in New York. A pluralistic-typological approach gained importance in the wake of this need to incorporate migrants' engagement with multiple cultures.

The pluralistic-typological approach

The pluralistic-typological approach maintains that migrants can show affinity towards their home culture, while simultaneously relating themselves to the host society (Berry, 2001). This approach has been characterized by a bi-directional model, which proposes a typology of acculturation based on two hypothetical questions: (a) *to what extent does an in-group or out-group want to maintain its own ethnic culture; and, (b) to what extent does an in-group or out-group want to relate to other cultures* (Berry, 2005) (refer to Figure 2). These two dimensions are not mutually exclusive. Instead, depending on the degree to which migrants or host society members answer each question, their acculturation orientation is plotted as *assimilation, integration, marginalization* and *separation*, which are mutually exclusive categories. Those migrants who are *integrated*

would be favorably disposed to both home and host cultures, whereas those who are *assimilated* would have positive attitude towards host culture and negative attitudes towards home culture. On the negative side, those who feel completely *separated* would seclude themselves from members of the host culture and deliberately hold bondage to members of the home culture, whereas those who feel rejected by both host and home cultures fall into the category of *marginalization*.

The pluralistic-typological approach shows greater sensitivity towards migrants who have remained ‘ethnic’ even after their prolonged engagement with the host society. However, several factors decide whether migrants are free to follow the acculturation orientation they desire to follow, or whether they are forced to adopt orientations that are dictated by host society and its governmental policies (Birman, Trickett, & Buchanan, 2005). Liu (2007) highlights the relationship between group vitality and migrants’ freedom in choosing the acculturation orientations they want: “the stronger the vitality of immigrant groups, the more likely such groups are to adopt [acculturation] orientations that reflect their own priorities rather than those determined by the host majority” (Liu, 2007, pp. 771-772). Bourhis, Moise, Perreault, and Senecal (1997) map host society’s acculturation orientation on to migrants’ orientations to predict the overall situation as consensual, conflictual or problematic. Communication via traditional channels – from interpersonal communication to mass media – helps in maintaining congruence between the orientations of the host society and the migrants (Kim, 1980).

The pluralistic-typological approach has also been enriched by the concept of transnationalism, widely used in contemporary studies on migrants. Transnationalism

refers to migrants' cross-border activities and imaginings including remittances, political engagement and cross-border activism. Political transnationalism helps understand how migrants are situated within the political systems of host and home countries, as well as the role of the state in the process (Eveland, Hayes, Shah, & Kwak, 2005; Guarnizo, Portes, & Haller, 2003).

Two opposing positions have been adopted by scholars on the role of the state in migrants' lives (Bauböck, 2003). Scholars argue that the state's powers among the migrant population have increasingly weakened as a result of wide support for notions like human rights, the international democratization project, as also due to an increase in cross-border political networks (Keck & Sikkink, 1998). Migrants also help diffuse ideas and beliefs to their homeland that can make decisive changes in its politics, which entails that the vested interests of states can be blunted by political transnationalism of migrants: "the information that migrants channel to high-volume migration communities has an aggregate-level effect that alters attitudes and beliefs of members of those communities" (Pérez-Armendáriz & Crow, 2010, p. 120). An equally valid position is held by some scholars who argue that the "state is here to stay," despite all apparent weakening of its powers among migrant population: "... states reconfigure themselves and redefine national membership to maintain ties to and profit from their transnational constituencies" (Levitt, DeWind, & Vertovec, 2003, p. 568). These tensions that are observed in relation to the role of the state in migrant lives, as well as the home and host country dimensions in migrants' transnational activities inform the pluralistic-typological approach.

Virtual spaces emerge as less-controlled avenues for migrants to negotiate their political belonging and identity, while locating their day to day lives in the larger political context of host and host countries (Laguerre, 2005; McGregor & Pasura, 2010; Metykova, 2010; Pasek, More, & Romer, 2009; Tynes, 2007). Studies have reported how migrants actively support the causes of nation-building and make financial contributions for social welfare activities at local and global levels (Bernal, 2006; Parham, 2004, Velayutham & Wise, 2005). Burrell and Anderson (2008) introduce the idea of an ‘aspirational migrant’ who breaks free from his/her own culture to explore the possibilities offered by globalized spaces. But underpinning this exploration is the possibility of keeping close contact with one’s own culture in offline and online spaces and a return to the homeland after gaining sufficient upward mobility in life. In such imaginings any host country for the migrant at any given moment is “often only one point in a series of moves or travel plans that almost universally included the intention to return to Ghana [homeland] permanently” (Burrell & Anderson, 2008, p. 207).

Figure 2. Acculturation orientations (Berry, 1997)

A pluralistic interpretation of migrants' relationship between the home and host cultures maintains that communication to home culture does not hinder migrants' acculturation, but is often "a positive function in a normative desire for ethnic identity" (Yaple & Korzeny, 1989, p. 312). Strengthening of cultural identity in the host country has been considered a positive outcome, which helps in migrants' acculturation (Marden & Meyer, 1968; Shibutani & Kwan, 1965). Another set of studies even consider ethnic communication as facilitator of migrants' assimilation to the dominant host culture (Park, 1971; Zubrzycki, 1958).

The pluralistic-typological approach explains heterogeneity in social and cultural processes better than the cumulative-progressive approach. It is also less normative towards the acculturation phenomenon since the two axes along which it identifies the four types of acculturation (assimilation, integration, marginalization and separation) allow greater freedom for less-influential migrant groups to hold on to their preferred acculturation strategies (Arasaratnam, 2008; Liu, 2007). Expanding the possibilities of the acculturation models, studies on migrants' mobile phone usage have also attempted to link it with mobile phone appropriation, identifying typologies as well as the links between the two phenomena (Aricat et al., 2015).

However, operationalization of the four types of acculturation (assimilation, integration, marginalization and separation) has often been criticized (Hicks, 1970; Rudmin, 2003). Ward and Kennedy (1994) argue that the "quadri-modal approach to acculturation attitudes has essentially ignored the direct and independent examination of the more fundamental components of acculturation – cultural identity and intergroup

relations” (p. 333). ‘Quadri-modal’ refers to the four-type acculturation typology mentioned above, from which one type would emerge as the dominant acculturation strategy for an individual migrant. Ward and Rana-Deuba (1999) criticized the four-fold paradigm stating that when the model is operationalized, each acculturation type is identified using ‘double-barreled’ questions. A double-barreled question touches upon more than one issue, triggering an ambivalent meaning in the respondent (Fowler, 1992). Scholars have also criticized the ipsative³ nature of the constructs that represent migrants’ affinity to home and host cultures and the questions used to measure the four acculturation attitudes (see, for example, Rudmin & Ahmadzadeh, 2001; Sayegh & Lasry, 1993). In order to overcome the problems, Rudmin and Ahmadzadeh (2001) suggest orthogonal or direct and independent measures of attitudes: “it would be more efficient and more accurate to try to measure the issues of liking or disliking one’s heritage culture, and hence identification with it...” (p. 45). This led to the adoption of singular concepts (independent constructs, as opposed to compound constructs like *assimilation* or *marginalization*) like *cultural identity* and *multiculturalism in workplace* — that are used in the present study — while retaining the pluralistic outlook of bi-directional model. These two concepts will be examined below.

³ Ipsative measures are used in psychometric tests allowing for respondents to choose from two or more options. However, these options are ideally given in as many statements. The disadvantage of questions of ‘quadri-modal’ approach is that although they are *de facto* ipsative measures, they have been used in Likert scales. In such case, as Rudmin (2003) and van de Vijver et al. (1999) have observed, the questions do not have null intercorrelations that are a prerequisite for conducting factor analysis.

Cultural identity

*Cultural identity*⁴ denotes the strength of loyalty and extant affinity of migrants towards their home culture. Cultural identity often overlaps with concepts like ethnicity and nationalism. Drawing intricate links between political nationalism and cultural nationalism, Hutchinson (1994) observes that cultural nationalism is more akin to attributing organic life force into the tradition, history and culture of a nation. Cultural nationalists, unlike political nationalists, do not consider state institutions as resting on rational foundations, but as part of an organic unit, which requires regeneration at the hands of each member of the society. Incessant rediscoveries of the authenticity of one's culture happen as members search for meaning and essence in "a set of repetitive 'mythic' patterns, containing a migration story, a founding myth, a golden age of cultural splendor, a period of inner decay and a promise of regeneration" (Hutchinson, 1994, p. 123).

The counter concept is that of 'marginal man,' reified by Park (1928), as someone who has mentally reached beyond the traditional boundaries of his/her own culture as a result of interaction with other cultures, either out of volition or by external force. According to Park (1928), marginal man, a stage he identifies as more mixed than a 'cultural hybrid', alone can galvanize societal change and progress, for he alone is capable to shake off the status quo that has afflicted settled societies. In this interpretation,

⁴ Cultural identity has been interchangeably used with ethnic identity. For instance, Eriksen (1993) argues that ethnic identity is oppositional, as it is evoked in an individual when s/he realizes that s/he is culturally different from others. Hall (1996) identifies the role of culture in situating all knowledge of an individual: "ethnicity acknowledges the place of history, language and culture in the construction of subjectivity and identity..." (p. 162).

‘marginality’ may be antithetical to notions of well-being in any given point in time, but it alone ensures progress of societies in the long-term. Stonequist (1931) elaborates on ‘marginal man’ and identifies that marginality “represents a process of abstraction, a core of psychological traits which are the inner correlates of the dual pattern of social conflict and identification” (p. 10).

Cultural identity has also been identified as a latent characteristic of migrants, which is evoked in the face of host society’s discriminatory practices and policies (Rumbaut, 2008). Identified mostly in second generation migrants, ‘reactive ethnicity’ denotes “one mode of ethnic identity formation [among ethnic minorities] that highlights the role of a hostile context of reception in accounting for the rise rather than the erosion of ethnicity” (p. 110). Reactive ethnicity is different from ethnic cultural identity that most acculturation studies focus on (e.g. Berry 1997; Tsai, Ying, & Lee, 2000). Unlike cultural identity, reactive ethnicity is not autonomous and free-wielding, but depends on how the migrant groups are received by dominant host cultures. Reactive ethnicity develops as a result of hostilities and segregation experienced by an ethnic group over a period of time. Hence, reactive ethnicity can be explained only from a historical perspective, in the wake of continual interaction between migrants and the host society (Diehl & Schnell, 2006; Howarth, Wagner, Magnusson, & Sammut, 2014). Rumbaut (2008) highlights the role of events and conflicts that help develop reactive ethnicity in migrants, whereas cultural identity is amenable for expression and evaluation at any given point in time. Events like 9/11 in the United States have also triggered a kind of fear of identity even among the well-integrated South Asians in the country, as they feel that the cultural symbols they

have been associated with as well as their racial similarities with the actual perpetrators of the violence will put them in danger (Bhatia & Ram, 2009). Cultural identity has a broader meaning in this study as it implies migrants' affinity to their heritage culture, but also to the lifestyle and work ethics they had been following.

Virtual spaces allow for constant co-construction of identities, a phenomenon widely observed among migrants (Chan, 2005). Political exiles and transnational migrants' use of internet to preserve their cultural identity against the incursions from outside world (Bernal, 2006; Perez & Ben-David, 2012). Previous research has produced mixed results when examining the link between ethnic identity and acculturation (Jeffres & Hur, 1981). A strong sense of cultural identity, without sufficient identification towards the larger society, can result in low adaptation to the host society (Nazroo & Karlsen, 2003; Ryan, 2010; Sam, 2000). Similarly, migrants with integrated ethnic identity will have strong identification with their country of origin, but they would also identify with the host culture, simultaneously (Hernandez, 2009; Jasinskaja-Lahti & Liebkind, 1999; Phinney, Horenczyk, Liebkind, & Vedder, 2001). Strong co-national identification has been associated negatively with psychological well-being of migrants, whereas strong host national identification leads to better sociocultural adaptation (Ward & Rana-Deuba, 1999). A strong sense of loyalty among workers towards members of the same ethnic and racial group can result in workers' low commitment towards an organization that has a multicultural character (Fitzsimmons, 2013). Since the extant literature largely supports a negative relationship between cultural identity and migrants' adaptation to both social and work domains, the related hypotheses included later in the chapter reflect this trend.

Similarly, the study also investigates how mobile phone calling to home or host cultures influences the relationship between cultural identity and social adaptation. Studies that have explored such an effect of mobile phones are rare, although sufficient attempts have been made on analyzing the impact of mobile phone on users' identity in general (García-Montes, Caballero-Muñoz, & Pérez-Álvarez, 2006).

The functional approach followed by mobile phone studies reviewed in the previous chapter has been extended to the investigation of the relationship between acculturation and adaptation outcomes. This section reviewed the factor cultural identity, a variable that represents acculturation in social life, and identified the nature and direction of relationship between cultural identity and migrants' adaptation to social and work domains, as found in the literature. Moving further into the work domain, the following section describes 'multiculturalism in workplace', a factor that defines acculturation in the work sector.

Multiculturalism in workplace

Multiculturalism in workplace denotes the level of acceptance and willingness for co-existence a migrant worker displays towards other cultures and towards his/her co-workers. The study of multiculturalism in workplace is part of 'diversity' studies conducted widely in organizations. Ely and Thomas (2001) classify diversity in work place into three categories: (i) diversity in identity group memberships, such as race and sex; (ii) organizational group memberships, such as hierarchical position or organizational function; and (iii) diversity based on individual characteristics, such as idiosyncratic

attitudes, values, and preferences. While studies have focused on the impact of diversity within organizations on the functioning and productivity of groups, the focus in present research is on individual worker's perception and attitude towards cultural diversity in the organization.

Diversity is perceived through racial differences and socio-cultural differences such as language, food preferences and shared meanings (Larkey, 1996; Tsui, Egan, & O'Reilly, 1992). However, each individual expression of diversity is perceived in the context of the larger group that it represents and the social and economic standing of the group in a broader world. Prior literature shows that the power positions of different racial and social groups in the outside world are reflected in the organizational context too (Griffith, Childs, Eng, & Jeffries, 2007; Hood & Koberg, 1994).

Ely and Thomas (2001) expanded the concept of 'diversity perspective' as a factor moderating the impact of culturally diverse groups on work group effectiveness. 'Diversity perspective' denotes "group members' normative beliefs and expectations about cultural diversity and its role in their work group... and beliefs about what constitutes progress toward the ideal multicultural work group" (Ely & Thomas, 2001, p. 234). Although earlier research found a normatively negative influence of multiculturalism on individual adaptation, leading to conflict and confusion (Griffith et al., 2007), recent research has identified positive outcomes; for example cognitive complexity (Tadmor, Tetlock, & Peng, 2009), adaptability (Chae & Foley, 2010; Chatman, Polzer, Barsade, & Neale, 1998; Frankenberg, Kupper, Wagner, & Bongard, 2013), and opportunity for integration and learning (Ely & Thomas, 2001).

Studies have attempted to link acculturation attitudes in social life with adaptation outcomes at workplace, like affective workgroup commitment (see, for example, Lu, Samaratunge, & Härtel, 2012, 2013). This study extends the scope of earlier investigations by exploring how multiculturalism of migrants at workplace determined their adaptation not only to work but also to the life domain in general. As suggested by the review, the nature and direction of relationship between multiculturalism in workplace and adaptation in social and work domains have been indicated in the related hypotheses added later in the chapter.

Adaptation outcomes in social and work domains

So far the attention has been largely on acculturation, with greater emphasis on orientations, strategies or attitudes. A dimension that requires greater attention is the host society's reciprocity towards migrants' attitude towards acculturation. It can be better studied under different domains of acculturation, for example, life and work domains, which are more relevant to the present research. The acculturation profile of a migrant is defined as a confluence of different domains, viz. political and government systems, labor and work, family, religious beliefs and customs, etc. (Navas et al., 2005). Acculturation occurs in these life domains differently (Mendoza, 1984). Attitude change in 'hard core' areas like religious beliefs is difficult to attain, but is easy to come by in 'peripheries' like economy management (Miller et al., 2013).

The focus on the reciprocity of host society as well as domain-wise attention on acculturation leads to the questions: "how does acculturation attitude help decide

adaptation outcomes of migrants in different life domains?”, and more pertinently “how does mobile phone communication lead to migrant adaptation in different domains of life”. This section reviews the outcome factors used in the study, viz. the level of migrant adaptation to life and work domains. While adaptation to social life has been characterized by three sub-constructs: *proficiency in host society language*, *adaptation to host society rules* and *adaptation to host society’s custom and lifestyle*, adaptation to work life has been characterized by the factor *organizational commitment*.

In order to guide the inquiry, the following research question on the impact of acculturation and mobile phone calling on the adaptation outcomes has been posed:

RQ1: How do cultural identity, multiculturalism in workplace and mobile calling to home and host cultures affect migrants’ adaptation outcomes in the host country?

The factors introduced in the first part of the research question have been reviewed in previous sections. The second part of the research question, pertaining to adaptation to social life, is reviewed in the following section.

The social domain

In the present study, three factors have been identified in order to evaluate the acculturation outcomes of migrants in social domain: *proficiency in host society language*, *adaptation to host society rules* and *overall comfort in host country*. Combined, these factors determine the social adaptation of migrants.

Proficiency in host society language

Gaining proficiency in host society language is considered a necessary prerequisite for optimal adaptation of migrants in the new culture. Language proficiency is also a measurable index of migrant adaptation. Scholars have acknowledged that individuals who look beyond their cultural identity and preferences learn new languages quickly and easily adapt to the cultures to which they migrate. Citron (1995, p. 106) notes: “a language learner who can empathize with his or her interlocutors and recognize the culture-boundedness of each language would be better able to learn the new language than one who cannot.” By learning the language of the host society a migrant can build a complex and nuanced perceptual structure of the host culture (Kim, 1977). This perceptual complexity has been found to have a positive relationship with the migrant’s knowledge of and adaptation to the host society. Knowledge of host society language reduces acculturation stress leading to better adaptation: “To the extent that immigrants possess the required background in understanding and using the language of the host culture, ... their acculturation process is likely to be less stressful” (Krishnan & Berry, 1992, p. 193). Although there are four official languages in Singapore, in the social and professional lives of non-resident workers, English is the most commonly used language although Mandarin and other Chinese dialects are most commonly the first language of residents (Chua, 2003). Hence, this study evaluated migrant’s competency in English.

Adaptation to host society's custom and life-style

Migrants often complain about some unknown discomfort that they feel in the new culture. Skuza (2007) notes that there is an increasing tendency in acculturation studies to capture feelings of personal and social isolation and confusion experienced by migrants to measureable psychological categories of depression. However, the emphasis should be given to the overall comfort level of the migrants rather than compartmentalizing of the experiences (Skuza, 2007). Mutual Intercultural Relations In Plural Societies (MIRIPS), an acculturation evaluation project based on bi-directional model, has incorporated this concept in its theoretical schema (Berry, 2005). This study adapted the concept of adaptation to host society's custom and life-style to suit the migrant experiences in Singapore. Ranging from one's opinion about the status of workers in the host society to one's opinion about the nightlife typical of metropolitan culture, the construct 'adaptation to host society's custom and life-style' intended to capture migrants' mental and physical comfort in host country Singapore.

Adaptation to host country rules

Asian political contexts and governance styles are so diverse that the continent is home to democratic and autocratic states alike. Liberal and conservative groups thrive in varying numbers in this region. Such diversity in the culture, governance and politics of countries in Asia suggest that even the South-South migrants have to adapt to the host society. In Singapore, the state clearly demarcates between different classes of migrants when rules are enforced, posing greater control on the movements of migrants at the lower

strata (Hamid, 2015). The extent to which migrants adapt to the general rules of the host country decides their adaptive behavior in personal/social life. Scholars observe that adaptation involves a kind of self-disciplining by the workers, who are subjected to strict schedules, instructions and monotonous life patterns, which would eventually lead them to become “good, docile ‘Others’”, as required by the host society (Abdullah, 2005, p. 232). The importance of migrants’ compliance to Singapore’s rules and social norms has been reiterated by authorities in the aftermath of December 8, 2013 riots in Singapore (Aricat, 2013; MHA, 2014; PTI, 2014). Thus, the set of laws and rules (e.g., law prohibiting drug trafficking and littering, in the case of Singapore) become a negotiation platform for migrants in their cultural adaptation process, especially if they have taken up assignments in different countries in Asia, before moving in to Singapore.

Based on the discussion on mobile communication to home and host cultures, cultural identity, multiculturalism in workplace and adaptation to social life, the following hypotheses are formed:

H1: Multiculturalism in workplace, mobile phone calling to dominant host cultures and mobile phone calling to home culture positively affect migrants’ adaptation to social life, whereas cultural identity negatively affects migrants’ adaptation to social life.

H1a: Multiculturalism in workplace positively affects adaptation to social life.

H1b: Mobile phone calling to dominant host cultures positively affects migrants’ adaptation to social life.

H1c: Mobile phone calling to home culture positively affects migrants' adaptation to social life.

H1d: Cultural identity negatively affects adaptation to social life.

The work domain

While there have been researches in different cultural contexts to evaluate the acculturation orientations of migrants in social life (e.g., Dandy & Pe-Pua, 2010; Horenczyk & Munayer, 2007; Liu, 2007; Piontkowski et al., 2000), management scholars acknowledge that “the concept of acculturation has rarely been discussed in the context of organizational behavior” (Cox & Finley-Nickelson, 1991, p. 91). This study used organizational commitment as an index to evaluate migrant workers' level of adaptation to work (Claus, Lungu, & Bhattacharjee, 2011; Chan & Qiu, 2011).

Organizational commitment: Organizational commitment is a complex concept with broad definitions in literature: it is sometimes defined as antecedents and consequences of employees' attachment to an organization, whereas defined in other cases as the process of attachment or the state of attachment itself (O'Reilly & Chatman, 1986). A central theme that underpins the definitions of organizational commitment is the employees' psychological attachment to an organization. Drawing on from Kelman's (1958) taxonomy of attitude change, O'Reilly and Chatman (1986) defined organizational commitment using three independent constructs – compliance, identification and internalization. Compliance has a materialistic interpretation. It occurs when attitudes and behaviors are adopted not because an employee fully believes in them, but simply to gain

specific rewards. Identification occurs when employees feel proud to be part of a firm, without however adopting its values as their own. Internalization is when employees' behavior is characterized by a congruence of their own values with that of the organization (O'Reilly & Chatman, 1986; O'Reilly, Chatman & Caldwell, 1991). The present study adopts this psychology-based definition, as it is found to be more relevant in the case of migrant workers who have no financial investments or other extrinsic factors to determine their organizational commitment.

Studies are increasingly focusing on the 'organizational commitment' of migrant workers, since it is an intermediate stage in determining "participation, power, teamwork, and professionalism" (Chan & Qiu, 2012, p. 1113). Further, organizational commitment is a more general and stable index of employee's relationship with the organization in comparison to job satisfaction: "organizational commitment should be somewhat more stable over time than job satisfaction. Although day-to-day events in the work place may affect an employee's level of job satisfaction, such transitory events should not cause an employee to seriously reevaluate his or her attachment to the overall organization" (Mowday, Steers, & Porter, 1979, p. 226). Research in business communication has highlighted that internal communication helps achieve better employee engagement (Mishra, Boynton, & Mishra, 2014). Saks (2006) maintained that clear and sustained communication with employees helps achieve employee engagement, which in turn results in employees' having better relationships with the employer.

Drawing on from earlier studies that have highlighted the importance of communication within organizations, which help workers to be informed about company

policies, obtain information on professional tasks and to solve problems (Anderson & Martin, 1995; Mathieu & Zajac, 1990; McMillan & Lopez, 2001; Rupert, Jehn, Engen, & Reuver, 2010), it is logical to predict that greater amount of communication among coworkers would be positively related to greater organizational commitment. Migrants' who seek social support from co-ethnics, as well as those who seek social support from their family and loved ones in their home countries have been found to be better adapted to work (Chib & Aricat, 2012). Similarly, the discussion on multiculturalism in workplace suggested that migrants' open disposition to cultural diversity in the organization can produce positive outcomes like better organizational commitment. Conversely, greater loyalty to one's own ethnicity and race would lead to lower commitment to organization. The following hypotheses are formed in order to guide the enquiry on the effect of acculturation and mobile communication factors on organizational commitment:

H2: Multiculturalism in workplace and mobile phone calling to dominant host cultures positively affect migrants' organizational commitment, whereas cultural identity and mobile phone calling to home culture do not have a relationship with organizational commitment.

H2a: Multiculturalism in work place positively affects organizational commitment.

H2b: Mobile phone calling to dominant host cultures positively affects migrants' organizational commitment.

H2c: Mobile phone calling to home culture positively affects migrants' organizational commitment.

H2d: Cultural identity negatively affects migrants' organizational commitment.

Figure 3 shows the relationships stated in hypotheses 1 and 2. To summarize, the chapter so far highlighted the approaches of cultural adaptation and political transnationalism in the context of migrants' communication technology use and identified the variables that are relevant to the present study. It also identified relationships between factors as supported by literature and represented the relationships in the hypotheses formulated. In those cases where relationships between factors were found lacking support in literature, null hypotheses were formulated for testing. The approach of 'functional use of mobile phone', discussed in Chapter 2, was extended to this chapter to identify an acculturation typology and the related variables. The following section discusses acculturation from the perspective of diaspora studies, and based on non-essential categories. This helps expand the approach of 'appropriation of mobile phones', discussed in Chapter 2, to the realm of acculturation and provide a basis for the qualitative exploration followed in the thesis.

Figure 3. The model showing the relationship between acculturation variables – *cultural identity* and *multiculturalism in workplace* – *mobile communication variables* and adaptation outcomes – *social adaptation* and *organizational commitment*.

