A STUDY OF THE IMPACT OF ORGANIZATIONAL COMMUNICATION

NETWORKS AND PERSONAL COMMUNICATION TECHNOLOGY USES ON

KOREAN IMMIGRANTS' INTERCULTURAL DEVELOPMENT

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ABSTRACT OF THE DISSERTATION

A study of the impact of organizational communication networks and personal

communication technology uses on Korean immigrants' intercultural development

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Based on the assumption that communication networks constitute culture, a study was

conducted on the impact of organizational communication networks and personal

communication technologies (PCTs) use on Korean immigrants' intercultural

development. The research has found that Korean immigrants' structural positions within

their ethnic church communication networks and diversity of their social network have

significant influences on their intercultural development, of which the process is

facilitated by PCT usage with distinctive ties. A theoretical model of immigrant

intercultural development was suggested based on the existing theories of cross-cultural

adaptation (Kim, 2001), cultural convergence (Barnett & Kincaid, 1983), and

intercultural communication networks (Smith, 1999; Yum, 1988) with a communication-

centered view on social networks. The current study first examined the structural

composition of Korean immigrants' communication networks in their ethnic church community, which became the main sources of their social capital, and then measured the effect of their network characteristics (i.e., size, diversity, and centrality) on individuals' ethnorelative and ethnocentric development (for RQ1 and its related six hypotheses). An organizational member survey of a sample Korean immigrant church was used to construct the whole network of the organization and to analyze the relationships between major constructs (i.e., social capital, PCTs use, and intercultural development). Further, how those network characteristics are related to Korean immigrants' PCTs use for contacting distinctive social ties (i.e., coethnic vs. host, strong vs. weak ties) were examined (for RQ2 and its four subsidiary questions). Last, this study examined how Korean immigrants' social capital embedded in their communication networks and PCT usage affect their intercultural development together (i.e., RQ3) via hierarchical multiple regression modeling. As a result of data analyses, two path models for the process of intercultural development were proposed; PCTs use for coethnic strong ties appears to increase Korean immigrant's network centrality within the ethnic religious community, which leads to ethnocentric development. By contrast, PCTs use for host ties (both strong and weak) seems to increase network diversity, which leads to ethnorelative development.

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I. Introduction

There are more than 1.4 million Koreans in the United States, which makes them the fifth largest Asian ethnic group after Chinese, Indian, Filipino, and Vietnamese (Min, 2012). One of the majority groups of new U.S.[1] immigrants now is Asian, together with Latin American, and Asians recently passed Hispanics as the largest group of new immigrants to the United States (Census, 2010;[2] Pew Research Center, 2012). The first generation of Korean immigrants started migrating to the United States in 1903; they and their descendants are known for their cohesive ethnic community and relatively strong preference for interacting with coethnics, meaning their fellow Koreans (Bates, 1994; Min, 2006; Oh & Kilduff, 1997; Pew Research Center, 2012; Yoo, 2000). Eighty-three percent of all Korean Americans live in the 15 largest Korean-population states (that is, states with Korean populations of 20,000 or more), indicating a high residential concentration of Korean Americans (Min, 2012, p. 8).

Many studies on Korean immigrants point out that readily accessible immigrant churches, especially Protestant churches for Koreans, provide space and opportunities for social networking as well as pre-established networks (Hurh & Kim, 1984; Kwon, Kim & Warner, 2001; Park, 1997). It is not uncommon for many immigrants to gather with their fellow coethnic immigrants to exchange information, social support, and help with one another; this process generates unique forms of social capital for immigrant communities

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[1] The United States has traditionally been a settlement society and currently has a moderate level of immigration with 11.7% of its total 298 million population being overseas-born (Van Oudenhoven et al., 2006). At present, 68% of its population is of European origins, 14% Hispanic, 13% African American, 4% Asian American, and 1% Native American. The US has traditionally assumed a "melting pot" approach to immigration and diversity although many have argued that the philosophy is essentially assimilationist in practice (Van Oudenhoven et al., p. 639).

[2] According to the 2010 Census report, the Asian population grew faster than any other race group in the United States between 2000 and 2010. This was observed for the population who reported Asian alone (increased 43 percent), as well as for the population who reported Asian in combination with another race (increased 46 percent).

(Portes & Sensenbrenner, 1993). The social and cultural consequences of those intensive networking processes revolving around a certain cultural institution (i.e., ethnic church organizations for Koreans) are worthwhile to examine, because those immigrant organizations can not only help immigrants adapt to the new environment by providing various resources, but can also become a community of its own and exert control over individual members' social actions, cultural beliefs, and norms to a certain degree. Depending on the frequency and patterns of social interactions within and across various immigrant communities, the extent of knowledge and understanding about various cultures other than one's own will vary.

Against this backdrop, the current research examined a Korean immigrant church from the standpoint of organizational communication networks (Monge & Contractor, 2003), examining how the organization as a cultural institution for Korean immigrants is structured, and how it shapes individual immigrants' intercultural development in the larger society of the U.S. The fact that more than 80% of Korean immigrants in the U.S. are affiliated with Protestant church organizations (Zhou & Kim, 2006) affirms that studying their ethnic religious communication networks will be an efficient and important way to reveal important aspects of their social lives. For many immigrants, including Koreans especially, the church serves as a "microcosm" of their social lives (Chai, 1998).

Previous studies analyzed immigrant social networks at an individual- or a family-level (Palloni, Massey, Ceballos, Espinosa, & Spittel, 2001; Portes, Haller, & Guarnizo, 2002) and mostly adopted an ego-network approach, which is to construct social networks based on an individual's perception of his or her own social world. However, research suggests that an examination of the organizational networks in which

immigrants are embedded gives better insights for observing a broader and more detailed structure of their social networks, and how the structure enhances and/or limits individuals' actions. Pre-established immigrant organizations such as ethnic churches and small businesses can draw a relatively clear boundary of their membership, thus they offer a chance to adopt a whole-network approach in studying structural configurations and their impact on individual members.

Historically, collectivism has been one of the main cultural aspects of Korean society (Hofstede, 1984). This indicates that Koreans highly endorse creating and maintaining appropriate social connections, which are the key measures of efficient management of life (Kim, 2002). The hierarchical and collective characteristics of Korean culture provided ripe conditions for the fast diffusion of personal communication technologies (PCTs) such as mobile phones, mobile internet, and social media among Koreans. The uses of PCTs that enable immediate access to one's social networks became critical in Koreans' navigation of their social lives, since one should keep his/her connections by meeting people and sharing information in order to display loyalty toward the in-group culture (Kim, 2002).

Based on a review of immigrant social networks research and the literature on immigrant cultural adaptation and personal communication technology (PCT) usage, a new conceptualization of immigrant social networks from a communicative perspective is proposed in this project. Studies of PCT usage (especially of mobile phones) and maintenance of social networks (Katz & Aakhus, 2002; Ling, 2008) are particularly relevant to the research reported here. This is because mobile phones provide immediate access to one another within social groups, including those of immigrants, enabling the

network members to exchange information and social support as well as coordinate joint actions through various communicative forms (e.g., voice calling, texting, email, access to social networking sites). As potential consequences of communication network dynamics, cultural convergence of in-group members (Barnett & Kincaid, 1983; Rogers & Kincaid, 1981) and implications for immigrants' intercultural development (Bennett, 1986, 2004; Kim, Y., 2001) will be explored. The current research poses an overarching question about how Korean immigrants' structural positions in their ethnic religious organizational communication networks and their PCT usage influence their development of intercultural sensitivity.

Studying Korean immigrant organizational communication networks in the U.S. context and immigrants' PCT usage has several implications. First, as a relatively young immigrant community, with several unique characteristics of its own compared to other ethnic groups (e.g., Hispanics, Irish, Italians, Jews, or African Americans), there is an opportunity to see how the community is structured within the host society. Second, considering the increasing diversity in every sector of society, research on ethnic community organizations should facilitate our understanding of various minority groups, particularly in how they navigate their social lives in a new environment, which ultimately contributes to an enhancement of inter-ethnic relationships. Third, a broader implication of the research can be found in terms of understanding the communication dynamics of ethnically homogeneous groups and their structural influences on individual members' cultural adaptation, as opposed to those of heterogeneous groups.

American society, known as one of the most diverse societies in the world, seems more divided than ever across many cultural lines, including ethnic/racial and religious

groups. One of the major reasons for such social division can be found in the lack of interactions between different cultural groups. If members from various cultural groups have ample opportunities to meet and communicate with those from other groups, they will have a chance to learn the new culture and understand the differences between cultures. As much as preexisting cultures influence how people interact with one another, how people communicate also forms the bases of their cultures. When a people's communication becomes routinized and patterned—in other words, when communication becomes a ritual (Carey, 1989)—then communication starts to form a culture in which a group of people shares similar attitudes, opinions, and beliefs. Communication networks are those structural/routinized patterns of communication and social interactions through which information, emotional support, and social influences flow. By studying how those communication networks are formed and structured, it would be possible to know how certain cultures are formed, maintained, and reinforced.

Immigration is the cornerstone of diverse American society in that various immigrant groups bring their own cultural traditions when migrating to the U.S. Although sociologists (Alba & Nee, 2003) predict that over generations, immigrant descendants will eventually be assimilated to the host society and its cultural norms, contemporary immigrants seem to have more options to delay the process of assimilation by staying in touch with their ethnic origin both physically and symbolically, due to the availability of advanced communication technologies such as the Internet and mobile phones. Certain immigrant groups established their ethnic communities and organizations to support their life in the new environment, which became their major sources of social networking (and social capital). Studying immigrant communication networks surrounding these ethnic

organizations that are maintained both online and offline, and examining their structural impact, will offer a chance to see how their ethnic cultures are maintained and reinforced. Therefore, the current research aims to examine the organizational communication networks of Korean immigrants, their personal communication technologies use, and how those are interrelated with their intercultural development.

Preview of the Following Chapters

Chapter II discusses relevant literature on immigrant social networks, intercultural development, and personal communication technologies (PCTs) and their intersections. Key theoretical concepts such as social capital and intercultural development are introduced along with relevant theories: social networks perspective, cross-cultural adaptation, intercultural communication networks, Apparatgeist, and cultural convergence. After reviewing major research findings and their relevance to the current research, three research questions and six hypotheses are proposed, along with a theoretical framework of this research examining the relationships between social capital embedded in Korean immigrant organizational communication networks, PCTs use, and intercultural development.

Chapter III discusses the research method used for this study, which is an organizational member survey examining Korean immigrants' social relationships, PCT usage, and their intercultural development. The procedure for collecting data and analyzing them via both network analytics and traditional statistics is explained in detail. Operational definitions of main variables for data analyses are also given. Descriptive statistics and network visualization of the sample are provided in this chapter.

Chapter IV presents the findings of data analyses in the order of research questions proposed earlier in Chapter II. First, it reports the relationships between social capital in Korean immigrant organizational communication networks and the members' intercultural development. Next, the relationships between Korean immigrant participants' PCT usage for different types of social ties and their network characteristics are analyzed by regression modeling. Finally, the chapter reveals the findings of multiple hierarchical regression analyses for all major variables: social capital measured by three network characteristics (size, diversity, and centrality); PCT usage for four distinctive social ties (e.g., coethnic vs. host and strong vs. weak); and two dimensions of intercultural development (ethnocentric and ethnorelative development). To close, Chapter V discusses research findings of this study based on their theoretical, methodological, and practical implications. Also, limitations of the research are discussed together with suggestions for future research. An overall conclusion of the study is provided at the end.

II. Literature Review

The second chapter of this dissertation research reviews the literature relevant to the three major areas of research and their interconnectedness: immigrant social networks, intercultural development, and personal communication technology (PCT) usage. Key concepts, theories, and research findings from previous studies are introduced from the literature review. Research questions and hypotheses of the current research are presented at the end of the chapter along with the theoretical model of the study.

Immigrant Social Networks

This section presents a literature review on immigrant social networks and reveals gaps in the attention paid to communicative aspects of social networking and how particular forms of social capital are formed in the immigrant community.

One does not have to go far back in the literature to find the origin of the concept of social networks in migration studies. Wellman (1988), in his essay on structural analysis in social sciences, mentioned the large streams of migrants leaving culturally homogeneous villages and tribes for industrialized cities after World War II. The anthropologist, who studied those migrants, discovered that "not only were the migrants forming strong, supportive ties within their new urban milieu, they were retaining strong ties to their ancestral rural homelands" (p. 22). Contrary to the investigators' earlier concern that these migrants had difficulty in their adaptation and survival, they were soon embedded in "complex and supportive *social networks*, cutting across tribal, residential, and workplace boundaries" (p. 22). Scholars also have been studying various issues related to global immigrant social networks in the name of *diaspora*. The concept of diaspora originally came from the Jewish community scattered all around the world,

however, the term is currently used to indicate many other global ethnic communities as well.

What is distinctive about structural studies on migration from a social networks perspective is that those migrants did not migrate to an industrial city because of any newly adopted modern norms and values, but because previously migrated kin, friends, and neighbors were there to help them find homes and jobs. Thus, migration is not really a "once-and-for-all, uprooting and isolating experience, but rather migrants travel and communicate back and forth between their new residences and homelands" (Wellman, 1988, p. 35). In other words, like many social phenomena, international migration is also an ongoing dynamic process of which the configuration and composition can and should be studied from a *relational* perspective rather than from a substantialist notion (Emirbayer, 1997). Again, decision of migration is not an independent thought process or characteristic of an individual or a family, but more of a consequence of social networks dynamics that individuals and family are part of.

The following section reviews the major findings of immigrant research limited in scope by their relevance to a social networks perspective and identifies significant debates, common threads, and shortcomings. It also suggests possible ways of extending and enriching current studies, both by cross-fertilization from other foundational social networks analytic works and through emphasis on a communication-centered view of social networks.

A long-running debate. A critical debate on immigrants' socio-economic adaptation stemmed from one of the earliest publications on immigrant enclaves (Wilson & Portes, 1980) indicating a relatively segregated and captive market of a large coethnic

immigrant community. The enclave hypothesis states that for newly arrived immigrants, participation in a pre-existing enclave economy can have positive economic consequences, such as employment, that include a greater number of opportunities for entrepreneurship (Portes & Jensen, 1987; Portes & Stepick, 1985). Sanders and Nee (1987), however, disproved the enclave hypothesis through their analysis of earnings among Cuban and Chinese immigrants. They showed that the enclave hypothesis was only applicable to immigrant entrepreneurs and not to general employees working within immigrant enclaves. They also found that "immigrant minority workers in the 'open' economy tended to receive higher returns on human capital than immigrant minority workers in an ethnic enclave economy" (p. 762).

Based on a classical assimilation view of the socio-economic adaptation of immigrants, Sanders and Nee (1987) pointed towards the limitation of ethnic solidarity, which was conceptualized later in the literature (Portes & Sensenbrenner, 1993) as one of the major sources of social capital generated from densely knit networks of enclave economy. This classical debate on the validity of the enclave hypothesis sheds light on subsequent immigrant studies in their conceptions of social capital regarding both positive and negative aspects (Portes & Sensenbrenner), the competing hypotheses between the effects of network closure (Coleman, 1988, 1990) and structural holes (Burt, 1992), and the relative importance of social relationships and human capital assets to immigrants' employment (Sanders & Nee, 1992, 1996; Sanders, Nee, & Sernau, 1994).

Incorporation of the social networks concept. This section shows how previous immigrant research introduced the concept of social networks and analyzed its relationship to the economic adaptation of various immigrant groups. Portes and Stepick

(1985) examined the situation of two immigrant groups (i.e., Cubans and Haitians) in light of two competing theoretical traditions: classical assimilation and labor market segmentation. Assimilation theory views the effect of enclave economy as limiting for immigrants' income earning and socio-economic mobility, whereas labor market segmentation emphasizes its positive effect. Portes and Stepick used a representative survey and tested the predictions from both theories concerning the U.S. labor market entry of foreign minorities and the determinants of subsequent mobility, most of which were unsupported. However, they did find that the hypothesis of heterogeneous modes of incorporation into the labor market (i.e., segmentation) was supported; this was especially true among Cubans, for whom employment in the ethnic enclave was associated with positive returns comparable to those of entry into the mainstream labor market.

Zhou and Logan (1989) addressed the controversy over the character of labor markets in enclave economies between Portes and his associates (1985, 1987) and Sanders and Nee (1987, 2002): whether the enclave provides positive earning-returns to educational and other human capital characteristics to immigrant minority-group workers. They studied the Chinese enclave in New York City using three different operational definitions of the enclave—as a place of residence, a place of work, and an industrial sector—which was another point of debate between Portes on one side and Sanders and Nee on the other. Zhou and Logan found that there was substantial evidence of positive returns for earnings of male enclave workers from education, labor market experience, and English-speaking ability regardless of the definition of enclave that they employed.[3]

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[3] By contrast, none of the human capital variables were positively associated with the female workers' income, and this finding became a meaningful starting point of discussion about gendered migration.

Portes and his associates' (1985, 1987) work on immigrant assimilation and the enclave economy played a significant role in urban-oriented sociology, along with Sanders and Nee's (2002) constant arguments about differential effects of enclave economy on immigrant entrepreneurs and employees, respectively. Sanders and Nee focused on the upper limit of profit generation within enclave economy and the distinctive economic structures between the earlier and the later stages of immigration. While the Portes camp appeared to focus more on Latino immigrants, with a few exceptional cases (Portes & Zhou, 1996; Zhou & Logan, 1989), Sanders and Nee seemed to diverge more, looking at other ethnic groups, such as Asian immigrants; they also studied interethnic variations (Sander & Nee, 1987, 1992, 1996, 2002). Portes relied heavily on quantitative analyses, whereas Sanders and Nee also used qualitative field research and interview methods.