Acculturation and mobile phone appropriation: Non-essential patterns

As mentioned in Chapter 2, the appropriation approach to mobile phone use focused on the meanings created by migrants as they engaged in mobile communication. A major achievement of the appropriation approach was that it shunned the functional path and concentrated on a more descriptive understanding of the phenomenon (refer to the discussion of the circular model). Added emphasis was given to the symbolic usage of the mobile phone, mainly with implications for the prestige and social identity of the user. This latter has defied tendencies to make universalist observations on the mobile usage phenomenon and as a result, has identified non-essential patterns of mobile phone appropriation. Similar to this trend, diaspora studies defied the universal categories as well as the permanence of underlying acculturation processes highlighted in the bi-directional model. This was possible by challenging the idea of an authentic, continuous, and progressively unfolding self that was at the core of traditional conceptualization of acculturation (Hall, 1991). An increased sensitivity towards the socio-historical process that determined the acculturation experience of migrants, especially those from once-colonized countries, characterized diaspora studies: “[the acculturation experiences] are constructed through a dynamic, back-and-forth play concurrently between structure and self, being privileged and marginalized and is caught in the web socio-political and historical forces” (Bhatia & Ram, 2009, p. 147).

This conceptualization informed the present study as it attempted to look beyond the acculturation model, and critically interpret the underlying process which is confined

to an analysis of migrants' affinity with host and home cultures. Following such a conceptualization the study aimed to identify acculturation types that went beyond the basic structures of cultural affinity and detachment. Similarly the study identified mobile phone appropriation types that are formed on the basis of non-conforming, subversive and unique patterns of usage determined by migrant conditions.

Categorizing or clustering individuals based on one or more themes has been a practice widely used in mobile communication and internet research (Bakardjieva, 2006; Ciunova-Shuleska, Grishin, & Palamidovska, 2012; Donner, 2006; Haverila, 2011). Donner (2006) studied mobile phone adoption in Rwanda based on the themes of “overall telephone scarcity” and “increasing mobile phone use”, categorizing the respondents based on their adoption and non-adoption (p. 18). Similar categorization of mobile phone users based on purchase decision, personality and usage have been followed by studies across cultures (see, for example, Kim & Park, 2013; Lepp, Li, Barkley, & Salehi-Esfahani, 2015). Identifying typology has been an effective way to answer questions on acculturation and mobile phone adoption and usage, although most studies were limited to one of the two fields. This research, with an objective to find links between these two phenomena – migrant acculturation and mobile phone appropriation – delineated the acculturation types among migrants based on their attitudinal dispositions and engagement with different cultures and identified the mobile phone appropriation types among the users. The research questions to guide this investigation were:

RQ2: How do acculturation types relate to mobile phone appropriation types among migrants, when defined in non-essential and non-universal terms?

An integrated diagram that summarizes the discussion on mobile phone use and migrant acculturation has been provided in Figure 4. The figure shows how the component ‘usage and handling’ of the circular model draws on from the tradition of mobile communication studies that followed a functional approach towards mobile phone usage. It also highlights the ‘prestige and social identity’ component of the model as drawing on from the appropriation approach followed by mobile communication studies. The integrated research design then combines the functional approach with acculturation conceptualized in terms of essential categories (the Berry model in Figure 2), and the appropriation approach with acculturation conceptualized in terms of non-essential categories. This leads to the integration of two methods – the quantitative and the qualitative methods – used in the study.

Figure 4: An integrated diagram of research design followed in the study, which helps determine the impact of mobile phone use on migrant acculturation.

Summary

The chapter built on the earlier one and extended the two approaches of mobile phone use – functional and appropriation approach – to the realm of acculturation. Parallels were drawn between the functional approach in mobile phone studies and the trends of studying acculturation by ‘essentializing’ migrant identities. Two prominent lines of thought in such an approach – cumulative-progressive and pluralistic-typological – were reviewed. The studies have variedly identified the impact of ethnic media on the acculturation of migrants, depending on the approach they have followed and the interpretative schema they have used. Although the bi-directional acculturation model was adopted to describe the cultural affinity of the migrants with their home culture as well as to dominant host society cultures, operationalization of the constructs failed in the population studied. This substantiated many criticisms raised against the model by other researchers. Subsequently, constructs ‘cultural identity’ and ‘multiculturalism in workplace’ were adopted to measure the acculturation attitude of migrants. The two constructs were reviewed, and the nature and direction of their relationship with adaptation outcomes were discussed.

The chapter also discussed the importance of studying acculturation in different domains of migrant life as each domain demanded different communication behavior from a migrant. The focus of this research was, however, narrowed down to two domains – lives and livelihood or personal/social and professional. Although there existed overlaps between these domains, in view of clarity for empirical research this study considered

them as separate. Consequently, adaptation to social life, with the three dimensions of ‘proficiency in host society language’, ‘adaptation to host society rules’ and ‘overall comfort in the host country’, were identified as a useful index of acculturation in social life. In the work domain, organizational commitment determined migrants’ adaptation. Hypotheses under RQ1 specifically tested the quantifiable aspects of mobile phone calling, under the rubric of an impact model. As formulated in H1, ‘multiculturalism in workplace’, ‘mobile phone calling to dominant host cultures’ and ‘mobile phone calling to home culture’ positively affected migrants’ ‘adaptation to social life’ (H1a, H1b, and H1c, respectively), whereas ‘cultural identity’ negatively affected migrants’ ‘adaptation to social life’ (H1d). H2 formulated that ‘multiculturalism in workplace’, ‘mobile phone calling to dominant host cultures’ and ‘mobile phone calling to home culture’ positively affected ‘organizational commitment’ (H2a, H2b and H2c, respectively), whereas ‘cultural identity’ negatively affected migrants’ organizational commitment (H2d).

Parallels were drawn between the appropriation approach in mobile phone studies and the trends of studying acculturation from the perspective of non-essential conceptualization of self and by ascribing greater importance to dynamic socio-historic processes. RQ2 helped guide the investigation into a broader area involving migrant acculturation and migrants’ appropriation of mobile phone. The study also aimed to find linkages between acculturation types and mobile phone appropriation types among migrants.

CHAPTER FOUR: METHODS

The study used mixed methods, wherein questionnaire survey and in-depth interviews provided quantitative and qualitative data respectively. The methods are informed by the circular model discussed in chapter 2, wherein the functional modes of mobile phone adoption characterized by the usage cycle leads to the quantitative methods. Correspondingly for evaluating acculturation, the bi-dimensional model (Berry, 1997) discussed in chapter 3 led to the quantitative assessment of acculturation. The symbolic cycle and prestige and social identity component of the circular model informs the qualitative part of the study. Correspondingly for acculturation, a non-essential conceptualization of cultural identities led to an exploration using the interview method.

The chapter begins by introducing the sample, before moving on to explaining the data collection method. It then elaborates on the data clean-up procedures, especially the measures adopted to deal with the missing data problem. This is followed by a section on quantitative measures, which includes description of various scales used in the study, supported by factor analyses results and reliability scores⁵. The last section in the chapter explains the qualitative instrument, which includes a description on the data analysis process.

⁵ More relevant tables are embedded within the text.

Sample

The sample included 462 male migrant workers from Bangladesh and India who had been in Singapore for varying amount of time. Only workers in semi-skilled and unskilled positions, employed in the industrial sectors of construction, oil refining, shipping and other factory/plant related jobs were included in the study. Workers in these categories are given work permit or 'S' pass as per the immigration rules of the government of Singapore. The migrants were from four regions in the two countries, each with its own language and ethnic culture: Malayali, Tamil and Telugu (from the south Indian states of Kerala, Tamil Nadu and Andhra Pradesh, respectively) and Bengali (from India's northeastern region as well as from Bangladesh). Although the concerned department in the Ministry of Manpower, Government of Singapore was approached for the demographic break-up of workers in these visa statuses, no aggregate data was provided for research.

Among the 1.3 million foreign workers employed in Singapore, 0.91 million constitute the sample frame of workers under low-skilled and semi-skilled categories, excluding maids. Earlier researches in acculturation have resorted to a wide variety of sample sizes irrespective of the total population under study: Kim (1977, 1978) studied Korean migrants in Chicago, US (a groups consisting of approximately 20 000 persons) by analyzing 285 questionnaire responses; Hao & Zhu (2005) studied the media usage and adaptation patterns of Chinese immigrants in Singapore, who formed a subset of 2.3 million people of Chinese ethnicity in Singapore, using a sample of 667 respondents.

Initially 528 migrant workers participated in the study – 519 filled in questionnaires and 73 participated in the interviews (with 64 interview respondents overlapping with the questionnaire group and 9 respondents for interview alone). However the sample was reduced to 462 after detecting missing data problems in some filled-in questionnaires.

Data collection

Questionnaire and interview data were collected between March 2011 and June 2013. The questionnaire was translated to four languages, Bangla, Tamil, Telugu and Malayalam; the initial translations and the back translations of the questionnaire were conducted by two different people who were proficient in both English and the respective language (refer to Appendix G for the questionnaire in English). The questionnaire survey was administered by the researcher personally and typically completed in 20 minutes, although some respondents took longer time to complete it, due mainly to their limited level of literacy and non-familiarity with survey questionnaires. The respondents were recruited through a mixture of purposive and snowball sampling methods. Workers were contacted near their dormitories or shared homes in the evenings and weekends as they returned from work. After a respondent completed the questionnaire, the researcher would ask him to refer his friends or acquaintances. At least 30% of respondents in the sample came through snowball sampling. Respondents who were found forthcoming in their interaction with the researcher were invited to participate in the in-depth interviews.

There is a chance that the respondents were sensitized during the data collection process, as both the survey and interview data were collected mostly from the same respondents. However, the particular situation of the research mandated that interviews be successfully initiated only after the respondent gets an idea about the topic of research by filling out the questionnaire. In other words, sensitization was needed to make the respondents reflect on their experiences in the presence of an outsider – the researcher. Moreover, the objectives of the questionnaire survey and the interviews were different: Whereas the questionnaire survey intended to get a quantifiable measure of migrants' mobile phone use, level of adaptation and acculturation attitude, the qualitative interviews probed further into descriptive assessments of their life experiences.

The minimum age for participating in the study was 21, as per the Institutional Review Board guidelines for social research put up by Nanyang Technological University (see Appendices C and D for approval letters). An honorarium of 5 SGD (approximately 3.85 USD) was paid to each questionnaire respondent and 10 SGD to each interview respondent. Funds to pay the honorarium to the respondents were granted jointly by an internet research group in Singapore and the University where the researcher was based (see Appendices E and F for grant approval letters).

The present study used convenience sampling and a face-to-face interview technique similar to other quantitative mobile phone studies (e.g., Fortunati, Manganelli, Law, & Yang, 2008). Most of the population under study resided in purpose-built dormitories in Singapore, which were commercially run (MoM, 2015). However, some resided in converted industrial premises or quarters on construction sites, which were

temporary and make-shift. Due to these difficulties, a random sampling frame used in previous acculturation research (e.g., Hao & Zhu, 2005; Kim, 1977, 1978) was not feasible in the context of this study. Given the sampling approach and the nature of the social group, it is correct to say that it is not statistically representative. That said, it is prohibitively difficult to develop a statistically representative sample of such a diverse and ill enumerated social group.

The actual response rate was not calculable for both questionnaire survey and interviews. However, broadly, one in five migrant workers approached by the researcher agreed to fill in the questionnaire and one out of three workers agreed to participate in interviews. While aggregate demographic data on temporary migrant workers in Singapore were not available, news reports and studies (Piper, 2005; Rahman & Lian, 2005) suggest higher proportions of Bangladeshi and Tamil workers. In addition to the two ethnicities, Telugu was also given greater representation in the sample (Adapa, 2002). The respondents were approached after being identified as Indian/Bangladeshi. They were then inquired about their sub-ethnic identities. If the workers' sub-ethnicities were one in the four under study – Malayali, Tamil, Telugu and Bengali – they were briefed about the study and were allowed to take the survey after giving their consent. Indians belonging to the Punjabi and Hindi speaking areas (north and northwest regions) were screened out, as they were pre-assumed to be too few in number to form a group of comparable size with the others. Due to some underlying individual and group characteristics like attitude toward outsiders, amiability, feeling of confidence, and the perceived value of the study incentive, some eligible groups were more willing to participate in the study than others:

in order of willingness, they were Bengali, Tamil, Malayali and Telugu. Since the researcher had set a maximum limit of eight questionnaire responses for each day of field visit, some eligible and willing respondents from the Bengali and Tamil groups had to be turned away, and thus more time was spent on less-willing and thinly-numbered groups of Malayali and Telugu.

Missing data

The problem of missing data was handled using a combination of ‘deletion’ and ‘simple imputation methods’. For the questions related to acculturation, adapted from MIRIPS questionnaire, there was a systematic exclusion of six questions among 79 respondents. These cases (observations) were omitted from the data set before statistical analyses, bringing down the sample size for quantitative analysis to 440. This method of listwise deletion (also called ‘complete case analysis’⁶) is recommended because of its simplicity, but also due to the advantage that it ensures equal sample size across analyses. The questions that were systematically omitted by the respondents were: “It is not important for me to be fluent either in [ethnic language] or language used in Singapore”, “I prefer social activities which involve Singaporeans only”, “I feel that [ethnic group] should maintain our own cultural traditions but also adopt those of Singaporean”, “I prefer to have only Singaporean local friends”, “I prefer social activities which involve both Singaporeans and [ethnic] members” and “I prefer to have both [ethnic] and friends from

⁶ This is different from ‘pairwise deletion’ wherein the other variables of a case, except the one where the missing data was observed, would be retained. This would lead to variable sample size during analyses.

dominant communities in Singapore.” One possibility for systematic non-response is that the difficulty in choosing between the two cultural dimensions in the same question would have motivated them to skip the question.

After omitting the 79 observations, the remaining instances of missing value were rare; no item had more than 3% of missing observations. Hence, these missing data points were imputed with ‘series mean’, a single imputation method widely used in social science research. This method was adopted because the imputation would not end up changing the mean for sample for that particular variable. It also supports a complete analysis of the data. However, ‘series mean’ imputation has the disadvantage that it reduces variability within the variable. However, the other imputation techniques had limited scope, and were more traditional⁷. Hence, considering the trade-offs involved in choosing an imputation technique, the ‘series mean’ imputation technique was finally chosen. The mean of all items in a scale was calculated after imputing the series mean to each item individually. Similarly, demographic variable ‘duration of residence in the host country’ had 3 missing values, which was also imputed with series mean.

The number of interviewees remained the same (i.e., 73), however the respondents who formed the intersection set of questionnaire and interview participants dropped from

⁷ The other options include ‘hot-deck imputation’ or ‘last observation carry forward’ technique. This involves imputing the missing data column with a value immediately preceding it. With the sophistication of computer-assisted techniques, the traditional method of ‘hot-deck imputation’ has been improved to ‘cold-deck imputation’ in which the missing values to be imputed are identified from donors of a different dataset. There were other techniques like ‘regression imputation’ and model-based techniques like ‘maximum likelihood’ and ‘multiple imputation’. However, these methods involved cumbersome coding and many layers of interventions and analysis. Moreover, their relative advantage over other methods was found to be less for this particular dataset.

64 to 51 after data clean up – i.e., of the 79 observations omitted from the dataset, 13 were that of interview respondents.

Quantitative measures

Acculturation orientations

The survey was designed so as to check whether the acculturation orientations adapted from the MIRIPS questionnaire (Berry et al., 1989; Berry, 2010; Horenczyk & Munayer, 2007; Piontkowski et al., 2000) were valid for the population studied. The MIRIPS questionnaire, which used a five-point Likert scale (from 1 ‘strongly disagree’ to 5 ‘strongly agree’), was adapted for each of the ethnic groups. The questionnaire aimed at mapping the four acculturation types, *assimilation*, *integration*, *separation* and *marginalization*. It also included questions on cultural identity and attitude towards multiculturalism. New questions were introduced in the MIRIPS questionnaire to overcome its ipsative character, an issue raised by critics of the bi-dimensional model (Hicks, 1970; Rudmin, 2003). For example, a typical MIRIPS question on acculturation orientation has two dimensions that are to be traced on a one-dimensional Likert scale: “I feel that [ethnic group] should maintain our own cultural traditions but also adopt those of Singaporean”⁸. To overcome this problem, a few one-dimensional questions, enquiring

⁸ Ipsative measures ideally should provide two answer choices for the respondent related to each dimension measured in the question. The respondent then chooses the best option that suits him/her. Instead, the failure of MIRIPS questions was to provide two dimensions in a Likert-scale. This is different from the problem of double-barreled questions which are considered an informal fallacy. Usually a compound question, the problem with double-barreled question can be solved just by splitting the question into two sentences.

either only about respondents' affinity to host culture or to their affinity to home culture, were introduced. The newly-added questions include, "I have at least five friends from my own community in Singapore", "I have at least five friends from other dominant communities in Singapore", "I think I have become a part of Singaporean society" and "I will be happy to adopt Singaporean culture".

A factor analysis with varimax rotation and unrestricted number of factors was used to determine which items from the MIRIPS questionnaire best captured the acculturation types for this sample population, in addition to evaluating the cultural identity and multiculturalism of Indian migrants. Thirty eight items were input for analysis. Any item with factor loading less than 0.4 was omitted. Although eleven factors emerged from the factor analysis, the items representing the four acculturation orientations were not meaningfully grouped around factors. Any occurrence of meaningful grouping of survey questions was later emerged to be unreliable as a scale, as the Cronbach alpha was low (refer to Table 1 for factor loadings, percentage of variance and internal reliability of factors; refer to Figure 9 in Appendix A for the scree plot).

The low reliability score for the MIRIPS questions on acculturation orientations has also been reported in other studies. Studies have criticized the operationalization of Berry's (2005) bi-directional, four-typology framework. According to Rudmin (2003), "questions about the fourfold paradigm have begun to arise, and it is increasingly under

Whereas, in the case of MIRIPS questions, the problem is more rooted in the concepts of 'quadri-modal' approach.

criticism” (p. 4). Citing a factor analytic study conducted by van de Vijver, Helms-Lorenz, and Feltzer (1999), Rudmin argued that the four acculturation scales in concert measured only one dimension, not two or four. It suggests that the MIRIPS scale for acculturation orientations failed to capture the phenomenon in the population of the present study.

Factors 1 and 3, related to strength of cultural identity and multiculturalism in workplace, respectively, emerged with meaningful combination of survey items. Both factors had eigenvalue above 2.6. They were finally used in the statistical modeling.

An analysis was done in order to identify the factors that loaded on to more than one factor. Only those items that loaded on to more than one factor with a factor loading difference less than 0.15 were included in the analysis. Item ‘I don’t want to have either Singaporean or [ethnic] friends’ had factor loading .49 on Factor 2 and .413 on Factor 4. This item corresponded to the ‘separation’ construct in acculturation wherein the migrants neither want to relate to other cultures nor want to retain their cultural identity. It did not fit with other questions in Factor 2, as the items did not form a meaningful collection of items. Even after removing the item in contention, Factor 2 failed to provide a meaningful collection of items. Hence, Factor 2 remained abandoned. Grouping the said item on ‘separation’ did not make Factor 4 meaningful either. The issue of ‘close factor loading’ for this particular item was, thus, found to be only tangential to the data analysis. Similarly, item ‘I feel that [ethnic group] should adopt the Singaporean cultural traditions and not maintain those of our own’ loaded closely on Factors 4 (.463) and 5 (.408). Removing it from Factor 4 did not make the remaining collection of questions in that

factor more meaningful, nor did it improve the Cronbach's alpha of the factor (0.6). When it was included in Factor 5, it fit to the factor meaningfully, since all the items in the factor represented the 'assimilation' construct, wherein the migrants wanted to relinquish their cultural identity and heritage and adopt the host society culture completely. However, Factor 5, even after adding the item in contention, did not have an acceptable internal reliability (.61). Hence, the factor was not included in the statistical model in the subsequent steps of analysis. Another item 'It is more important to me to be fluent in languages in Singapore than in [ethnic language]' loaded both on Factor 4 (.367) and 5 (.44). However, inclusion or exclusion of the item to/from the factors did not help in the analysis: either the factors failed to achieve any meaning considering all grouped items together or the factors lacked reliability. Hence, they stood rejected, while the closeness of factor loading of the item in contention was considered a non-issue for the later analysis.

Cultural identity

Items like 'I think of myself as [ethnic]', 'I feel that I am part of [ethnic] culture', 'I am proud of being [ethnic]' and 'I am happy to be [ethnic]' were adapted from the Cultural Identity scale of MIRIPS questionnaire. Different variations of the scale have been used by researchers to suit the specific requirements of the context of studies. For example, Ward and Kennedy (1994) developed an Acculturation Index, which had 21 items to assess respondents' identification to culture of origin and culture of contact, using questions on lifestyle, recreational activities and perceptions like "Are your experiences and behaviors similar to people from your country of origin".

A five-point Likert scale with eight items recorded responses from '1 – strongly disagree' to '5 – strongly agree'. The scale was reliable, Cronbach's alpha: .85.

Multiculturalism in workplace

Items like 'It is a pleasure to work with people of different ethnicities' and 'It is best for an organization if all workers forget their different ethnic and cultural differences and work in unison' were adapted from the MIRIPS questionnaire (Berry, 2010) to represent the multicultural character of industrial workforce in Singapore. Studies have used similar items in other cultural contexts. For example, Dandy & Pe-Pua (2010) used a ten-item Multicultural Ideology and Social Equality Beliefs scale to test Australian host society's multicultural character, which included questions like "Australians should recognize that cultural and racial diversity is a fundamental characteristic of Australian society" (p. 37). The essence of Multiculturalism Ideology Scale (MIS) included in MIRIPS is to understand how members of a society perceive multiculturalism (Berry, 2010). Van de Vijver, Breugelmans, and Schalk-Soekar (2008) noted that MIS "provides a short and reliable measure of majority attitudes toward multiculturalism" (p. 96).

Four items loaded on to the same factor. A five-point Likert scale with four items recorded responses from '1 – strongly disagree' to '5 – strongly agree'. The scale was reliable, Cronbach's alpha: .74.

Table 1. Results of factor analysis on acculturation items adapted from MIRIPS.

	<i>Mean</i>	<i>SD</i>	<i>Factors</i> ⁹									
<i>Factors and items (eigenvalues in brackets)</i>			1	2	3	4	5	6	7	8	9	10
Cultural identity (6.44)												
I think of myself as [ethnic]	4.29	1.26	<u>.767</u>	.032	.089	.007	.003	.181	-.042	-.148	.014	.044
I feel that I am part of [ethnic] culture	4.17	1.26	<u>.747</u>	.149	.112	-.055	-.011	.045	.03	-.113	.012	-.004
I am proud of being [ethnic]	4.56	1.01	<u>.825</u>	-.047	.094	-.042	.076	.063	-.055	.139	.024	.067
I am happy to be [ethnic]	4.51	1.04	<u>.767</u>	-.014	.072	-.05	.049	.12	-.102	.162	.03	-.055
Being part of [ethnic] culture makes me feel happy	4.46	1.04	<u>.731</u>	-.027	.121	-.127	.033	.081	-.057	.158	.05	.013
Being [ethnic] makes me feel good	4.33	1.16	<u>.594</u>	.045	.165	-.094	-.028	.065	.149	.207	.033	-.079
Being part of [ethnic] culture is embarrassing to me. (Reverse)	4.31	1.27	<u>.418</u>	-.117	.168	<u>-.538</u>	.018	-.076	-.039	.184	.064	.063
Being [ethnic] is uncomfortable for me. (Reverse)	4.4	1.13	<u>.411</u>	-.164	.103	<u>-.559</u>	.025	-.035	-.039	.079	-.009	.217
<i>Cronbach's alpha</i>			.85									
<i>% variance explained</i>			11.77									

⁹ Factor loadings above 0.25 (both negative and positive dimensions) have been highlighted. While grouping the items and identifying the factors, the highest factor loading in an expected direction has been given priority.

Abandoned (3.86)

I prefer social activities which involve [ethnic group] members only	3.26	1.58	<u>.273</u>	<u>.628</u>	-.077	.098	-.011	-.025	-.06	-.187	-.017	.11
I prefer social activities which involve Singaporeans only.	2.92	1.5	.028	<u>.705</u>	.039	.043	.17	.172	-.057	.14	-.034	-.109
I prefer to have only Singaporean local friends	2.67	1.56	-.103	<u>.686</u>	.027	.146	.086	.182	-.056	.021	.066	.022
I don't want to have either Singaporean or [ethnic] friends	2.04	1.4	-.238	<u>.49</u>	.012	<u>.413</u>	.035	<u>-.275</u>	-.043	.114	-.107	-.03
I prefer to have only [ethnic] friends	2.45	1.5	.021	<u>.618</u>	-.064	<u>.289</u>	-.137	-.134	-.044	-.116	.13	.07

Cronbach's alpha

.72

% variance explained

7.3

Multiculturalism in workplace (2.69)

It is a pleasure to work with people of different ethnicities.	4.31	1.14	.161	.062	<u>.75</u>	-.118	.124	.107	-.011	.172	.002	.061
An organization that has a variety of ethnic and cultural groups is more able to tackle new problems as they occur.	3.82	1.33	.03	-.093	<u>.683</u>	-.05	.222	-.004	-.149	.185	.096	-.078
It is best for an organization if all workers forget their different ethnic and cultural differences and work in unison.	4.35	1.15	<u>.251</u>	.087	<u>.698</u>	-.139	.007	.076	.085	.078	-.106	.033

We should recognize that cultural and racial diversity is a fundamental characteristic of my organization.	3.91	1.34	.207	-.101	<u>.691</u>	-.003	.076	.182	.013	-.189	-.038	.036
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<i>Cronbach's alpha</i>	.74
<i>% variance explained</i>	6.7

Abandoned (1.61)

I feel that [ethnic group] should maintain our own cultural traditions and not adapt to those of Singapore	2.64	1.51	.088	.247	.021	<u>.402</u>	<u>-.524</u>	-.067	-.118	.008	.011	-.037
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I don't want to attend either Singaporean or [ethnic] social activities	2.01	1.35	-.048	.241	-.224	<u>.56</u>	.001	-.133	-.065	.144	-.041	.202
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I feel that [ethnic group] should adopt the Singaporean cultural traditions and not maintain those of our own	2.17	1.41	-.082	.135	-.06	<u>.463</u>	<u>.408</u>	-.123	.087	-.001	.125	-.073
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I am concerned about losing my cultural identity.	2.18	1.41	.009	.044	-.001	<u>.622</u>	-.087	-.029	-.13	.014	.117	.166
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<i>Cronbach's alpha</i>	.6
<i>% variance explained</i>	6.64

Abandoned (1.45)

Even if I lose my mother tongue eventually, I should be more competent to use languages used in Singapore.	2.6	1.51	.099	.076	.095	.185	<u>.402</u>	-.18	<u>-.252</u>	-.023	<u>-.334</u>	.202
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I think I have become a part of Singaporean society.	3.29	1.4	.005	.19	.198	.058	<u>.691</u>	-.02	-.03	.104	.019	.061
I will be happy to adopt Singaporean culture.	3.45	1.4	.091	.054	.158	-.095	<u>.754</u>	.196	.065	.045	.068	-.024
It is more important to me to be fluent in languages in Singapore than in [ethnic language]	2.78	1.51	.108	.117	.034	<u>.367</u>	<u>.44</u>	.157	-.033	-.15	<u>-.349</u>	-.016
<i>Cronbach's alpha</i>							.61					
<i>% variance explained</i>							6.17					
Abandoned (1.31)												
It is important for me to be fluent in both [ethnic language] as well as the languages used in Singapore.	3.83	1.32	<u>.298</u>	-.141	.04	.046	.134	<u>.53</u>	-.208	-.121	<u>.254</u>	-.014
I feel that [ethnic group] should maintain our own cultural traditions but also adopt those of Singaporean.	3.86	1.3	.208	.032	.101	-.069	.034	<u>.596</u>	.134	.244	-.005	-.02
I prefer social activities which involve both Singaporeans and [ethnic] members.	3.67	1.41	.065	<u>.399</u>	.215	-.123	.135	<u>.603</u>	-.1	.052	-.005	.031
I prefer to have both [ethnic] and friends from dominant communities in Singapore.	4.19	1.18	.201	.081	<u>.261</u>	-.106	.01	<u>.511</u>	.039	.193	<u>-.295</u>	.245
<i>Cronbach's alpha</i>								.58				
<i>% variance explained</i>								4.75				

Abandoned (1.16)

An organization that has a variety of ethnic or cultural groups has more problems with productivity than organizations with one or two basic cultural groups. (Reverse)

2.75 1.47 -.079 -.237 -.009 .02 .052 .033 **.746** -.221 .064 -.108

The productivity of the organization is undermined by workers of different ethnic and cultural backgrounds sticking to their old ways. (Reverse)

3.1 1.49 -.014 -.003 -.034 -.144 .062 -.066 **.738** .220 -.058 .113

Cronbach's alpha

.46

% variance explained

3.91

Abandoned (1.15)

I have more than 5 close friends from the local communities.