More importantly, it was not until recently that these groups of scholars started to discuss social networks more directly, and to incorporate partial and indirect measures of network properties into their immigrant research. For instance, Sanders, Nee, and Sernau (2002) studied how the social capital and closure properties of family- and ethnic-based social networks influence the immigrants' assimilation. They examined the relationships between immigrants' reliance on social ties and their employment. Their ethnographic interviews with Asian immigrants in Los Angeles indicated that reliance on social ties usually operates informally, such as when job seekers consult their more experienced and better-connected friends, relatives, and acquaintances and ask them to serve as network intermediaries. Sanders et al. concluded that immigrant social networks provide group-based resources that assist them to make headway into their new society, but that reliance

on social ties was most common for moves into jobs of low occupational prestige having low human capital requirements.

In their discussion of findings, Sanders et al. (2002) noted that strong ethnic ties can serve as a bridge between immigrants and a wider economy (i.e., non-coethnic employers), contrary to the prediction of the network closure hypothesis that densely-knit ethnic networks might limit the chance for immigrants to enter the mainstream economy. While it was an issue that the "chain" characteristic of immigrants' information exchange makes it difficult to attribute the bridge tie to a particular individual or to a particular tie strength, the fact that a structural hole (that is, unconnected parts of the network) in the networks (Burt, 1992) was still bridged by ethnic ties mattered more significantly. Immigrants' entry into the primary sector of the economy, which happened due to the bridging of networks, was more likely to give them a chance of higher income earnings.

In their more recent study of transnational entrepreneurs as an alternative form of immigrant adaptation, Portes, Haller, and Guarnizo (2002) incorporated measures of network scope and size. They measured immigrants' social ties with home countries by asking about their association with multiple organizations such as hometown, charity, and political organizations. Portes et al. proved the empirical existence of transnationalism based on the immigrants' mobilization of their cross-country social networks and discussed its implications for potentially altering the nature of new ethnic communities.

Considering the long-running debate over the effects of enclave economy, particularly whether it works positively for immigrants' economic adaptation in the host society or not, Pfeffer and Parra (2009) studied the role of social ties and human capital in the integration of Latino immigrants into the local economy. They particularly

considered rural contexts with limited labor market opportunities and less access to social resources provided by coethnics. Their mixed-method research found that strong social ties, weak ties, and human capital all played distinctive roles in the economic adaptation of immigrants outside the ethnic enclave. Pfeffer and Parra's finding was consistent with Granovetter's (1973) observation of weak ties, in that those who were less reliant on strong social ties were better able to take advantage of a broader range of labor market opportunities. All in all, a potential conclusion can be made from the past research findings about immigrant social networks and their economic adaptation: the enclave economy, consisting of dense coethnic social networks, has a mostly positive impact on immigrant entrepreneurs' income earning, but not so much for enclave employees; those immigrant employees seem to benefit more from their human capital resources (such as education and English-proficiency) than from social capital embedded in coethnic social networks. Strong coethnic ties can be beneficial to the extent that they serve as "bridges" to the mainstream economy for immigrants.

A common thread: Social capital. As was shown in the previous review of immigrant studies, social capital emerged as a major theoretical concept and is a common thread in understanding the dynamics of international migration, from initiation to settlement and success in the host countries (Massey et al., 1998; Portes & Sensenbrenner, 1993; Sanders & Nee, 1996). It seems that many researchers almost equate social capital theory with a social networks approach. However a consistent definition of social capital and its application is rarely found across studies—the concept may indicate a specific type of resource or a social tie or both, or the fact that an immigrant works within an ethnic enclave. What becomes relatively clear from the past

30 years of research and its varying conceptions of social capital is that the concept is a multi-level construct, but it should include a dimension of social relationships and/or networks of relationships (See Adler & Kwon, 2002 for a comprehensive historical review on conceptualizing social capital). To illustrate this point, social capital can be defined as "a *web* of cooperative and trusting *social relationships* that provide individuals with emotional and/or material support and opportunities and help to coordinate joint activities [*emphasis added*]" (Brehm & Rhan, 1997; McLean, 2007). In a similar vein, Lin (1999) defined social capital as "access to and use of resources embedded in the web of social relationships."

Coleman's (1990) discussion of social capital centers on its conception as "generalized reciprocity" referring "mutual trust and commitment among interrelated actors that are independent of any specific transaction" and may result either from cultural values backed by effective norms or from repeated interactions among the same actors over time (Sandefur & Laumann, 1998; Peng, 2004, p. 1051). Criticizing the vagueness and positive bias of Coleman's conception, Portes and Sensenbrenner (1993) tried to refine the concept of social capital by distinguishing four specific sources: (a) value introjections, (b) reciprocity transaction, (c) bounded solidarity, and (d) enforceable trust.

The aspect of *value introjections* emphasizes the moral character of economic transactions guided by value imperatives learned during the process of socialization. According to this idea, an economic transaction reflects its underlying social and moral order, and is a first source of social capital since it moves people to act in ways other than only being selfish (Portes & Sensenbrenner, 2003). *Reciprocity transactions* give rise to

social capital through the accumulation of 'chits' on the basis of previous good deeds to others in the primary exchanges of favors, information, approval, and other valued items of which social life consists. While the difference from regular market behavior is that such transactions center not on money and material goods but on intangible social actions, in contrast to the first type, individuals are not expected to behave following group morality, but rather to pursue selfish ends (Portes & Sensenbrenner).

Bounded solidarity focuses on situational circumstances leading to a group-oriented behavior detached from early introjections of values. The classic sources of this concept are exemplified by Marx's analysis of the rise of proletarian consciousness and the transformation of workers into a class-for-itself, the internal solidarity created by a common awareness of capitalist exploitation. Portes and Sensenbrenner (2003) said as a source of social capital, bounded solidarity does not arise out of the internalized values or from individuals' reciprocal exchanges of favors, "but out of the situated reaction of a class of people faced with common adversities" (p. 1325). *Enforceable trust* is characterized by individuals subordinating their desires to collective expectations in anticipation of long-term market advantages by virtue of group membership. The predominant orientation of enforceable trust is utilitarian, except that an actor's behavior is not oriented towards a specific other, but to the *web of social networks* of the entire community. Partly, the higher degree of enforceable trust has to do with the higher degree of *reachability* of the members within a network (Fuglerud & Engebrigtsen, 2006; they found this case in their study of Tamils). What is important for this type of social capital is the possibility, and ability, of keeping people in line, so that they can be mobilized for some kind of common goal, which requires both a common standard of behavior (e.g.,

informal norms) and means of communication (Portes & Sensenbrenner, 1993, p. 1337).[4]

The discussion of enforceable trust as a type of social capital resource is particularly

relevant to the context of the current research. This is because immigrant church

members can be mobilized for a common goal, who have both the religious doctrines (or

principles) and the ethnic culture as a common standard of behavior. Additionally,

various communication forms including mobile phones and social media can be used,

allowing high degree of reachability within immigrant social networks.

Zhou and Kim (2006) studied distinctively higher educational achievement of

Chinese and Korean immigrant children and showed how culture and network structure

interact to create powerful ethnic community forces. Both Chinese and Korean immigrant

communities established supplementary school systems such as ethnic language schools

and afterschool programs in which immigrant children can benefit from interacting with

coethnic peer groups in addition to learning their ethnic culture and receiving extra

educational support. China and Korea both belong to a Confucius culture that has been

characterized by its respect for formal hierarchy and strong collectivism. Higher

educational attainment among younger generations of Asian-Americans can be

understood in this cultural context as well, since a high level of education is traditionally

associated with high social status and economic earnings in East Asian culture. Zhou and

Kim also pointed out some possibly negative consequences of being raised and protected

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[4] The applicability of these concepts (i.e., bounded solidarity and enforceable trust) to immigrant social networks has already been shown through previous research (Aldrich & Zimmer; Tilly; cited in Portes & Sensenbrenner, 1993) since immigrants are a class of people, usually seen and perceived as minorities of a society, and they share a common context faced with the hardship of economic survival and possible discrimination from the host society. Upon this foundation, they can develop a sense of belonging, connectedness: bounded solidarity. Being embedded in coethnic immigrant communities and the enclave economy, while expecting and experiencing the long-term benefit of the networks, can enforce a type of trust among immigrants, especially in their entrepreneurship.

within strong ethnic communities: younger generations of immigrants' established patterns of social networking, which seem to generate social capital of "bounded solidarity and enforceable trust," can actually impose limits on their job placement and occupational mobility in the host society.

Common shortcomings and possible cross-fertilization. The evidence accumulated so far confirms the critical role of immigrant networks in structuring individual and household migration decisions (Massey et al., 1998) along with the benefits of social capital generated from enclave economy on immigrants' employment and income earnings (Portes & Zhou, 1996; Sanders et al., 2002; Zhou & Logan, 1989). However, previous immigrant studies neither distinguish various sources of social capital suggested by Portes and Sensenbrenner (2003), nor consider distinctive effects of bonding versus bridging social capital (Putnam, 2000) on immigrant cultural adaptation. These two types of social capital (i.e., bonding and bridging) are closely related to the classification of strong and weak ties in the social networks literature (Granovetter, 1983). Bridging social capital is generated when weak ties from diverse backgrounds bring in novel information and perspectives, whereas bonding social capital occurs among strong ties that provide emotional support and a sense of belonging to one another (Granovetter). Tightly knit networks with strong ties (e.g., close friends and family members) tend to lack diversity, but they foster deeper personal connections (Putnam). By contrast, loosely tied networks with weak ties (e.g., acquaintances and loose connections) facilitate information mobility across different groups of people while lacking substantive support or intimate connections.

Moreover, previous conceptualizations of immigrant social capital did not examine immigrant social networks directly, so those studies could not resolve the issue of methodological individualism[5] (Emirbayer, 1997; Wellman, 1988). They either measured whether each immigrant works within or outside the enclave as a proxy measure of being embedded in ethnic networks (Portes & Zhou; Sanders et al.; Zhou & Logan), or surveyed immigrants' social ties (e.g., kin and friends with migrant experiences) and used them as network variables (Massey & Espinosa, 1997; Palloni, Massey, Ceballos, Espinosa, & Spittel, 2001). Those pseudo-network variables, along with demographic variables as the sources of human capital, were analyzed using traditional statistical methods. Therefore, a predominant orientation of extent studies is an ego-centered network approach by nature, and it fails to address the impact of structural positions that individuals occupy in their social networks.

Wellman (1988) and other researchers acknowledge the benefit of an ego-centered approach in social networks analysis due to its compatibility with traditional survey research and statistical analyses. However, except for a few recent cases (e.g., Pfeffer & Parra, 2009 on rural Mexican immigrants), most studies have not incorporated direct network measures such as tie strength or distinctive measures for bonding ties (e.g., internal ties within the enclave) or bridging ties (e.g., external ties with those outside the enclave). Moreover, because of their inherent limitation as an ego-network approach, previous studies could not measure any structural properties of immigrant networks, such

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[5] Due to the relational dynamics, how individuals behave in a social setting (e.g., in dyads, triads, or groups) will be different from when they are alone; thus, investigating individuals' perceptions of their own social behaviors, by asking them to self-report (i.e., methodological individualism), cannot reveal accurate pictures of relational phenomena and their structures (Emirbayer, 1997).

as centrality of communication flow and of other resource exchanges, or varying degrees of network characteristics (e.g., density, structural holes) by different types of networks.

One exception to this general ego-network approach can be found in Bashi's (2007) research on West Indian immigrants and their unique social networks, described with the metaphor of a hubs-and-spokes structure. Hubs are a small group of influential individuals who control informational and material resources that are the spokes' source of international social mobility. Bashi's finding expands our understanding of transnational migration flow and its possible configuration for a specific type of immigrant. One notable finding was that most migrants in her study did not maintain intensive cross-border ties. However, the minority that did retain these ties was particularly important for a range of social outcomes. This is because once a very centralized structure (i.e., hubs-and-spokes) is established, individual migrants do not voluntarily select themselves as much as they are selected by a "hub" that picks migrants with the right morals, skills, and work ethic. In this sense, "hubs, or veteran immigrants, are the keepers and controllers of the social capital in the immigrant social networks" (Bashi, 2007, p. 109). Although Bashi's research revealed the centralized structure of West Indian immigrant communities and its possible impact on immigrants' upward social mobility, her research did not consider various measures of social networks that are directly associated with social capital, such as network size or the homogeneity vs. heterogeneity of one's social networks.

Need for a communication-centered approach. Another limitation of the previous immigrant studies lies in their conceptualization and operationalization of social networks as individual actors' social ties without much articulation of their structural

embeddedness into multiple overlapping social networks and their possibly distinctive effects. What makes relationships possible, and the actual content of those relationships (e.g. immigrants' communication networks), were not examined extensively—one exception was Sanders et al.'s (2002) ethnographic study on immigrants' information exchange process. Research assumed that immigrants will readily mobilize resources (e.g., financial, informational, or emotional) or take advantage of social capital embedded in their social networks. However, not many of them dealt with the actual communication links or any other resource exchange process within and across immigrant communities. If done, it will show the process of actual networking and its consequential effects more in detail. Coleman (1990) emphasized the role of communication in generating informal norms within a social structure since communication makes it possible to coordinate joint activities among the norm beneficiaries. According to Coleman's view of social networks, actors in the given network get to form a certain culture of their own by their repeated, norm-following social interactions.

Information exchange is one type of communication critical to immigrants' entry into host societies with high uncertainty, and also to their adjustment into the new environment. However, the establishment of social networks is achieved not only by information exchange among its members, but also by habitual and relational communication of everyday life. For those immigrants who have more or less settled down in the host country, the social communication (e.g., emotional support, gossip, etc.) with their coethnic community members, coworkers, and other neighbors could be a greater part of their lives reminding and reinforcing their (ethnic) culture (Carey, 1989), rather than the instrumental communication of information exchange. Kim (2001)

brought up emotional support, along with information exchange, as one of the main forms of social communication for an immigrant, based on numerous research findings (e.g., Fogel, 1993; Jou & Fukada, 1995; Marcia, 1993).

A study of communication flow within immigrant networks should refer to Burt's (2001) argument. He compared two competing hypotheses describing how network closure, defined as a network structure in which nodes are tied to one another with much redundancy, affects the flow of information within a network. The bandwidth hypothesis—presumed in closure models of social capital—posits that network closure enhances information flow through redundant channels. On the other hand, the echo hypothesis—based on the social psychology of selective disclosure in informal conversations—argues that closed networks do not enhance information flow so much as they create an echo chamber that reinforces predispositions. Burt found more empirical support for the echo effect over the bandwidth, in that strong positive relations can develop next to strong negative ones. This is because strong third-party ties increase the volume of *gossip*, from which strong relationships emerge (both positive and negative), depending on the actors' predispositions. Thus, what is conveyed through social ties, according to Burt's view, is not resources, but "gossip." He says that, "gossip is not about information. It is about creating and maintaining relationships…conversations about social structure are an integral part of building and maintaining relationships with the primary effect of reinforcing the current structure" (p. 46). According to Burt's echo hypothesis, it is expected that the more densely knit and isolated a network is, the more likely it will be that communication within the network will be gossip, not new information and perspectives circulated among the network members.

The role of gossip in immigrant social networks was highlighted by an ethnographic study of Somali women immigrants in Australia (McMichael & Manderson, 2004). Among the interviewees, sharing stories and details about their lives could be both a positive and a negative mode of communication. Gossip could be "a vehicle for Somali women to share knowledge about Australia: job availability, where to buy cheap food, information about services and changes in immigration criteria" (p. 95) whereas "fear of being gossiped about acts as a panopticon to control their activities within the community and to deny them access to resources" (p. 93). Through gossip, immigrants acquire and generate information as well as express and clarify judgments, norms, and values (p. 95).

As such, field research and in-depth interview studies on immigrant social networks (Bashi, 2007; McMichael & Manderson, 2004; Menjivar, 2000;[6] Sanders et al., 2002) are insightful, revealing the complicated nature of immigrant social networks and their configurations. The content and construction of communication within immigrant sub-populations or across different groups can be well presented by thick descriptions of their everyday lived experiences embedded in their social networks. Previous immigrant research along these lines seems to lack efforts of combining network analytic methods with qualitative analyses, which if done would be more effective in revealing the micro-level network process (e.g., communication) constituting the macro-level structures and vice versa (see McLean, 2007 for a good example of combining quantitative and

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[6] Menjivar found in her study of Salvadorian immigrants that unfavorable receiving contexts of the host society and extremely poor ethnic communities constrained individual immigrants in benefiting from social capital; although there were many coethnic members residing in the area of their immigration, they could not exchange much help with one another because of the structural conditions of their immigration. Menjivar described this particular situation of Salvadorian immigrants' social networks as "fragmented ties."

qualitative approaches in network analyses; he termed as relationship between individual action and social network).

In addition, sociological literature on the social networks approach points out that we need to pay more attention to the "action, agency, and intersubjective meanings" of relations (social ties) and consider "cultural contingency" of network formations, which highlights the importance of communication and culture in studying social networks. (Pachucki & Breiger, 2010). Fuhse (2012) also suggests researchers should pay more attention to communication in networks by providing various ways of how communicative perspective can enrich social networks research. Fuhse notes that studying intercultural communication provides a framework that combines communication, meaning, and social network; it is particularly suited with regards to four aspects: (1) it allows researchers to take social context into account; (2) it points to particular problems of intercultural communication and their consequences; (3) networked-based techniques for successful intercultural communication can be identified (which has been done by Smith (1999) to a certain extent, but not fully yet); and (4) it focuses on the consequences of intercultural communication for the development of relational expectations in social networks.

Summary of immigrant social network literature. Two representative research streams have been presented in this section of literature review in terms of previous immigrant studies done from an economic sociological perspective partially incorporating social networks concepts. One of them was by Portes and his associates, studying the effects of network closure (i.e., enclave economy) on immigrants' economic adaptation. Another group can be represented by Sanders and Nee and their associates

who have been constantly rebutting Portes' arguments; they highlighted the limited effect of ethnic networks on immigrant employees' income earnings, the relative importance of human capital (e.g., level of education, language proficiency) as opposed to that of social capital (i.e., potential resources embedded in one's social networks), and the effect of structural holes (i.e., bridging social capital) in immigrant social networks by entering into mainstream labor markets.

Even though these studies have so far greatly enhanced our knowledge of the economic effect of immigrant networks, there still seems to be much room for improvement in terms of adopting a social networks perspective more actively and showing its possible effects on areas other than economic adaptation. Despite the impossibility of adopting a whole-network approach in its idealized sense to study transnational immigrant networks, examining diverse immigrant organizations such as churches, alumni, or rotary, in which a large part of immigrant social networking takes place, can serve as a valid alternative. Combining a traditional sense of social networks analysis with an intensive field research might enable us to identify distinctive structures of social networks by their contents or by different ethnic groups. Ultimately, it will contribute to revealing a broader mechanism of the interaction between individual immigrants' actions (i.e., communication) and the structure of their social networks and its consequent effects on their cultural adaptation.

Cultural Consequences of Immigrant Social Network Dynamics

Classical immigrant studies have largely dealt with the impact of social networks on individuals' economic adaptation, which was shown by having income earning as a consistent dependent variable in their analyses (Portes et al., 2002; Sanders & Nee,

1996). Considering the likelihood of economic stability being the priority for many immigrants' resettlement, it is not surprising to see why most research equated economic success with an indicator of good adaptation. However, different types of social networks can have varying effects on immigrants' social lives (Davis, Steckloy, & Winters, 2001; Wellman & Wortley, 1990; Yoo, 2000), just as the friendship network can provide emotional support for immigrants' social-psychological well-being in addition to its role as an immediate source of information. It is also notable that immigrants are less likely to receive concrete financial support from their coethnic social networks (other than their close family or kin members), indicating their lack of social capital to a certain extent (Bates, 1994; Yoo, 2000). As such, the scope of immigrant social network dynamics can be expanded beyond the discussions of economic effects on employment and income earnings. The following section briefly reviews literature on immigrants' cultural adaptation (e.g., acculturation and intercultural communication) and intercultural network theories.

Intercultural communication and acculturation. Young Y. Kim (2001) proposed a structural model of cross-cultural adaptation that considers various factors influencing individual immigrants' cultural adaptation to a new society (see Figure 2.1, p. 28). Her comprehensive model includes factors related to individuals' predispositions such as preparedness for change, ethnic proximity, and adaptive personality as exogenous variables influencing the process of intercultural communication. The model also considers environmental factors like host receptivity, host conformity pressure, and ethnic group strength. Although Kim's model did not specify the effect of communication *networks* per se, individuals' interactions with both host members (i.e.,

Host IC in Figure 2.1) and coethnic members (i.e., Ethnic IC in Figure 2.1) and their

usage of both host (i.e., Host MC) and ethnic media (i.e., Ethnic MC) are major

components of the model, among others. In a way, ethnic group strength, along with

immigrants' social communication, can be considered similar to the communication

networks component in Kim's model of cross-cultural adaptation. Depending on the

influences of those two exogenous conditions (i.e., predisposition and environment) and

the process of individuals' personal and social communication in the host society, it can

be determined whether or not a stranger in the new society achieves a successful

intercultural transformation (Kim). Kim suggests that the extent of intercultural

transformation can be observed by the following three measures: functional fitness,

psychological health, and intercultural identity.

　　For example, if a sojourner or an immigrant is well-prepared for changes in the

new environment, is ethnically similar to the host society members, and has an adaptive

personality, the process of intercultural communication will be smoother, and he or she is

more likely to perform well in the workplace, feel more satisfied, and form an

"intercultural" identity. There are environmental factors that are beyond individuals'

control, such as if the host society receives immigrants favorably, the pressure for

assimilation is high, and the relative status and power of the particular ethnic group is not

yet very strong; in these cases, the host communication will be facilitated more than

ethnic communication will be, and it is more likely that the person will experience

intercultural transformation. However, in Kim's structural model of cross-cultural

adaptation, communication (both interpersonal and mediated) is a key process mediating

between individuals' predispositions and environment and their intercultural

transformations.

Figure 2.1

A Structural Model of Cross-Cultural Adaptation (Kim, Y., 2001, p. 87)
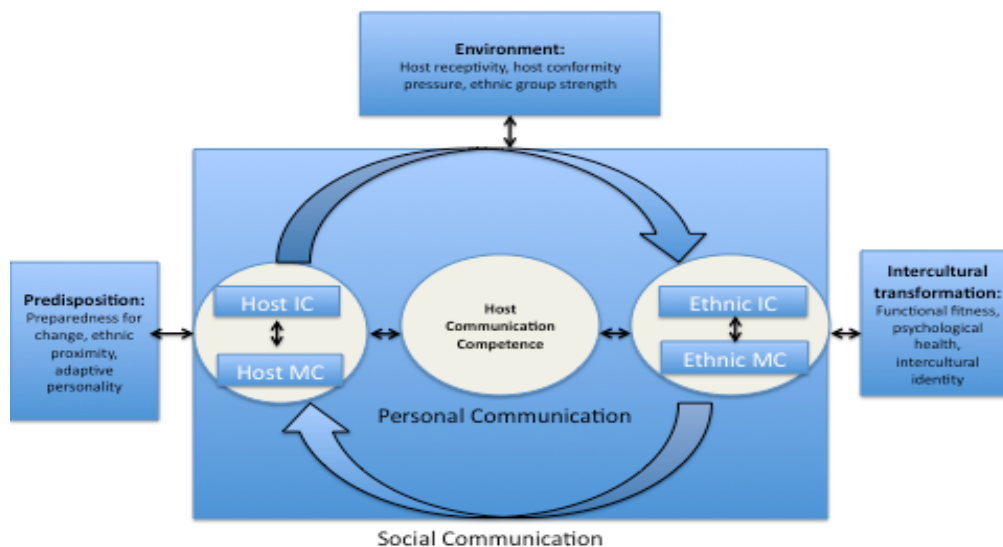
Note: IC = interpersonal communication, MC = mass communication.

Kim's earlier work (1977) examined the communication patterns of foreign

immigrants, and she characterized acculturation as the phenomena whereby "sooner or

later, immigrants come to understand better the norms and values, and to adopt salient

reference groups of the host society" (p. 66). Later, Kim expanded her view of

acculturation to include the establishment of an "intercultural identity" for an immigrant,

sojourner, or a businessperson who successfully integrates into a new environment.

Intercultural identity indicates an individual's ability to grow beyond one's original

culture and embrace a new culture, gaining additional insights into both cultures in the process (Kim, 2001).

According to Kim (1977), "the complexity with which an immigrant perceives the host society will be influenced by language competence, acculturation motivation, and channel accessibility, mediated by interpersonal and mass communication experiences" (p. 68). Her causal model puts communication directly in the path of acculturation; the communication channels of interest are interpersonal communication and mass media. Kim's work and her theoretical model both have been used broadly by other researchers and been evaluated as a major contribution to acculturation research in terms of highlighting the importance of the communication process in an individual's cultural learning.

Kim's theory of acculturation maintains that increasing interpersonal communication within the new host environment will result in increased acculturation. However, ethnic communication with those from the home culture is not expected to nurture intercultural identity (Kim, 2001). In order to have smooth interpersonal communication within the host culture, host language competence is necessary, just as it is for using host mass media successfully. For these reasons, Kim also proposes that proficiency in the host language will increase both interpersonal and mass media communication as shown in her model (see Figure 2.1). Her theory suggests that increasing use of the host environment's mass media will increase acculturation, whereas the use of ethnic mass media will not necessarily facilitate acculturation. Kim also notes that availability of interpersonal and mass communication channels will influence the amount of communication that occurs.

Another researcher, Kim, J. (1980), considered ethnic network as one of the three exogenous variables—along with occupational status and family—when explaining an immigrant's acculturation level; he found that significant portions of the effects of the three exogenous variables are mediated by intercultural and ethnic communication activities. According to Kim's findings, the facilitating effect of intercultural communication (i.e., host communication) and the damaging effect of ethnic communication on acculturation were more noticeable in the advanced stage of immigration, meaning the effects of mediator/moderator variables were stronger for those immigrants who had lived in the host society longer. This might be due to the fact that once a certain social communication pattern is established for an immigrant in the host society, there will be cumulative effects of social communication networks reinforcing that pattern over time, of which the process might be above and beyond one individual immigrant's conscious control.

The current study can be viewed as a trial of magnifying certain parts of Young Y. Kim's (2001) model of cross-cultural adaptation (see Figure 2.1), since the research aims to closely investigate the relationship between immigrant communication network dynamics in an ethnic church organization and its effect on their intercultural development. Within her model, the component of ethnic group strength can be considered as one of the results of ethnic social network dynamics together with interpersonal communication among coethnic members. Kim's model conceptualizes the process of cultural adaptation as more or less linear and causal with a variable-based approach. Nevertheless, one of the main indicators of intercultural transformation (that is, one's *intercultural identity*) has been studied more often with qualitative research

methods, such as ethnographies and interviews done by observing and listening to individuals' acculturation experiences (Kim, 2001). Kim notes that there are two indicators of intercultural identity: individualization and universalization. According to Kim: "An individual intercultural identity entails a clearer sense of selfhood and well-being in the form of self-acceptance and self-esteem and the relative absence of malice and other debilitating emotional states such as anxiety and depression" (p. 192). A parallel development to an individualization of self-other orientation is a universalistic cognition "of a new consciousness, born out of an awareness of the relative nature of values and of the universal aspect of human nature" (Yoshikawa, 1978, p. 220).

The current research considers the concept of *intercultural development* (Hammer, 1998) as a way to examine quantitatively the relationships between immigrants' communication networks and intercultural transformation. This can be done by measuring the extent of one's intercultural development and analyzing its relationships with that individual's communication network characteristics (such as size, diversity, and structural position in the network) and also with other relevant communication variables (e.g., communication media usage, frequency of contacts with coethnic and host society members). Considering the increased variety and availability of personal communication technologies such as mobile phones and social media for mediating interpersonal communication compared to decades ago, the current study extends Kim's (2001) theoretical model into the contemporary technological landscape for immigrants' social life, where they can maintain both their local and transnational ties much more easily than before. The following section explains the concept of intercultural development in more detail.

Intercultural development. The intercultural development inventory (IDI) was

created by Mitchell Hammer (1998) based on Milton Bennett's developmental model of

intercultural sensitivity (DMIS) (Bennett, 1986). The DMIS focuses on processes of

intercultural adaptation viz. six orientations that people appear to move through as they

develop intercultural competence. The first three orientations—Denial, Defense,

Minimization—are considered "ethnocentric" because the perceiver's own culture is

central to how reality is constructed. The latter three orientations—Acceptance,

Adaptation, Integration—are considered "ethnorelative", as the perceiver's own culture is

interpreted in the context of another culture. Hammer, Bennett, and Wiseman (2003)

summarized these six DMIS stages as follows:

> "Denial of cultural difference is the state in which one's own culture is
> experienced as the only real one…. Defense against cultural difference is the state
> in which one's own culture is experienced as the only viable one. A variation on
> Defense is Reversal, where an adopted culture is experienced as superior to the
> culture of one's primary socialization ("going native" or "passing")….
> Minimization of cultural difference is the state in which elements of one's own
> cultural worldview are experienced as universal. … Acceptance of cultural
> difference is the state in which the experience of another culture yields perception
> and behavior appropriate to that culture…. Integration of cultural difference is the
> state in which one's experience of self is expanded to include the movement in
> and out of different cultural worldviews" (Hammer et al., pp. 424-425).

The DMIS was originally developed with a grounded theory approach using

theoretical concepts from cognitive and experiential constructivism (e.g., Brown, 1972

and Kelly, 1963 for cognitive constructivism; Bateson, 1979 and Lakoff & Johnson, 1999

for experiential constructivism). Bennett (2004) explains that the cross-cultural

experience is cognitively constructed, and depending on individuals' cognitive

complexity, people can be more or less "sensitive" to cultural differences. In other words,

more cognitively complex individuals can make finer distinctions between phenomena in

a particular domain (Bennett). People who are more cognitively complex are also more able to be "person-centered" and "perspective-taking" in their communication, which are skills associated with more successful interpersonal communication. More successful *intercultural* communication also involves being able to see a culturally different person as equally complex to one's self (i.e., person-centered) and being able to take a culturally different perspective. In addition, how human beings "co-create" their experience through corporal, linguistic, and emotional interaction with natural and human environments allows the DMIS to describe a mechanism of intercultural adaptation (Bennett).

The essence of intercultural adaptation is the ability to have an alternative cultural experience (Bennett, 2004). Individuals who are socialized into a monoculture have access only to their own cultural worldview, and are thus less likely to experience the difference between their own perception and that of others from different cultures. The DMIS assumes that contact with cultural difference generates pressure for change in one's worldview (Bennett). This happens because the "default" ethnocentric worldview, while sufficient for managing relations within one's own culture, is inadequate to the task of developing and maintaining social relations across cultural boundaries. If there is a need for such cross-cultural relations, as typically is the case for educators, long-term international sojourners, and members of multinational teams, then there is pressure to develop greater competence in intercultural matters. However, this pressure can be ignored depending on specific individuals and situations, so change as a function of contact is not inevitable (Pettigrew & Tropp, 2000). Therefore, it is possible that immigrants can remain ethnocentric even if they move to a new society and meet host members of the new culture, depending on how they navigate their social lives in the host

environment. Based on the above literature review on immigrants' social networks and their acculturation and intercultural development, the current study proposes the following first research question:

RQ1. What is the impact of social capital embedded in the organizational communication networks of Korean immigrants on their intercultural development?

Intercultural communication network theories. Gudykunst (2002) introduced three kinds of intercultural communication theories that focus on communication networks: (1) outgroup communication competence theory (Kim, 1986); (2) intercultural versus intracultural networks theory (Yum, 1988); and (3) networks and acculturation theory (Smith, 1999). Network theories are based on the assumption that individual behaviors are influenced by interpersonal relationships rather than by individuals' personal characteristics (Gudykunst).[7] Therefore, the main focus of network theories is on structural positions and social relationships instead of cultural beliefs or internalized norms. In general, the theories focus on explaining interconnecting relationships between people from different cultures rather than on static, bounded groups (Yum).

While Kim's (1986) intercultural network theory suggests that a heterogeneous personal network having outgroup members as close ties at the center would facilitate the individual's outgroup communication competence, Yum's (1988) theory explains the differences between individuals' intracultural and intercultural networks characteristics (Gudykunst, 2002). According to Yum's theorems, intracultural networks—one's social

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[7] This theoretical assumption of network perspective is in line with Emirbayer's (1997) mention of the relational perspective of network approach, compared to the substantialist notion of traditional statistical analysis based on the assumption of independence of each case observed (i.e., methodological individualism).

networks within the same cultural boundary—tend to be more interlocking, dense, and multiplex than intercultural networks, and consist of more strong ties than weak ties. Yum also notes that the role of bridges and liaisons are more prevalent and more important for network connectedness of intercultural networks (p. 251). Bridges in the network connect cliques (i.e., groups of connected individuals), as a member of the cliques, whereas liaisons can connect cliques while not being a member; both bridges and liaisons become structural holes (Burt, 1992) for the whole network. Yum's final theorem suggests that transitivity, as a network property defined as sharing connections (that is, when "my friend's friends are my friends"), plays a smaller role in intercultural networks than in intracultural networks. It is again because intercultural networks are less dense and more diffuse compared to intracultural networks, meaning there is a smaller number of transitive ties across nodes/actors.

Smith (1999) proposed an intercultural network theory with seven assumptions and seven propositions by linking social networks and immigrant acculturation. He suggested the social network approach will bridge the gap across different paradigms in intercultural communication research, and that the conceptual history and relevant properties of social networks will address the *relational* quality of intercultural interactions while acknowledging the stability of structural phenomena (p. 629). Smith's first proposition states that "intercultural identity strategies are discernible within social network structures" (p. 646, italics omitted in all propositions). This proposition suggests that immigrants tend to be linked to those individuals who define their identities, such as coethnic immigrants or host nationals (Gudykunst, 2002, p. 196). The second proposition suggests that "culturally influenced perceptions shape the function and experienced

nature of social networks" (p. 647). This proposition claims that the way immigrants experience social networks is influenced by their native cultures (Gudykunst).

Smith's (1999) third proposition states that "as socio-structural heterogeneity increases, the probability of acculturation increases" (p. 647). This suggests that the more host nationals appear in immigrants' social networks, the more likely immigrants are to acculturate (Gudykunst, 2002). The fourth proposition claims that the "rate of change in an intercultural social network is a dynamic function dependent on the stage of integration with the host community" (p. 648). This means that as immigrants become integrated into host communities, their social networks change (Gudykunst). The fifth proposition contends that "structural constraints will impact the size of intercultural networks, in turn affecting the adjustment process" (p. 648). This proposition suggests that factors such as existing social stigma (e.g., racial/ethnic stereotype), residential area, and social class all influence immigrants' abilities to form intercultural networks and acculturate (Smith, p. 648).

Smith's (1999) sixth proposition is that "as density increases, the provision of diverse resources within the net decreases, thereby affecting socialization/acculturation" (p. 650). This means that dense networks decrease the chance for immigrants to obtain various resources needed for acculturation in the host society, because information and support could be redundant in dense networks. The final proposition contends that "intercultural networks will be less dense, with more radial ties in cultures reflecting contextual-based relationship norms than those found in cultures reflecting a person-based relationship norm" (p. 650). This is due to the fact that immigrants' significant ties with host nationals will primarily be with coworkers in host cultures, reflecting a mainly

contextual-based relational norm (Smith). Coworker ties tend to be based more on interest, not sentiment, and interest networks tend to be more loosely knit, with higher turnover in nodes (van Poucke, 1980).