3.84 1.34 .193 -.091 **.26** .015 **.275** .154 .076 **.471** -.124 -.085

In Singapore, I have more than 5 friends from my own ethnic community.

4.05 1.3 **.279** -.011 .124 -.01 -.028 .17 -.007 **.659** .078 -.043

Cronbach's alpha

.52

% variance explained

3.91

Abandoned (1.1)

It is more important to me to be fluent
in [ethnic]/Hindi languages than in
languages used in Singapore.

3.23 1.46 .205 .119 .002 .156 .032 .031 -.016 .006 **.791** .084

Cronbach's alpha
% variance explained

N/A
3.26

Abandoned (1.05)

It is not important for me to be fluent
either in [ethnic language] or
language used in Singapore

2.69 1.49 -.007 .028 .038 .098 .069 .074 .018 -.068 .061 **.88**

Cronbach's alpha
% variance explained

N/A
3.05

Adaptation outcomes: Social life and work domains

Adaptation outcomes were measured in the domains of social life and work. In the social life domain, three sub-constructs – *proficiency in host society language*, *adaptation to host country rules* and *adaptation to host society's custom and lifestyle* – were used to measure the adaptation outcome. Similarly, in the work domain migrant workers' organizational commitment was used as the index of adaptation outcome.

Adaption to social life

Items to measure adaptation outcomes in social domain were drawn from the sub-scale 'socio-cultural competence' in the MIRIPS questionnaire (Berry et al., 1989; Berry, 2010) and were supplemented with context-specific questions. Items like "How difficult it is to cope with the pace of life in the new country" have been split and changed to "How comfortable are you with the metro life" and "How comfortable are you with the city's night life". MIRIPS question "How difficult it is to follow the rules and regulations in the new country" has been split and changed to "How comfortable are you obeying the traffic regulations in the city as a pedestrian", "How comfortable are you with obeying the drug law" and "How comfortable are you with obeying the anti-littering law". The modifications to the scale pertained to specific social and governance conditions of Singapore. The 5-point Likert scale of original MIRIPS has been enhanced to 7-point Likert scale (from 1 'very comfortable' to 7 'annoyed') so as to capture a more nuanced insight into the experiences of the interviewees. Similar changes have been made by researchers who adapted the scale to specific cultural contexts. For example, Wilson

(2013) re-defined the questionnaire items to make it a 'revised sociocultural adaptation scale' (R-SCAS), but retaining the basic dimensions of the scale. Earlier, Ward and Kennedy (1999) prepared and tested a comprehensive SCAS with 41 items (p. 663), but noted that the scale "is a flexible instrument [that] can be easily modified according to the characteristics of the sojourning sample" (p. 662). In a similar manner, modifications were made to the original 'socio-cultural competence' scale of MIRIPS as mentioned above.

A factor analysis using varimax rotation and unrestricted number of factors was used to determine which items best captured the adaptation outcomes for this sample population. Although five factors emerged following factor analysis, only three factors measuring different aspects of adaptation were used in the study. Remaining two factors did not have a sufficient number of items to form a meaningful scale (refer to Table 2 for factor loadings, percentage of variance and internal reliability of factors; refer to Figure 10 in Appendix A for the scree plot). All items were reversed before creating the following measures. Combined, the three adaptation outcomes have been termed 'adaptation to social life' in the study. The three factors representing adaptation to social life are described below.

Compliance with host society rules: Five items on rules and regulations loaded on the same factor. Questions included, "While staying in Singapore, how comfortable are you with: obeying rules in public transport," "Obeying anti-littering law" and "How comfortable are you with the overall order and discipline in this society." The last item loaded on to two different factors (Factor 1 and 5), with close factor loadings. However, removing it from Factor 1 reduced the internal reliability of the scale on social adaptation,

as well as of the sub-scale ‘compliance with host society rules’. Hence, the item was retained in Factor 1.

Proficiency in host society language(s): Six items on language proficiency in host country loaded on the same factor. Questions included, “While staying in Singapore, how comfortable are you with: “Dealing with people in authority,” “Communicating with people of a different ethnic group” and “Communicating in a language other than your mother tongue.”

Table 2. Factor analysis results, factor loadings for adaptation to social life (questions adapted from MIRIPS ‘sociocultural competence’ scale)

	<i>Mean</i>	<i>SD</i>	Factors				
<i>Factors and items (with eigenvalues in brackets)</i>			1	2	3	4	5
Complying with the host society rules (4.48)							
Obedying traffic rules as a pedestrian	6.15	1.22	<u>.728</u>	.104	-.004	.198	-.181
Obedying rules in public transport while travelling	6.06	1.27	<u>.726</u>	.068	-.017	<u>.303</u>	-.143
Obedying anti-littering law	5.89	1.49	<u>.738</u>	.086	.142	-.096	.156
Obedying anti-drug law	5.86	1.56	<u>.679</u>	.114	.079	-.09	.244
Overall order and discipline in society	6.05	1.3	<u>.552</u>	.12	.08	.044	<u>.470</u>
<i>Cronbach's alpha</i>			.75				
<i>% variance explained</i>			13.11				
Competency in host society language(s) (1.93)							
Dealing with people in authority	5.67	1.23	.024	<u>.595</u>	.144	.033	-.074
Communicating with people of a different ethnic group	5.46	1.23	.124	<u>.659</u>	.062	.158	.041
Communicating in a language other than your mother tongue	5.2	1.38	.155	<u>.719</u>	.043	.135	.044
Learning a language to know about the culture it represents	5.26	1.47	.023	<u>.614</u>	.03	-.008	.249
<i>Cronbach's alpha</i>				.62			
<i>% variance explained</i>				11.13			
Adaptation to host society's custom and lifestyle (1.49)							
Family relationships in host society	4.74	1.46	-.019	.047	.53	.302	.365
Metro culture	5.37	1.49	.081	.054	.428	.408	.204

Dress code of women	3.88	1.71	.071	.106	<u>.791</u>	-.077	-.106
Male-female relationships	4.31	1.65	.017	.07	<u>.758</u>	.093	.011
Overall world view of this society	5.23	1.34	.166	.129	<u>.429</u>	<u>.229</u>	<u>.260</u>
<i>Cronbach's alpha</i>					.67		
<i>% variance explained</i>					10.31		
Abandoned (1.1)							
Festivities of groups other than yours	5.44	1.32	.03	.139	-.004	<u>.691</u>	.099
Nightlife	5.27	1.57	.039	.032	<u>.273</u>	<u>.613</u>	-.031
<i>Cronbach's alpha</i>						.38	
<i>% variance explained</i>						9.24	
Abandoned (1.04)							
Status given to workers in this society	5.2	1.41	.136	<u>.225</u>	.178	<u>.252</u>	<u>.613</u>
<i>Cronbach's alpha</i>							N/A
<i>% variance explained</i>							6.4

Adaptation to host society's custom and life-style: Five items on adaptation to host society's custom and life-style loaded on the same factor. Questions included, "Family relationships in the host country," "With metro culture" and "Overall worldview of this society." Item "Family relationships in the country" loaded on three different factors – Factors 3, 4 and 5 – but not very closely (i.e., with a difference higher than 0.15). Item "metro culture" loaded on to two factors – Factor 3 and 4 – closely. However, removing it from Factor 3 reduced the internal reliability of the scale on social adaptation as a whole, as well as of the sub-scale 'adaptation to host society's custom and life-style'. Hence, the item was retained in Factor 3.

Other combination of items was also tried in order to identify other meaningful sub-scales. For instance, items "Overall order and discipline in society", "Family relationships in host society" and "Status given to workers in this society" had loaded well on Factor 5, even though in the case of the first two items their highest factor loadings corresponded to different factors. Nevertheless, these three items could be meaningfully grouped to form a construct that could represent an additional dimension of social adaptation. However, the internal reliability (Cronbach's $\alpha = .52$) of these three questions was not at acceptable level. In short, although two items – "Overall order and discipline in society" and "Metro culture" – had loaded on to different factors with close factor loadings, they were retained to the factor on which they had the highest factor loading. This helped keep the overall internal reliability of the scale 'social adaptation' at the current level, which would have dropped had the items were removed.

The adaptation to social life scale was created by taking the average of 14 items that grouped in three factors and was internally reliable; Cronbach's $\alpha = .76$.

Organizational commitment

Organizational commitment was measured using a five-point Likert scale (from 1 "totally disagree" to 5 "totally agree"). O'Reilly and Chatman (1986) conceptualize organizational commitment on the basis of three constructs [an explanation of the constructs is provided in the literature review chapter]: compliance, identification and internalization. Compliance, the behavior aimed at gaining specific rewards, is measured using items like "Unless I'm rewarded for it in some way, I see no reason to expend extra effort on behalf of this organization" and "In my job here, I sometimes have to act in ways that are not completely consistent with my true values" (Kelman, 1958; O'Reilly & Chatman, 1986). To measure identification with the organization, items like "I talk up the [organization] to my friends as a great organization to work for" and "I feel a sense of pride in working for this organization" were used (Buchanan, 1974; O'Reilly & Chatman, & Caldwell, 1991). The identification measure, when used separately, had a Cronbach's α of .862 in Buchanan (1974, p. 539). Internalization measure was created by O'Reilly and Chatman (1986) and includes items like "I find that my values and the organization's values are very similar" and "Since joining this organization, my personal values and those of the organization have become more similar". The scale with all constructs combined has a Cronbach's α of .94 in Buchanan (1974, p. 539). Mowday, Steers and Porter (1979) administered the Organizational Commitment Questionnaire to employee populations ranging from hospital employees, auto company employees and

scientists and engineers and observed that the reliability alpha fell within the range of .82 and .93 (pp. 230-232). O'Reilly and Chatman (1986) showed that the three dimensions are orthogonal (p. 494).

Although six factors emerged, only three factors with eigenvalues above 1.5 were included in the study. Although some items loaded on to more than one factor, none except two such items was removed from the analysis. The removal of the two items (as indicated in table 3) helped improve the internal reliability of the organizational commitment scale. There was no instance of items loading simultaneously on to more than one factor¹⁰ observed for the Factors 4, 5 and 6. However, for Factors 1, 2 and 3 a few items loaded on to more than one factor. It implied that constructs compliance, identification and internalization have not been found clearly differentiated in the sample. However, this overlap of constructs did not influence the later analysis of data, as the reliability of the scale as a whole was found to be good. The 19-item measure used in the study was derived from the previous studies with an added question “At times I wonder how I have begun to feel more committed towards my work after coming to Singapore”, which reflected migrants’ situation of a shift from their home country to Singapore. The scale was internally reliable (Cronbach’s alpha: .925) (refer to Table 3 for factor analysis results and reliability scores; refer to Figure 11 in Appendix A for the scree plot).

¹⁰ The closeness in factor loadings has been defined as a ‘difference of less than 0.15’.

Table 3. Factor analysis results, factor loadings for organizational commitment

	<i>Mean</i>	<i>SD</i>	Factors					
<i>Factors and items (with eigenvalues in brackets)</i>			1	2	3	4	5	6
Factor 1 (8.96)								
I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.	4.24	1.2	<u>.627</u>	<u>.45</u>	-.146	-.029	-.06	-.073
I talk up this organization to my friends as a great organization to work for.	4.12	1.2	<u>.71</u>	<u>.226</u>	.198	-.004	-.057	-.07
I would accept almost any type of job assignment in order to keep working for this organization.	3.87	1.37	<u>.450</u>	<u>.311</u>	.076	-.188	-.191	<u>-.329</u>
I find that my values and the organization's values are very similar.	3.82	1.27	<u>.569</u>	.134	<u>.386</u>	.175	.035	-.143
I am proud to tell others that I am part of this organization.	4.07	1.22	<u>.732</u>	.116	.196	.151	.023	-.105
This organization really inspires the very best in me in the way of job performance.	4	1.24	<u>.635</u>	<u>.259</u>	<u>.351</u>	-.026	.054	-.04
I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.	4	1.23	<u>.61</u>	.212	.229	.003	.088	-.082
Deciding to work for this organization was a definite mistake on my part (Reverse).	3.84	1.37	<u>.485</u>	.042	.098	<u>-.310</u>	<u>.345</u>	.158

I feel a sense of pride in working for this organization.	4.03	1.23	<u>.693</u>	.235	<u>.366</u>	.033	.051	.097
This organization has a tradition of worthwhile accomplishments	3.86	1.24	<u>.483</u>	.227	<u>.427</u>	.067	.129	.078

Cronbach's alpha
% variance explained

.88
16.48

Factor 2 (2.86)

I really feel as if the organization's problems are my problems.	3.94	1.22	<u>.389</u>	<u>.493</u>	<u>.376</u>	.037	.036	.077
The most important things that happen to me involve my work	3.91	1.26	<u>.228</u>	<u>.502</u>	<u>.428</u>	-.019	-.11	-.105
I live, eat and breathe my job	3.85	1.34	.058	<u>.57</u>	<u>.383</u>	-.103	-.04	<u>-.378</u>
I complete my assigned duties on time.	4.31	1.06	.22	<u>.668</u>	.221	.043	-.041	0
I comply with the rules and regulations of this organization.	4.49	0.97	<u>.509</u>	<u>.664</u>	-.011	.04	-.011	.022
I do what my boss says without complaint	4.26	1.12	.166	<u>.651</u>	.096	.199	-.006	-.044
At times I wonder how I have begun to feel more committed towards my work after coming to Singapore.	4.09	1.17	<u>.322</u>	<u>.47</u>	.236	.134	.129	-.043

Cronbach's alpha
% variance explained

.82
10.69

Factor 3 (1.58)

For me this is the best of all possible organizations for which to work.	3.63	1.35	<u>.353</u>	.171	<u>.605</u>	.033	.043	-.157
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I have warm feelings toward this organization as a place to work live and work with.	3.89	1.22	<u>.459</u>	<u>.347</u>	<u>.509</u>	.015	.083	.01
I would be quite willing to spend the rest of my career with this organization.	3.22	1.5	.213	.228	<u>.677</u>	.044	-.027	.114
Since joining this organization, my personal values and those of the organization have become more similar.	3.7	1.2	<u>.383</u>	.075	<u>.611</u>	.204	.059	-.061

Cronbach's alpha
% variance explained

.77
9.81

Abandoned (1.29)

I really care about the fate of this organization.	3.55	1.42	.208	.211	.037	<u>.600</u>	-.086	.123
I volunteer for tasks that are not required of me.	3.19	1.46	.027	.273	-.007	<u>.468</u>	-.241	-.021
In my job here, I sometimes have to act in ways that are not completely consistent with my true values	3.09	1.42	-.054	-.042	-.009	<u>.699</u>	-.176	-.055
I attend functions that are not required, but that help the organization's image.	2.84	1.51	-.029	-.065	<u>.276</u>	<u>.714</u>	-.038	-.136

Cronbach's alpha
% variance explained

.63
7.16

Abandoned (1.1)

I feel very little loyalty to this organization. (Reverse)	3.32	1.65	.047	.006	<u>-.299</u>	<u>.315</u>	<u>.672</u>	.088
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It would take very little change in my present circumstances to cause me to leave this organization. (Reverse)	2.66	1.37	-.019	-.075	-.017	-.159	<u>.450</u>	.198
There's not too much to be gained by sticking with this organization indefinitely. (Reverse)	3.55	1.39	<u>.413</u>	-.067	.236	-.246	<u>.443</u>	.014
Unless I'm rewarded for it in some way, I see no reason to expend extra effort on behalf of this organization. (Reverse)	2.99	1.48	-.053	.105	.131	-.174	<u>.585</u>	-.068
<i>Cronbach's alpha</i>								.41
<i>% variance explained</i>								6.09
Abandoned (1.0)								
I could just as well be working for a different organization as long as the type of work was similar.	2.46	1.48	-.112	.062	.006	-.1	<u>.06</u>	.845
<i>Cronbach's alpha</i>								N/A
<i>% variance explained</i>								3.92

Amount of mobile phone communication

Migrant workers prefer to use cheap one-on-one communication with home and host cultures. Literature suggests that increased use of SMS is characteristic among female domestic workers who furtively use their mobile phones in between the short breaks during work (see, for example, Lin & Sun, 2011; Thomas & Lim, 2011). On the other hand, there is no employer control on male migrant workers with regard to the use of mobile phone, other than when they are working in dangerous work sites. Moreover, in Singapore's context, voice calling is equally cheap and have greater advantages over SMS. Voice calling also allows to be evaluated along two dimensions, viz. frequency and duration of calling, compared to SMS, which can only be assessed by way of average count per day or week. Another reason to choose voice calling as the quantitative measure pertains to the real-time interaction possibility it affords the user. Unlike SMS, which is exchanged with a time lapse, synchronous voice conversations can simulate face-to-face interactions better than text messages. Therefore, it was important to use mobile voice calls as the quantitative measure in the study on migrants' affinity to home and host cultures.

Duration and frequency of calls were used as the measures to denote one-on-one voice communication. The data was collected based on self-report items in the questionnaire. Duration and frequency of mobile phone calling, in addition to texting, were key indices of amount of mobile phone usage before the advent of smartphones among the migrant worker population in the last few years. Duration and frequency

measurements are in line with the ‘amount of exposure’ concept widely followed by media effect studies, cultivation analysis and uses and gratifications approach (Shrum, 2002; Signorielli & Morgan, 1990). As migrants use mobile phones for fulfilling informational needs, networking, strengthening intimate relationships, and for entertainment purposes, both duration and frequency dimensions provide a comprehensive measurement of migrants’ one-on-one communication. Duration and frequency of calling have also been used by studies that attempted to find out the level of involvement of mobile users (Ciunova-Shuleska et al., 2012; Haverila, 2011). In the present study, frequency and duration have been measured along the axis of cultural referencing; i.e. calls that are likely to make home culture salient and those that make host culture salient. All the measures related to mobile communication were developed by the researcher, since prior research combining cultural orientation and mobile phone use was absent.

A factor analysis with varimax rotation and unrestricted number of factors was used to determine whether the conceptual foundation distinguishing host and home culture calls was valid in the sample population. Three factors emerged, but they did not reflect the cultural orientation of mobile calling. Hence, the scales were created based on the conceptual foundation of calling to home and host cultures (refer to Table 4 for factor loadings and reliabilities; refer to Figure 12 in Appendix A for the scree plot).

Mobile phone calling to dominant host cultures

Six items were included in the scale, reflecting both frequency and duration dimensions. Frequency items included, “How often do you call your friends from other

communities in Singapore?” and “How often do you call your fellow-workmen, at or below your level”. Responses ranged from “Virtually never” (0), “Once in a week (2), to “At least once in a day” (5). Duration items included, “For how long do you talk to your friends in other communities in Singapore?” and “For how long do you talk to your fellow-workmen, at or below your level?”. Responses ranged from “Not applicable” (0), “Approximately 5 to 10mts” (2), to “More than an hour” (5). The measure was internally reliable (Cronbach’s alpha: .73).

Mobile phone calling to home culture

Eight items were included in the scale, reflecting both frequency and duration dimensions. Frequency items included, “How often do you call your family back home” and “How often do you call your friends from your own community in Singapore”. Responses ranged from “Virtually never” (0), “Once in a week (2), to “At least once in a day” (5). Duration items included, “For how long do you talk to your friends back home at a time over phone?” and “For how long do you talk to your friends in other countries over phone at a time?”. Responses ranged from “Not applicable” (0), “Approximately 5 to 10mts” (2), to “More than an hour” (5). The measure was internally reliable (Cronbach’s alpha: .66).

Table 4. Factor analysis results for items on amount of calling on mobile phone to home and host cultures.

	<i>Mean</i>	<i>SD</i>	<i>Factors</i>		
<i>Factors and items (eigenvalues in brackets)</i>			1	2	3
Factor 1 (4.01)					
On average, for how long do you talk to your family over phone at a time?	3.44	1.18	<u>.542</u>	-.117	<u>.434</u>
For how long do you talk to your friends back home at a time over phone?	2.7	1.22	<u>.704</u>	-.028	.219
For how long do you talk to your friends in other countries over phone at a time?	2.06	1.34	<u>.676</u>	.174	-.067
For how long do you talk to your friends from your own community in Singapore?	2.46	1.34	<u>.666</u>	.021	.190
For how long do you talk to your friends in other communities in Singapore?	1.82	1.27	<u>.734</u>	.315	-.099
For how long do you talk to your fellow-workmen, at or below your level?	2.06	1.26	<u>.672</u>	.234	-.093
For how long do you talk to someone above your status in office over phone?	1.74	1.28	<u>.598</u>	<u>.405</u>	<u>-.270</u>
<i>Cronbach's alpha</i>			.8		
<i>% of variance explained</i>			22.84		
Factor 2 (1.86)					
How often do you call your friends in other countries?	2.18	1.57	<u>.323</u>	<u>.514</u>	.001
How often do you call your friends from other communities in Singapore?	2.94	1.74	.132	<u>.732</u>	.175
How often do you call your fellow-workmen, at or below your level?	3.87	1.42	.017	<u>.646</u>	.232

How often do you call anyone above your status in office?	3.27	1.73	.112	<u>.695</u>	.004
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<i>Cronbach's alpha</i>				.65	
<i>% of variance explained</i>				16.55	

Factor 3 (1.37)

How often do you call your family back home?	4.51	0.95	-.065	-.040	<u>.729</u>
How often do you call your friends back home?	3.16	1.31	.145	<u>.310</u>	<u>.601</u>
How often do you call your friends from your community in Singapore?	3.87	1.37	-.009	<u>.394</u>	<u>.617</u>

<i>Cronbach's alpha</i>					.55
<i>% of variance explained</i>					12.33

Demographic variables

Demographic variables included: (i) age (measured in years after birth), (ii) education (number of years of formal education, including technical courses), and (iii) income (using the categories of ‘less than SGD 500,’ ‘between SGD 500 and 999,’ ‘between SGD 1,000 and 1,999’ and ‘SGD 2,000 and above’ per month), and (vii) period of residence in the host country (measured in number of months, under different contracts combined).

For the whole sample of 462, the average age was 28.95 ($SD = 5.43$), with a range of 21 to 50; education ranged from five years to 21.5 years, with a mean of 12.09 ($SD = 2.22$); and, duration of residence ranged from one month to 168 months (14 years), with a mean of 49.4 months ($SD = 34.23$). The sample constituted 113 Bengali (24.5%), 174 Tamil (37.7%); 102 Telugu (22.1%); and, 73 Malayali (15.8%). To compensate for Malayali’s lesser presence in the questionnaire sample, interview sample included more of them: 46.6%. The remaining respondents in the interview sample were evenly distributed among the three other ethnicities. The frequency distribution of the income slabs of the sample was: 45 respondents (9.7%) earned a monthly income below SGD 500; 312 (67.5%) earned between SGD 500 and SGD 999; 96 (20.8%) earned between SGD 1,000 and SGD 1,999; and, 9 (1.9%) earned SGD 2,000 or above.

Qualitative instrument

The qualitative interview followed the narrative research techniques that valued the verbal recollections of the subjects under study (Creswell, 2007; Mantovani, 2012),

especially related to their acculturation experience. The quantification method of questionnaire survey was suitable to understand the volume of mobile voice calls (e.g. frequency and duration of calls) and acculturation, the narrative strategy allowed an in-depth exploration of the acculturation-communication experience. The qualitative interview prompted the migrants to make a narrative description of events and moments in their life in the host country, wherein they found themselves in collaboration or in confrontation with members of other cultures. The interview followed the tradition of narrative research in acculturation (Arasaratnam, 2008; Ryan et al., 2008; Skuza, 2007).

The languages used to conduct the interview include English, Hindi and Malayalam. The researcher had working knowledge of all three languages. Interviews extended for 20 to 30 minutes on average. The first part of the interview included questions on usage history, ‘for how long have you been using the mobile phone’, ‘how has your communication over mobile phone to family, friends and colleagues changed over time, especially during the migration phase’, and ‘what are the new skills you acquired over time to interact with newer and more sophisticated affordances of the phone.’

The second part involved questions on usage and handling of the mobile phone. Questions asked under this section included, ‘how has the mobile phone helped you maintain relationship with family and friends’, ‘how has the mobile phone helped you manage your life in the host society’, and ‘how do you use the mobile phone for pastime and distraction.’

The third part explored the prestige and social identity component related to mobile phone usage. Questions included, ‘have you come across situations when you have been identified by others with a particular pattern of your mobile phone usage’, and ‘has your mobile device helped increase your prestige among peers.’

The fourth part focused on meta-communication. Respondents were asked, ‘how do you communicate with others about your experience of using the mobile phone’, and ‘how have you come to know about mobile services in the host country.’

The fifth part explored the acculturation orientations of respondents. Questions in this category included, ‘to what extent do you think you have adapted yourself to the culture of Singapore’, ‘how does your relationship with the host communities in Singapore affect your identity as a Malayali and/or Indian’, ‘how do you maintain a bonding with your family back home with the help of mobile phone’, and ‘to what extent have you adapted to the multicultural workforce of your organization’ (see Appendix H for the detailed ‘interview guide’).

Recorded interviews were translated to English by the researcher. They were then transcribed and coded on the basis of theorized categories. The information obtained was interpreted and categorized according to the “themes in the context of a theory or conceptual framework” (Boyatzis, 1998, p. 11). The interview drew on from traditions including social constructivism, symbolic interactionism, phenomenology and interpretive research, especially in the data analysis phase. For instance, social constructivism posits that text, technology, phenomenon and events are not directly accessible to humans. On

the contrary, people construct meanings from observations and other sensory data, wherein the meaning making process is influenced by socio-cultural norms (MacKenzie & Wajcman, 1999). Building on this argument, the research demarcated two instances of meaning construction: (i) the way in which respondents imagined and developed meanings of their acculturation experience and technology use; and, (ii) the way in which the researcher interpreted the data after deriving meaning from the interview transcripts. Qualitative data in itself does not provide a quantifiable picture of the acculturation-appropriation situation. But when read along with the quantitative survey data, qualitative interviews provide a deeper insight into the phenomenon.

Symbolic interactionism emphasizes the meanings derived by individuals in representing their self, while acting and responding to the demands of everyday life (Denzin, 1992; Hall, 1980). The inquiry guided by the symbolic cycle of appropriation in the circular model contributes to the approach of symbolic interactionism methodologically and epistemologically. Phenomenology addresses the lived experiences of individuals without reducing them to *a priori* psychological categories (Skuza, 2007). The study followed this approach while exploring the lived experiences of migrants as they interacted with members of the host and home cultures on a regular basis in the mediated spaces allowed by the mobile phone, as also in the unmediated spaces in the social and work domains. Finally, following an interpretive approach, the strict contours of Berry's typology were disregarded to allow for a more fluid categorization of the acculturation phenomenon.

During the thematic analyses, patterns of topics or issues that emerged with regard to respondents' use of mobile phone were taken note of (Creswell, 2007). These patterns revealed how the mobile phone usage patterns fitted the circular model and how mobile phone appropriation is linked to migrant acculturation at different levels.

The thesis follows established conventions in data analysis and the reporting of the qualitative findings. In research that draws on from phenomenology and follows an interpretive approach, the convention to report findings is to consider any meaningful phrase or sentence that reflects a theme, or tells a story that informs the research. For example, de Souza e Silva et al., (2011) analyzed the qualitative data pertaining to mobile phone appropriation using quotes from respondents. Skuza (2007) analyzed data by "(i) reading the data, (b) dividing the data into parts, (c) organizing and transforming the data into disciplinary language, (d) expressing the structure of the phenomenon" (p. 450). Leonardi (2003) analyzed interview data by looking for themes, patterns and positions built on cultural orientation. "Particular attention was given both to comments or stories that made claims about the purpose of a certain technology as well as its benefits and hindrances, and to the way in which participants framed their knowledge about the specific communication technologies" (p. 166). In this research, since the qualitative data were used both to triangulate the results of regression analyses and to derive acculturation and appropriation types, it was important to provide detailed narrative descriptions for the relationships and patterns.

Data analyses

Quantitative and qualitative data were analyzed based on theoretical framework developed in the thesis thus far. Following data clean up and imputation of ‘series mean’ to missing data points, regression diagnosis tests were run to check for normality, heteroscedasticity and multicollinearity between variables. A detailed description of the diagnostic tests has been included in the following section. Two regression tests were run on two dependent variables to test the hypotheses under research question 1. The two steps – regression diagnosis and regression tests – constituted the quantitative data analysis part of the study. Qualitative data analysis involved triangulation of regression results with the qualitative data. The qualitative data was also analyzed to answer research question 2 on identification of non-essential types of mobile phone appropriation and acculturation.

Regression diagnosis

Multicollinearity between the independent variables cultural identity, multiculturalism in workplace, mobile communication to home and host cultures, as also between the demographic variables was within the acceptable limit (Variance Inflation Factor being less than 1.6 in all cases, except in the case of interaction terms). Descriptive statistics showed that both the mobile communication variables – amount of calling to home culture and amount of calling to dominant host cultures – followed a normal distribution. However, the two acculturation variables – cultural identity and multiculturalism in workplace – showed skewness towards higher values: For cultural

identity, scores between 4.5 and 5 constituted 60.2% of the sample, whereas for multiculturalism, scores between 4.5 and 5 constituted 46.4% of the sample. As the skewness was not caused by outliers, the problem of non-normality of the two variables was considered to be a non-issue in the regression analysis.

Regression tests

The questionnaire data were used to test the hypotheses on the effect of acculturation factors and mobile communication variables on adaptation outcomes. Hierarchical regression analysis was used to identify the relationship between the variables. Demographics was the first block in the regression equation. Age, education, duration of residence and income were considered as one block in alignment with existing practice in acculturation research (Kim, 1977; Sunoo, Trotter & Aames, 1980). The second block was cultural identity and multiculturalism in workplace, as both these variables tended to evaluate the acculturation attitude. The third block was mobile phone calling to home and host cultures, which are the main variables being focused in the theses. In addition, a fourth block tested interaction effects between cultural identity and calling to host and home cultures and multiculturalism in workplace and calling to home and host cultures. Scores for all the six independent variables were centered before calculating the interaction terms. Two tests were run for two dependent variables of the study: Adaptation to social life and Organizational commitment.

Qualitative data analyses

Qualitative data were analyzed to triangulate the results of the regression tests. A meaningful phrase, sentence or paragraph was considered a unit of analysis (de Souza e Silva et al., 2011; Skuza, 2007). Themes and usage patterns were allowed to emerge as the data analysis work progressed (Lindlof & Taylor, 2011). Patterns of mobile phone usage and appropriation among migrants were identified from the interview data, as also patterns of acculturation (for a detailed list of categories used to code data, as well as the categories that emerged at the time of data analysis has been given in Table 5). These patterns were then used to identify user types and acculturation types among the respondents.

A critical discourse analysis (CDA) perspective was followed while analyzing the data, wherein the hierarchical structures that constitute discourse and practice related to mobile phone use among migrants and acculturation have been brought to the fore (Chouliaraki & Fairclough, 1999; Fairclough, 2003; Foucault, 1981; Foucault, 1991; Hammersley, 1997). Fairclough (2003) provides a manifesto for critical discourse analysis highlighting the following questions: “How do [existing societies] deny people the possibilities and resources for rich and fulfilling lives?... What possibilities are there for social change which would reduce these problems and enhance the quality of the lives of human beings?” (p. 202). Of particular importance in CDA are social structures and social practices. Social structures determine the way in which each member of a society acts and thinks, to the extent that these structures are a kind of external imposition on the members. Social practices are defined as “relatively stabilized form of social activity” (p. 205).

Within social practices, Fairclough (2003) identifies different elements that are interconnected – e.g., subjects and their social relations, values, discourses, etc. It is the relationship between social structures and social practices that is attempted in CDA. According to Toolan (1997), discourses are “symbolic capital, exploited in ways that benefit some and disadvantage others” (p. 89). The objective of CDA is to reveal the ways in which this symbolic capital is exploited in different communicative events so as to change the order of discourses itself.

For Foucault (1981, 1991), ‘discourse’ has a broader meaning and implication, which implies neither a multiplicity of intended meanings nor muted words and expressions. Instead, “discourse is constituted by the difference between what one could say correctly at one period (under the rules of grammar and logic) and what is actually said” (Foucault, 1991, p. 63). Discourse pervades human activities that fall under three practical systems characterized by three relational spheres: “relations of control over things, relations of action upon others, [and] relations with oneself” (Foucault, 1997, p. 318). An investigation into these three areas forms the primary objective of CDA, which ultimately leads to identifying the discourses that sustain the hegemonic structures embedded in social practices. The present research also follows the principles of CDA, as it highlights the hierarchical structures that the migrants have to negotiate as they acculturate to the host society and use mobile phone to adapt to work and social life.

To summarize, this chapter presented the mixed methods approach followed by the study. It described the population, sample, the rationale behind snowball and purposive sampling methods and the data collection techniques adopted by the study. The

chapter explained how the scales of cultural identity, multiculturalism in workplace, mobile phone calling to home and host cultures (IVs), adaptation to social life, and organizational commitment (DVs) were created based on factor analysis and reliability test results. It also described the qualitative instrument used in the study, especially the interview guide used to elicit data on acculturation and mobile phone appropriation. The chapter also elaborated on the quantitative and qualitative data analyses methods followed by the study. It also provided detailed demographic information for the sample, in terms of the respondents' age, educational level, duration of residence in the host country and income categories. The following chapter presents the results of the analyses, to help answer the research questions.

Table 5. List of mobile appropriation and acculturation categories and different migrant types' extent of fit to each category.

	Typologies		
Mobile appropriation categories	Culture connoisseurs/ Convenience seeker, Experimenter	Culturally petrified- Austere user	Culture campaigner- Group communicator
Functional use ¹	Frequent; Both feature phones and smartphones are used.	Frequent, but with careful consideration of cost. Low diffusion of smartphones.	Frequent; Low-cost messages widely used to reach a group of people.
Symbolic use ¹	Consider mobiles as status symbols	Gift mobiles to loved ones	No symbolic use observed
Use of advanced features ¹	Frequent	Seldom	Seldom
Cost considerations related to mobiles usage ²	Average	High	Average
Content of meta-communication ²	Frequent deliberations on what is new in the mobiles market	On a look-out for uncluttered information in mediated spaces, but also from friends	Frequent deliberations on the low-cost methods available on mobiles to communicate with group members
Acculturation categories Amount of communication to home country ¹	High, but independent of the communication to host cultures	High, at the expense of sustained engagement with the host cultures	High; News from home country strengthen cultural identity

Amount of communication to members of dominant host cultures ¹	High, irrespective of high amount of communication to home	Low; Engagements restricted to professional spaces and to close friends from other cultures	Low
Extent of relationship with dominant host country cultures ¹	High	Low	Low
Identification with one's own culture ¹	Low	Average	Very high
Level of engagement with co-ethnics in host country ¹	Average	Average	Very high
¹ Pre-determined categories			
² Categories emerged with data analysis			

CHAPTER FIVE: FINDINGS

In the previous chapters, the inquiry into the impact of mobile phone on migrant workers' acculturation was developed along two lines. The first was an examination of functional mobile phone usage patterns. This line of inquiry was based on the circular model's 'usage and handling' component, and the bi-dimensional acculturation model (Berry, 1997). The survey questionnaire that examined (1) acculturation, (2) mobile phone calling to dominant host and home cultures and (3) migrants' adaptation outcomes in social life and organization was based on this line of inquiry. The second line of inquiry examined the appropriation of mobile phones by users. This was based on the circular model, especially its 'prestige and social identity' component, and the conceptualization of acculturation based on non-essential categories. The interviews examined this dimension of mobile phone usage and migrant acculturation.

This chapter presents the results of both lines of inquiry and shows how they complement each other in studying the phenomena of acculturation and mobile phone appropriation. While research question 1 (RQ1) dealt with the functional usage pattern of mobile phones, leading to quantitative measurement of the variables, research question 2 (RQ2) dealt with appropriation and acculturation types. In answering the research questions, this chapter presents the findings of both quantitative and qualitative analyses. The chapter is sub-divided according to the research questions. Descriptions of the variables used in the quantitative analyses have been provided in Table 6.

RQ1 asked, “How do cultural identity, multiculturalism in workplace and mobile calling to home and host cultures affect migrants’ adaptation outcomes in the host country.” Adaptation outcomes were divided into two domains – i.e. related to work and social life. Consequently two main hypotheses (H1 and H2) were formed, one each for each dependent variable, and statistical tests were conducted.

In the quantitative analysis, guided by RQ1, there was a mixed pattern of relationships between the independent¹¹ and the dependent¹² variables. As the reader will see, age, education level and multiculturalism in workplace had positive influence on migrants’ adaptation to social life, whereas no other independent variables had effect on the dependent variable. In the work domain, three independent variables – cultural identity, multiculturalism in workplace and mobile calling to dominant host cultures – emerged as significant predictors of the dependent variable organizational commitment. These results have been triangulated with interview data. Further the interview data also helped identify acculturation and appropriation types among the migrant workers. The chapter concludes by suggesting links between the two types.

H1: Predicting migrants’ adaptation to social life

As noted, the first hypothesis stated “multiculturalism in workplace, mobile phone calling to dominant host cultures and mobile phone calling to home culture positively

¹¹ Cultural identity, multiculturalism in workplace , mobile phone calling to dominant host cultures and mobile phone calling to home culture.

¹² Adaptation to social life and organizational commitment.

affect migrants' adaptation to social life, whereas cultural identity negatively affects migrants' adaptation to social life". To test the hypothesis, a hierarchical regression was run (see Table 7). Demographics was the first block. It explained 5.8% of the variance in adaptation to social life, $F(4, 435) = 6.7, p < .001$. Age ($\beta = .16, p < .01$) and education ($\beta = .14, p < .01$) significantly predicted migrants' adaptation to social life. The results indicate that those who are older and have higher educational qualification tend to be better adapted to the host cultures. As the second block, acculturation explained 1.8% of the variance in the dependent variable, $F(2, 433) = 4.18, p < .05$. Multiculturalism in workplace ($\beta = .13, p < .05$) was a significant predictor. The results indicate that migrants who are favorably disposed to other cultures in workplace are more likely to adapt to social life in the host country. The third block, mobile communication explained 0.8% of the variance in adaptation to social life, $F(2, 431) = 1.83, p > .05$. Neither calls to home nor calls to host culture was a predictor for adaptation to social life. The interaction terms were entered as the fourth block, $F(4, 427) = .63, p > .05$. None of the interaction terms significantly predicted social adaptation, whereas the model with interaction terms predicted 0.5% of variance. The hierarchical regression explained 8.9% of the variance in total. H1a was supported. H1b, H1c and H1d were not supported.

Multiculturalism influencing social adaptation: Evidence from interviews

Interviews with the respondents (refer to Table 8 in Appendix B for interviewee details) further supported the positive influence of multiculturalism in workplace on social adaptation. The quantitative results suggested blurring of boundaries between work and

social life: respondents' engagement with co-workers was not limited to the work spaces alone, but was carried over to the domain of social life too. Mobile telephony turned out to be an effective tool that helped their seamless movement between work and social domains. This resulted in respondents' better adaptation in social life.

"I do communicate with other communities, especially at work – to Burmese, Bangla and Thai. I call them sometimes, outside work also. With some I do talk outside work Say, when he goes home for leave then also I maintain contact"
(TAM02).

To solve specific work-related problems, respondents communicated with supervisors, colleagues and friends. This communication, although functional and goal-oriented in nature, also provided an opportunity for cultural learning for the respondents. The benefits of such communication was extended to social life, and helped facilitate respondents' adaptation to social life. Respondents with higher multicultural attitude were found to benefit more from their multicultural engagements in work spaces. When workers from different cultures came together in a team at worksites, mobile phones were used to micro-coordinate and complete the assigned tasks faster and with greater ease. Later the friendship between team members was extended to social life. MAL05 worked as an air-conditioning mechanic in shipyard. His daily task was to take measurement of air-conditioning pipes and fittings, and to arrange materials that were needed to fix any problem in the system. While carrying out the task, MAL05 had to talk to supervisor and site engineer.

“On mobile phone, this communication [on measurements and materials] becomes easier. Without mobile phone this coordination will not happen”
(MAL05).

MAL05's interview suggested that when he could communicate and coordinate with other members of his team, it facilitated his adaptation in social life. This was seen in his work history. Comparing his life in Singapore with that of his earlier work stints, MAL05 recalled that he worked in five countries in the Middle East in the past. But he quit the job in each country within six months after joining. On the other hand, he had been working in Singapore for four years. In addition to the “economic benefits” of his current job, he liked the work culture in Singapore compared to other countries where he worked. This has resulted in his seeking an extended stay in the country, despite the limited opportunities available for naturalization to the country.

However, there were also situations where mobile phone communication with colleagues did not enhance the multicultural outlook of the migrants. Interviews revealed a trend of respondents' matter-of-fact engagement with other cultures, which did not go beyond fulfilling the professional requirements. Entrenched moral values related to the home culture put constraints on them when they tried to gain membership of friendship networks. MAL16 was one among the early adopters of social networking sites like Facebook. However, he restricted his friends' circle on Facebook to members from his own ethnic community. There were indeed a few

Singaporean ‘friends’ in his Facebook list, only because they were above him in the organizational hierarchy.

“Then, there is now a Filipino girl in our company. She’s on FB [Facebook], but I’ve not added her as a friend. If one enters into that area, there is a chance to go in a wrong way ... like having a girlfriend, and things like that... Since I don’t like it, I’m not going that way” (MAL16).

His anxiety about dilution of cultural and moral values resulted in his active detachment from other cultures, complicated by a gendered migrant identity. It may also be that he feared a reprimand from members of his home culture or from family if he befriended a Filipino girl in Singapore. Similar to the experience of a group of south Indian migrants controlled by a “transnational village gaze,” MAL16’s FB activities might be under constant monitoring by his family and friends (Velayutham & Wise, 2005, p. 35). This supports the observation that migrants’ identities are always a complex mixture of gender, class and culture (Nazroo & Karlsen, 2003; Ryan, 2010). As theorized under ‘multiculturalism in workplace’, the key task for an acculturating worker was to negotiate these identities in the organizational space and cope with the diversity among colleagues. The excerpts from the interviews suggested that the multicultural disposition of migrant workers will have a positive effect on their social adaptation. Mobile phones facilitated the process. However, there were aberrations to this common pattern, especially when migrant workers conformed strongly to the home culture and its norms.

The following section explores the second part of RQ1, identifying the effect of IVs on organizational commitment. The results are then triangulated by the interview data, explicating the underlying patterns of relationship between the IVs and the DV.

Table 6. Descriptions of the six variables used in the regression analyses.

	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>SD</i>
Multiculturalism in workplace	440	1	5	4.098	.93
Cultural identity	440	1	5	4.38	.81
Amount of calling to home	440	.63	5	3.048	.71
Amount of calling to host	440	0	5	2.618	.95
Adaptation to social life	440	1.93	7	5.569	.69
Organizational commitment	440	1.21	5	3.969	.8

Table 7. Hierarchical regression analyses (to test hypotheses 1 and 2) of the impact of cultural identity, multiculturalism in work place, mobile phone calling to home and host cultures on two adaptation outcomes – adaptation to social life and organizational commitment.

Predictors	Adaptation to social life (H1), β	Organizational Commitment (H2), β	ΔR^2 Adaptation to social life	ΔR^2 Org. Commitment
Block 1: Demographics				
Age	.157**	.043		
Education	.142**	-.05		
Period of residence	-.026	.024		
Income	.085	-.045	.058	.018
Block 2: Identity and multiculturalism				
Cultural identity	.028	.333***		
Multiculturalism in workplace	.134*	.321***	.018	.365
Block 3: Mobile phone calling				
Mobile calling to home culture	.058	-.002		
Mobile calling to dominant host cultures	.045	.17***	.008	.024
Block 4: Interaction terms				
Cultural Identity X Calling to home culture	.081	-.068		
Cultural Identity X Calling to host cultures	-.051	.095		
Multiculturalism X Calling to home culture	-.075	.016		
Multiculturalism X Calling to host cultures	.012	.136**	.005	.027
<i>R Square</i>			.089	.433
<i>Adjusted R Square</i>			.063	.417

Notes: *** $p < .001$; ** $p < .01$; * $p < .05$

Figure 5: The model diagram with standardized beta coefficients corresponding to each hypothesis

H2: Predicting migrants' organizational commitment

The second hypothesis stated “multiculturalism in workplace, mobile phone calling to dominant host cultures and mobile phone calling to home culture positively affect migrants' organizational commitment, whereas cultural identity negatively affects organizational commitment.” To test the hypothesis, a hierarchical regression was run. Demographics was the first block. It explained 1.8% of the variance in organizational commitment. None of the demographic variables accounted for any significant amount of variability in organizational commitment, $R^2 = .02$, $F(4, 435) = 2.02$, $p > .05$, indicating that age, education, income or period of residence did not affect migrants' commitment to their organization. As the second block, acculturation explained 37.4% of the variance, $F(2, 433) = 128$, $p < .001$. Both multiculturalism in workplace ($\beta = .32$, $p < .001$) and cultural identity ($\beta = .33$, $p < .001$) emerged as significant predictors. The results indicate that migrants who are favorably disposed to other cultures in workplace, and who show greater identification with ethnic culture are more likely to show greater commitment to their organization in the host country. As the third block, mobile communication explained 2.4% of the variance, $F(2, 431) = 8.54$, $p < .001$. Amount of calling to dominant cultures in the host country ($\beta = .17$, $p < .001$) was a significant predictor of organizational commitment. The interaction terms were entered as the fourth block, $F(4, 427) = 5.01$, $p < .01$. The interaction between multiculturalism in workplace and calling to host culture was significant ($\beta = .14$, $p < .01$). The model with interaction terms predicted 2.7% of variance. The hierarchical regression explained 43% of the variance in total. H2a and H2b were supported, whereas H2c and H2d were not supported. H2d hypothesized

that cultural identity would negatively affect organizational commitment. However, the results indicated significant positive effect of cultural identity on organizational commitment.

Factors influencing organizational commitment: Evidence from interviews

Cultural identity, multiculturalism in workplace and mobile phone calling to members of dominant host cultures positively affected migrants' organizational commitment. Interviews suggested that most of the respondents were conscious of their national identity. Indeed this helped them ignore, if not overcome, other fissures that were features of their identity as practiced in their country of origin e.g. class and caste.¹³ National identity took precedence over other identities; the respondents reported a willingness to put their best into their professions so that their national identities were held in high esteem among peers. BGL05, a social science graduate, had actively participated in civic and political activism while staying in Bangladesh before migration. In Singapore, he could only find a job far below his educational qualification. However, he treated his tough working conditions in Singapore as an opportunity to learn, as he constantly compared the living conditions in his own country with that of Singapore. His strong identification with his own culture influenced the way he interacted with the new culture, which apparently caught his imagination due to its improved law and order

¹³ Caste is a feature of South Asian societies, especially in the Hindu tradition. Occupational closure based on one's lineage and endogamy within one caste group are its chief characteristics. Those groups who traditionally did scavenging, tanning and butchery were considered outcaste and were systematically discriminated against by the upper caste groups.

situation. The hardships he faced in his profession were not a deterrent, as they nevertheless helped him learn better while learning the advanced work practices in Singapore. Asserting himself among co-ethnics as an opinion leader, he demonstrated to them the benefits of being committed to one's work organization in Singapore.

"I want to make them [my fellow countrymen] concern what's going on in my country... I make them aware [using the channels of internet and mobile phone]. I talk to them about these matters... Singapore rules and regulations... it's strict. But if somebody follows it... he can learn something from Singapore and use it going back to the country. I'm happy that I could work for this organization" (BGL05).

Although not expressly said by the respondent, his respect towards the host country's system of governance and the general law and order in the host society positively affected his commitment towards the organization he worked for. Mobile phones, supplemented by internet, helped him disseminate this learning both from the host society and from the organization to his fellow countrymen.

In another instance of cultural identity supporting organizational commitment, migrants from same ethnic groups came together informally in organizations to complete a task, often coordinating among themselves with the help of mobile phones. Leveraging on their common mother tongue, migrants from the same ethnic groups used mobile phones to micro-coordinate and complete professional tasks. MAL23, who was a general worker in process construction and maintenance sector, had to make several trips from his worksite to the store to collect materials. He later befriended the storekeeper who was

from Tamil ethnicity. Although MAL23's mother tongue was not Tamil, he knew the language due to his native town's geographic proximity with the Tamil-speaking State in India. This acquaintance helped him save time on trips, as the order for materials could now be made over mobile phone.

"I often call on the number of the storekeeper and say 'such and such material is in short supply'... I just need to wait at the site, the material will come there... My supervisor supports this kind of coordination... I think the organization appreciates it" (MAL23).

MAL23's strategy resembles the economic usages of mobile phone that have received wide attention in ICT for Development literature, wherein mobile phones have helped business people to cut the number of trips to procure and sell the products (Saunders, Warford, & Wellenius, 1994). However, the added implication of this strategy in the migration context is that the workers' identification with their ethnicity and their co-ethnic collaborations have helped them perform better at work, leading to their increased commitment towards the organization.

Respondents recalled instances when they received acknowledgement and encouragement for their good work from management and supervisors. With the help of mobile phones, respondents gained access to official managerial processes that were out of bounds for them until then. For example, with the help of mobile phone respondents could register personal grievances with the management. The following quotes are from two respondents with similar work profile and educational qualification. They

demonstrate how factors like organizational policies and attitude of host management determined employee satisfaction, supplemented by mobile communication.

“Once a call came from home saying my grandfather passed away. They did not call me, but my manager. The manager called to our work site and conveyed the news. He asked my supervisor to allow me to sit in the canteen for 10 to 15 minutes. He permitted me to call home, or to go back to my room, whatever I chose to” (MAL19).

“When I was in Saudi [Arabia], I was not even informed when my father passed away. The company didn’t inform me. Some firms are like that, especially in Arab countries. They don’t inform, thinking that we will leave immediately. So, I got to know [about my father’s demise] after a few months. Everything was through letters then. Now, we call daily” (TAM11).