However, Smith's (1999) intercultural network theory has not been followed up extensively by subsequent empirical studies, except for his own study of the social architecture of communicative competence (Smith, 2002). With regards to his seven propositions related to the impact of network dynamics on intercultural communication, the current study aims to test three of them in the context of Korean immigrant social networks: propositions 3, 4, and 5. The following are the hypotheses that are generated for the current research based on Smith's theoretical propositions:

P3. The relationships between socio-structural heterogeneity and acculturation

→**H1a.** The more diverse a Korean immigrant's communication network is, the higher the chance of one's ethnorelative intercultural development.

→**H1b.** The more diverse a Korean immigrant's communication network is, the lower the chance of one's ethnocentric intercultural development.

P4. The relationships between the rate of change in social networks and the stage of integration into the host society

→**H2a.** A Korean immigrant's centrality score within an intracultural network (e.g., coethnic church communication networks) will be negatively associated with one's ethnorelative intercultural development.

→**H2b.** A Korean immigrant's centrality score within an intracultural network will be positively associated with one's ethnocentric development.

P5. The relationships between social stigma, residential area, and social class and acculturation

→**H3a.** Depending on a Korean immigrant's occupation in the host society, the extent of ethnorelative development will vary.

→**H3b.** Depending on a Korean immigrant's occupation in the host society, the extent of ethnocentric development will vary.

Immigrants' Communication Media Usage: Acculturation vs. Transnationalization

Intercultural communication research has contributed to understanding of the immigrant acculturation[8] process (Chen & Thorson, 2007; Kim, J., 1980; Kim, Y., 1977, 1995; Shah, 1991). The studies revealed the important roles of immigrants' host language competence, social communication, and the use of both ethnic and host society mass media in how immigrants adjust their beliefs, attitudes, and behaviors. A recent study on Internet-usage patterns of Chinese immigrants (Chen, 2010) showed that the length of residence in the host society reflects the immigrant's preferences of Internet use. The longer immigrants reside in the host country, the less likely they will surf their home country's websites and the more likely they will communicate with local people via the Internet. What these studies suggest is that immigrants' communication media (including both mass and new media, as well as both host society and ethnic media) usage patterns can indicate the extent to which they are acculturated to the host society. However, Gibbs, Ball-Rokeach, Jung, Kim, and Qiu (2004) found that both old and new immigrants living in the Los Angeles area maintained contacts with their countries of origin at a much higher rate compared to their contacts with other countries; their findings from the

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[8] Terminology used to describe socio-cultural changes after migration varies among disciplines and specific authors (Lee, Sobal, & Frongillo, 2003). Here, acculturation refers to a process of "overall" adaptation on both individual and group levels, including cultural, psychological, social, economic, and political aspects.

metamorphosis project studying seven different immigrant groups' perception of globalization and their everyday communication behavior (i.e., Caucasian Protestant, Caucasian Jewish, African American, Mexican-origin, Central American-origin, Korean-origin, and Chinese-origin) suggested that immigrants' cultural communication ties remain largely ethnically bound.

Lee, Sobal, and Frongillo (2003) compared the models of acculturation for the case of Korean Americans and showed that the process of immigrant acculturation was not unidimensional. By applying Berry's (1997) bidimensional model, they showed three distinctive forms of Korean Americans' acculturation: assimilation, integration, and segregation. According to Lee et al.'s findings, the assimilated group was younger, consisting mostly of 1.5 and 2nd generation immigrants[9]; thus, they received a longer period of formal American education compared to the older generation. The assimilated group spoke English most fluently and used U.S. mass media most frequently among the three groups. Therefore, the assimilated Korean immigrants showed attitudes, beliefs, and behaviors that were adjusted closer to those of host society members. The integrated group showed distinctly "bicultural" aspects of acculturation, since they not only used Korean but also American mass media, and were participating in both American and Korean recreational and religious groups most actively among the three groups. Compared to the segregated group, which showed almost the opposite case of the assimilated, the integrated group had a substantial amount of close friends who were Americans.

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[9] 1.5 generation means those immigrant descendants who were born in Korea, but migrated to the host society when they were young, such as from pre-school to teenage years.

Among the six dimensions of acculturation—cultural, structural, marital, identification, perceived discrimination, and civic—used in Lee et al.'s (2003) study, the structural dimension that measured Korean Americans' social participation and networks was the most unique indicator for the integrated group, in that Korean Americans who showed an integrated mode of acculturation were active in social networking with both coethnics and non-coethnics. They not only participated in Korean organizations but also in American ones; the integrated Korean Americans consumed both ethnic and host media actively. Therefore, Lee et al.'s finding provides bases for studying immigrants' social networking patterns and communication media usage as significant distinguishers of their cross-cultural adaptation patterns.

The aforementioned studies mostly adopted a traditional "assimilation" perspective and revealed a critical component of the immigrant acculturation process: *social* participation and communication in the host society. However, with the advancement of information and communication technologies (ICTs) such as the Internet and mobile phones, it has become possible and much easier for contemporary immigrants to maintain *transnational* ties with their home country by consuming mass media (products) of their home origin and keeping in touch with family and friends abroad. Horst (2010) used metaphors of "roots" and "routes" to describe how the Jamaican diaspora uses media to create, maintain, and negotiate symbolic relationships with the home country and its culture (i.e., roots), as well as to maintain tangible relationships with family and friends in Jamaica (i.e., routes). Transnationalism more recently has been perceived as a counterargument to the dominant acculturation/assimilation perspective and a renewed conception of globalization in understanding how immigrants navigate

their lives in the host society (Faist, 2000; Portes et al., 2002; Van Oudenhoven et al., 2006). Broadly referring to multiple ties and interactions linking people or institutions across the borders of nation-states, transnationalism, more specifically in the context of immigration, refers to the process by which immigrants forge and sustain multistranded social relations that link together their societies of origin and settlement (Shiller, Basch, & Blanc-Szanton, 1992).

An essential element of transnationalism is the great number and variety of involvement activities that immigrants sustain in both home and host societies. Examples are: money remittances, commercial ties, intensive links with relatives and friends, branches of religious organizations set up in the new country, second homes in the country of origin, and mutual visits. Gibbs et al.'s (2003) study showed both class and cultural differences are evident with regards to work associations and money transfer across various immigrant groups in Los Angeles areas; according to their findings, relatively affluent groups such as the Chinese-origin group had far more work connections with their country of origin than those of other immigrant groups, whereas Central American-origin and Mexican-origin groups reported higher amounts of money remittances to their countries of origin.

All of these transnational phenomena are facilitated by increasingly affordable telecommunication services (Faist, 2000; Van Oudenhoven et al., 2006, p. 647). Therefore, in order to better understand the changing nature of immigrants' social lives, studying what kind of communication media they use and how they use them for the maintenance of their various social ties becomes necessary. The previous research has mainly focused on immigrants' use of mass media, both of ethnic and host society origin,

which has *indirect* effects on the immigrant acculturation process due to the mediation of interpersonal communication (Kim, J., 1980; Kim, Y., 1977, 1995; Shah, 1991). The current research focuses on the immigrants' interpersonal communication networks that are more directly connected to their social lives, and thus it aims to investigate their personal communication technology (PCT) uses including those of mobile phones and social media, and their influences on social network maintenance.

The following section reviews research on mobile communication and other types of PCT usage limited in its scope by the relevance to a social networks perspective. Two different theories guiding the current research are introduced and discussed. Upon finishing the review, a series of research questions (i.e., RQ2 and its subsidiary questions) related to Korean immigrants' PCT usage and its possible impact on their social networks are proposed.

Mobile communication and social networks. As was mentioned above, research on immigrants' communication media usage has shown that both ethnic and host society media play significant roles in their socio-cultural adaptation in the new environment (Kim, J., 1980; Kim, Y., 1977; Matsaganis, Katz, & Ball-Rokeach, 2011; Shah, 1991). However, considering the well-known nature of many immigrant communities being densely-knit social networks, it is anticipated that the use of mobile phones, as a personal communication technology, will also be critical in their maintenance of social ties. A growing body of research on migrant workers' mobile phone usage showed how they maintain their transnational ties with families and friends through mobile communication (Chib, Aricat, & Ling, 2012; Law & Peng, 2008; Paragas, 2009), which has both positive

and potentially negative impacts on migrant workers' settlement and acculturation in the host society.

Migrant workers can strategically use mobile phones to maximize their job opportunities and manage social relationships with both their strong ties and their newly created weak ties. However, the increased availability of transnational communication based on the mobile Internet, along with the relative ease of communicating with coethnics (due to the limited host language proficiency), seem to reinforce the migrant workers' strong tie communication rather than to facilitate weak tie communication; this might ultimately delay the process of their acculturation[10] (Aricat, 2011). Chib, Aricat, and Ling (2012) found from their in-depth interviews with migrant workers in South Asia that they network with coethnics in the host society and acquire new skills as a result of mobile communication, and also that some are members of faith-based and voluntary organizations, from which they receive emotional and social support in time of need as well as spiritual well-being.

Based on a theoretical assumption of Apparatgeist (Katz & Aakhus, 2002) and its revised conception of *pure* communication as *possible* communication (Campbell, 2008), both of which will be explained in more detail in the following section, this research proposes that studying immigrants' mobile communication will enable understanding of the configuration of their social networks. An examination of the relationships between Korean immigrants' mobile communication, both in terms of voice calling and texting, and their social network characteristics (e.g., size, diversity, structural positions) can enrich our knowledge about how the use of personal communication technologies (PCTs)

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[10] Aricat (2011) notes that the meaning of being acculturated into the host society for immigrants is challenged in a transnational era.

sustains different types of social ties and mediates the effect of immigrant social capital, if at all, on their acculturation. Given that more and more people are accessing their email and social network sites through their mobile devices nowadays, it becomes more necessary to consider immigrants' mobile communication as the main channel for their daily social communication.

Apparatgeist theory. Katz and Aakhus (2002) proposed the theory of Apparatgeist to make sense of consistencies discovered in the effects and uses of mobile phones and other PCTs in various areas of the world. Apparatgeist, which literally means "spirit of the machine," refers to a common human orientation toward PCTs and coherent trends in adoption, use, and social transformations. The theory was devised out of the compiled research findings from diverse nations (e.g., Finland, Israel, Italy, Korea, U.S., France, the Netherlands, and Bulgaria) in which Katz and Aakhus observed parallel shifts in communication patterns that are closely related to mobile phone adoption in those countries. For example, similar trends appeared in the coordination of daily activities, *configuration of social networks*, private use of public spaces, and new forms of connections to the workplace [*emphasis added*] (Campbell, 2008, p. 156).

Apparatgeist refers to an underlying spirit that contributes to these consistent changes and/or consequences. Katz and Aakhus (2002) attributed the spirit of Apparatgeist to a common *logic* that "informs the judgments people make about the utility or value of the technologies in their environment… and predictions scientists and technology producers might make about personal technologies" (p. 307). This is the logic of *perpetual contact*, which is a "socio-logic" derived from collective sensemaking; it "underwrites how we judge, invent, and use communication technologies" (p. 307). The

logic of perpetual contact is influenced by a group of social (e.g., values and norms) as well as technological (e.g., size and design) factors on its surface level, which shapes how people think about and use their PCTs. Below the external layers of these factors, there lies a core assumption of perpetual contact and the spirit of Apparatgeist—the ideal of *pure* communication that is to share one's mind completely with another (Katz & Aakhus, p. 307).

Apparatgeist theory argues that the norms regarding technology use are continuously being modified, often creatively, by users within social environments to serve their expressive interests (Katz & Aakhus, 2002). Users of technologies imbue them with special meanings and emotional valences. The increasing integration of PCTs with the physical body, social meaning, and individual identity is captured by the phrase "machines that become us" (Katz, 2003). Users are extending their physical attributes to include the technologies that have been increasingly connected to one's being, which allows for an additional means of self-expression (Katz, Lever, & Chen, 2008, p. 369).

Katz and Aakhus (2002), in their proposal of Apparatgeist theory, provided both the manifest and latent points in people's reasoning with respect to the technological and social aspects of PCTs, including mobile phones. In manifest reasoning about the qualities of attractive technology, there are specific attributes sought after in the design process regarding what potential users might want: smaller, faster, more functions, lower cost, or higher status marker, to name a few. On the manifest qualities of technology's social role, Katz and Aakhus mentioned, to the extent that the technologies fit into the local social context of users, they will be used to seek information and to fulfill social roles and personal needs. In addition, norms and values will be associated with the use of

technologies. In latent reasoning about the qualities of technology, there are issues as well: symbolic affirmation of values, socially appropriate behavior for relevant technology use, decreased monitoring of self, and increased monitoring over others are all examples of these issues.

All of this manifest and latent reasoning might be identified when researching immigrants' use of mobile phones; but the current study focuses primarily on one of the latent social dimensions that factors into decisions about adoption and usage of PCTs, namely, one's social network. Among the examples of the latent social dimensions of PCT usage that Katz and Aakhus suggested, there are *networks of social ties* based on sentiment, interest, and obligation, advancement of self, group, and values within group, society, and culture, respectively (p. 311, see Table 19.1). By studying how immigrants' social networks of information, emotional support, and help are maintained by their mobile communication, an empirical test of the theoretical premises of Apparatgeist will be achieved.

Campbell and Russo (2003) found that people within the same personal communication networks (PCNs) showed more similar attitudes towards the use of mobile and similar usage patterns compared to those who were outside of their social networks. Researchers attributed the results to the social influence from close contacts and collective sensemaking of the technology within the PCNs. When discussing theoretical implications of their study, Campbell and Russo mentioned how their findings were in line with Apparatgeist theory, particularly considering the socio-logic of perpetual contact, and they proposed an application of Apparatgeist theory to the study of small-scale social networks. Their research findings suggested that a group of people who

are connected to one another (i.e. forming social networks) might converge into similar attitudes toward the use of PCTs and into similar patterns of usage.

While acknowledging the utility of Apparatgeist as a theoretical framework in understanding and predicting the relationship between perceptions and uses of PCTs, Campbell (2008) suggested an alternative conception of "pure" communication as an underlying driving force behind adoption, conceptualization, and use of the mobile phone and other PCTs; he explained that "possible" communication might be a better term than "pure," since not all mobile users in all social contexts are driven by a fundamental desire of complete social connection. Pure communication resonates more with certain expressive and social uses of the technology, and not so much with safety/security and instrumental uses, both of which were also identified as main reasons of mobile phone adoption/usage through research (Campbell). Even in the expressive social usage area, where people use a PCT to connect with others, they can also use it to highlight and demarcate the boundary between in-group and out-group members. This can be seen particularly well in teenagers' mobile phone usage as they develop their own special language and characters when texting (Green, 2003; Ling & Yttri, 2002). "While social network members are privy to text messages with distinctive language, nonmembers are often relegated to less inclusive forms of mobile phone use, such as voice mail" (Campbell, p. 160).

Based on the theoretical assumptions of Apparatgeist and Campbell's revised conception of pure as possible communication logic, the current study proposes that examining interpersonal communication channels (i.e., PCTs) used by organizational members will serve as a useful way to reveal the structure of "possible" communication

networks. Within a bounded context of organizational communication networks, such as in a Korean immigrant church, people might show some collective sensemaking of their mobile phone usage and converge into similar attitudes toward mobile phone use and toward similar usage patterns (Campbell & Russo, 2003). Going further, since what is conveyed through the interpersonal communication channel is not only information, but also social influence or normative control, members within the same organizational networks who communicate frequently with one another could form similar cultural attitudes and beliefs over time.

Selective interpersonal relationship theory. Matsuda's (2005) selective interpersonal relationship theory claims that the use of mobile phones can change young people's social networks. According to Matsuda, researchers have long asserted that young people—broadly defined as 13- to 30-year-olds—had extensive, but low-quality relationships with friends, and that mobile phone usage may facilitate the improvement in their relationship quality. However, she observed that no empirical studies had been conducted which support this claim, and that these interpretations may have been distorted by cohort effects, sampling bias, and mass media effects. Matsuda argued that young people prefer *selective* interpersonal relationships in which they maintain *particular, partial*, but *rich* relations, depending upon the situation.

Urbanization increases the number of possible contacts with increased mobility, and hence, promotes selective relationship formation (Matsuda, 2005). Mobile phones, as well as urbanization, can increase the frequency of communication and allot opportunities expand interpersonal relationships, thus increasing the size and diversity of one's social networks. For the most part, however, young people are likely to communicate only with

close friends via mobile phones (Ling, 2007); and also, they can connect with one another regardless of their current location. Matsuda argued that it is better to consider such relationships as being selective, rather than qualitatively rich or poor, and also noted that such selective relationships can be regarded as partial, yet rich. That is, young people do not need fully integrated relationships with others, but can have partially functioning relationships in response to one's situational demand.

By extending Matsuda's selective interpersonal relationships theory, we might be able to project that Korean immigrants who use mobile phones and other PCTs actively also could be maintaining their interpersonal relationships selectively, by taking advantage of the characteristics of new media, thus overcoming temporal and physical barriers. Despite their uplifting and relocating from the country of origin, contemporary immigrants can maintain their long-distance relationships relatively easily by using all kinds of PCTs. Instead of trying hard to make new friends in the host society, which is much harder for foreign-born immigrants due to their lack of host language proficiency, they might be seeking information and social support from those with whom they already share common language and culture.

Based on Matsuda's (2005) selective interpersonal relationship theory, Igarashi, Takai, and Yoshida (2009) examined the development of face-to-face (FTF) social networks and mobile phone text message (MPTM)-mediated social networks, and found gender differences in the social network structure of Japanese undergraduate students. Their longitudinal social network analysis showed that MPTM social networks consisted of dyadic relationships, and its growth was slower than FTF social networks. The intimacy of friends who communicate via both FTF and MPTM was rated higher than

those who communicate only via FTF. The structure of MPTM social networks coincided with known gender differences in network characteristics: women tended to expand their MPTM social networks more than men did. Igarashi et al.'s findings suggest that mediated communication networks might develop more slowly than in-person networks, but use of *multiple* communication channels seems to facilitate relationship development (Haythornthwaite, 2002, 2005).

Mobile communication's impact on social networks. Ling, Yittri, Anderson and DiDuca (2003) found that people who did not have pre-established social networks could not readily take advantage of the Internet and mobile phones. They concluded that it is beyond the role of communication technologies to create social networks. Although people can still go online and try meeting new people such as in online dating sites (Gibbs, Ellison, & Heino, 2006), more often we seem to use the Internet and mobile phones to maintain our existing ties rather than to create new ties. boyd and Ellison (2007) also reached similar conclusions from their review of research on social networking sites (SNSs), finding that most SNSs primarily support pre-existing social relations.

Donner's (2006) research on the use of mobile phones by microentrepreneurs in Rwanda added a notable discussion in this line of inquiry. Although the proportion of mobile phone use for contacting friends and family (i.e., existing ties) was higher than that for business-related contacts, it was found that those microentrepreneurs residing in low teledensity areas, where many residents do not own means of telecommunication yet, can benefit from their ownership of mobiles in terms of having constant and immediate connections to their new business ties. Donner interpreted his findings as confirming

evidence for both *structural change* of society and increased *productivity and amplification* enabled by the use of communication technology. He emphasized that the most sudden changes to a personal network—the introduction of new weak ties (Granovetter, 1973) and the expansion of networks—were experienced by those who purchased the first phone of their lives.

Based on a survey of Taiwanese college students, Wei and Lo (2006) found that the mobile phone supplements the fixed telephone as a means of strengthening users' family bonds, expanding their psychological neighborhoods, and facilitating symbolic proximity to the people they call. The authors concluded that the mobile phone has evolved from a luxury for businesspeople into an important facilitator for many users' social relationships. However, Wei and Lo found that for those with poor social connections, the mobile phone offers a unique advantage: it confers instant membership in a community. This finding seems to contradict somewhat previous research on mobile communication and social networks configuration, but it is in line with what Donner (2006) found about the mobile phone use by microentrepreneurs in Rwanda.[11] In addition, Lewis et al. (2008) found that racial and ethnic minority groups of college students used Facebook actively to enhance their social networks in terms of diversity and size. They also found that subgroups defined by gender, race/ethnicity, and socioeconomic status showed distinctive networking behaviors, and that students sharing social relationships as well as demographic traits tend to share cultural preferences such as movies, music, and books.

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[11] Wei and Lo's (2006) study was about individual level benefits of using mobile phones, but Donner (2005) focused more on a structural condition (i.e., living in a low teledensity area) which made it possible for microentrepreneurs to take advantage of having the first phone connection in their lives.

Miyata, Boase, and Wellman (2008) studied the social effects of keitai (i.e., mobile phone in Japanese) email and PC email in Japan, and found that the young Japanese used emails exchanged through mobile phones for maintaining existing supportive relationships rather than developing new relationships. The differential effects of mobile-based and PC-based emails were confirmed even after controlling for the effect of demographics, employment status, *network size and diversity*, and participation in voluntary groups. Miyata et al. also found that the increase in PC-based email usage was significantly related to the increase in personal network diversity, meaning the participants interacted with people from diverse backgrounds though PC emails. From the results of a longitudinal panel study over three years, they raised concern about the possibility of a young keitai-dependent generation living *insular* lives "remaining ignorant of how people from diverse social strata live and interpret the world" (p. 220).

The current study can make contributions to understanding how mobile communication configures social networks of a bounded group in general and more specifically, of an immigrant organization. There is not enough research on immigrants' mobile phone use, besides that of migrant workers, in how they maintain their transnational ties with families and friends abroad through mobile communication (Chib, Aricat, & Ling, 2012; Law & Peng, 2008; Paragas, 2009). The scant research, however, provides insights about how migrant workers can strategically use mobile phones to maximize their job opportunities and manage social relationships with their newly created ties.

For example, Law and Peng (2008) pointed out that although a mobile phone is a personalized medium, for migrant workers, it is a very powerful tool in building mobile

cyber-kinship networks in Guandong, China. Mobile phones not only help migrants to maintain existing kin relationships in expanded spatiotemporal contexts, but also to prolong new social relationships developed in the workplace. Migrant workers are highly mobile and most of them do not stay in one factory for a long period of time. In the past, friendships developed in one location would rarely be prolonged when workers left that workplace; but now, they can stay in regular contact with their new friends via mobile phones. Mobile communication, which frees individuals from temporal and physical constraints, serves an important function of preserving this new kind of social network among migrant workers with different places of origin.

Combining the previous research findings on the relationship between the use of mobile phones and the users' maintenance of their social networks, it seems the majority of studies confirm that mobile communication strengthens existing social ties, and thus generates more bonding social capital, rather than creating new weak ties for bridging social capital (De Gournay, 2002; Igarashi et al., 2009; Ling et al., 2003; Ling, 2008; Matsuda, 2005; Miyata et al., 2008). Ling (2008) summarized this phenomenon as "bounded solidarity"[12] to refer the major effect of mobile communication on changes in people's social networks. However, some exceptional cases have been identified, such as in the developing country of Rwanda (Donner, 2006), for people like migrant workers in China (Law & Peng, 2008), racial and ethnic minorities (Lewis et al., 2008) or those poorly connected socially (Wei & Lo, 2006). For those cases, mobile communication also facilitates the creation of new ties and the maintenance of contacts with new entrants in social networks. These findings suggest the possibility of a reversed direction of

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[12] Ling's expression interestingly overlaps with Portes and Sensenbrenner's (2003) conception of "bounded solidarity" as one of the common resources of social capital found among immigrant communities.

relationship: how network conditions (e.g., low teledensity, poor social connection) can affect individuals' personal communication technologies (PCTs) usage and their social relationships.

The current study tries to further this line of inquiry by asking how PCT usage intersect with social network characteristics like size, diversity, and structural positions (Campbell & Kwak, 2010). Except for Igarashi et al. (2009), previous studies have not directly examined network properties, but instead used proxy measures (e.g., proportion of new entrants in Donner, 2006) to infer the impact of mobile communication on changes in social networks. By incorporating direct measures of network properties, especially of one's structural position (i.e., centrality) in a given network, the current study complements the prior research and approaches the concept of social capital more accurately and holistically.

De Gournay (2002) argues that mobile communication fosters a decrease in number of social ties as networks become less diffuse and more tightly knit. Gergen (2008) characterizes this trend as "monadic clustering" and theorizes that it can have negative consequences for civil society, as networks become insular and detached from the democratic process. Based on these scholars' assertions of the role of mobile communication and its effect on social network configurations, the current study proposes an examination of the relationship between immigrants' use of mobile phones and their community organizing in its structural configuration. Considering the private nature of mobile communication and its possibility of strengthening immigrants' social ties with their family and coethnic friends, rather than creating new ties with host society members, it can be expected that the mobile communication with coethnic strong ties

would increase the network density and its consequential closure and insularity. In the mean time, some immigrants might use the mobile phone frequently for contacting both non-coethnics and weak ties as well; in that case, those immigrants will be more likely to have larger, more diffuse, and more diverse social networks.

Scholars have also been studying whether Internet technology enhances or impedes the formation of social capital that was originated from offline relationship contexts (Wellman et al., 2001). Williams (2007) found that general Internet usage was associated with an increase in bridging social capital, while discouraging bonding social capital. However, relationship building and its resulting social capital may take on a distinctive form in Social Network Sites (SNSs) because of their unique orientation and architecture geared towards social connectivity (boyd & Ellison, 2007). A study on MySpace member profiles found that a relaxed concept of friendship on SNSs led to communicating not only with close friends, but also with mere acquaintances and strangers (Thelwall, 2008). Close connections can be strengthened via use of SNSs that provide another channel for communicating with strong ties, thus enhancing bonding social capital (Donath & boyd, 2004; Ellison, Steinfield, & Lampe, 2007).

As such, numerous studies suggest that different types of media usage are associated with distinctive social ties. Mobile phones and Instant Messaging (IM) seem to be more related to strong tie relationships and smaller networks, while PC emails and SNSs are related to weak tie and diverse networks (Ellison et al., 2011; Kim, Kim, Park, & Rice, 2007; Miyata et al., 2008; Quan-Haase & Wellman, 2006; Zhao, 2006). Research on the social uses of new media particularly focuses on the relationship between media use and social networks, which supports the idea that the network context as a specific

condition of communication can influence how one chooses, uses, and perceives different media (Licoppe & Smoreda, 2005; Rice, 1993). Boase, Horrigan, Wellman, and Rainie (2006) found that participants who kept in contact through email with most of their central relationships also had many telephone contacts with those people (i.e., multiple media use for strong ties), while more face-to-face contacts were related to their non-central relationships. They also found that email users were more socially supported when they used multiple media (e.g., IM, mobile phone, personal digital assistant (PDA)). Haythornthwaite (2005) and Haythornthwaite and Wellman's (1998) earlier studies examined the relationship between multiple media use and tie strength; they found that people with stronger ties had more relationships, more frequent communication, and more media to use than those with weaker ties (i.e., media multiplexity).

Boase (2008) found from a national random survey of 2200 American adults that the extent to which different types of communication media (i.e., in-person contact, landline, mobile phone, and email) were used varied with the size and diversity of personal networks. According to his analyses, in-person and landline contacts were still the major form of social communication (in 2004), and the use of mobile phone and email were distinctively related to different sizes and diversities of personal networks. Mobile phones were used when personal networks included large numbers of kin ties, diverse ties in low and high prestige occupations, and dense groups of core ties; whereas email was used when personal networks included large numbers of friends, work and kin ties, diverse ties in high prestige occupations, and with the geographically distant (p. 501). Boase interpreted his findings that depending on the different social opportunities

each medium affords, an individual actor chooses to use one medium over another or combines several of them to fulfill social needs and preferences.

A more recent study (Ellison et al., 2011) on uses of Facebook, one of the most popular and widespread SNSs, and its impact on college students' perceived social capital, found that different types of connection strategies (i.e., initiating, maintaining, and social information seeking) are related to bonding and bridging social capital distinctively. Initiating communication with strangers could increase bridging social capital and maintaining existing ties could increase bonding with them; social information seeking was a unique connection strategy, however, having the potential to change latent ties into weak ties, thus contributing to bridging social capital as well. Based on the previous research findings on the relationship between individuals' use of PCTs (including mobile communication and social media and their social networking characteristics), the current research poses the following question about Korean immigrants' PCT usage for their social network maintenance:

RQ2. What are the relationships between Korean immigrants' personal communication technologies usage and their social capital?

Aforementioned research has found that people tend to use multiple media (i.e., multiplexity) to maintain their strong ties, while they use fewer media for their weak ties (Haythornthwaite, 2005). In addition to RQ2, the study will examine whether the tendency for media multiplexity is found in the case of Korean immigrants' PCT usage and which PCTs are more associated with weak ties, if at all. Based on the findings from previous studies about the relationships between usage of various PCTs and their

distinctive effects on tie strength (Haythornthwaite, 2002), the following additional research questions are proposed:

RQ2a. How does use of PCTs with coethnic strong ties affect Korean immigrants' social capital?

RQ2b. How does use of PCTs with coethnic weak ties affect Korean immigrants' social capital?

RQ2c. How does use of PCTs with host strong ties affect Korean immigrants' social capital?

RQ2d. How does use of PCTs with host weak ties affect Korean immigrants' social capital?

Cultural convergence and the role of personal communication technologies. Rogers and Kincaid (1981) proposed cultural convergence theory and argued that over time actors (e.g., individuals, groups, or nation states) in a closed system will converge on the average collective pattern of thought if communication is allowed to continue indefinitely. Cultural convergence theory predicts that all participants in the world system will converge into a global culture if communication within the system is unrestricted. The process of cultural convergence can only be delayed or reversed by the introduction of new information and/or the formation of boundaries (e.g., tightly-knit ethnic and religious groups, regional economic blocks) that restrict the flow of communication. According to the theory, relatively bounded and isolated groups experience greater convergence toward their own local system rather than the larger global system, even though the net convergence of the entire system still continues to increase (Rogers & Kincaid).

Barnett and Kincaid (1983) developed a mathematical model for convergence theory and tested the theory with diverse immigrant groups in Hawaii (Kincaid, Yum, Woelfel, & Barnett, 1983). Among the participating immigrant groups, they picked Korean immigrants, divided them into two sub-groups according to the length of immigration (either 1-7 and 8-15 years), and showed that earlier immigrants converged closer toward the value configuration of the host society.[13] Their findings can be interpreted in line with the traditional acculturation/assimilation perspective; the longer the residence of immigrants in the host society, the more similar attitudes and beliefs they show with those of natives due to the ongoing acculturation process (Chen, 2010; Kim, Y., 1995).

Barnett and Rosen (2007) later reformulated cultural convergence theory, considering the *strength of ties* and *directionality* in communication exchanges between nodes. Before, the network ties were measured dichotomously with link or no-link; thus, the number of messages or the frequency of communication had not been addressed. In addition, communication between nodes was assumed to be sharing of information among equals, but in fact, there can be actors initiating more interactions than others, which creates unequal distribution of encoding and decoding messages in the networks. Barnett and Rosen added two more propositions in their reformulation of cultural convergence theory: (a) the stronger the link between actors, the greater their reciprocal influence, that is, the faster they converge on a common set of beliefs; and (b) the greater proportion of messages initiated by an actor, the more similar the final equilibrium set of beliefs will be to the initial state of beliefs held by that actor. In the long term, global

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[13] But interestingly, the earlier immigrants also showed more damaging effects of ethnic communication as well in another study (Kim, J., 1980), probably because once a certain pattern of communication (with host and ethnic members and media) is established, it is not likely to be changed, but rather to be solidified over time.

culture will be most similar to the nations encoding the greatest proportion of the system's messages (in particular, the United States) (Barnett & Rosen).

Based on research examining international hyperlink networks (Barnett & Park, 2005; Park, Barnett, & Chung, 2011), Barnett et al. interpreted that the structural configuration of information exchange within the world system is quite similar with that of resource trades among nation states. This is because nations such as the U.S. and other European countries are still at the core of its network. However, Barnett et al. also found China and India becoming more central, while continental Europe becomes less central than before, which they suggested as evidence that the structure of the world telecommunication system might be changing. There is a two-fold explanation provided for this phenomenon: (a) on a short-term basis, cultural homogenization will be delayed by the increased use of advanced internet technologies allowing local groups to tighten their networks and preserve their own cultures; and (b) on a long-term basis, differences among national cultures diminish to form a single global culture or transnational identity, albeit with considerable variation (Barnett & Park).

If cultural convergence theory is applied to the context of relatively bounded and isolated groups such as ethnic church organizations, where communication among the members within organizations is frequent, unrestricted, and also facilitated by the new communication technologies such as mobile phones and social media, it is anticipated that members might converge towards their own organizational norms and ethnic values rather than toward the culture of a larger society. The cultural convergence toward an in-group and/or the preservation of their ethnic culture is more likely to happen when an organization tries to maintain a clear boundary, thus creating a relatively closed system,

and also when the culture of an in-group has many distinctive aspects compared to that of its larger society (e.g., collectivism vs. individualism, Hofstede, 1984; high context vs. low context communication, Hall, 1976 for Korean vs. American culture).

Over time, however, as organizational members spend more time in the host society interacting with outsiders (e.g., host nationals) or as the composition of membership changes (e.g., a generational change in the immigrant society), it is possible that systemic homeostasis will be achieved, meaning that the differences between in-group and out-group cultures diminish (Barnett & Kincaid, 1983) and a sort of hybrid culture between one's ethnic origin and host society will emerge. For example, as second and third generations of immigrants become the host nationals themselves and grow more acculturated toward the host society, and the host society accepts various immigrant cultures as part of its own, immigrant descendants' cultural identity will be more likely to be cosmopolitan, transnational, and hybrid between their ethnic origin and host society. However, there are exceptional cases, like Jewish communities and their diaspora that maintain their cultural and religious traditions relatively consistently even over several generations.

The current research views this cultural convergence, either inward or outward, as one of the possible consequences of communication networks dynamics, and tries to understand the influence of personal communication technologies (PCTs) usage in the process of convergence as well. On one hand, it is possible that the instant connections afforded by mobile communication and the ongoing conversations enabled by various social media will contribute to the "inward" cultural convergence among members within an ethnic cultural organization by tightening their networks. If so, they will identify more

strongly with an in-group culture compared to that of a larger society, thus possibly

showing relatively *ethnocentric* intercultural development. It is also plausible that

individuals who are deeply embedded in these tight-knit intracultural networks will have

less chance to interact with outside members (i.e., intercultural communication) due to

the structural limitation.[14] On the other hand, if members have many and diverse

relationships with outsiders (including non-coethnics and host nationals), are embedded

in multiple diffuse networks, and also use PCTs frequently for maintaining those

relationships, it is anticipated that they will be more likely to experience other cultures in

addition to their own and show *ethnorelative* intercultural development. Based on these

projections, the following research question is proposed for the current study:

> **RQ3.** How do Korean immigrants' social capital and usage of personal
>
> communication technologies affect their intercultural development after
>
> controlling for the effect of English proficiency and length of immigration?

When trying to answer RQ3, the study will examine whether Korean immigrants'

social networking patterns and their PCTs use, including mobile phone and social media

(e.g., Facebook, Instant Messaging) uses, have a significant relationship with their

cultural attitudes both together and separately. Depending on individual actors' network

characteristics (i.e., centrality, size, and diversity) and the amount of PCTs used, it is

expected that the extent of intercultural development will vary. Table 2.1 summarizes the

research questions and hypotheses suggested thus far for the current study. The following

Figure 2.2 shows the theoretical model of the research. As it is represented in the model,

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[14] Creating and maintaining relationships is a time consuming activity, thus the number of direct social ties any given person can have will necessarily be limited (Wellman, 1988). Scott (1991) has argued that limitations of time have direct consequences for the reciprocity and intensity of relationships. Therefore, if a Korean immigrant has most of his/her relationships within an ethnic church network and spends much time interacting with those people, the chance of interacting with outsiders will be reduced naturally.