Mobile phones helped bring timely information and support to migrant workers in organizational and social spaces alike, because of which their organizational commitment justifiably increased. They expressed confidence that if they got into trouble somewhere in Singapore, they could call up their boss for support. This can be seen in the example of respondents who worked in islands that were located away from the Singaporean mainland. They said that they were sometimes stopped by the security guards at the gates. To gain entry they had to call up their boss who alone could certify their identity before they were provided access to the worksite. In cases like this one can see that the mobile phone facilitated interaction within the organization.

However, there were also instances when hierarchical organizational structures and employee-unfriendly policies obstructed the communication between employees and the management. In such instances mobile communication acted as conduit of top-down communication from the management to the employees at the lower rung. Respondents' commitment to the organization ultimately suffered in such cases. MAL24 and his colleagues had occasional stand-offs with the management, as they protested against undue deductions in pay, less hospitable living conditions and inconvenient transport facilities. MAL24 maintained that dialogue with the management, even in the face of a crisis, hardly helped mitigate tensions.

“We don't talk usually to anyone in the management, except to the madam. We call her when any need arises. Madam is in Malaysia... It's not as if we call daily, but only if we have a difficulty” (MAL24).

One day, on their way to work in the shipyard, MAL24 and friends tapped their entry pass at the gate. In normal case, it was the task of the team leader to inform the personnel at the punching gate about the details of employees who would be coming in for work on a particular day. Knowing that this information was not passed on to the personnel at the punching gate prior to their arrival, MAL24 called up the 'madam' on his mobile phone and informed her about the anomaly. Due to some technical reasons the issue was not sorted out and the workers had to return. To their astonishment, the management decided not to give that day's salary to the workers who returned.

“She said, ‘there is no basic, it will be marked a leave today.’ ... We didn’t get that day’s pay. She is good for nothing. This company is no good” (MAL24).

In sum, the positive influences of cultural identity, multiculturalism in workplace and mobile phone calling to dominant host cultures on organizational commitment were not always in place. Rather they were complicated by individual-specific factors like migrants’ motivation to use mobile phone to find instrumental solutions to the problems they faced at work sites and the management’s level of employee-friendliness.

The qualitative interviews also suggested that migrants’ cultural identity was strengthened by feelings of social responsibility and civic sense towards their country of origin. This led to their greater commitment towards their work organization in Singapore. This relationship was undergirded by the fact that higher organizational commitment ensured sustained earnings in Singapore, which helped them fulfil their social responsibility by donating to the neighborhood associations and supporting the needy in their country of origin.

Further investigation was needed to go beyond the functional usages of the mobile phone and to contextualize the acculturation attitudes observed in the quantitative data. Moving ahead with the investigation, RQ2 asked, “How do acculturation types relate to mobile phone appropriation types among migrants, when defined in non-essential and non-universal terms?” Qualitative interviews have been analyzed in the following sections to answer the research question.

Mobile phone appropriation

The qualitative interviews were analyzed under the rubric of *usage and handling* and *prestige and social identity* of the circular model. As suggested by the original conceptualization of the mobile phone appropriation model in Wirth et al. (2008), four goal-oriented uses could be identified with respect to *usage and handling* – viz. *distraction/pastime, maintenance of relationship, management of everyday life* and *control*. The component of meta-communication in the circular model was found to be linking both the usage (associated with *usage and handling*) and the symbolic cycles (associated with *prestige and social identity*) (see Table 2 for the list of mobile phone appropriation and acculturation ideal types that emerged with data analysis).

Usage and handling

The respondents balanced intensity and frequency of use of mobile phone with cost considerations. They aligned the expense for day-to-day mobile phone use with their monthly earnings. The money they spent on telephony was mainly for international calls. Local, in-country calls were virtually free. The interviewees, to a large extent, used low-cost pre-paid cards for international calling. In practice this meant that they used a system of ‘missed calls’ (Donner, 2007; Sey, 2011) when they saw that a call was from someone they knew in their home country. Using the missed call system, the call from the person in their home country was a signal that they wanted to talk. The person in Singapore then used an international calling card to call back thus saving money.

Some respondents had separate mobile phones for personal and work-related use. Respondents differentiated between a basic handset (often a feature phone) meant for rough use at a work site and an advanced handset (often a smart phone or a touchscreen phone) for relaxation, characterized by different usage and handling patterns. The advanced mobile device was left in their rooms under safe conditions during the workday, only to be used in the evenings for accessing entertainment content. BGL02, like many other respondents, had clearly differentiated between his touchscreen phone which was meant to “listen to songs, play games, [and] sometimes use internet,” and the feature phone that he carried to the worksite, always with an apprehension that “while working, the phone can drop.” Although ‘rough use’ of a feature phone suggested usage in rough conditions like a construction worksite or a welding pit, it also implied a cheap mobile device that can be used with little care. Such a low-cost mobile phone had little emotional value for the users and was evaluated only on the basis of its material worth, demonstrating how the symbolic cycle is linked with the usage cycle of the circular model.

Unlike female domestic workers in Singapore, the male migrants had more autonomy in their use of mobile phone (Thomas & Lim, 2011). However, in view of safety and security some worksites did not allow the use of mobile phones: e.g. on a ship deck, inside a rig in an oil field, etc. In such cases a unique mode of use could be observed: the workers kept their mobile phones inside the lockers, often switched to silent mode, and checked for calls during break time or after work. Thus, a long ‘mobile-free period’ was preceded or followed by intense communication to family and friends.

Irrespective of the mode, cost consideration determined the contours of the respondents' usage of the mobile phone. For example, some respondents recalled how they desisted from browsing internet on mobile, or sometimes limited its use for fear of making a dent into their phone credit.

“If I use internet on mobile, it costs more... If I download something, the local balance is used up very fast. So I go to the [internet] café when I feel like”

(TEL02).

Four goal-oriented mobile phone usages could be observed– *distraction/pastime, maintenance of relationship, management of everyday life* and *control* (Wirth et al., 2008). These four types of usages were determined by respondents' skills and motivation to use, their economic conditions and the restrictions posed by social and organizational norms.

Distraction/pastime

For many respondents, opportunities for distraction/pastime increased with embedded features of the mobile phone, especially use of multimedia, i.e. the use of phones to play music and to watch videos. While some respondents actively appropriated these functionalities, others, due to limited financial resources and lack of technical skills, lagged behind from moving on to advanced functionalities. There was also an apprehension on increased inattentiveness and distraction among workers during work, caused by the entertainment opportunities available over mobile phone. However, the blanket ban on mobile phone usage, outside the immediate concerns of safety, proved to

be retrogressive as many respondents who watched videos on web to solve problems related to their work were affected by the prohibition (Chib & Aricat, 2012). MAL05, a senior employee in the organization, supported such a ban on the usage of mobile phones at workplaces arguing that it was part of the safety measures adopted by any organization. However, underpinning these justifications on the ban on mobile phone at work, a subtle logic that migrant workers were incapable of differentiating the good from the bad was evident. It implied that the company had to subject them to constant surveillance to make optimal use of their resources. This supported the findings of earlier studies on the stereotypes attached to Polish workers employed in low-skilled sectors in London (Ryan, 2010), and the exclusion of Tamil migrant workers by the resident population in Singapore (Hamid, 2015).

At the same time, mobile phone was effectively used for distraction and pastime by respondents to fill in low-activity periods during journeys or in between work. MAL01 had fifteen to twenty minutes to commute to work everyday, which he utilized by listening to vernacular songs downloaded to his mobile phone. Downloaded songs on mobile phone came in handy for him when “I’m in a mood of sleeping.” Another respondent, TEL02, acknowledged that his regular mobile phone communication with a Filipino girl, whom he befriended nine months earlier, substantially improved his English. TAM08 maintained that mobile phone helped in micro-coordination (Ling & Yttri, 2002) in real time, especially when he and his friends planned outings on weekends.

“We have life outside work... for instance, tomorrow they [my friends] have arranged for a trip to Marina Bay. They called me and informed me” (TAM08).

In addition to the multimedia features of the mobile phone, the calling and texting affordances helped migrant workers use the mobile device for distraction and past time. This included coordination among workers, supported by mobile calling or texting, to organize an entertainment event in offline space, as the above quote suggested. Advanced applications over mobile internet, like the vernacular newspapers, were also a means of distraction and pastime. Through accessing vernacular newspapers on mobile phone respondents cut down their expenditure on print newspapers, which cost eight times its price in their country of origin. By accessing vernacular newspapers on mobile phone respondents could make informed opinion about the social and political issues related to their country of origin, which helped them improve their standing in informal groups (Aricat, 2015b). Hence, distraction and pastime mobile phone usages had extended effects on migrants: They provided a cultural learning opportunity for the migrants (as in the case of migrants acquiring better English skills through their communication with girlfriends over mobile phone), and they helped relate to co-ethnics more closely (as in the case of migrants using vernacular newspapers to access news and discuss it among co-ethnic migrants). This leads to the second kind of pragmatic use of mobile phone: maintenance of relationship.

Relationship maintenance

A number of relationships were valued by the respondents, including those with their family and friends in the country of origin and friendly ties with co-ethnics and coworkers. As a result of inexpensive international calling rates in the last decade, there had been a spike in the number of outgoing international calls (Vertovec, 2003). This has

included newer forms of interaction like video chatting, social networking and voice over internet calling, associated with the second wave of mobile phone diffusion. As Donner (2009) noted, “even non-calls¹⁴ might matter, as reachability itself (social presence at a distance) can play a role in determining people’s choices about how to conduct their day” (p. 95). In the present sample, most of the calls that maintained and strengthened relationships were expressive in nature rather than an instrumental exchange of information between the calling parties. The importance of the mobile phone in maintaining relationships can be seen in the comments of MAL05.

“A life without mobile phone !!... I would definitely find it difficult to survive without it... if I don’t call home daily, they will feel sad... I also feel sad, if I don’t call there everyday, I’ll keep thinking about what’s going on there” (MAL05).

Inexpensive in-country calls helped the respondents connect to migrant friends from different countries also in Singapore. The relationship between coworkers from different countries was strengthened by subtle acts of caring, that were afforded by their existing resources. These are seen in the comments of TAM05.

“Two days back my [Burmese] friend went to the hospital... some chest problem... today morning I called him. He was hospitalized for three days... now he’s

¹⁴ Indeed, a non-call cannot be defined using the verb ‘is’. Here, ‘non-calls’ refers to any trace of the respondent related to mobile communication that can ‘present’ him to loved ones. It can be the respondent’s contact number stored in a family member’s phone, a missed call from him to the family or even a trace in memory that anticipates a call from him at a particular time.

discharged. When I called, I asked him how he felt... whether he feels better now”
(TAM05).

Kathiravelu (2012) identified the importance of such care networks outside the institutional mechanisms among migrant workers in Dubai that helped ameliorate the workers’ marginalized existence. The comments of TAM05 indicate that they are also to be found among the migrant workers in Singapore.

From the point of view of acculturation, ‘maintenance of relationship’ with home and host cultures had a broader symbolic meaning that went beyond relationship with individuals. In that sense, even other pragmatic mobile phone usages aimed at *distraction and pastime, management of everyday life* and *control* would result in ‘maintenance or impairment of relationship’ that have implication for migrants’ acculturation.

Management of everyday life

Most respondents organized their daily life utilizing a wide variety of functionalities on mobile phone, at times the only communication device available to them. Workers were transported to work sites early in the morning so as to avoid peak hour traffic. The alarm functionality of the mobile phone helped them schedule their time. Similarly, emergency messages were passed on to the management using mobile phones. Respondents widely used mobile phones to inform the concerned department about leave of absence and for arranging logistics that were needed to divide their time between worksites and company headquarters. As noted by TAM04:

“Some leave application... in the morning, if I am sick, I call my supervisor and tell him: ‘I cannot make it today, I cannot make it to work’. It’s allowed to take leave by calling on phone. Can, can” (TAM04).

In addition to making personal calls, most respondents used their mobile phones to make work-related calls, for which they never sought reimbursement from the organization. However, respondents in the lower rungs were generally not allowed to use mobile phone during work, in which case they had to approach their team leader, who would either have a walkie-talkie, or a mobile phone or both provided by the company. As a supervisor in refinery, TAM01 had three mobile phones: a smartphone, a feature phone and walkie-talkie. The smart phone was to access internet and to call friends, the feature phone to call family, whereas the walkie-talkie, which also supports a SIM just like a mobile phone, was specifically meant to make calls while at work. Thus for him, managing everyday life had an added meaning of managing the mobile devices he had in his possession. This also implied managing his team of workers using the walkie-talkie provided by the company.

In other work contexts, smartphones supposedly challenged the traditional demarcations of home and work, “freeing one from the cubicle but also allowing work to seep into every nook and cranny of personal life” (Agger, 2011; p. 120). However, many respondents in this study wanted to demarcate their personal life from work life. Using different strategies for organizing work and social life using mobile phone, workers who were not in supervisory positions were able to achieve this demarcation, a phenomenon also noted by other scholars (Chib & Aricat, 2012). Management of daily life using

mobile phone also helped migrants achieve greater control in their life, although the device sometimes submitted them to the control of others.

Control

Control, in the context of mobile phone use, had a range of meanings for the respondents. One form of control implied the extent to which employers, aided by mobile phones, controlled the migrant workers, determining their movements, deciding their work schedules and micro-managing their activities. Another form of control involved a kind of subtle and reciprocal control experienced by the migrant workers from their family, a kind of ‘emotional tax’ on the migrant workers who ensured their social presence in family with the help of mobile phone. A third form of control implied the migrant workers’ greater control over their own lives in the host country, facilitated by the possibilities opened up by mobile phone.

The case of employers’ control of migrant workers was not as widespread as in the case of domestic workers (cf. Lin & Sun, 2010; Thomas & Lim, 2011). Among the respondents of this study, they largely made use of mobile phones to turn the demands of work in their favor. In such cases, mobile phone emerged as an effective means of resisting the control of authorities.

“I know people who often receive such calls [outside work].... Some pipe leaking, steam open... they have to go back and attend to the problem. Sometimes they rectify the problems over mobile phone also” (TAM05).

The above quote suggested that the employees at supervisory positions risked being contacted by the management outside office hours if something was found amiss in their work. But, with the help of mobile phone, many among them could fix the problems remotely, thus turning a potential phenomenon of control in their favor. The case of family exerting soft control over the migrant workers was evident in BGL20's prior warning to family and friends not to disturb him during work.

"I [have] asked them 'ready [already]... 'This time, this time you call me, I know. This time this time my work time. Don't disturb'" (BGL20).

MAL20 also had similar concern because of which he kept his mobile phone in his room while going for work. His apprehension was that any negative news from family over mobile phone would distract him at work and could lead to accidents. MAL24 recalled the difficult times in the past when he could hardly find money for mobile phone top-up. But whenever he established contact with family after overcoming the economic obstacles, his family failed to be sympathetic towards his plight.

"When I call home they say, 'whatever it is, you stick to the job there for two years.... Look for another job'" (MAL24).

As discussed under 'management of everyday life', respondents had greater control over their own lives as a result of using the mobile phone. Although respondents sometimes complained about being addicted to social networking sites, there was no real concern of mobile phone expenditure going out of their hands. On the other hand, they rationalized their above average spending on mobile phone as something essential to their

lives as migrants. BGL01, who earns between SGD 500 and 999 a month, agreed that his monthly expenditure of SGD 120 was higher than average for a worker. However, unlike other workers he did not “spend money dating a girlfriend or drinking on weekends”. Mobile phone calling had a purpose for him, as he maintained that it was important to talk at length, “up to an hour a day”, with family over mobile phone.

In sum, three different meanings of control in connection to mobile phone use were identified in the appropriation patterns of the respondents: Control by employers, control by families and control of migrants’ own lives. Collectively they added a pragmatic dimension to migrants’ ‘usage and handling’ of the mobile phone that had implications for their acculturation.

Prestige and social identity

Along with ‘usage and handling’, the ‘prestige and social identity’ dimension of the circular model decided users’ appropriation of the mobile phone. The following sections explain how ‘prestige and social identity’ emerged as an important dimension in the appropriation phenomenon.

Gaining prestige

‘Prestige and social identity’ is determined by answering the question ‘what did the mobile device do to the user’. The question brought to fore the symbolic meanings associated with mobile phone usage, in contrast to the pragmatic usage patterns discussed in the previous section. Two phenomena that had direct implication to respondents’ prestige and social identity were observed:

- (i) emergence of “warm experts” (Bakardjieva, 2006, p. 101) in matters related to technology use; and,
- (ii) gifting of mobile phones – used and new handsets – to loved ones in migrants’ country of origin.

Bakardjieva (2006) characterizes ‘warm experts’ as having both the knowledge of universal features of technology, as well as the concrete local conditions in which a technology is adopted. Warm experts not only possess the technical skills to operate a technology, but they also share experiences and interests with new learners whom they can help learn technology skills. Tech-savvy migrants, who were ‘warm experts,’ shared their knowledge on the advanced functionalities of the mobile phone with fellow migrants. As a result, these migrants were accorded recognition and expert status in matters related to mobile phone usage, which is short of becoming an ‘opinion leader’ who would be influential in areas beyond technology. MAL30 achieved warm expert status among peers by helping them download software that supported vernacular fonts.

“I download it [the software for vernacular fonts] for them [my friends]. When he sees Malayalam or Tamil in his phone, he is surprised and happy” (MAL30).

These experts acquired technological skills quickly and passed on the knowledge to their ‘laggard’ peers. Often the top-down communication was a mixture of standard instructions to use a mobile phone affordance and the expert’s own interpretation of user experience. Such usage instructions helped widen the usage horizon of less privileged migrants, while boosting their self-conception and positively affecting their social

standing. In addition, respondents also evaluated the external conditions that determined their mobile usage, while reflecting on how others around them used various functionalities of mobile phone. The mobile phone and its diverse usages were topics for urban legends, gossip and the grapevine. Respondents who were part of such message circulations, derived meanings from them, but also invested meanings to such messages based on their intercultural experiences. This eventually helped them form opinion about the host society, as well as about themselves and their place in the new culture. For example, MAL02 noted that people seem to “hide” behind their phones on the busses perhaps so as to avoid engaging in conversation.

“Mobile phone diffusion is all good. But have you noticed the problem here? No one, no girl will look at your face when you travel in a bus... everyone is looking at the screens of their mobile phone” (MAL02).

The respondents’ prestige and social identity in the host society was thus intricately linked with their knowledge and practices of mobile usage and handling. Binding these two dimensions of appropriation were their own reflections (meta-communication). Discourse and practice thus reinforced each other. For example, TAM01 purchased a mobile broadband SIM card for his laptop. Later he realized that it could also be used in his mobile phone too. However, he was unsure whether it would amount to breach of agreement with the service provider. Nevertheless, he rationalized his act with the researcher using a technical logic:

“I don’t think there is anything illegal in it... This is a SIM [in the laptop]... It’s true that the feature is drastically different if the connection is used in mobile phone, it’s mobility... that’s why it’s called ‘mobile broadband’” (TAM01).

TAM01’s experimentation suggested that meta-communication was an integral link between usage and handling, and the discursive strategies involved in using a technology (the former represented by the ‘usage cycle’ in the circular model and the latter by the ‘symbolic cycle’). Experimentation involved a complex exercise of exploring the possibilities afforded by the mobile ecosystem of the host country and the utilization of available resources (Aricat, 2015a). It also involved active assertion of identity and personal freedom by the experimenting individual.

However, experimentation with mobile phone affordances was found to have a spiraling effect. Initial success in learning led to greater investments and risk-taking. Respondents perceived a kind of autonomy and self-empowerment in mastering the advanced mobile phone functionalities, which helped them psychologically overcome, or at least mitigate the effects of, their marginalized existence. MAL16 dismissed the common characteristic of migrant workers, which was “thinking of making money [always],” and emphasized on taking risks to get out of the workers’ routine and making economic investments in “learning”. However, over-enthusiasm in experimentation sometimes metamorphosed into over-indulgence. Exploring the advanced features of the mobile phones, these respondents slackened at work, which eventually led the management to impose restrictions on mobile phone usage, including surveillance and penalties. As Bakardjieva (2006) observed, these respondents were “losing [themselves]

in the technology much in the same way amateur musicians and drug addicts were submitting to their passion” (p. 104). Opinions were generated on what kind of mobile phone usage characterized an ideal worker who was properly acculturated to the work environment. Meta-communication linked the usage and symbolic cycles in a perpetual balance of argumentation. Opinion leadership thus became an important manifestation of ‘prestige and social identity’ associated with mobile phone appropriation. This point will be further elaborated on when links are drawn between appropriation and acculturation types.

Gifting

The second phenomenon of gifting of mobile phone to loved ones was widely observed in the sample, especially among those with low digital literacy and technological skills. Both used- and newly-purchased phones were gifted to loved ones back in the country of origin.

“I gave her [my wife] the phone after engagement... it was a good model, with camera, video, etc. After marriage I presented her another mobile handset, and recently another one... totally three” (MAL09).

As Velayutham and Wise (2005) observed, even in transnational spaces, some close-knit communities replicated the moral economy of the original caste groups in which they belonged. Migrants from a south Indian village in Singapore were bound by a “gift-exchange relationship” (Velayutham & Wise, 2005, p. 38), wherein the community back home always expected that the migrants would “present gifts... assist with cash to

help needy relatives, offer disaster relief, contribute fund to village projects and assist with finance to build new houses” (p. 30). Velayutham and Wise (2005) argued that the “thankful indebtedness” (p. 37) that the migrants felt toward their community was inculcated through strict endogamy and inward-looking principles followed by its members over generations. In a similar manner, through gifting mobile phones, the migrant workers in the present study strengthened their bonding with their cultural communities in the country of origin. Conforming to the norms ensured migrants’ prestige and social identity in the local communities.

There was also a technical reason behind migrants’ gifting of the mobile phone to the home country. Respondents gifted their used handsets when they moved on to advanced mobile devices. As represented by the symbolic cycle in the circular model, a circular pattern of gifting and identity formation could be delineated in this phenomenon: While mobile phone as gifts determined migrants’ prestige and social identity in their local community in the country of origin, it was ownership of advanced mobile devices that had a symbolic value on their prestige in the host country. MAL15 changed his mobile handset “about eight to 10 times” in seven years’ of residence in Singapore. Whenever a better model mobile phone was launched in Singapore, he bought it for his own use and sent his old handset to relatives or friends back home. Similarly, MAL32 gifted mobile phones to his friends back home even if they did not make a request.

“After coming to Singapore I’ve bought two phones only. One spoiled already. The current one is... big one... India sent already. That was a costly one. I gifted it to my mother” (TEL05).

The experience of TEL05 reflected another trend among migrants: The trend of keeping a low-profile mobile device for themselves and gifting an advanced mobile handset to their loved ones back home. Unlike those migrants who always kept the most advanced mobile handsets for their own use, respondents like TEL05 did not stake their prestige and social identity on advanced mobile phones as fashion statements.

In sum, the two sections on ‘usage and handling’ and ‘prestige and social identity’ explored the two facets of mobile phone appropriation, based on the circular model. While ‘usage and handling’ drew on from the functional usage trend in mobile communication research, ‘prestige and social identity’ focused on what the mobile device meant for the users and how they used it in ways that affected their prestige and social identity. Based on the analyses, different mobile phone appropriation types were identified among the migrant workers (Aricat et al., 2015), which are explored in detail in the following section.

Mobile phone appropriation types

While identifying the mobile phone appropriation types, this research attempted to go beyond essential categories, and identified traits rather than individual migrants as characterizing a usage pattern. The following description of appropriation types, or rather categories of user traits, summarizes the previous discussion on ‘usage and handling’ and ‘prestige and social identity’ presented in the preceding sections.

The convenience seeker

The convenience seeker compared the functionalities of the mobile phone with other media, and held an informed opinion on the complexities involved in appropriation. These users were similar to the ‘Everyday-Life-Managers’ of Wirth et al. (2008), who “emphasize(d) the pragmatic usage dimensions of ‘control’ and ‘management of everyday life’” (p. 608). An important trait characterizing convenience seekers was that they had clear evaluations not only on what to appropriate, but also how appropriation could be affected by various factors. The symbolic effects of mobile phone on convenience seekers were not projected to the outside world in terms of individual exhibition. They were uninterested with praise or criticism by friends with regard to mobile devices. Instead, satisfaction of basic utilitarian needs was paramount; additional qualities were superfluous. The aesthetic qualities of mobile phones, for example, as a fashion accessory, did not appeal to the convenience seeker. They remained apathetic about the aesthetics of the phone, paying attention only to its functionality.

The experimenter

Experimenters were positive skeptics: Although they had clear knowledge of the ordinary usage of most functionalities of the mobile phone, they were not satisfied with the commonplace uses of the functionalities. They were always in the path of exploring advanced and unique uses of mobile phone functionalities. Often, the unique uses they sought were not meant for the common public, but only for skilled users like experimenters themselves. Although the experimenters were active users of the mobile

phone, they did not exactly resemble the ‘Obtrusive Multi-users’ of Wirth et al. (2008), who “disregard(ed) those in the immediate surrounding” (p. 607). On the other hand, experimenters were community players with good grasp of technology issues, who were approached by their migrant friends who were not so proficient in mobile phone users. Experimenters imparted their acquired skills and knowledge to others, which helped them gain a kind of ‘wizardry’ status -- somewhat like Bakardjieva’s (2006) “warm experts” -- in the community. Experimenters had knowledge to operate the advanced mobile phones, but was also “part of users’ lifeworld and share(d) experiences, interests, and knowledge with them.” (Bakardjieva, 2006, p. 101).

The group communicator

Group communicators reached out to groups of people swiftly and cost-effectively. Being the most cost effective method of group communication, texting was widely used among members in religious groups and informal friend circles. Convenience seekers shared the characteristics of a *bricoleur* in cultural anthropology (Lévi-Strauss, 1966), to whom the task at hand was more important than the tools used for solving it. Group communicators were regularly in touch with several people in both host and home cultures, related to both work and personal life. Group communicators often assumed leadership roles in work organizations or social congregations bound together by ethnicity, politics, or religion. Those with an active political past kept detailed track of national political events and made active interventions through mobile calling, from vote canvassing to giving strategic directions to their co-party workers (Aricat, 2015b).