RQ1 examines the relationship between Korean immigrants' social capital and their intercultural development, while RQ2 examines the relationships between social capital and PCTs use. The last question of this study (RQ3) considers the relationships among the three constructs (i.e., social capital, PCT usage, and intercultural development) together, while controlling for the effects of length of immigration and English proficiency.

Table 2.1

Research Questions and Hypotheses

	Research Questions	Hypotheses
RQ1	What is the impact of social capital embedded in organizational communication networks of Korean immigrants on their intercultural development?	**H1a.** The more diverse a Korean immigrant's communication network is, the higher the chance of one's ethnorelative intercultural development. **H1b.** The more diverse a Korean immigrant's communication network is, the lower the chance of one's ethnocentric intercultural development. **H2a.** A Korean immigrant's centrality score within an intracultural network (e.g., coethnic church communication network) will be negatively associated with one's ethnorelative intercultural development. **H2b.** A Korean immigrant's centrality score within an intracultural communication network will be positively associated with one's ethnocentric development. **H3a.** Depending on a Korean immigrant's occupation in the host society, the extent of ethnorelative development will vary. **H3b.** Depending on a Korean immigrant's occupation in the host society, the extent of ethnocentric development will vary.
RQ2	What are the relationships between Korean immigrants' personal communication technologies usage and their social capital? **RQ2a.** How does use of PCTs with coethnic strong ties affect Korean immigrants' social capital? **RQ2b.** How does use of PCTs with coethnic weak ties affect Korean immigrants' social capital? **RQ2c.** How does use of PCTs with host strong ties affect Korean immigrants' social capital? **RQ2d.** How does use of PCTs with host weak ties affect Korean immigrants' social capital?	
RQ3	How do Korean immigrants' social capital and usage of personal communication technologies affect their intercultural development after controlling for the effect of English proficiency and length of immigration?	

Figure 2.2

Theoretical Model of the Research
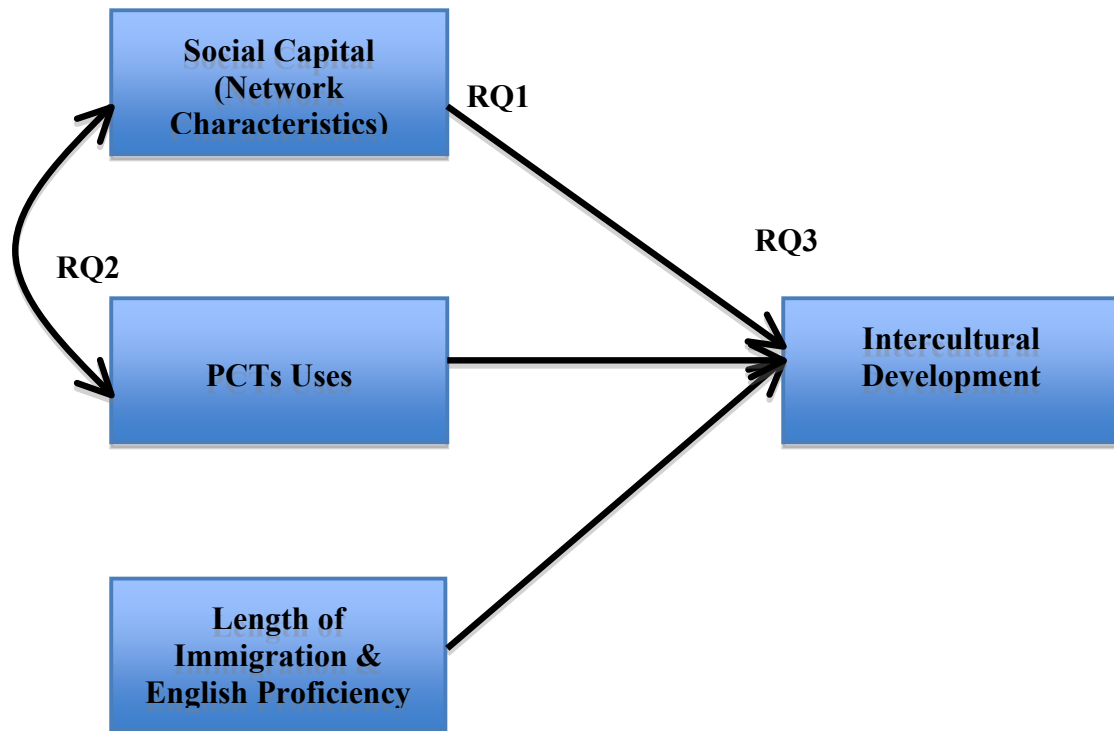
III. Research Methods

In order to answer the proposed research questions and test the hypotheses of the current study presented in the previous chapter, an organizational member survey was used to collect data on Korean immigrants' communication networks, personal communication technology usage, and intercultural development. The following section explains the process of data collection and measurement of major variables in the survey, and then provides descriptions for the sample demographics and data analysis procedures.

Data Collection

In order to closely examine the relationships between Korean immigrants' social networking dynamics, personal communication technology (PCT) usage, and their intercultural development, a Korean immigrant church located in suburban New Jersey was selected as a sample organization. The state of New Jersey has one of the largest Korean immigrant populations (77,810 Korean-born immigrants live in NJ according to 2011 American Community Survey; Migration Policy Institute), along with California, New York, Illinois, and Georgia. The church organization was founded in 1974 and currently has about 450 adult members registered as Korean-speaking congregants. The organization has a separate ministry for the Sunday school, youth group, young adults, and the English-speaking congregation. The Sunday schools and youth group services are also run mostly in English, and the young adult group service has both Korean and English versions. As a result of an abundance of Korean immigrant pastors and the historical relationships between the U.S. and Korea (including American missionaries in Korea and the Korean War in 1950), there are approximately 3,500 Korean immigrant churches in the U.S., with the majority being Presbyterian (Min, 2006, p. 245). However,

due to the available access to the research site, a Methodist church was chosen as the
sample organization for this study.

Post-1965 Korean immigrants, like other Asian immigrants, were generally drawn
from the well-educated, urban, middle-class segment of the population in their home
country (Min, 2006, p. 234). The first wave, especially, of post-1965 Korean immigrants
(those who acquired green cards granting permanent residency before 1980) included
large numbers of professionals, especially medical professionals, and foreign students
who later changed their status to that of permanent resident in the U.S. (Kim, D. Y.,
2004). Considering the fact that the sample organization of this research was established
38 years ago, it was expected that most members of this particular immigrant church are
those who migrated after 1965.

Upon acquiring the most updated registry of Korean-speaking adult congregants
of the church, a survey was sent to each member on the list, along with the informed
consent form and an invitation letter from the pastor of the church. A total of 450 surveys
were delivered to each member/household of the church congregants from November
2011 till January 2012. The study was promoted by the pastor during the main services
and several other church gatherings (e.g., Bible study meetings, the church assembly) and
the congregants were asked to participate in the survey. The church members were
reminded about the survey through phone calls and interpersonal contacts by the
researcher until September 2012.

Sample description. There were 80 male (45.7%) and 95 female (54.3%)
participants in the sample along with three participants whose biological sex was
unidentified (Total $N = 175$). Participants' median age was 51 years old (range $= 21 - 87$,

$M = 51.95$, $SD = 13.52$). Almost all participants (98.3%) were born in Korea, thus being the first generation Korean immigrants in the U.S.; only two participants were born in the U.S. and there was only one participant who reported being born in a country other than Korea or the U.S. Fifty-two (31.3%) participants had professional occupations such as lawyers, doctors, or accountants, and sixty-four participants (38.6%) reported owning a small business or working for nail salons or groceries, which has been reported as a typical case for many Korean immigrants in the U.S. (Min, 2006). Fifty participants in the sample (30.1%) were currently unemployed, being a student, housekeeper, or retired.[15] Slightly less than one third of the sample (31.9%) reported monthly income of less than $2500, a slightly higher percentage of participants (34.4%) reported between $2500 and $5500, and the rest (33.7%) reported more than $5500.

More than three quarters of the valid sample reported an education level of college graduate or higher, and 88.1% of the participants were married. About 10% of the sample reported being single and three participants reported being divorced. Participants reported living in the U.S. from two to 50 years since immigration ($M = 21.98$, $SD = 10.3$), and they reported from six months to 36 years of church membership ($M = 11.27$, $SD = 8.05$). Table 3.1 summarizes the descriptive statistics of the sample demographics.

The response rate of the survey for this study was about 40% ($N = 178$). Although this rate was not ideal to construct the whole communication network of the target organization, it was satisfactory for the current study, considering the nature of mail-in surveys and the fact that there was no direct incentive to participate. Since the target subjects of this research were those officially registered as church members, whose ages

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[15] Twelve participants did not report their occupation in the survey.

ranged from 18 to 80, an online survey was not a viable method for data collection when considering the older populations.

Table 3.1

Summary of Sample Demographics

Variables	Levels	Frequency (%)	*M*	*SD*
Age	Range 21 – 87 yrs	-	50.95	13.52
Sex	Male	80 (45.7%)		
	Female	95 (54.3%)	-	-
Monthly income	> $2500	53 (31.9%)		
	$2500-5500	57 (34.4%)	-	-
	< $5500	56 (33.7%)		
Education	High school or less	42 (24.3%)		
	College	98 (56.6%)	-	-
	Post-college	33 (19.1%)		
Occupation	Unskilled labor	64 (38.6%)		
	Professional	52 (31.3%)	-	-
	Unemployed	50 (30.1%)		
Marital status	Married	155 (88.1%)		
	Single	18 (10.2%)	-	-
	Divorced	3 (1.7%)		
Length of immigration	Range 1.83 – 50yrs	-	21.98	10.3
Church membership	Range .5 – 36yrs	-	11.27	8.05

However, an independent sample T test was performed to see whether there was any demographic difference between the participants who responded to the survey during the first two months (n = 72, 40.4%) and those who responded later (n = 104, 59.6%) during the whole ten months of data collection for the current study. The test was for a non-response bias analysis to compensate for the relatively lower response rate of the survey assuming that late responders are more likely to be non-responders, thus the independent sample T test is used as a proxy to look for differences within the sample. In terms of participants' age; t (172. 82) = -.75, p = .453, sex; t (173) = .14, p = .888, income; t (164) = .7, p = .482, and education level; t (171) = 1.52, p = .129, those two groups of survey respondents did not show any statistically significant difference[16].

Measurement of variables. The organizational member survey, used to collect data for the current study, asked about four different aspects of Korean immigrants' lives: a) demographics, b) media usage including personal communication technologies (PCTs), c) social networking, and d) acculturation/intercultural development. For demographic information, participants' age, gender, occupation, level of education and income, and the area of residence was included.

Media usage. Participants' PCTs use (i.e., cellular phone calling, texting, email, landline, Social Network Sites, Instant Messaging, and Skype) for contacting their strong and weak ties both coethnic and host ties was asked by using a 7-point scale (*1 = not at all, 7 = a few times a day;* "Among the media options below, how often do you use each one of them for contacting your Korean friends and coworkers?"). In addition, both

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[16] Independent sample T tests were performed for major variables of this study (i.e., length of immigration, English proficiency, PCT usage for four different types of ties, ethnocentric and ethnorelative development) between the early and late responders of the survey and the results are provided as a summary in Table 6 in Appendix II. According to the tests, late responders lived slightly longer in the US and early responders are slightly more ethnocentric.

Korean and American mass media usage was assessed by media content genre (i.e., news,

entertainment shows, drama/sitcoms, documentary/current affairs, and movies) using a 5-

point scale (*1 = not at all, 5 = use daily;* "what kind of Korean TV programs do you

watch? Please check the frequency for each type of program"). The survey also asked

whether respondents were subscribing to Korean and/or American newspapers and/or

reading news online also with a 5-point scale.

*Social networkin**g.** The survey questionnaires included the measurement of the

extent of Korean immigrants' organizational involvement (i.e., religious, hobby,

occupational organizations, others) with a 5-point scale (*1 = rarely or never, 5 = more*

than once a week), number of both their coethnic and non-coethnic ties, and that of strong

and weak ties. The current study assessed the strength of social ties by measuring the

frequency of communication between people; the number of friends and coworkers

contacted daily/weekly versus less frequently than daily/weekly was used to compare

strong versus weak ties.[17] In order to perform structural analyses of the organizational

communication networks, each member was asked to provide information about up to six

people (i.e., alters) whom they contact to seek information, emotional support, and help

(e.g., ride, money, or gift). Using a name generator method (Marin & Hampton, 2007),

participants of the survey were asked to provide names and demographic information

(i.e., age, sex, education, employed or not, and Korean or not) of those alters.

Acculturation/intercultural development. Finally, a series of questions on the

extent of participants' structural acculturation and intercultural development were

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[17] Tie strength does not always equate with frequency of communication; for example, people could have strong family ties with relatively infrequent communication among members. Studies have measured tie strength using emotional closeness and relational intimacy along with frequency of contacts. However, the current study only asked about Korean immigrants' social ties with friends and coworkers, and so partially eliminated the chance of having errors from not capturing strong family ties.

included in the survey. Comprehensive measures of acculturation examining various aspects such as food consumption, psychological feeling, and exogamy were adopted from Lee et al.'s (2003) study all with 4-point scales; and the level of intercultural development (Hammer et al., 2003) including five different aspects (i.e., denial/defense, reversal, minimization, acceptance/adaptation, and encapsulated marginality) with a 5-point scale (*1 = strongly disagree, 5 = strongly agree*) were incorporated in the organizational member survey. An exemplary item measuring each aspect of intercultural development is: It is appropriate that people do not care what happens outside their country (i.e., denial/defense); people from our culture are less tolerant compared to people from other cultures (i.e., reversal); our common humanity deserves more attention than cultural differences (i.e., minimization); I evaluate situations in my own culture based on my experiences and knowledge of other cultures (i.e., acceptance); I do not identify with any culture, but with what I have inside (i.e., encapsulated marginality).

The Intercultural Developmental Inventory (IDI) was constructed to measure the developmental orientations toward cultural differences described in the Developmental Model of Intercultural Sensitivity (DMIS; cited in Seibold, 2009, p. 171). The most recent and comprehensive analysis and revision of the IDI (see Hammer et al., 2003, Table 1) produced a 50-item measure with items loading on five factors corresponding to the orientations of the DMIS: a) DD (Denial/Defense) scale, b) R (Reversal) scale, c) M (Minimization) scale, d) AA (Acceptance/Adaptation) scale, and e) EM (Encapsulated Marginality) scale. According to Hammer et al., the final items on each scale produced good reliability scores (i.e., .80 and above), and the current study adopted three items for each dimension, making a total of 15 items measuring the stages of intercultural

development, in consideration of the amount of cognitive burden that might be generated for survey participants.

A copy of the survey questionnaire is attached as an appendix. The survey was initially translated into Korean by the researcher, who speaks and writes both English and Korean fluently. A native English speaker and a bilingual person (between Korean and English) had given feedback that was incorporated into the final version of the survey mailed out to the participants.

Data Analysis

Operationalization of social capital. In order to explore the relationships between social capital embedded in a Korean immigrant church organization's communication networks and its members' intercultural development, social capital was operationalized as network characteristics, such as network centrality, diversity and size (Lin, 1999). Each participant's Indegree centrality scores (Freeman, 1979; calculated by the ratio between number of ties coming into the actor vs. total possible ties within the network; basically it indicates the number of church members seeking information from the person) for three different types of networks (i.e., information, emotional support, and help) were obtained using UCINET (Borgatti, Everett, & Freeman, 2002), a commonly-used network analysis software, centrality measures. The higher an individual's Indegree centrality score is, the more direct ties the person has within the given network and more members within the organizational networks seek resources like information and support from that person. The following Figures 3.1, 3.2, and 3.3 illustrate the information, emotional support, and help exchange networks of the sampled Korean immigrant

church, respectively. The different size, color, and shape of each node of the network

indicate the extent of Indegree centrality.

Figure 3.1

Information Network by Indegree Centrality
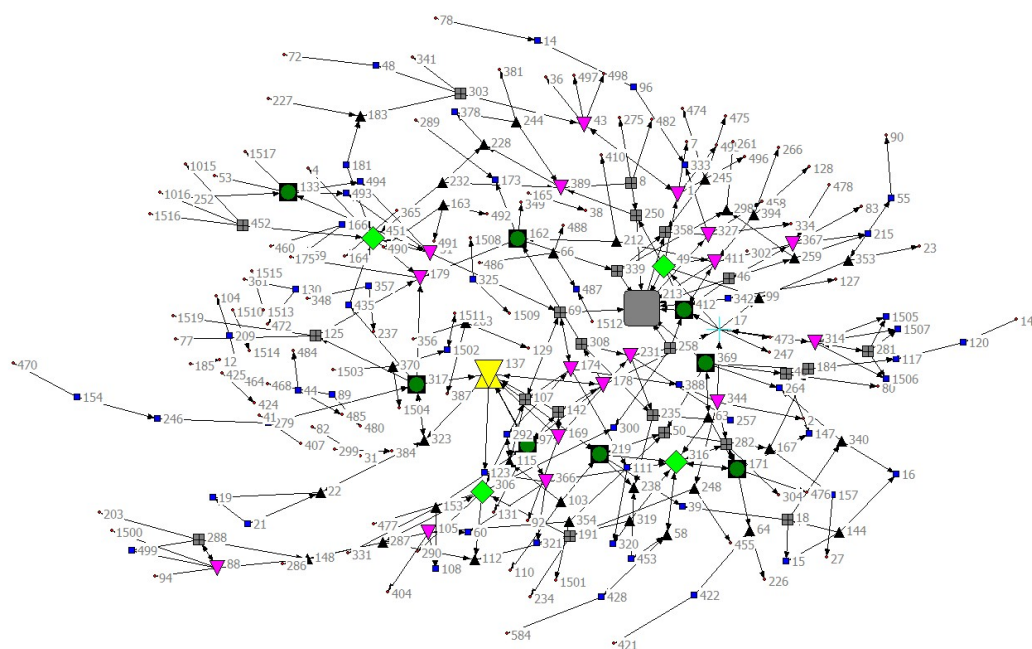
*Different colors, shapes, and size of each node represent different levels of Indegree centrality

The information network was the largest among the three networks, having a total

of 332 ties; the help network was the smallest, at 210 ties. The emotional support network

had a total of 239 ties. As a result, the help exchange network was slightly denser (.6%)

than the other two (information: .54%, emotional support: .57%). Approximately 14% of

the overall ties were reciprocated in the help network, whereas 13% for information and

10% for emotional support networks were reciprocal ties.

Figure 3.2

Emotional Support Network by Indegree Centrality
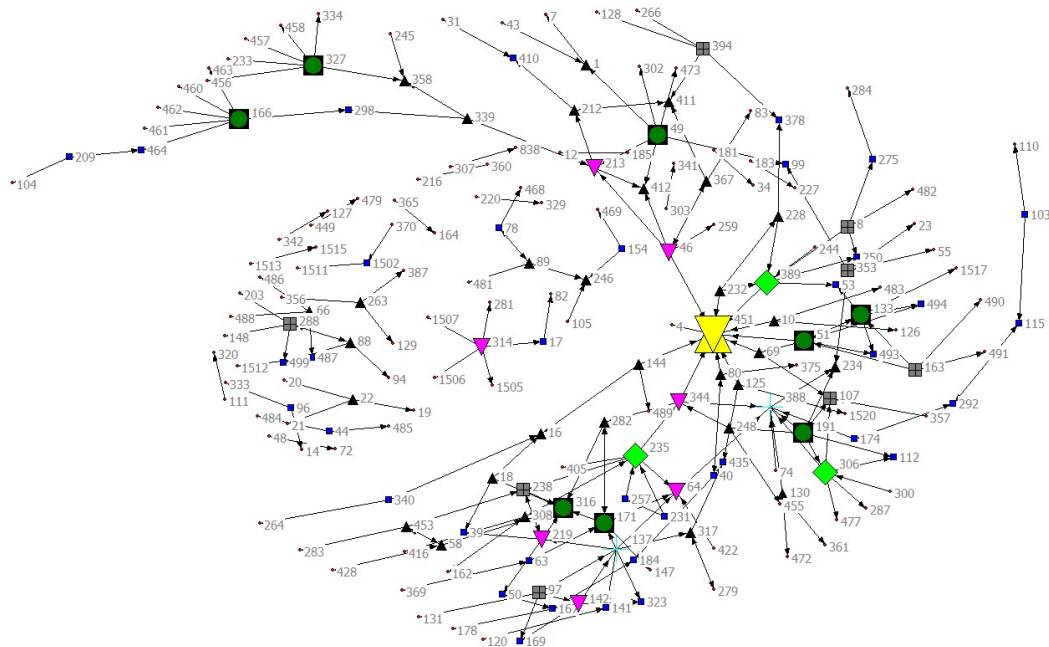
The network diversity was operationalized as the ratio between coethnic friends versus non-coethnic friends of Korean immigrants. One's social network diversity can be defined in various ways, such as by considering the gender, occupation, or educational level of alters. However, given the context of the current research examining the effect of communication networks on culture, ethnic and racial diversity seems to be most relevant. The network diversity percentage score was calculated by the number of non-coethnic ties divided by one's total number of ties and multiplied by 100. Network size was computed by aggregating the number of one's friends and coworkers, both coethnic and non-coethnic. Table 3.2 shows the summary of descriptive statistics for network variables used in this study to measure the concept of social capital.

Figure 3.3

Help Network by Indegree Centrality
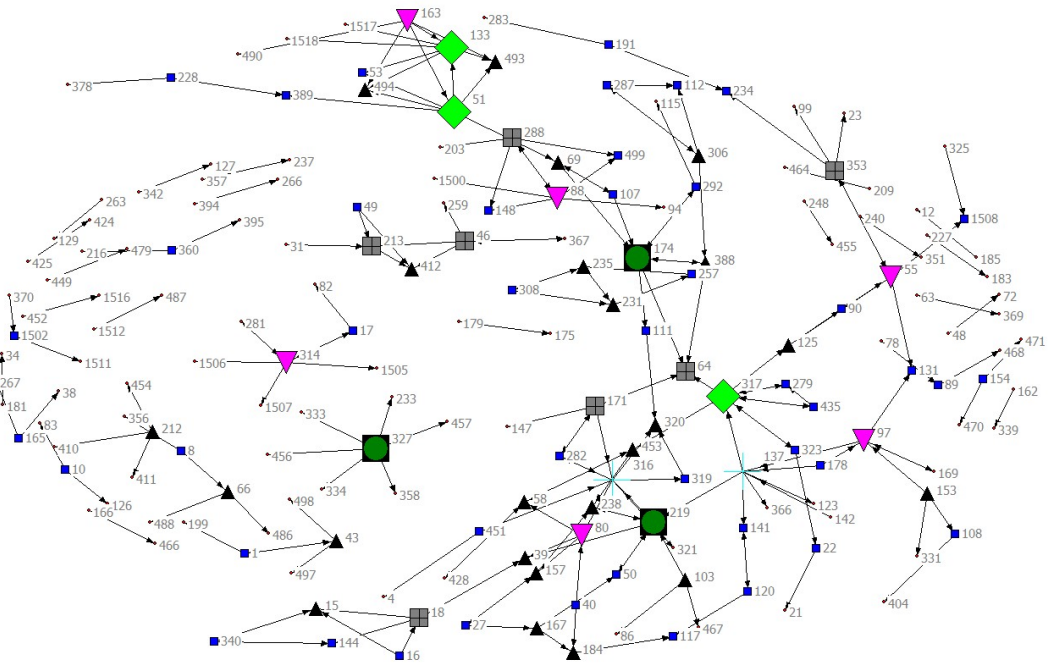
Table 3.2

Descriptive Statistics for Network Variables

Network variables	Range	*M*	*SD*	*N*
Network size	0 - 215	22.72	25.40	178
Network diversity	0 - 80	16.45	20.54	178
Information network Indegree centrality	0 - 10	1.42	1.55	139
Support network Indegree centrality	0 - 10	1.16	1.44	127
Help network Indegree centrality	0 - 5	1.07	1.05	121

In order to examine who are central actors in different types of networks and see whether there is any statistically significant demographic difference between central and peripheral actors, a series of analysis of variance (ANOVA) was performed. The results showed that participants' age and their level of education had a slight impact— marginally significant differences were found only when the means were calculated with considering different sizes of the sub-groups (i.e., weighted means), but no other demographic variables such as monthly income, gender, or occupations seem to have statistically significant association with network centrality. In terms of age, participants in their 30s and 40s seemed to be the most central groups in the information network of the sample organization, whereas those who were 60 years old and above were not as much, $F(1, 4) = 3.024$, $p = .084$ (see Figure 3.4 for the comparison of means in information network centrality across five different age groups).

Figure 3.4

Comparison of Indegree Centrality in Information Network across Age Groups
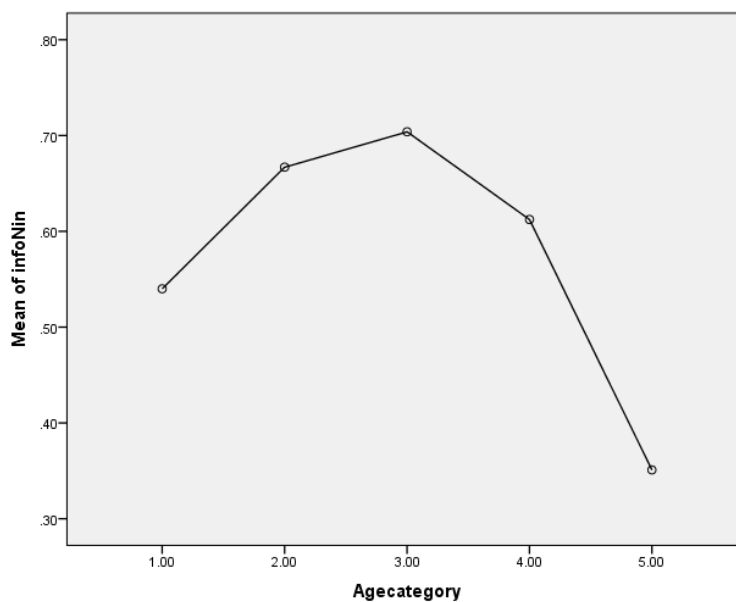
1 = 20 – 29 yrs; 2 = 30 – 39yrs; 3 = 40 – 49 yrs; 4 = 50 – 59 yrs; 5 = 60s and above.

In terms of education level, the higher the participant's education, the more central he or she seemed to be in the help exchange network within the organization, F (1, 3) = 5.909, p = .017 (see Figure 3.5 for the comparison of means in help network centrality across four different levels of education). This pattern of association among age, educational level, and Indegree centrality was similar across the three types of networks (i.e., information, emotional support, and help), but lacked any notable statistical difference. The ANOVA here was used to see the trend, not to test any hypothesis; still caution is advised when interpreting it.

Figure 3.5

Comparison of Indegree Centrality in Help Network across Educational Levels
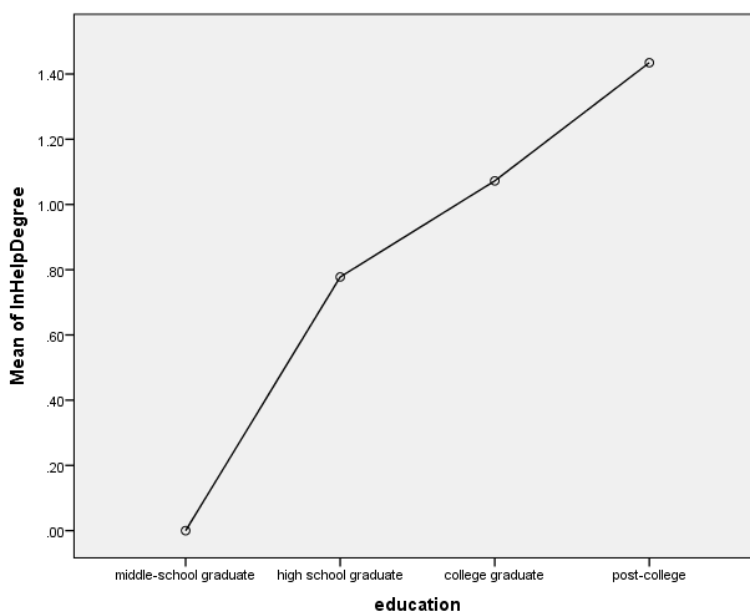
Intercultural development scores. A principal component factor analysis was performed to generate scores of ethnocentric and ethnorelative development. When the number of factors extracted was not preset, a total of six factors were produced with varimax rotation. The result (see Table 3.3) showed that the five dimensions adopted from the Intercultural Developmental Inventory were more or less identified from the

factor analysis as Hammer et al. (2003) found earlier from their research, albeit with

some mixture of items. The six dimensions together explained a total variance of 62%.

Table 3.3

Factor Analysis of Intercultural Development Measures

Measurement items	Factors					
	1	2	3	4	5	6
*EM2	.780	.156	-.040	.125	.076	-.071
Denial/Defense 1	.597	.492	.151	-.137	.129	-.077
EM1	.596	-.088	.232	-.041	-.108	.046
Minimization3	-.030	.722	-.089	-.017	.126	.152
Denial/Defense 2	.204	.630	.119	.242	-.511	-.064
EM3	.102	.581	.284	-.233	-.005	-.113
Reversal2	.194	-.003	.742	-.140	-.017	-.104
Reversal1	-.114	.068	.696	.284	-.107	.045
Reversal3	.341	.332	.505	.042	.183	.133
Acceptance1	.056	.047	-.085	.745	.105	.049
Acceptance3	-.038	-.250	.141	.672	-.183	.027
Denial/Defense 3	.050	.066	-.096	-.034	.851	.089
Acceptance2	-.012	.077	.217	.483	.526	-.052
Minimization1	-.124	.054	.072	.079	.120	.875
Minimization2	.520	-.023	-.189	-.038	-.087	.588
Eigen value	2.689	1.649	1.573	1.278	1.086	1.006

*EM: Encapsulated marginality
Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

One of the dimensions of intercultural development found in Hammer et al.'s

(2003) research, called "encapsulated marginality," was a unique dimension that could

not be categorized clearly either onto ethnocentric or ethnorelative development. Survey

items such as "I feel rootless because I do not think I have a cultural identification" and

"I do not identify with any culture, but with what I have inside" were used to measure the dimension of encapsulated marginality. Note that this kind of attitude does not necessarily indicate that the person considers his or her own culture as the only valid one (i.e., ethnocentric), or appreciates cultural differences and is willing to adapt to them depending on situations (i.e., ethnorelative).

Therefore, another principal component factor analysis was performed after eliminating scale items related to the dimension of "encapsulate marginality" and also those of "reversal" since both of them are neither "ethnocentric" nor "ethnorelative" according to Hammer et al. (2003). The following Table 3.4 shows the final result of the factor analysis and which items loaded under which dimension of intercultural development. The first component extracted from the factor analysis had two items: one related to the denial/defense and another to the minimization aspect of intercultural development. The three items measuring the dimension of acceptance were loaded onto the second factor together, and there were two other dimensions representing the aspects of denial/defense and minimization. The four dimensions together explained a total variance of 63.2%.

An ethnorelative development score was created by aggregating values of three items loaded onto the second factor; the score ranged from 4 to 14 ($M = 10.55$; $SD = 1.79$; Cronbach's $\alpha = .44$). An ethnocentric development score was also created by aggregating values of the rest of the items except one item related to the denial/defense (i.e., Denial/Defense 2 in Table 3.4[18]); the score ranged from 8 to 24 ($M = 15.42$; $SD = 2.72$; Cronbach's $\alpha = .38$). Although Hammer et al.'s (2003) study found a satisfactory

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[18] This item was excluded because the factor loading for Denial/Defense 2 was negative meaning the direction was completely the opposite of all the other items measuring ethnocentric intercultural development.

level of reliability for each dimension of intercultural development (i.e., .80 or above),

the analysis of scale reliability for the two scores (i.e., ethnorelative and ethnocentric) did

not reach the level. However, their study used a 50-item survey. The current study

adopted only 15 items from the original survey (with three items per each dimension) to

reduce the cognitive burden of survey participants. Particularly, the lower reliability score

of "ethnocentric" dimension seems to originate from combining the two distinctive

aspects of intercultural development (i.e., denial/defense with minimization) that were

independent components in the factor analysis. The purpose of the current analysis was to

dichotomize the intercultural development into ethnocentric and ethnorelative

dimensions, not to test the reliability of original scales in their five dimensions.

Table 3.4

Second Factor Analysis of Intercultural Development Measures

Measurement Items	Dimensions			
	1	2	3	4
Denial/Defense 1	.773	-.075	.007	.061
Minimization3	.647	.020	.111	.077
Acceptance1	.044	.708	.036	.070
Acceptance3	-.277	.686	-.260	.065
Acceptance2	.238	.616	.421	-.135
Denial/Defense 3	.134	.053	.837	.078
Denial/Defense 2	.627	.238	-.636	-.002
Minimization2	.195	-.103	-.057	.801
Minimization1	-.044	.206	.174	.734

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

Based on the communication network scores and intercultural development scores

obtained from the above analyses, a series of hierarchical multiple regression modeling

was performed to examine how the sample organization's (i.e., a Korean immigrant church) social capital affects its members' intercultural development, and how members' personal communication technologies usage facilitates and/or mediates the process of communication networks influencing their intercultural development. In order to meet the assumption of normal distribution and independence of each case observed for the linear modeling, each individual's network centrality score (measuring the structural position in the network) and network size (number of friends and coworkers) variables were both transformed using a logarithm.

Personal communication technologies usage. Participants of the current study were asked to report the frequency (i.e., a 7-point scale; *1 = not at all, 7 = a few times a day*) of their contacts with distinctive types of social ties (i.e., coethnic vs. non-coethnic, friends vs. coworkers, strong vs. weak ties). They indicated the extent of communication with each type of tie through eight different contact methods: (a) in-person, (b) cellular phone voice calling, (c) cellular phone texting, (d) landline phone, (e) email, (f) instant messaging, (g) social network sites, and (h) Skype. The following Table 3.5 is the descriptive summary of personal communication technologies (PCTs) uses of the sample. Four different scores were created for the main analysis of PCTs use and their relationships with other variables by aggregating the frequency of communication for each contact method except for those of in-person meetings: (a) PCT usage for coethnic strong ties (Cronbach's α = .76), (b) PCT usage for coethnic weak ties (Cronbach's α = .75), (c) PCT usage for host strong ties (Cronbach's α = .80), and (d) PCT usage for host weak ties (Cronbach's α = .82). See Table 3.6 for the descriptive statistics of the four PCTs variables.

Table 3.5

Frequency of Contacts for Distinctive Social Ties

Social Ties	Strong Coethnic		Weak Coethnic		Strong Host		Weak Host	
Contact methods	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
In-person	2.69$_a$	1.67	1.93$_b$	1.49	1.46$_c$	1.86	.80$_d$	1.30
Cell Voice	3.21$_a$	1.71	2.36$_b$	1.44	1.14$_c$	1.65	.82$_d$	1.23
Texting	1.89$_a$	2.04	1.13$_b$	1.57	.75$_c$	1.43	.41$_d$	1.02
Landline	1.24$_a$	1.65	1.00$_b$	1.45	.43$_c$	1.14	.29$_d$	.82
Email	1.95$_a$	1.89	1.35$_b$	1.57	.90$_c$	1.56	.61$_d$	1.03
IM	1.52$_a$	2.14	.90$_b$	1.54	.37$_c$	1.11	.24$_c$	.76
SNSs	1.17$_a$	1.84	.92$_b$	1.61	.36$_c$	1.08	.36$_c$	.97
Skype	.40$_a$	1.09	.20$_b$	.73	.07$_c$	.36	.08$_c$	.40

*Means with different subscripts indicate the significant differences within the same category of contact method (IM = Instant Messaging, SNSs = Social Network Sites).