The austere user

Austere users describe those who were content with their low-end phones. This type draws on from a key concept in behaviorism – *tabula rasa* – which states that the human mind is like a blank slate at birth. How humans interact with the world throughout their life is determined by what is incrementally added to the slate over a lifetime. They learned basic mobile phone skills from others with some difficulty, and had no interest to explore functionalities themselves. With limited knowledge of operating advanced digital devices like a smartphone, the *austere users* also had limited needs of communication. The feature phones generally fulfilled their needs for voice calling and texting, or occasional shooting of pictures and playing of music. In contrast to *experimenters'* technology obsession, the *austere users* were led by a desire for an uncluttered mind. Even the feature phones were used with much care and caution; each use was a fresh learning experience for them, as they returned frequently to the basics of operation, being careful in pressing the keys of the device and thinking twice before proceeding from one screen to the next.

In summary, by attempting to answer research question 2, this section has until now found evidence to support the mobile phone appropriation process explained by the circular model. In doing so, four mobile phone appropriation types were identified: the *convenience seeker*, the *experimenter*, the *group communicator* and the *austere user*. The next task is to identify the acculturation types, which is followed by linking the mobile phone appropriation types with the acculturation types. The following section analyzes data on acculturation mainly under the rubric of retaining one's identity and relating to

other cultures. The acculturation types identified from the data were found to be context-specific and non-essential, overcoming the limitations of the four-type Berry (1997) model, which categorized acculturation in rigid categories of *assimilation*, *integration*, *marginalization* and *separation*. The section concludes by identifying relationships between mobile phone appropriation type and acculturation type.

Retaining links with home and relating to dominant host cultures

The two dimensions of ‘retention of ties with home culture’ and ‘relating to dominant host cultures’ are the cornerstones of acculturation. Migrants have to negotiate these two dimensions in their daily lives. The most explicit aspects of these two dimensions were captured by the bi-dimensional Berry (1997) model, which in this study was used to measure and analyze quantitative data. Those dimensions that were not captured by the Berry (1997) model were explored using interviews. The interview data has been analyzed in this section, which will ultimately lead to identification of the acculturation types that will be contextualized to the study population.

Retention of ties with home involved participation in activities pertaining to one’s home culture, participation in religious activities along with co-ethnics and sustained communication ties with family and friends in the country of origin. The first and foremost objective of using a mobile phone was to maintain contact with loved ones in the country of origin, as several examples in the previous sections suggested. Migrants’ co-ethnic groupings in the host country varied according to ethnicity and religion. For instance, small prayer groups among Christian co-ethnic friends met regularly at

designated places in Singapore. Under the aegis of such groups, there were attempts to reach out to the needy, cutting across ethnicities, and to organize recreational activities that ensured conviviality. However, due to the transient nature of such networks, these activities failed to sustain momentum, and the enthusiasm among the group members faded off after a period of time. MAL02 recalled that the migrant workers' segment of the Christian religious group in which he was a member organized a compassionate visit to Little India in 2011, with the objective of reaching out to the needy and the destitute. During the course of their one-day visit, MAL02 and friends enthusiastically engaged with the poor workers they found in Little India. However, such visits did not recur for want of a clearly thought out plan.

“‘Teka mission’ was a famous project we launched ... we reached out to Indian workers in Little India.... but later people dropped out, mainly because of work pressures” (MAL02).

Even within the religious organization different migrant groups were demarcated based on their professions and class characteristics. There were separate groups for migrant workers, nurses, IT professionals, and so on. Thus, the interactions between co-ethnic migrants were confined to the class-based group in which they were members. Those respondents who were associated with well-established social welfare organizations, especially those supported by resident Singaporeans, enjoyed better sustainability in their social activities. MAL29 volunteered at an old-age home in Singapore, where he could interact with co-ethnics. Since this old-age home was

registered in Singapore and had been receiving funds from resident Singaporeans, MAL29 could make a long-term engagement with its activities.

“When in India, I had been active in this mission [for the elderly]. I came here, I inquired about it. . . . I go there on weekly off days. My mobile phone helps to spread the word” (MAL29).

Accessing news in vernacular languages helped the respondents retain ties with their home culture. More specifically, the respondents could get information on their locality back in their home country through their conversations with family and friends. When elections to State legislative assembly were held, TAM04 followed the vote counting process on a television channel in Singapore. When he started doubting the fairness of election process in one of the electoral constituencies in his home State, he called up a political contact in the constituency. He was told that there was widespread vote rigging in the constituency. TAM04 was better convinced by the brief report provided by his local contact over mobile phone, than by the journalistic reports he watched on mainstream television channel. TAM11 succinctly expressed similar sentiments on accessing news from his locality:

“We get to know happenings not only from home, but even in the neighborhood... everything... someone falling sick... This is beyond what we get from newspapers. We don’t get such local news from newspapers, right?”

In sum, informal co-ethnic networks, voluntary organizations and religious gatherings were important avenues that helped migrants retain relationship with home

culture, in addition to connecting with family and friends in their country of origin. The transient and informal nature of such networks, however, curtailed migrants' ability to engage in goal-oriented activities. Nevertheless, a few platforms did exist for migrant workers to maintain long-term engagement with members of their home culture. However, due to job pressures, migrant workers rarely made use of such opportunities. When it came to knowing local news, mobile phone communication with family or local contact was trusted and valued by the respondents over news reports on television channels.

Respondents' engagement with dominant host communities varied across ethnic groups. Tamil respondents agreed that their acculturation to the host society was facilitated by the official recognition given to Tamil ethnic community in Singapore. However, at least a few felt that all low-skilled migrants fell into the same class of 'low income population', regardless of their ethnicity. Singapore's policy promoting multiculturalism ensured hassle-free conductance of cultural festivals, facilitating widespread participation of residents as well as non-residents in cultural festivals. Thus, migrant workers' engagement with the resident population provided a wide spectrum of experiences cutting across their social and professional lives.

"Those in high status do not have any connection with us. They are at their own level. People like us are in our own groups" (TAM02).

"I volunteered for social activities... programs related to Onam [a regional festival of the community] . . . to the Malayali Association. We have gone to

Yishun, earlier. Then to Timah . . . all part of Malayali cultural festivals”
(MAL07).

Based on this complex picture on migrants’ engagement with home and dominant host cultures, a typology of acculturation may be delineated. The types reveal how the migrants’ engagement with home and dominant host cultures interact with their communication links with the two cultures and the multicultural context of the host society to determine their acculturation.

Migrant acculturation types

The observed typology includes the *culture campaigner*, the *culture connoisseur*, and the *culturally petrified*. The remaining part of this section elaborates on the acculturation types, and establishes a link between mobile phone appropriation types and acculturation types (Aricat et al., 2015).

The culture campaigner

Culture campaigners were specialized opinion leaders in the area of current cultural products from their home culture. They regularly promoted the ethos of their own culture, both actively and passively. They took initiative to share culture-specific news with co-ethnics, inviting them to take part in cultural programmes. The regular campaigning for home culture alleviated apprehension about loss of cultural identity due to international migration. Most cultural campaigners joined ethnic, religious or cultural organizations where their unique bonds could be asserted in interaction with similar individuals. The higher literacy level of culture campaigners, in addition to their skill sets

in using advanced mobile handsets, helped them to put various affordances of the mobile devices to meaningful use.

The culture connoisseur

Culture connoisseurs were characterized by lack of interest in mainstream evaluations of cultural expressions related to dominant host cultures. Instead, they recognized the human agency in cultural expressions and appreciated the socio-historical processes that constituted cultural practices in Singapore. Hence, in relating to dominant host cultures in Singapore, culture connoisseurs made reasoned judgments even when the cultural practices were unfamiliar to them. Culture connoisseurs, compared to the relative isolation of culture campaigners, established and maintained contact with migrant friends from different countries as they co-existed in Singapore. In order to do that, they took advantage of various affordances of the mobile phone, including calling. Almost all respondents in the sample planned to return to their home country upon achieving their financial targets. However, culture connoisseurs took advantage of their time in Singapore by making an effort to learn about dominant host cultures.

The culturally petrified

The culturally petrified did not engage in a critical evaluation of other cultures, basing their disregard on an established, and unquestioning, preference for their own culture. They held strong opinions about certain aspects of cultural life, such as the status of women in society and the perils of alcohol consumption. Other cultures were evaluated based on these selective areas, rather than taking culture in its totality or investigating the

intricacies of the issues. Culture became the primary area of contestation that threw open the challenges, as “everything was freely allowed” (MAL10). Once the culturally petrified took exception to dimensions of another culture, they often completely distanced themselves from that culture. These respondents replied with a categorical “no” (MAL09) about the possibility of settling permanently in Singapore, due to a handful of ‘objectionable’ cultural behaviors or practices they observed among the dominant host cultures. The culturally petrified spoke high of the host country on matters related to technological advancement, maintenance of law and order and safety measures adopted at work sites, but most of them did not see themselves continuing in the country for long.

Linking mobile phone appropriation types with acculturation types

So far the investigation was limited to identifying the types representing mobile phone appropriation and acculturation. In order to synthesize the two phenomena, links between the types that represent the phenomena are suggested and substantiated in this section.

Culture campaigners were likely to adopt the appropriation pattern of group communication, since their main objective was to link with as many co-ethnics as possible in least amount of time. However, the converse was not true, as group communicators were not necessarily culture campaigners. Group communicators belonging to religious and social groups were not interested in secular expressions of culture. In such cases, group communicators acted merely as opinion leaders propounding religious or moral causes.

Convenience seekers and experimenters were connoisseurs of culture. As technology-savvy people with informed opinions about different mobile phone functionalities, this appropriation type embodied the positive side of material reality, disregarding the contradictions of experiences inherent in a clash of cultures. For them, what was immediately present required attention and cognition, and what could provide more comfort in real life mattered the most – both in the context of culture and in the context of technology. The *telos* of career advancement was intricately linked to their enthusiasm in establishing friendship with co-ethnics as well as with members of other communities. Convenience seekers and experimenters as connoisseurs of culture situated mobile phone as a positive supplement that helped assert the centrality of the human subject, allowing for the abstraction of a secular, modern individual in a global space.

The austere user was linked to culturally petrified character. They found cultural learning as tedious as learning new mobile phone functionalities. The cultural personality trait that was averse both to higher level appropriation and to cultural learning allowed little space for negotiation. Meaningful engagement with dominant host cultures was, therefore, rare.

Based on the interviews with respondents, this section analyzed themes related to mobile phone appropriation and migrant acculturation. It first elaborated on the typology of mobile phone appropriation and substantiated how meta-communication linked the usage and symbolic cycles of the circular model. The section also presented a typology of acculturation and established links between appropriation types and acculturation types. The final hyphenated typology can be summarized as: *convenience seeker/experimenter-*

culture connoisseur, *group communicator-culture campaigner* and *austere user-culturally petrified* (Aricat et al., 2015) (see Figures 6, 7 and 8). The following chapter includes a detailed discussion of the findings that have been presented in this chapter as answer to the two research questions.

Figure 6: Diagram summarizing the main characteristics of aspirational migrants.

Group Communicators

- Reach out to groups of people swiftly and cost-effectively
- Assume leadership in ethnic, religious and social organizations for migrants
- Generate discussion on politics and social issues related to home-country among fellow migrants
- Those with active political past make interventions on phone during elections in the home country
- Subsidies in local calling and texting boost the culture campaigning behavior
- Send text messages to hundreds of receivers through a central distribution list

Culture campaigners

- Regular campaigning for home culture alleviate apprehension about loss of own cultural identity
- Migrants with higher human capital, like education, technology skills, elevate themselves to the level of cultural campaigners
- Culture campaigning as active resistance towards assimilationist pressures

Figure 7: Diagram summarizing the main characteristics of ethnic migrants.

Figure 8: Diagram summarizing the main characteristics of ascetic migrants.

CHAPTER SIX: DISCUSSION AND CONCLUSION

One key theoretical assumption of the study was that migrants tended to retain cultural identity and preferences while trying to foster relationships with other cultures in the host country. However, prior research suggested that stronger identification with own culture and lack of engagement with members from other cultures resulted in migrants' lower adaptation to the host society (Schwartz et al., 2010). Drawing on from the frameworks of acculturation and migrants' appropriation and functional uses of mobile phone, the present study explored migrant workers' mobile phone communication with members of own culture and with members of dominant host society cultures. The findings showed that low-skilled migrant workers' positive disposition towards cultural diversity in organizations had positive impact on their adaptation to both social life and work; mobile phone calling to dominant host cultures had positive effect on adaptation to work; and, cultural identity positively affected migrants' commitment towards organization. This chapter discusses the theoretical and practical implications of the results.

Acculturation, mobile communication and adaptation to social life

The first part of RQ1 investigated how adaptation to social life in the host country is determined by amount of mobile communication and acculturation factors like cultural identity and multiculturalism in workplace. Only multiculturalism in workplace, which corresponds to 'integration' in the pluralistic-typological model (Berry, 1997), had positive influence on migrants' adaptation to social life. Prior studies have established that

integration, or the favorable disposition of migrants towards their own culture as well as towards other cultures in the host country, positively affects migrants' adaption to the host society (e.g. Horenczyk & Munayer, 2007; Krishnan & Berry, 1992, Piontkowski et al., 2000). By assessing the impact of multiculturalism in workplace on adaptation in social life, the study has extended the scope of earlier research on integration. The results suggest that integration is indeed the desirable acculturation attitude in both social and work domains (Arends-Tóth & Van De Vijver, 2003; Horenczyk & Munayer, 2007). While an attitude of integration to the social domain was relevant for migrants with greater permanency in their resident statuses, this attitude is more valid in the work domain for migrants who have only transient statuses in the host country. This point was further corroborated by the fact that the integration measures (the four-typology model following the bi-dimensional approach) failed to attain internal validity while measuring acculturation in social life of migrant workers in the study, while the multiculturalism measure acquired internal validity in workplace.

The qualitative interviews provided justification for the relationship between multiculturalism in work place and social adaptation. In most cases, the migrants gained a footing in the new culture through engagement with their teammates from different cultures, as they jointly performed the organizational tasks. South Asian migrants had to communicate in English while talking to their co-workers from Thailand, Malaysia, Myanmar and China. Even among the South Asian workers, the lingua franca had to be a third language, which in most cases was English or Hindi. Micro-coordination using

mobile phone was also a means by which migrants improved their proficiency in English proficiency.

The fact that migrants' adaptation to social life is decided by their multicultural orientation in workplace also explains the peaceful co-existence of different ethnic groups in around 50 purpose-built dormitories and innumerable worksite accommodations in Singapore. Migrants' acceptance of other cultures takes place not only in the context of the organization, but in the social spaces too, leading to their greater adaptation in social life. Findings also suggested that the migrant workers' multicultural attitude that helped them in the coordination and joint performance of tasks has resulted in they seeking longer duration of stay in Singapore, unlike their earlier stints in Middle East and other regions.

In addition, since the migrants' identities are always a complex mixture of gender, class and culture (Nazroo & Karlsen, 2003; Ryan, 2010), there was a constant need for migrants to negotiate these identifies in a multicultural setting. In such negotiations, an attitude that is favorably disposed to other cultures will positively influence migrants' social adaptation. Although mobile phones facilitated the process of social adaptation, in the case of workers who conformed strongly to the home culture and its norms, there was hardly any influence of mobile phone communication.

Relatedly, cultural identity does not influence migrants' adaptation to social life. As minority groups with low socio-economic status and low political standing, the low-skilled migrants would not want to stake claims based on their identities. Prior studies

have confirmed the trend that low-vitality groups supported integration to the dominant society in view of the expected benefits of this attitude (Liu, 2007). This entailed that low-vitality groups desisted from expressing strong loyalty towards their cultural identity at the expense of negatively affecting their relationship with the dominant cultures in the host country. Extending the logic, it may be argued that any attack or perceived threat to migrants' cultural identity is unlikely to bring down the level of adaptation of migrants in social life. Whereas, as the discussion above suggests, if migrants do not have the disposition towards accepting the multicultural set-up of their organization, it would undermine their social adaptation in the host country. The absence of influence of cultural identity on adaptation to social life portends a healthy trend in cosmopolitan Singapore, as far as migrant workers are concerned. It means that migrants do follow multicultural and secular qualities in their life in Singapore, such that the strength of their identification to ethnic culture does not determine their adaptation to social life. However, as prior research on host society acculturation indicates (Navas et al., 2005), host society should also play its part to make the acculturation situation consensual, by showing greater tolerance and acceptance towards the migrants.

The non-existence of relationship between cultural identity and social adaptation may be understood with caution. While operationalizing the variables, cultural identity was conceived as a static concept, non-responsive to changing dynamics between interacting cultures. On the contrary, the migrant rioting incident of 2013 in Singapore ("Singapore's angry", 2013) shows that 'reactive ethnicity' (Rumbault, 2008) would afflict even culturally passive populations in the face of perceived threat and

discrimination¹⁵. Identities do not express themselves in a vacuum, but are co-constructed by the members who share these identities between them; identities are also ascribed by people external to the group (Diehl & Schnell, 2006; Howarth et al., 2014).

Age and education positively affected adaptation to social life, whereas income and period of residence did not have an effect. In prior studies, migrants of higher age were less adapted to the host society (Arasaratnam, 2008; Liu, 2007). Hence, the result calls for greater attention, as it tells something unique about the migration situation in Singapore. Either the migrants are becoming more submissive in their social life as they grow old, or, the older migrants' expectations from life in Singapore are much less as compared to that of young migrants. Further investigation is needed to understand this phenomenon.

Higher education leading to better adaptation is in line with the findings of earlier studies, which show that migrants with better language skills, higher knowledge of the process of migration and higher education tend to adapt better to the host country (Al-Rajhi, Altman, Metcalfe, & Roussel, 2006; Schwartz et al., 2010). Further investigation is required to understand how advanced mobile devices are better utilized by migrants with higher education to access information that can facilitate their better adaptation, in comparison to those who have less education.

¹⁵ The incident that triggered migrants' rioting in Singapore involved the death of a Tamil migrant in a bus accident in Little India, a busy business district in the country. The driver of the bus was a Singaporean. Suggesting that a 'reactive ethnic' backlash was at play, most of the 57 rioters later repatriated by the Singapore government were from the Tamil community (MHA, 2014, p. 11).

Finally, the model with the predictors – demographics, acculturation and mobile communication – has only accounted for a low amount of variance in migrants' social adaptation. Prior studies have identified a series of predictors involving cultural affinity and interpersonal and mass media communication as influencing the social adaptation of migrants (Holmes & Janson, 2008; Horenczyk & Munayer, 2007; Kim, 1977). However, the model used in the study failed to consider these variables, which resulted in a low R^2 value for the model. It would be worth investigating which all predictors outside acculturation and mobile communication decide low-skilled migrants' social adaptation – e.g., what is the differential impact of low-end mobile phone and smartphone on the social adaptation of migrants?

In sum, this section elaborated on the acculturation and mobile communication factors' influence on social adaptation of migrants. The results followed a mixed pattern – while multiculturalism in workplace positively influenced social adaptation, strength of cultural identity did not have any impact on social adaptation. Mobile communication factors too did not influence social adaptation. In addition there was no interaction between factors of acculturation and mobile communication. Contrary to the findings of prior research that older migrants are less adapted, this study found older migrants to be better adapted to social life. That education positively influences social adaptation confirms the findings of prior studies that well-informed migrants with greater language skills can adapt to the host society faster than their less educated counterparts.

Acculturation, mobile communication and organizational commitment

The second part of RQ1 inquired how acculturation and mobile communication affected organizational commitment. The positive influence of cultural identity on migrants' commitment to organization was contrary to prediction. Prior research in similarity-attraction paradigm has established that people feel favorably disposed to those who are similar to them in a group, leading to greater communication within group and group effectiveness (Chatman et al., 1998; Tsui et al., 1992). Conversely, members of minority cultures in an organization are likely to perceive threat to their identities which would eventually cause negative attitudes toward others, leading to the minority group's low organizational commitment (Riordan & Shore, 1997; Rupert et al., 2010). The results of the present study modify the existing understanding on minority groups' commitment to organization, as they show that the stronger the migrant workers identify themselves with their own ethnic culture, the more committed they are towards their organization. One explanation is the existence of co-ethnic groups in organizations, which help migrants from those communities to coordinate among each other and get work done easily (Chib & Aricat, 2012). Qualitative inquiry suggests the existence of such homogenous work groups based on ethnic identities in organizations. In such culturally uniform work groups, the migrant workers leverage on their national, linguistic and cultural identities to gain better acceptance, ensure information access and seek professional assistance in times of need.

Multiculturalism in workplace leading to better organizational commitment supports the findings of prior research that has observed positive outcomes like cognitive

complexity (Tadmor, et al., 2009), adaptability (Chae & Foley, 2010; Frankenberg et al., 2013; Riordan & Shore, 1997; Rupert et al., 2010) and integration and learning (Ely & Thomas, 2001) among migrants who desire greater diversity in organizations. However, this study did not differentially assess migrants' acceptance of diversity across class. It is still not known whether migrant workers in the lower stratum acknowledge diversity only among their peers in the same class or across the organizational hierarchy. Qualitative investigation suggests that considering the minimal and sometimes conflictual interaction of migrant workers with management, the desire for multiculturalism in workplace is restricted to their own class of workers and does not involve colleagues above their status. In most cases, migrants worked in a multicultural team that shares the same class character, and when they accepted diversity in their team, that positively influenced their organizational commitment. The effect of multiculturalism in workplace on organizational commitment was moderated by mobile phone calling to dominant host cultures, which was supported by qualitative interview data.

The leap in the effectiveness of the statistical model with the introduction of acculturation variables (R^2 value changed by 37.4%) suggests that the two factors – cultural identity and multiculturalism in workplace – are decisive in understanding low-skilled migrants' commitment to the organization.

The positive influence of mobile calling to dominant host cultures on organizational commitment of migrant workers also needs attention. Calls originated from members of dominant host cultures, but also those directed to them, were captured by the scale. However, the variance explanation power of the mobile communication variables

was low, highlighting the need for more factors in the block, or more effective measurement scales. Qualitative inquiry showed that contact with a member from other culture most often began in the organizational context, although it later extended to social spaces. Hence, the positive relationship between calling members of other cultures and organizational commitment is justified, as calling to other cultures often entails team work and problem solving that utilizes the instrumental potentialities of the mobile phone, leading to migrants' better organizational commitment (Larkey, 1996).

Demographics did not decide migrants' organizational commitment. It suggests that in a multicultural work context, acculturation-communication variables have greater power to predict workers' organizational commitment, in comparison to their demographics. Positive outcomes in organizations may not be achieved only by ensuring that the workforce is young and is well paid and well educated – concerns typical of conventional managerial outlook. On the contrary, issues related to cultural identity and multicultural disposition of the workforce need increased attention.

Finally, the model with predictors of demographics, acculturation and mobile communication has accounted for considerable amount (43%) of variance in organizational commitment. It suggests that organizations would benefit if they take an effort to assess periodically the cultural identity, mobile calling behavior, and multiculturalism of the migrant workers at the lower stratum. It is important to understand the factors affecting organizational commitment of migrant workers, as the latter has extended impact on other favorable organizational outcomes, like productivity and job satisfaction. Studies have shown that committed employees show greater loyalty to the

organization, and are more satisfied in their work in comparison to employees who are less committed (Mathieu & Zajac, 1990; Riketta & Van Dick, 2005). As an important predictor of positive organizational outcomes, organizational commitment needs greater emphasis in statistical modeling that involves the communication and acculturation of migrant workers, so that the integration of minority members into the organization and, ultimately to the host society as a whole, can be achieved.

The differential impact of predictors on the two indices of adaptation – social adaptation and organizational commitment – suggests that acculturation of migrants in the host country varies with the life domains (e.g., Arends-Tóth & Van De Vijver, 2003; Navas et al., 2005). While the blurring of lives and livelihoods remain a prominent theme in mobile communication studies (Donner, 2009), acculturation research still considers the two domains as separate. One reason for this demarcation between the personal and the professional is the very nature of labor migration; given the lack of possibilities for naturalization to the host country in the long-term, migrants want to keep the domains separate and approach them with different acculturation strategies.

From a communication perspective, more effective models that can predict adaptation with the help of acculturation and mobile communication may be adopted in future research. For example, studies have identified factors like migrants' interpersonal communication, mass media usage and participation in recreation clubs and religious groups in the host country as mediating the effect of acculturation on adaptation (Birman et al., 2005; Krishnan & Berry, 1992; Schwartz et al., 2010). This arises from the understanding that "... the relation between acculturation and adjustment outcomes are far

from simple according to the theoretical and empirical literature: Some groups may benefit using strategies that may be irrelevant or even problematic to others” (Jurcik et al., 2013, p. 664). In line with these models, mobile phone calling to host and home cultures may be introduced as mediating factors in future research. Considering the widespread diffusion of feature and smartphones among migrants world over, especially among those located in the developed countries, more research is needed to understand the effect of mobile communication as predictors or mediators on acculturation and adaptation. Migrants at the lower strata have less access to offline interactive channels with the host society, like membership in resident clubs and professional organizations. Hence, the importance of a sustained evaluation of the role of mobile communication in the acculturation of migrants is needed in the contemporary context.

It is also important to understand how different sections of migrants appropriate mobile phone, in their effort to acculturate to the host society. The following section elaborates on the types drawn from qualitative data, going deeper into the linkages between acculturation and mobile phone usage. These types defy the essentialized conceptions of acculturation typologies, based on two fixed dimensions of cultural relations, viz. (i) retaining one’s own cultural heritage; and, (ii) relating to other cultures. Instead, the types underline the socio-historical contexts that determined the identity of migrants that were not fixed but always fluid in their relationship with other cultures as well as in their mobile phone use (Bakardjieva, 2006; Bhatia & Ram, 2009). These categories do not have objective existence among the population studied, as the case with Weber’s ‘ideal types’ (Kim, 2012), instead they work with the principle of adequacy.

Ideal types bring together “concrete individual phenomena... into a unified analytical construct” (Weber, 1904/1949, p. 90). But it is futile to look for an empirical correspondence for these ideal types in reality, since they amount to “utopia [that] cannot be found empirically anywhere in reality” (p. 90). Weber (1917/1949) emphasizes one-sidedness in social science, against the claims of objectivity in the positivist tradition. It helps the researcher to be “self-consciously subjective” (Kim, 2012), and “stand up for [his/her] own ideals” (Weber, 1904/1949, p. 58). In a similar manner, the ideal types of mobile phone usage-acculturation suggest a utopia, which nevertheless is analytically consolidated, but empirically non-falsifiable. This method should thus be understood beyond the traditional objective-subjective postulates of science.

Mobile usage-acculturation types

The qualitative exploration on mobile usage patterns and appropriation was based on the circular model. Mobile phone appropriation was analyzed based on the three dimensions derived from the circular model: *usage and handling*, *prestige and social identity* and *meta-communication*. Although the two acculturation indices of the pluralistic-typological approach – (i) retaining one’s cultural identity; and (ii) relating to other cultures – informed the identification of the types, a more fluid method of classification has been followed.

While four user types – *convenience seekers*, *experimenters*, *group communicators* and *austere user* – were identified on the basis of respondents’ appropriation patterns, three acculturation types – *culture campaigner*, *culture connoisseur* and *culturally*

petrified – were identified on the basis of their extant affinity towards own-culture as well as their relationship with other cultures. The analysis qualitatively linked appropriation types with the acculturation types: culture campaigners tended to be group communicators, whereas convenience seekers and experimenters were driven by material conditions of culture and were mostly connoisseurs of culture. The austere users were characterized by a lackadaisical attitude with limited desire for innovation, and hence were also culturally petrified in their approach to acculturation. Further quantitative investigation is required in order to establish causality patterns between mobile appropriation and acculturation. Nonetheless the linkages found in this study reveal that mobile phone appropriation styles are indeed related to the social behavior patterns of the users, migrant acculturation being one such crucial phenomenon decisive in the process.

The following three sub-sections summarize the three hyphenated types derived from the qualitative data.

The aspirational migrant

Aspirational migrant corresponds to the convenience seeker/experimenter cum culture connoisseur group (refer to Figure 6). Aspirational migrants utilize the relationships they establish in the host country for expanding career horizons, for attaining personal and professional growth and for taking up new challenges in life. This group of migrants has to be situated beyond the discourse of transnationalism, which is restricted to home and host cultures alone. Burrell and Anderson (2008) consider aspirational migrant as the new face of modern day migration, who goes beyond the confines of home and host

cultures to explore a plethora of cultures in faraway regions. Aspirational migrants utilize the opportunities available to them in different regions of the world in order to attain a goal, a goal that takes newer forms as they come across new events in life.

Like any other migrant in the lower economic strata, aspirational migrants also have limited political and civil rights in the host country, limited choice on the strategies of acculturation, which result in their restricted freedom and capabilities. However, in their attempt to explore the freedom possibilities, aspirational migrants use mobile phones as a tool for information access and networking.

Interviews suggested that even though aspirational migrants adapted to the social domain and respected cultural diversity better than others, it did not ensure their longevity of residence in the host country. Aspirational migrants gave priority to expanding their horizons in life, and adaptation to the host society as well as to its technology environment was only a means to achieve this end. They strategically utilized various affordances of the mobile phone for bridging divides in information access, connectivity and for the acquisition of skills. In addition to acquiring advanced mobile gadgets, they kept track on the broader changes occurring in the mobile technology scene in the host country, with an aim to improve their career. Future research can investigate whether aspirational migrants' use of mobile phone actually helped them advance in their career or not. Further investigation is also needed to find out whether aspirational migrants' better adaptation to the host society is a cause or an effect of their high amount of mobile phone calling to both host and home cultures.

Given experimenters’¹⁶ aptitude and skills in tweaking the functionalities of the mobile phone, some suggestions for future research on technology design are in place. Bar et al. (2007) argue that technology appropriation is always a political expression of resisting and negotiating different power structures: “the technology’s particular architecture embodies specific power relationships, between equipment makers and service providers, as well as between both of these and users” (p. 3). Future research may focus on how the inputs from experimenters could help improve the technology design and affordances of mobile phones meant for migrants. Businesses may invest in research and development to investigate how the tweaking and experimenting qualities of experimenters could be replicated across the board. Such measures would help address the problem of digital divide that occurs among migrants due to lack of skills and lack of familiarity with the latest affordances of the phone (Qureshi, 2012).

Government agencies may delve more on the characteristics of aspirational migrants, and motivate and strengthen the culturally-neutral and -sensitive disposition of this group of migrants. The outlook of aspirational migrants fits well with the meritocratic employment market of host country Singapore, making the acculturation situation a consensual one (Navas et al., 2005). It is therefore in the interest of the host society to identify the traits that make up an aspirational migrant and inculcate such values in other groups of migrants. However, it needs to be ensured that such profiling is not used for

¹⁶ Experimentation is one key characteristic of aspirational migrants as elaborated while answering RQ2.

social engineering, when policies related to migration are formulated at the government level.

The ethnic migrant

Ethnic migrant corresponds to the group communicator cum culture campaigner group (refer to Figure 7). A chief characteristic of ethnic migrant was that due to their greater identification with their own culture, their engagement with the host society culture was low. Mobile phone becomes a tool for ethnic migrants to spread the message of their home culture. Interviews showed that ethnic migrants (constituting culture campaigners and group communicators) engaged themselves more than other groups in campaigning for a political cause or organizing a cultural festival in the host country. From a political transnationalism perspective, diasporic communities and their political engagement with both host and home countries have received considerable academic attention (Chan, 2005; Laguerre, 2005; McGregor & Pasura, 2010; Tynes, 2007). For guest workers, who have limited political citizenship rights in host countries, mobile/social media have provided affordable opportunities to communicate and share views related to the politics of their home country. However, there is a marked difference between transnational exchanges happening in other migrant categories and contexts and the transnational exchanges of migrants at the lower strata. For example, the amount of influence wielded by Latin American and Caribbean migrant workers in US in the politics of their homeland is unique to that population (Barry, 2006; Laguerre, 2005; Parham, 2004), whereas such political influence may not be observed to the same extent in other

diasporic communities. Despite being a major sending country, Indian diaspora's role in deciding the political climate of their home country has been minimal¹⁷. In the case of migrant workers in the low-income group, financial constraints and job pressures disallow them to fly home to vote in elections, or use their mandate through absentee voting mechanisms.

A study conducted to evaluate the political participation of migrants in Singapore provided insights into ethnic migrants' political participation (Aricat, 2015b). The study explored how the low-skilled migrant workers from India imagined and asserted their political identity through various usages of the mobile phone. The findings showed that some migrants who were active in politics in pre-migration phase lost their interest in politics after migration. However, a small section of migrants felt a sense of loss for not being able to continue their political activities in the host country. This transnational political imagination also worked as a defensive cultural identity for ethnic migrants. Political issues related to their home country opened up a public sphere for ethnic migrants to assert their national identity, form groups and keep the transnational imagination alive.

However, the transnational political imagination kept alive by low-skilled migrants had only limited influence in deciding their offline political activities. For instance, low-skilled migrants from South Asia do not appeal as a political constituency

¹⁷ This needs some qualification, as the situation is fast changing in today's scenario. Major political parties in India, for instance, are using new communication technologies to seek support from overseas citizens.

for established parties in their respective home countries. While it is a usual practice for political parties to set up chapters in immigrant settlements and for politicians to campaign among the expatriates (Guarnizo et al., 2003), no such activity has been reported among South Asians in Singapore. Hence, the traditional categories of voting and campaign participation, whose applicability is restricted to citizens and other resident segments of a society, do not have relevance to migrants at the lower strata (Eveland et al., 2005; Pasek et al., 2009). In such a situation, mobile/ social media help develop a public space where migrants could express their opinion about political issues relating to their home country, thereby co-creating their identities in virtual spaces. However, the accessibility to such a public sphere is not evenly distributed among all segments of the migrant population (Suroor, 2012).

The low level of engagement of ethnic migrants with the host society was not due to a passive apathy. On the other hand, it was resultant of their active defense of their own cultural identity. Limited freedom of expression related to political matters in the host country might also have an aggravating effect on ethnic migrants, who ultimately have to content themselves with discussing politics of their home country in virtual space (Lee, 2005).

Future research can focus on ethnic migrants to understand how they use different mobile/social media channels to campaign for political and cultural causes and to co-create and strengthen their identities in the host country, and how it affects their adaptation to both social and work spaces.

The ascetic migrant

Ascetic migrant corresponds to austere user cum culturally petrified group (refer to Figure 8). The chief characteristic was that their usage of mobile phone was confined to a handful of affordances – like calling, texting, listening to music and the camera. They were also reserved in their engagement with other cultures, but unlike culture campaigners they were not active proponents of events and activities related to home culture. Ascetic migrants' low spending on mobile phone calling may also be due to insufficient disposable income. Those who are stuck at low end mobile phones still had to recharge their pre-paid calling cards at regular intervals, while those who used internet-based international calling could substantially cut down their monthly calling expense while gaining more talk time. Ascetic migrants' increased reliance on conventional mobile phone calling, instead of internet-based calling, was mostly due to their lack of adaptation skills in the new advanced mobile ecosystems (Aricat, 2015a). Future research can investigate the effect of these factors while mapping the acculturation patterns of migrants.

While asceticism may be construed as a limited revulsion towards host society culture, it may also be a manifestation of a tapering off stage in migration. Government policies towards low-skilled migrants disallow them to naturalize to the host country, resulting in a circular migratory process among this section of migrants. Adding to the woes of their temporary statuses are their lower than expected returns from labor, irregular or delayed payment of salaries and general dissatisfaction in jobs. Interview data

confirmed this relationship between mobile communication, acculturation and adaptation, as respondents complained about low wages, discrimination against South Asian workers in work places and lack of opportunities for career growth. Ever-increasing debts, especially the debt they incurred as they acquired a work permit in Singapore, resulted in ascetics' judgment of their migration to Singapore as a failed attempt. In all such cases, the denouement was invariably the migrants' impending distress return to their home country. Such underlying dynamics of migration has become decisive in their mobile phone calling to home and host cultures.

Migrant workers in this category are not necessarily discontent about perceived discrimination or about being unable to integrate well with host society. But they are overburdened by the responsibilities they have on themselves as breadwinners of their family. Other studies have also confirmed how male migrant workers endure greater social and emotional stress during their migrant lives, compared to their female counterparts like the foreign domestic workers (Chib et al., 2013). Hence, the government policies for this group of migrants should be to address their economic and social distress, which they have inherited from their pre-migration phase and which are aggravated by factors like low wages and uncertain future. Businesses may delve more into the communication behavior of these migrants and introduce products and services targeting the group.

Ascetics' relationship with their own life and also with the world was not established on a foundation of technological complexities, but on more primeval issues of livelihood, human relationships and perceived human values. Religious cosmology had a

decisive role in ascetics' life, although universal secular principles of equality among religion and gender parity did not have much appeal for them.

Another characteristic of ascetics is lack of initiative. They waited for things to fall in place, rather than actively intervening to change the course of events. These migrants were often influenced by peer opinion, ranging from advices on how to adapt to host society to the kinds of mobile usage that would help them during their stay. Some ascetics admitted that they rarely initiated a conversation on politics or participated in a political discussion, while staying in the host country. The prohibitions on freedom of expression prevalent in the host country may have a linear repressive impact on ascetic migrants (Lee, 2005).

In sum, the three categories of migrants – *aspirational*, *ethnic* and *ascetic* – highlighted the links identified between acculturation and mobile phone appropriation. As noted, the terminology does not intend to label any individual migrant based on his acculturation attitude and mobile phone appropriation. Instead, the categories summarized the ways in which migrant personalities can be constituted on the basis of the two phenomena.

Theoretical implications

Theoretically, the study contributes to both the conceptualizations of acculturation, viz., (a) acculturation understood on the basis of quantifiable attitudes and essential categories (Berry, 1997); and, (b) acculturation as founded in the socio-historical processes and explained as non-essential patterns (Bhatia & Ram, 2009). Theoretical

contributions to the first conceptualization include: (i) In addition to interpersonal communication and mass media usage, this study recognized the importance of mobile phone calling in the acculturation process; (ii) It identified the links between mobile communication, acculturation and adaptation outcomes in the domains of work and social life, thus advancing the theoretical understanding on the role of mobile phone in the two acculturation domains; and, (iii) It made relevant the concept of acculturation to the low-skilled migrant population, thereby making the discourse more broad-based and less exclusionary. The ‘usage and handling’ component of the circular model has been theoretically developed in the study to link with the first conceptualization of acculturation.

Theoretical contributions to the second conceptualization are: (i) The process of identifying the acculturation-mobile phone user types exemplified how migrant acculturation can go beyond the four-class typology and manifest in overlapping patterns. Migrant types fail to manifest as monolithic cultural identities; they do not represent individuals with a coherent, unified self that always hark back to origins, but a de-centered self that constantly evolves as a result of its interaction with the changing migrant situations; and, (ii) The links between acculturation and mobile phone appropriation advance the theoretical understanding on intercultural communication in mediated spaces.

Policy implications

The findings of the study suggest that migrants' interaction with home and host cultures decide their adaptation to social and work domains. The official position of the Singapore government is to keep the low-skilled migrant population as a repatriable workforce. The resident population also resists integration of low-skilled migrants to the mainstream. Even within this policy framework, the findings of this study can enhance migrant workers' acculturation experience. The findings suggest that allowing migrant workers to show greater loyalty to their ethnic culture will not in any way affect their social adaptation, but only strengthens their organizational commitment. Policies can be formulated based on this knowledge, in order to strengthen multiculturalism among migrant workers in the work place. No policy restrictions are required to control the expression of migrants' loyalty towards their own culture, as suggested by the study. Further, findings suggest that migrant workers' organizational commitment will be enhanced if they talk to members of dominant host cultures on mobile phone. In the organizational spaces there should be more interaction between management and the lower level workers. As suggested by interview data, migrant grievances are not sufficiently redressed by the management over mobile phone calls. There needs to be active efforts to change the situation, and introduce more mobile-based grievance redress mechanisms within the organization. Management can also take active measures to improve the language skills of the migrants, helping them to talk more with their colleagues from other cultures over mobile phone.

The findings from the second research question in the study, as well as the methods used, helped identify acculturation types and mobile phone user types among migrant workers. If practiced judiciously, such profiling helps the host society institutions and the civil society to promote mutually beneficial relationship with migrants. From an ethical point of view, the aim of host country government should not be to classify migrants based on the types identified in the study. The identification of migrant types method used in the study may be misinterpreted narrowly, which may result in the exclusion of those migrants who do not fit to the dominant host society outlook. The author cautions against possible misuse of the method by ultra-nationalist, anti-immigrant lobbies, who may disregard the theoretical premises that supported the method. In this study, the types were identified for the purpose of challenging the essential acculturation categories. It should be noted that different life philosophies and outlook underpin different types, implying that the natural co-existence of one type with the other, as well as a harmonious existence of all types with the host society, must be set as the policy objective. Classification of migrants based on acculturation and mobile phone appropriation types involves social engineering, and thus, should be avoided.

Beyond the impact model

Although this research began with the objective of understanding the impact of mobile phone on migrant acculturation, over the course of the study it was observed that the technology, along with having an impact over the users from a macro perspective, was appropriated in different ways as part of social processes. Meanings were ascribed to

mobile phone affordances based on the cultural and social background of the users, while users appropriated its functionalities as decided by the social context they were in (Hall, 1980; Jamison & Hard, 2003). The findings confirmed the social constructivist position that technology cannot have inherent properties outside the interpretive frames with which they are explored and utilized (MacKenzie & Wajcman, 1999). Without dismissing the ‘impact’ and ‘effects’ of mobile phone communication that the populations world over have witnessed from a macro perspective, the research however calls for a deeper engagement with the interpretive schemas adopted by users as they appropriate various affordances of the technology. The realist position of techno-determinists stands rejected, for reason that different usages of the mobile phone are constituted and determined by socio-cultural norms and practices. Similarly, the essentialist nature of typological thinking in acculturation has also been critiqued in this research with the introduction of acculturation types that are more dynamic, and overlapping with each other.

Limitations of the study

Firstly, due to the convenient sampling methods used in the study, the extrapolations based on statistical results have limitations. Second, the population studied had specific demographic characteristics – male low-skilled migrant workers from four linguistic groups from Bangladesh and India. Hence, the results of the study may not be generalized to other groups of migrant workers like foreign domestic workers or skilled workers and professionals in high-income jobs, like IT, finance and education. Third, the mobile communication measures used in the quantitative part of the study have taken into

account only one aspect, viz. mobile phone calling. The effects of other modes like texting and chatting may also have a bearing on migrant acculturation. The research design did not take this into account. Fourth, the questionnaire survey relied on self-report and each respondent had to fill in the questionnaire by himself, although assisted by the researcher or their friends in some cases. Due to insufficient skills in filling up a questionnaire, the respondents with lower education level might not have provided information true to their best knowledge and belief. Since the survey used self-reported measures, all limitations associated with this method were applicable to this study too (Boase & Ling, 2013). Fifth, the interviews were conducted in only three languages – English, Hindi and Malayalam. Although the services of interpreters were sought whenever necessary, some information might have lost when the respondent expressed it in his mother tongue and the researcher understood it in another language. Sixth, the researcher did not have access to any of the living places of migrants, usually dormitories, and to their work sites. Had the researcher gained access to these sites, some information provided by the respondents could have been verified and cross-checked. In the absence of it, respondents' verbal recollections and narratives had to be taken to be true. Seventh, acculturation is a bi-dimensional process for both migrants as well as the host society. It is only through an investigation involving both migrants and the host society that a vivid picture of this phenomenon would emerge. This study, instead, looked only at the experience of migrants and highlighted their experience over that of the host society. Eighth, on thorough scrutiny there might appear a disconnect between the conceptual definition and the operationalization of the variable 'mobile communication to dominant host cultures.'

While the six questions on mobile communication (three each for duration and frequency of calling) enquired on the amount of communication to friends from other cultures and to colleagues, it is to be noted that the latter category might have some overlaps with the mobile communication measure on home culture calling. However, the differential effect of mobile calling to home and host cultures on the adaptation outcomes shows that such overlaps have been minimal and insignificant. Ninth, the data collection process lasted for more than two years, during which period many factors related to migrant workers and mobile technologies could have changed. Although a descriptive understanding of such changes was achieved by qualitative interviews, the questionnaire might have evoked different meanings for respondents who filled it early on and those who filled it towards the end of the data collection period. For example, voice over internet calling has diffused to the migrant population at a fast pace during the data collection period. The question on ‘how long you talk to family back in your home country’ might have evoked different connotations for respondents who filled the questionnaire before and after the smartphone diffusion. Relatedly, the focus of the research was fine-tuned over the course of data collection, as the full potential of the circular model of mobile phone appropriation was identified only later in the study. Hence, interview questions based on the model components may not have captured the appropriation phenomenon in its fullest. Tenth, in the regression analyses, the block with mobile communication variables as well as the full model of ‘adaptation to social life’ has low explanatory power (R-square value). Hence, there is limited scope for generalizing the results.

Finally, the research followed a positivist approach as it investigated how the mobile phone was appropriated within a cross-cultural context. Drawing on mainly from the tradition of Enlightenment rationality and the sociological thinking emerged from that event/period, this study failed to fully appreciate latest understanding related to the de-centredness of the human subject (Hall, 1992). The conceptualization and execution of the study, interpretation of the phenomenon of technology appropriation and the critique of existing research literature would have been different had the study drew more from the philosophical tradition that negated the originality of the knowing subject.

Future research

The quantitative part of the study attempted to assess the relationship between mobile communication and migrant acculturation, which was reflected in migrants' adaptation in the host country. Based on the findings of this study, future research can attempt to build sophisticated models and causality structures that combine mobile communication and acculturation. Mobile communication should eventually be introduced into the acculturation models, complementing the interpersonal and mass media communication variables used in these models.

The concept and design of this study may be extended to include other migrant segments in Singapore, but also international and in-country migrant populations around the world. It is relevant in the emerging migrant context to understand how individuals and groups appropriate mobile technology to empower themselves in non-institutionalized ways. Findings from such studies can guide the society to go beyond official narratives

and media apprehensions on the cultural threats posed by migrants and understand the newer patterns of cultural mixing and plurality with better clarity.

There should be sustained research interest on the acculturation experience of migrants at the lower strata, which eventually unfolds in diverse patterns in disparate demographic groups. Indeed, the ultimate challenge is to acknowledge that the acculturation experience of each individual migrant is irreducible and unique.

In conclusion

Importance of communication in acculturation has often been understood at the level of content, without accounting for the communication technology usage patterns. For instance, the impact of traditional media like print, radio and television on ethnic migrants has been studied mainly by looking into the amount of media exposure and also by analyzing the media content consumed by ethnic communities. Extending this goal-oriented model, this study looked at migrant acculturation as a phenomenon determined partially by mobile-phone usage patterns. By conceptualizing acculturation as an ongoing process, rather than as an end goal, this study looked into the changing communication technology contexts in which male low-skilled migrants acculturated to the host society.

The study followed two competing conceptualizations of acculturation – one that quantifies the acculturation attitudes and categorizes the acculturating individual, and the other highlighted by a descriptive, non-essential understanding of acculturation. Both these conceptualizations were linked with the mobile phone appropriation studies among migrants: The functional approach towards mobile phone study was linked to the first

conceptualization of acculturation based on quantifiable categories, whereas the appropriation approach was linked to the second conceptualization of acculturation based on non-essential types. From the perspective of individual well-being, none of the types in acculturation and mobile phone appropriation may be considered better than the other. Whereas, viewed from the perspective of multiculturalism, those migrant personalities that creatively engage with other cultures fit better to a multicultural host society. In any case, there cannot be a single answer for the integration question. Empirical studies can assess integration and comment on the intercultural situation. But the individual experience is more complex and ongoing. Hence, there is no endpoint where one can say that integration is achieved. Any such claim can be equally refuted with counter examples of marginalized, less integrated migrants always wanting to go back to their home country in the long-term.

Some findings of the study highlighted the uniqueness of migrant adaptation in Singapore: e.g. higher amount of mobile communication to other cultures positively affected migrants' adaptation only in work spaces. It suggests that engagement with other cultures occurs more in organizational spaces, with beneficial effect for both the organization and the migrants. Whereas, in order to adapt to the social life of the host country, migrants rely on co-ethnic networks, in addition to their regular interactions with their families in the country of origin. There is an indication that the social spaces in the host country are less welcoming to migrant workers in comparison to their work spaces. The government and the civil society need to identify the reasons behind the division between the two domains and work towards bridging it.

An important contribution of the study is that the layered meanings and implications of acculturation have been made relevant to migrants at the lower strata. It highlighted the disadvantaged position of low-skilled migrants in their negotiation for freedom and rights in the host country. The economic logic of labor migration itself presents an unstable acculturation context for the low-skilled migrants and the host society. Due to this same economic logic, a management perspective has taken precedence over a political praxis of migrant rights and assertive action. Migrant behavior has become something to be studied, to be constantly watched and to be pacified for good. In a spiral, and over time, such management mechanisms ensure that there is minimal agentic role for the cultural self of migrants, productivity is enhanced and these migrants are constantly reminded of their transient existence in the host country. From a development point of view, governments, mobile service providers, policy makers and the civil society need to provide optimal conditions for migrants to acculturate in a beneficial and self-fulfilling way. Only such a condition can provide true freedom of choice for migrants and save them from being cogs in the machine. Technology innovations should not pose assimilationist pressures on migrants; instead, migrants should be given the choice to assert their different identities – as a satisfied user of a low-end mobile phone, as an ascetic migrant who does not value the universality of Enlightenment rationality, etc. – without being excluded and discriminated against in the host society.

This study emphasizes that the double whammy – being a low-skilled migrant with minimal chances of professional upward mobility and a culturally uprooted migrant working in a multicultural environment – needs a resolution at the fundamental level. As

long as the economic and policy structures supporting labor migration remain the same, the differential adaptation of migrants in personal and professional domains is expected to continue. How far a conscious and collective will – either from the host society or from the migrants, or from both – can change the course of this destiny cannot be inferred from the findings of the study.

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APPENDIX A: FIGURES

Figure 9. Scree plot of factor analysis on acculturation items.

Figure 10. Scree plot of factor analysis on social adaptation items.

Figure 11. Scree plot of factor analysis on organizational commitment items.

Figure 12. Scree plot of factor analysis on mobile communication items.

APPENDIX B: TABLES

Table 8: Details of Interviewees

Sl. no.	Interviewee ID ¹	Age	Education (In years; including vocational training)	Income slabs ²	Job	Duration of residence in Singapore (In months; under different contracts)	Interview date and venue ³
1	BGL01	29	10.0	2	Mechanic, Shipyard	43	21-Jul-11; Penjuru ⁴
2	BGL02	24	12.0	2	Steel reinforcement (skilled worker), Construction	24	14-Jun-11; Soon Lee Rd.
3	BGL03	24	9.0	1	General worker, Construction	24	13-Jun-11; Soon Lee Rd.
4	BGL04	30	10.0	3	Welder, Construction	72	5-Jul-11; Soon Lee Rd.
5	BGL05	31	15.0	2	General worker, Construction	12	17-Jul-11; Penjuru
6	BGL06	30	10.0	2	General worker, Construction	12	10-Aug-11; Penjuru
7	BGL07	23	12.0	1	General worker, Construction	25	30-Jul-11; Penjuru
8	BGL08	25	10.0	2	General worker, Construction	18	3-Jul-11; Soon Lee Rd.
9	BGL09	25	12.0	1	General worker, Construction	36	10-Jun-11; Soon Lee Rd.
10	BGL10	23	10.0	2	General worker, Process Construction & Maintenance (PCM)	30	3-Jul-11; Soon Lee Rd.

11	BGL11	37	11.0	2	Fitter, Shipyard	18	3-Aug-11; Soon Lee Rd.
12	BGL12	21	12.0	2	Rigger signalman, Construction	24	14-Jun-11; Soon Lee Rd.
13	BGL13	24	10.0	2	Air-con mechanic, Construction	24	14-Jun-11; Soon Lee Rd.
14	BGL14	32	12.0	3	Safety supervisor, Construction	168	15-Jun-11; Soon Lee Rd.
15	BGL15	27	10.0	2	Welder, Shipyard	84	21-Jul-11; Penjuru
16	BGL16	29	12.0	2	Security guard, Construction site	60	25-Aug-11; Soon Lee Rd.
17	BGL17	26	12.0	2	Supervisor, Construction	120	15-Jun-11; Soon Lee Rd.
18	BGL18	32	8.00	1	General worker, Construction	36	9-Jun-11; Soon Lee Rd.
19	BGL19	28	15.0	2	Painter, Construction	36	8-Jun-11; Soon Lee Rd.
20	BGL20	26	10.0	2	Safety supervisor, Construction	44	19-Jul-11; Penjuru
21	BGL21	31	15.5	3	Skilled worker, Construction	117	21-Sep-12; Centurion
22	BGL22	34	16.0	4	Office work, Construction	22	09-Mar-13; Near Teka Mall
23	MAL01	26	13.0	3	Welder, Refinery	60	31-Jul-11; Penjuru
24	MAL02	36	13.0	2	Quality controller, Marine sector	60	27-May-11; Eng Lee hostel
25	MAL03	35	12.0	3	Quality controller, PCM	72	30-May-11; Eng Lee hostel
26	MAL04	42	10.0	2	Insulator, PCM	12	16-Jul-11; Penjuru
27	MAL05	40	10.0	2	Air-con mechanic, Shipyard	48	17-Jul-11; Penjuru

28	MAL06	45	10.0	2	General worker, Shipyard	11	3-Apr-11; Penjuru
29	MAL07	50	12.0	2	Pipe fitter, Shipyard	84	21-Jul-11; Penjuru
30	MAL08	27	12.0	2	Quality controller, PCM	84	27-May-11; Kian Teck hostel
31	MAL09	30	10.0	2	Welder, Shipyard	72	31-Jul-11; Penjuru
32	MAL10	32	10.0	2	Electrician, Shipyard	33	4-Jun-11; Soon Lee Rd.
33	MAL11	25	12.0	2	Quality controller, PCM	18	3-Jun-11; Blk 916
34	MAL12	32	14.0	2	Electrician, Shipyard	36	4-Jun-11; Soon Lee Rd.
35	MAL13	26	12.0	3	Electrician, Shipyard	42	4-Jun-11; Soon Lee Rd.
36	MAL14	34	12.0	2	Technician, PCM	24	2-Jun-11; Soon Lee Rd.
37	MAL15	30	12.0	2	Quality analyst, PCM	84	11-Aug-11; Avery Lodge
38	MAL16	25	12.0	2	Welder, PCM	60	25-May-11; Blk 988C
39	MAL17	31	12.0	2	Quality analyst, Piping sector	60	17-Jul-11; Penjuru
40	MAL18	33	12.0	3	Quality controller, Welding	60	17-Jul-11; Penjuru
41	MAL19	23	10.0	2	General worker, Insulation	14	19-Jul-12; Penjuru
42	MAL20	33	12.0	2	General worker, Insulation	26	24-Mar-11; Soon Lee Rd.
43	MAL21	41	10.0	2	General worker, Construction	21	16-Jul-11; Penjuru
44	MAL22	25	12.0	1	General worker, Insulation	24	3-Apr-11; Penjuru
45	MAL23	28	10.0	2	General worker, PCM	23	24-Mar-11; Soon Lee Rd.
46	MAL24	23	14.0	1	General worker, Shipyard	8	8-Apr-11; Soon Lee Rd.

47	MAL25	30	14.0	2	Electrician, PCM	24	23-May-11; Eng Lee hostel
48	MAL26	29	14.0	3	Quality controller, Welding	24	6-Jun-11; Blk 816
49	MAL27	31	10.0	2	Sheet material fitter, Insulation	30	18-Aug-12; Joo Koon
50	MAL28	28	11.0	2	Welding, PCM	72	18-Aug-12; Joo Koon
51	MAL29	42	13.0	2	Cladding & Insulation	36	18-Aug-12; Joo Koon
52	MAL30	32	13.0	3	Marine engine mechanic	84	18-Aug-12; Joo Koon
53	MAL31	24	14.0	3	Piping supervisor	18	19-Aug-12; Joo Koon
54	MAL32	23	12.0	2	Forklift driver, Shipyard	12	1-Sep-12; Joo Koon
55	MAL33	30	16.0	3	Mechanical supervisor, Construction	84	9-Jun-13; Bluestar
56	MAL34	30	16.25	2	Fitter, Refinery	44	9-Jun-13; Eng Lee hostel
57	TAM01	43	12.0	3	Quality controller, Refinery	48	23-Jul-11; Penjuru
58	TAM02	26	12.0	2	General worker, Insulation	72	23-Jul-11; Penjuru
59	TAM03	27	16.0	2	Quality controller, PCM	36	3-Aug-11; Soon Lee Rd.
60	TAM04	25	10.0	2	Safety supervisor, Oil & Petrochemical	60	21-Aug-11; Penjuru
61	TAM05	29	14.0	2	Fitter & Rigger signalman	36	22-Aug-11; Penjuru
62	TAM06	34	10.0	2	Skilled worker, Insulation	62	30-Apr-11; Soon Lee Rd.
63	TAM07	26	15.0	2	General worker, Insulation	30	18-Aug-12; Joo Koon
64	TAM08	25	15.0	2	General worker, Insulation	30	18-Aug-12; Joo Koon
65	TAM09	28	12.0	2	General worker, Insulation	27	19-Aug-12; Joo Koon
66	TAM10	36	10.0	2	Store keeper, PCM	36	25-Aug-12; Joo Koon
67	TAM11	38	12.0	2	Store keeper, Construction	60	25-Aug-12; Joo Koon

68	TAM12	24	16.0	2	Office work, Oil & Petrochemical	72	9-Mar-13; Penjuru
69	TEL01	22	11.0	2	Welder, Shipyard	36	25-Jul-11; Blue Star
70	TEL02	25	11.0	2	Welder, Construction	48	16-Jul-11; Penjuru
71	TEL03	25	16.0	2	Store keeper, Construction	13	19-Aug-12; Joo Koon
72	TEL04	29	10.0	2	Fitter & Welder, Construction	72	24-Feb-13; Soon Lee Rd.
73	TEL05	28	15.0	2	Painting & Plastering, Construction	60	24-Feb-13; Soon Lee Rd.

1. BGL for Bangladeshi, MAL for Malayali, TAM for Tamil and TEL for Telugu.
2. Slab 1- below SGD 500; Slab 2- between SGD 500 and 999; Slab 3- between SGD 1,000 and 1,999; Slab 4- SGD 2,000 and above. Income is calculated inclusive of pay for overtime work.
3. Although the dormitory names are mentioned in this column, the actual venue of the interview was in a park or secluded area near to dormitory.
4. Centurion and Bluestar are dormitory names, whereas Joo Koon, Penjuru and Soon Lee Rd. are dormitories identified with place or road name.

APPENDIX C: IRB APPROVAL – LETTER 1

Research Support Office

Reg. No. 200604393R

IRB 11/05/14

30 June 2011

A/Prof Arul Indrasen Chib
Wee Kim Wee School of Communication and Information

NTU INSTITUTIONAL REVIEW BOARD APPROVAL

Project Title: Acculturation of Migrants in Work Sector: Identifying the Facilitative Role of Mobile Phones

(Amount Approved: SGD\$5,000; to be funded by SIRCA program)

I refer to your application for ethics approval with respect to the above project.

The Board has deliberated on your application and noted from your application that your research involves interviewing subjects.

You have also confirmed that informed consent will be obtained from the participants and you have guaranteed the confidentiality of your participants' biodata obtained from them.

The Board is therefore satisfied with the bioethical considerations for the project and approves the ethics application under Full Board review.

A handwritten signature in black ink, appearing to read 'Lee'.

Prof Lee Sing Kong,
Chair, NTU Institutional Review Board
encl.

cc Chair, Wee Kim Wee School of Communication and Information
Members, NTU Institutional Review Board

Blk N2.1, B4-01, 76 Nanyang Drive, Singapore 637331 Nanyang Avenue, Singapore 639798
Tel : +65 6791 9857, Fax: 6793 2019
www.ntu.edu.sg

APPENDIX D: IRB APPROVAL – LETTER 2

Research Support Office

Reg. No. 200804303R

IRB 11/05/14 Amendment

20 April 2012

Asst/Prof Arul Indrasen Chib
Wee Kim Wee School of Communication and Information

NTU INSTITUTIONAL REVIEW BOARD APPROVAL

Project Title: Impact of Mobile Phone on the Acculturation of South Asian Migrant Workers in Singapore

I refer to your application for ethics approval with respect to the above project.

The Board has deliberated on your application and accepted the change in:

1. Title
2. Sponsor
3. Number of subjects
4. Research site
5. Procedures
6. Informed consent process

The Board is therefore satisfied with the bioethical considerations for the project and approves the ethics application.

A handwritten signature in black ink, appearing to read 'Lee'.

Prof Lee Sing Kong,
Chair, NTU Institutional Review Board
encl.

cc Chair, Wee Kim Wee School of Communication and Information
Members, NTU Institutional Review Board

Blk N2.1, B4-01, 76 Nanyang Drive, Singapore 637331 Nanyang Avenue, Singapore 639798
Tel : +65 6791 9857, Fax: 6793 2019
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APPENDIX E – GRANT APPROVAL LETTER FROM WKW SCHOOL OF COMMUNICATION

Office of Finance

Reg. No. 200604393R

M4080857.060

14 Mar 2012

Asst Prof Arul Chib
Wee Kim Wee School of Communication and Information

Project Title: Impact of Mobile Phone On The Acculturation Of South Asian Migrant Workers In Singapore
Project Duration: 01 February 2012 to 28 February 2014
NTU's Peaks of Excellence: New Media
Total Funding: \$2,979

We are pleased to inform that the cost centre number and WBS Elements assigned for the above research grant are as follows:

Cost Centre	WBS Element	Description	Budget loaded S\$
M408060000	M4080857.060.500000	Grants	-
M408060000	M4080857.060.601001	Manpower	740
M408060000	M4080857.060.703012	Materials	64
M408060000	M4080857.060.706022	Other Costs	2,175
Total			2,979

Tan Siew Hong (Ms)
Assistant Director

cc Director, Research Support Office and Bibliometrics Analysis
→ Chair, Wee Kim Wee School of Communication and Information
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APPENDIX F: GRANT APPROVAL LETTER FROM SIRCA

The Singapore Internet Research Centre

18 October 2010

Applicant Name: Mr Rajiv George Aricat

Project Title: ACCULTURATION OF Migrants in Work Sector: Identifying the Facilitative Role of Mobile Phones

Dear Mr Aricat,

Congratulations!

Your application for the **SIRCA Graduate Award (Research)** has been approved by the SIRCA Graduate Award Review Committee. In support of the above referred project, you have been awarded a total of **SGD4,290** for the period of your project, with final report to be submitted to SIRCA by **July 2011**. I append here in ANNEX A the terms attached with this offer.

Please find a copy of the Letter of Acceptance enclosed as ANNEX B. If you accept this offer, please sign the Letter of Acceptance and return to my office, with your signature within 7 working days from which this letter is dated. If you decide to decline this offer, please notify the office as soon as possible via email. If your reply is not received by then, this offer may be rescinded.

For additional information, please visit <http://www.sirca.org.sg>

If you have any questions about this award, please contact the SIRCA senior manager, Yvonne Lim (Ms) by phone: (65) 6790-4574; fax (65) 6792-7526 or email: sirca@ntu.edu.sg

Yours sincerely,

A handwritten signature in black ink, appearing to read "Ang Peng Hwa".

Professor Ang Peng Hwa
Director
Singapore Internet Research Centre

The Singapore Internet Research Centre
31 Nanyang Link
Singapore 637718
Tel: (65) 6790 6394
Email: sirca@ntu.edu.sg

APPENDIX G: QUESTIONNAIRE IN ENGLISH

Wee Kim Wee School of Communication and Information

AY2012/13 Doctor of Philosophy

Consent to participate in the questionnaire survey

I am a doctoral student in the Communication Research division of Wee Kim Wee School of Communication & Information, Nanyang Technological University, Singapore.

I am conducting this survey as part of my PhD programme. I am interested to find out the role of mobile phones in the acculturation process of foreign workers in Singapore. The duration of the study is a year - from March 2011 September 2012. The survey takes about fifteen minutes to complete.

Your participation is completely voluntary, and your responses will be completely anonymous. There are no consequences if you decide not to complete the questionnaire. After the successful completion of this questionnaire, you will be given SGD 5 as a token amount of appreciation. There are no anticipated risks associated with your participation in this study.

Your responses in this study will be anonymous when we describe your experiences in research reports or presentations.

My supervising professor is Dr. Arul Indrasen Chib/ Prof. Rich Ling. He can be contacted at ArulChib@ntu.edu.sg or at 6514-8390.

In case you have complaints about the ethical aspects of this research study, you may report the matter to Institutional Review Board of the university: E-mail: irb@ntu.edu.sg or Ph: 6592-2495. By responding to this survey you are indicating your consent.

I, Rajiv G. Aricat, thank you in advance for completing the survey to the best of your understanding.

Your signature

Date

Please indicate (please circle) the extent to which you feel ‘comfortable’ or ‘not comfortable’ with each of the following statement, using the 7 point scale.

1= “very comfortable”

2= “comfortable”

3= “ok”

4= “neutral”

5= “uncomfortable”

6= “very uncomfortable”

7= “annoyed”

While staying in Singapore, how comfortable are you with the following:

1. Dealing with people in authority.

1 2 3 4 5 6 7

2. Obeying traffic rules as a pedestrian.

1 2 3 4 5 6 7

3. Obeying rules in public transport while travelling.

1 2 3 4 5 6 7

4. Obeying anti-littering law.

1 2 3 4 5 6 7

5. Obeying anti-drug law.

1 2 3 4 5 6 7

6. To get along with the overall order and discipline in Singapore.

1 2 3 4 5 6 7

7. About status given to workers in Singapore.

1 2 3 4 5 6 7

8. How do you adapt to the family relationships you see in Singapore?

1 2 3 4 5 6 7

9. Metro culture in Singapore.

1 2 3 4 5 6 7

10. How comfortable are you with watching festivities of groups other than yours in this city?

1 2 3 4 5 6 7

11. Your comfort level about the nightlife in Singapore.

1 2 3 4 5 6 7

12. How comfortable are you with the dress code of women in this city?

1 2 3 4 5 6 7

13. Your overall comfort level about male-female relationships in this city.

1 2 3 4 5 6 7

14. Overall world view of this society.1 2 3 4 5 6 7

15. Making yourself understood during your stay here.

1 2 3 4 5 6 7

16. Talking about yourself with others.1 2 3 4 5 6 7

17. How comfortable are you with finding your way around in the city?

1 2 3 4 5 6 7

18. How comfortable are you with communicating with people of a different ethnic group?

1 2 3 4 5 6 7

19. Communicating in a language other than your mother tongue.

1 2 3 4 5 6 7

20. Learning a language to know about the culture it represents.

1 2 3 4 5 6 7

Please indicate (please circle) the extent to which you ‘agree’ or ‘disagree’ with each of the following statements, using a 5 point scale.

[1 - "totally disagree"; 2 – “somewhat disagree”; 3 – “neutral”; 4 – “somewhat agree”; 5 - "totally agree."]

While in Singapore,

21. It is NOT important for me to be fluent either in [ethnic language] or in the languages used in Singapore (Chinese, English, etc).

1 2 3 4 5

22. It is important for me to be fluent in both [ethnic language] as well as the languages used in Singapore. 1 2 3 4 5
23. It is more important to me to be fluent in [ethnic language] than in languages used in Singapore. 1 2 3 4 5
24. Even if I lose my mother tongue eventually, I should be more competent to use languages used in Singapore. 1 2 3 4 5
25. I think of myself as [ethnicity]. 1 2 3 4 5
26. I feel that I am part of [ethnicity]. 1 2 3 4 5
27. I am proud of being an [ethnicity]. 1 2 3 4 5
28. I am happy to be a [ethnicity]. 1 2 3 4 5
29. Being part of [ethnicity] is embarrassing to me. 1 2 3 4 5
30. Being an [ethnicity] is uncomfortable for me. 1 2 3 4 5
31. Being part of [ethnic] culture makes me feel happy. 1 2 3 4 5
32. Being an [ethnicity] makes me feel good. 1 2 3 4 5
33. I think I have become a part of Singaporean society. 1 2 3 4 5
34. I will be happy to adopt Singaporean culture. 1 2 3 4 5
35. Adopting Singaporean culture will be embarrassing to me. 1 2 3 4 5
36. I feel that [ethnic] people should maintain their own cultural traditions and not adapt to those of Singapore. 1 2 3 4 5
37. I don't want to attend either Singaporean or [ethnic] social activities. 1 2 3 4 5
38. I prefer social activities which involve [ethnic] members only. 1 2 3 4 5

39. I prefer only those social activities which involve members from other communities in Singapore (Chinese, Malay, etc.) alone.
- 1 2 3 4 5
40. I feel that it is not important for [ethnic] people either to maintain their own cultural traditions or to adopt Singaporean.
- 1 2 3 4 5
41. I feel that [ethnic] people living here should maintain their own cultural traditions but also adopt other cultural traditions in Singapore (Chinese, Malay, etc.).
- 1 2 3 4 5
42. I feel that [ethnic] people should adopt Singaporean cultural traditions and not maintain those of their own.
- 1 2 3 4 5
43. I prefer to have friends only from other communities in Singapore (Chinese, Malay, etc.).
- 1 2 3 4 5
44. It is more important to me to be fluent in languages in Singapore than in [ethnic language].
- 1 2 3 4 5
45. I don't want to have either Singaporean or [ethnic] friends.
- 1 2 3 4 5
46. I prefer to have only [ethnic] friends.
- 1 2 3 4 5
47. I prefer social activities which involve people from other communities in Singapore (like Chinese, Malay, etc.) as well as people from my own [ethnic] community.
- 1 2 3 4 5
48. I prefer to have both [ethnic] friends and friends from other local communities in Singapore (like Chinese, Malay, etc.).
- 1 2 3 4 5
49. I have more than 5 close friends from the local communities in Singapore (like Chinese, Malay, etc.).
- 1 2 3 4 5
50. In Singapore, I have more than 5 friends from my own ethnic community.

1 2 3 4 5

51. There is room for a variety of cultures in this country.

1 2 3 4 5

52. After living in Singapore, I am concerned about losing my cultural identity.

1 2 3 4 5

About the organization you work with and about your job:

53. I am willing to put in a great deal of effort beyond that normally expected in order to help my organization be successful.

1 2 3 4 5

54. I talk up my organization to my friends as a great organization to work for.

1 2 3 4 5

55. I feel very little loyalty to this organization.

1 2 3 4 5

56. I would accept almost any type of job assignment in order to keep working for this organization.

1 2 3 4 5

57. I find that my values and the organization's values are very similar.

1 2 3 4 5

58. I am proud to tell others that I am part of this organization.

1 2 3 4 5

59. I could just as well be working for a different organization as long as the type of work was similar.

1 2 3 4 5

60. This organization really inspires the very best in me in the way of job performance.

1 2 3 4 5

61. It would take very little change in my present circumstances to cause me to leave this organization.

1 2 3 4 5

62. I am extremely glad that I chose this organization to work for over others I was considering at the time I joined. 1 2 3 4 5
63. There's not too much to be gained by sticking with this organization indefinitely. 1 2 3 4 5
64. Often, I find it difficult to agree with this organization's policies on important matters relating to its employees. 1 2 3 4 5
65. I really care about the fate of this organization. 1 2 3 4 5
66. For me this is the best of all possible organizations for which to work. 1 2 3 4 5
67. Deciding to work for this organization was a definite mistake on my part. 1 2 3 4 5
68. I feel a sense of pride in working for this organization. 1 2 3 4 5
69. I really feel as if the organization's problems are my problems. 1 2 3 4 5
70. The most important things that happen to me involve my work. 1 2 3 4 5
71. I live, eat and breathe my job. 1 2 3 4 5
72. I have warm feelings toward this organization as a place to work live and work with. 1 2 3 4 5
73. I would be quite willing to spend the rest of my career with this organization. 1 2 3 4 5
74. I volunteer for tasks that are not required. 1 2 3 4 5
75. I complete my assigned duties on time. 1 2 3 4 5
76. I comply with the rules and regulations of this organization. 1 2 3 4 5

77. I do what my boss says without complaint. 1 2 3 4 5
78. Unless I'm rewarded for it in some way, I see no reason to expend extra effort on behalf of this organization. 1 2 3 4 5
79. In my job here, I sometimes have to act in ways that are not completely consistent with my true values. 1 2 3 4 5
80. I attend functions that are not required, but that help the organization's image. 1 2 3 4 5
81. This organization has a tradition of worthwhile accomplishments. 1 2 3 4 5
82. Since joining this organization, my personal values and those of the organization have become more similar. 1 2 3 4 5
83. At times I wonder how I have begun to feel more committed towards my work after coming to Singapore. 1 2 3 4 5

Multiculturalism in workplace

84. It is a pleasure to work with people of different ethnicities. 1 2 3 4 5
85. An organization that has a variety of ethnic and cultural groups is more able to tackle new problems as they occur. 1 2 3 4 5
86. It is best for an organization if all workers forget their different ethnic and cultural differences and work in unison. 1 2 3 4 5
87. We should recognize that cultural and racial diversity is a fundamental characteristic of my organization. 1 2 3 4 5
88. An organization that has a variety of ethnic or cultural groups has more problems with productivity than organizations with one or two basic cultural groups. 1 2 3 4 5

89. The productivity of the organization is undermined by workers of different ethnic and cultural backgrounds sticking to their old ways.

1 2 3 4 5

For answering the following questions, please follow the key given below:

[1= at least once a day, 2=more than once in a week but not everyday, 3=once in a week, 4=less than once in a week but at least once in every 15 days, 5=with a time gap of at least 15 days, 6 = almost never]

90. How often do you call your family back home?

1 2 3 4 5 6

91. How often do you call your friends back home?

1 2 3 4 5 6

92. How often do you call your friends in other countries?

1 2 3 4 5 6

93. How often do you call your friends from your community in Singapore?

1 2 3 4 5 6

94. How often do you call your friends from other communities in Singapore?

1 2 3 4 5 6

95. How often do you call your fellow-workmen, at or below your level?

1 2 3 4 5 6

96. How often do you call anyone above your status in office?

1 2 3 4 5 6

Please answer the following:

For answering the following questions, please follow the key given below:

*[1=more than one hour, 2=between 30mts to 1 hour, 3=between 10mts to 29mts,
4=approximately 5 to 9mts, 5=for a very short time, 6= not applicable]*

97. On average, for how long do you talk to your family over phone at a time?

1 2 3 4 5 6

98. For how long do you talk to your friends back home at a time over phone?

1 2 3 4 5 6

99. For how long do you talk to your friends in other countries over phone at a time?

1 2 3 4 5 6

100. For how long do you talk to your friends from your own community in Singapore?

1 2 3 4 5 6

101. For how long do you talk to your friends in other communities in Singapore?

1 2 3 4 5 6

102. For how long do you talk to your fellow-workmen, at or below your level?

1 2 3 4 5 6

103. For how long do you talk to someone above your status in office over phone?

1 2 3 4 5 6

The survey is over, thanks

APPENDIX H: QUESTIONS FOR IN-DEPTH INTERVIEWS

Mobile phone usage history:

1. For how long have you been using the mobile phone?
2. How has your communication over mobile phone to family, friends and colleagues changed over time, especially during the migration phase?
3. What are the new skills you acquired over time in order to interact with newer and more sophisticated affordances of the phone?

Usage and handling:

1. How has the mobile phone helped you maintain relationship with family and friends?
2. How has the mobile phone helped you manage your life in the host society?
3. How do you use the mobile phone for pastime and distraction?

Prestige and social identity:

1. Have you come across situations when you have been identified by others with a particular pattern of your mobile phone usage?
2. Has your mobile device helped increase your prestige among peers?

Meta-communication:

1. How and what do you communicate with others about your experience of using the mobile phone?
2. How have you come to know about mobile services in the host country?

Acculturation orientation in personal/social lives:

1. Explain the differences in the culture of Singapore from that of your own culture.

2. If there are differences, how do you deal with them?
3. Do you think if you relate to other communities, you will be losing your cultural identity?
4. Do you think you have a good number of friends among the local communities in Singapore? How many? Do you think you've good number of friends from your own ethnic community in Singapore? How many?
5. How does your relationship with the host communities in Singapore affect your identity as a Malayali and/or Indian?
6. How do you maintain a bonding with your family back home with the help of mobile phone?
7. Which all cultural aspects of Singapore are you already familiar with? How similar are they to what you've practiced and learned? *(To verify whether Tamil population feels more inclined to Singapore's situation)*

Communication links with home culture:

1. How often do you talk over mobile phone to your family and friends in India/Bangladesh?
2. How often do you talk over mobile phone to friends and colleagues from other cultures in Singapore?
3. Are you a member of any of the cultural/social service organization in Singapore?
4. Do you attend any of the informal gatherings with co-ethnics? How do you maintain communication links with various members of such groups?

Competency in host society language:

1. How competent are you in English?

2. Which language do you use when talking to members of other communities (e.g. Thai, Chinese, etc.), especially over mobile phone?
3. In which language do you speak the most while talking over mobile phone?
4. While speaking in a language other than your mother tongue, is it better to be face to face with your listener or is it better to talk to the listener over mobile phone? Why?

Adaptation to host society rules:

5. Do you think there is a great deal of difference between the rules and regulations in your country of origin and in Singapore? Explain.
6. Do you think you've adapted to the rules and regulations in Singapore?

Overall comfort in host society:

7. Explain how you find it to be working in a culture other than yours.
8. Do you feel any physical or mental discomfort when you adapt to the Singaporean conditions?
9. To what extent do you think you have adapted yourself to the culture of Singapore\

Organizational commitment:

1. Do you think you'll call someone over phone seeking help to do a task better?
2. Do you think that mobile phones can increase your work productivity in the new culture?
3. How much have you adapted to the multicultural workforce of your organization
4. How have mobile phones helped you improve your performance as you cope with your work in Singapore?

5. Did you use mobile phones for any purpose while working in your home country, (if yes, in what all ways), (if no, what was the reason for not using a phone)?
6. Explain how you feel when working in a multicultural environment.
7. For what all purposes do you use mobile phone during work?
8. Does your mobile phone help you communicate more with people from other cultures, or does it not? Explain.

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