As shown in Table 3.5, cellular phone voice calling was the most frequently used PCT for Korean immigrant participants' social networking. In-person meeting comes next, and cellular phone texting and email were about the same level. Considering the 7-point scale for measuring the frequency of contacts, Instant Messaging (IM), social network sites (SNSs), and Skype were not used very frequently among Korean immigrant participants of the current study. A consistent pattern was observed in the frequency of contacts for different types of social ties: participants of the survey contacted their coethnic and strong ties more frequently than their host and weak ties. The order of

frequency was the same for five different contact methods from in-person meeting to email; for the usage of IM, SNSs, and Skype, there was no statistically significant difference in the frequency of contact between host strong ties and host weak ties (See Table 3.5).

Combining the results of paired T test analyses shown in Table 3.5 and 3.6, the media multiplexity hypothesis (Haythornthwaite, 2005), which states that strong ties tend to be maintained with the usage of multiple media and thus with more frequent communication, is confirmed by this study as well.

Table 3.6

Aggregated Frequency of PCTs use per Distinctive Ties

Types of ties	Range	*M*	*SD*	N
Coethnic strong	0 – 34	11.37_a	8.01	174
Coethnic weak	0 – 32	7.74_b	6.39	172
Host strong	0 – 30	3.90_c	5.86	157
Host weak	0 – 31	2.81_d	4.49	160

*Means with different subscripts indicate the significant differences across the type of social ties.

IV. Results

This chapter explains findings from the data analyses of the current study. Results are presented in the order of research questions and hypotheses proposed in chapter II.

Social Capital and Intercultural Development (RQ1)

In order to examine the influences of social capital embedded in Korean immigrants' organizational communication networks on their intercultural development after controlling for the effect of individuals' English proficiency and length of immigration, two hierarchical regression analyses were performed: one for the ethnorelative development score and another for the ethnocentric development score as the criterion variables.

The first hypothesis of the current study was about the relationship between immigrants' communication network diversity and intercultural development (H1a for ethnorelative, H1b for ethnocentric development). The second hypothesis was about the relationship between the structural position (i.e., Indegree centrality score) within an intracultural network (i.e., ethnic church communication networks) and intercultural development (H2a for ethnorelative and H2b for ethnocentric development). The results of the hierarchical regression analyses showed that both hypotheses were partially supported (see Table 4.1 and 4.2). H1a and H2b were supported, while H1b and H2a were not.

When the ethnorelative development score was regressed onto the three network variables (i.e., size, diversity, and centrality), only communication network diversity had a marginally significant influence, $\beta = .159$, $t = 1.89$, $p < .10$; this means the more non-coethnic members a Korean immigrant has in his or her communication network, which

increases the network diversity, the more likely s/he is akin to cultural differences and willing to adapt to them. Therefore, H1a predicting the positive association between network diversity and ethnorelative development was marginally supported, but H2a predicting the negative association between network centrality and ethnorelative development was not. The direction of influence was nevertheless in line with the prediction of H2a, $\beta = -.017$, $t = -.219$, $p = .827$: the more central a person was within an intracultural network, the less likely s/he was to be open to cultural differences. The following Table 4.1 summarizes the results of the hierarchical regression analysis for ethnorelative development.

Table 4.1

Hierarchical Regression Analysis on Ethnorelative Development

Model	β	p	R^2
Length of immigration	.054	.492	
English	-.037	.639	.003
Length of immigration	.028	.720	
English	-.099	.234	
Network size	.051	.528	.031
Network diversity (H1a)	.159	.061[†]	
Network centrality (H2a)	-.017	.827	

† $p < .10$.

When the ethnocentric development score was regressed onto the three network variables (i.e., size, diversity, and centrality), after controlling for the effect of English proficiency, $\beta = -.276$, $t = -3.64$, $p < .001$, only the Indegree centrality remained

statistically significant in the model, $\beta = .189$, $t = 2.61$, $p < .05$. This result means that those Korean immigrants who speak English well are less likely to be ethnocentric in their intercultural development. Regardless of English proficiency, however, those who are deeply embedded in their religious organizational communication networks, connected to many other members of the organization who seek information from them, are more likely to be ethnocentric in their intercultural development. In other words, the more centrally a Korean immigrant is located within their ethnic church information network, the more likely s/he believes that Korean culture should be a model for the rest of the world (indicating cultural superiority) and do not think cultural differences are more important than the common humanity and the universality of human needs, interests and goals. The following Table 4.2 summarizes the results of the hierarchical regression analysis for ethnocentric development.

Table 4.2

Hierarchical Regression Analysis on Ethnocentric Development

Model	β	*p*	R^2
Length of immigration	.076	.314	$.071^{**}$
English	-.276	.000	
Length of immigration	.079	.300	
English	-.257	.002	
Network size	-.011	.883	$.109^{**}$
Network diversity (H1b)	-.032	.691	
Network centrality (H2b)	.189	$.010^{*}$	

* $p < .05$, ** $p < .01$.

It appeared that network diversity did not have any direct impact on ethnocentric development, $\beta = -.032$, $t = -.398$, $p = .691$, thus H1b of the current study predicting the negative association between network diversity and ethnocentric development was not supported except for the direction of influence.

In order to test H3a and H3b about the impact of immigrants' occupation on their intercultural development, two analyses of variance (ANOVA) were performed to find whether the mean scores of ethnorelative development (H3a) and those of ethnocentric development (H3b) were significantly different across three occupational groups (i.e., unskilled labor, professional, and unemployed). The results of ANOVA tests confirmed only H3a because Korean immigrants' occupation had a statistically significant impact on ethnorelative cultural attitudes and beliefs, $F (2, 162) = 3.30$, $p < .05$, but not on ethnocentric attitudes and beliefs. The professional group ($M = 11.10$, $SD = 1.63$) showed the highest score on ethnorelative development, while the unskilled labor group ($M = 10.28$, $SD = 1.78$) showed the lowest score. These two groups were significantly different in their ethnorelative development scores according to a Bonferroni post-hoc comparison (mean difference $= .82$, $SE = .33$, $p < .05$). The unemployed group came in between the professional and unskilled labor groups. There were no statistically significant differences in ethnocentric development scores across the three groups, but the unskilled labor group ($M = 15.91$, $SD = 2.90$) showed the highest among all, followed by the unemployed ($M = 15.54$, $SD = 2.64$) and the professional ($M = 14.74$, $SD = 2.67$). Figure 4.1 illustrates the differences of ethnorelative development scores across the three occupational groups.

Figure 4.1

Comparisons of Ethnorelative Development by Three Occupational Categories
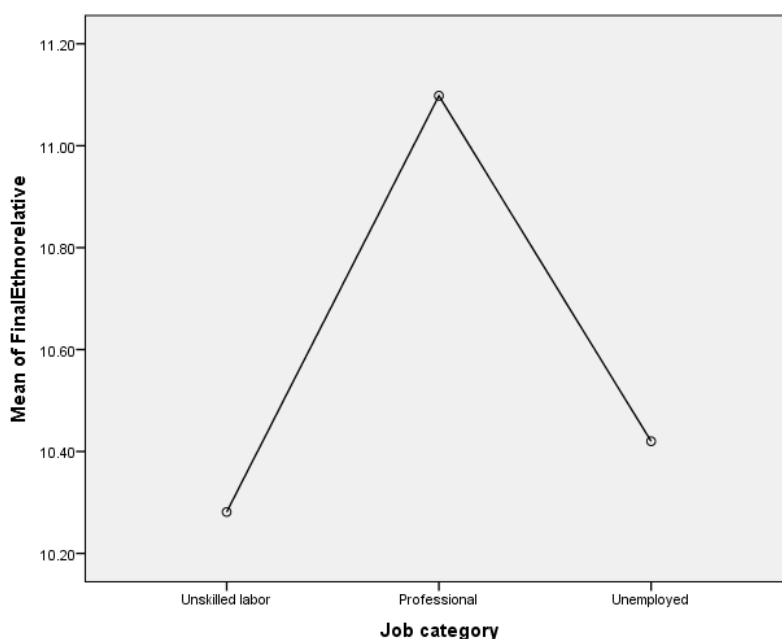
It appears that the significant influence of Korean immigrant's occupation on ethnorealtive development comes from the network prestige related to one's occupation. It is because depending on the nature of occupation, the opportunities of interaction with diverse others will vary. Compared to the unskilled labor group's work in small businesses like laundry, grocery, and nail salons, the professional group might have more chance to meet diverse others including host members due to their higher occupational mobility. This was also partially verified by another ANOVA on differences in monthly income and education level across the three job categories. Between the professional (M = 4.71, SD = 1.96) and the unskilled labor (M = 4.69, SD = 1.85) groups that showed the statistically significant difference in ethnorelative development, there was no significant impact of monthly income according to a Scheffe's post-hoc test. However, the level of education was significantly higher in the professional group (M = 4.21, SD = .64) than in

unskilled labor group ($M = 3.75$, $SD = .70$) and the unemployed group ($M = 3.86$, $SD = .79$).

Social Capital and Personal Communication Technologies Usage (RQ2)

The second research question examined how Korean immigrants' communication network characteristics (i.e., size, diversity, and centrality) were related to their uses of personal communication technologies (PCTs) for distinct social ties (e.g., coethnic vs. non-coethnic, strong vs. weak ties). Bivariate correlation analyses were performed to examine the association between the usage of various types of PCTs for four different ties and the three network variables. As a result, the network size variable was significantly correlated with almost all kinds of PCTs use except for the case of cellular voice calling and landline usage for coethnic weak ties. Network diversity was correlated with all kinds of PCT usage for host ties and with landline and email usage for coethnic strong ties. Network centrality was significantly correlated with only texting and email usage with coethnic strong ties. Tables 4.3.1 through 4.3.4 present the results of the correlation analyses.

Next, four simple linear regression analyses were performed to examine the association between social capital measured by individuals' communication network characteristics and their PCT usage scores. When the PCT usage for coethnic strong ties was regressed onto the three network variables (RQ2a), network size ($\beta = .298$, $t = 4.07$, $p < .001$) and centrality ($\beta = .166$, $t = 2.35$, $p < .05$) had statistically significant positive associations. The result means that the larger a Korean immigrant social network is, and the more central the person is located within the information network of the church organization, the more frequently s/he uses PCTs for contacting coethnic strong ties. The

three network variables together explained about 14% of the variance of PCT usage for

coethnic strong ties, F (3, 174) = 9.19, $p < .001$. See Table 4.4 for the summary of

regression analysis for RQ2a of the current study.

Table 4.4

Linear Regression Analysis on PCTs use for Coethnic Strong Ties (RQ2a)

Model	β	*p*	R^2
Network size	.298	.000***	
Network diversity	.099	.179	.137***
Network centrality	.166	.020*	

* $p < .05$, ** $p < .01$ *** $p < .001$.

Next, when the PCT usage for coethnic weak ties was regressed onto the three

network variables (RQ2b), only the network size was a statistically significant predictor,

β = .283, $t = 3.27$, $p < .01$. This means that the larger a Korean immigrant's social

network is, the more frequently s/he uses PCTs for contacting Korean acquaintances who

are not necessarily close friends or coworkers. The three network variables together

explained about 10% of the variance of PCT usage for coethnic weak ties, F (3, 130) =

4.72, $p = .004$. Network centrality (β = .125, $t = 1.49$, $p = .138$) and network diversity (β

= .036, $t = .42$, $p = .674$) were not significantly associated with PCT usage for coethnic

weak ties. See Table 4.5 for the summary of regression analysis for RQ2b of the current

study.

Table 4.3.1

Pearson Correlations between PCT usage for Coethnic Strong Ties and Network Characteristics (* p < .05, ** p < .01, Two-tailed)

	Net Size	Net Diversity	Infonet Outdegree	Infonet Indegree	In-person	Cell voice	Texting	Landline	Email	IM	SNS	Skype
NetSize	-											
NetDiversity	.306**	-										
InfoOutdeg	.021	-.184*	-									
InfoIndegree	-.006	-.029	.079	-								
In-person	.256**	.050	-.108	.071	-							
Cell voice	.217**	.013	.015	.108	.461**	-						
Texting	.252**	.087	-.086	.186*	.478**	.434**	-					
Landline	.242**	.245**	-.096	.003	.227**	.125	.040	-				
Email	.305**	.207**	-.004	.224**	.370**	.347**	.604**	.219**	-			
IM	.286**	.081	-.065	.093	.356**	.274**	.632**	-.075	.448**	-		
SNS	.240**	.067	.138	.140	.271**	.222**	.473**	-.016	.420**	.582**	-	
Skype	.186*	.128	.002	-.066	.093	.205**	.205**	.058	.331**	.316**	.351**	-

Table 4.3.2

Pearson Correlations between PCT usage for Coethnic Weak Ties and Network Characteristics (* p < .05, ** p < .01, Two-tailed)

	NetSize	Net Diversity	Infonet Outdegree	Infonet Indegree	In-person	Cell voice	Texting	Landline	Email	IM	SNS	Skype
NetSize	-											
NetDiversity	.306**	-										
InfoOutdeg	.021	-.184*	-									
InfoIndegree	-.006	-.029	.079	-								
In-person	.270**	-.018	-.082	-.070	-							
Cell voice	.129	-.027	.014	.050	.441**	-						
Texting	.334**	.063	-.083	.040	.358**	.356**	-					
Landline	.138	.048	-.046	-.033	.238**	.301**	.058	-				
Email	.272**	.119	-.001	.147	.226**	.317**	.495**	.157*	-			
IM	.238**	-.001	-.067	.053	.269**	.305**	.570**	.025	.415**	-		
SNS	.252**	-.006	.094	.121	.259**	.233**	.466**	.020	.496**	.683**	-	
Skype	.224**	.096	-.038	-.038	.101	.138	.211**	.161*	.323**	.405**	.394**	-

Table 4.3.3

Pearson Correlations between PCT usage for Host Strong Ties and Network Characteristics (* p < .05, ** p < .01, Two-tailed)

	NetSize	Net Diversity	Infonet Outdegree	Infonet Indegree	In-person	Cell voice	Texting	Landline	Email	IM	SNS	Skype
NetSize	-											
NetDiversity	.306**	-										
InfoOutdeg	.021	-.184*	-									
InfoIndegree	-.006	-.029	.079	-								
In-person	.415**	.513**	-.132	-.032	-							
Cell voice	.426**	.536**	-.113	-.054	.743**	-						
Texting	.342**	.371**	-.102	-.023	.491**	.594**	-					
Landline	.209**	.425**	-.103	-.057	.347**	.479**	.313**	-				
Email	.295**	.447**	-.079	.030	.578**	.682**	.391**	.392**	-			
IM	.287**	.271**	-.096	.035	.323**	.498**	.498**	.137	.476**	-		
SNS	.289**	.208**	-.010	.041	.247**	.199*	.519**	.138	.331**	.491**	-	
Skype	.178*	.201*	-.154	.059	.186*	.182*	.196*	.149	.297**	.222**	.312**	-

Table 4.3.4

Pearson Correlations between PCT usage for Host Weak Ties and Network Characteristics (* p < .05, ** p < .01, Two-tailed)

	NetSize	Net Diversity	Infonet Outdegree	Infonet Indegree	In-person	Cell voice	Texting	Landline	Email	IM	SNS	Skype
NetSize	-											
NetDiversity	.306**	-										
InfoOutdeg	.021	-.184*	-									
InfoIndegree	-.006	-.029	.079	-								
In-person	.325**	.347**	-.011	-.019	-							
Cell voice	.377**	.470**	-.013	.027	.770**	-						
Texting	.359**	.274**	-.043	.009	.564**	.590**	-					
Landline	.221**	.274**	-.175	.000	.425**	.419**	.361**	-				
Email	.388**	.387**	.034	.125	.373**	.476**	.446**	.285**	-			
IM	.228**	.332**	-.077	.038	.290**	.384**	.593**	.373**	.458**	-		
SNS	.306**	.283**	-.024	.087	.271**	.335**	.558**	.261**	.652**	.646**	-	
Skype	.164*	.205**	.006	-.031	.126	.244**	.225**	.307**	.288**	.307**	.246**	-

Table 4.5

Linear Regression Analysis on PCTs use for Coethnic Weak Ties (RQ2b)

Model	β	*p*	R^2
Network size	.283	.001**	
Network diversity	.036	.674	.098**
Network centrality	.125	.138	

** *p* < .01.

      The result for a linear regression analysis with the PCT usage for host strong ties as a criterion variable (RQ2c) showed that both network size (β = .274, *t* = 4.32, *p* < .001) and network diversity (β = .461, *t* = 7. 28, *p* < .001) had relatively strong positive associations. This means that if a Korean immigrant has a large and diverse social network having many friends and coworkers and also many non-Korean friends and coworkers in the network, then the person is more likely to use PCTs for contacting their host strong ties. Network centrality was not significantly associated with the PCT usage for host strong ties, β = .027, *t* = .44, *p* = .659. However, the three network variables together explained a statistically significant amount of variance (approximately 36%) of PCT usage for host strong ties, *F* (3, 174) = 32.01, *p* < .001. See Table 4.6 for the summary of regression analysis for RQ2c of the current study.

      Finally, when the three network variables were regressed onto the PCT usage for host weak ties (RQ2d), the result was similar to the case of PCT use for host strong ties. Both network size (β = .228, *t* = 3. 34, *p* < .01) and diversity (β = .390, *t* = 5. 73, *p* < .001) were statistically significant positive predictors of PCT usage for host weak ties, but network centrality was not, β = .073, *t* = 1. 12, *p* = .265.

Table 4.6

Linear Regression Analysis on PCTs use for Host Strong Ties (RQ2c)

Model	β	*p*	R^2
Network size	.274	.000***	
Network diversity	.461	.000***	.356***
Network centrality	.027	.659	

*** *p* < .001.

This result means that the larger and more diverse a Korean immigrant's social network is, the more frequently s/he uses various PCTs for contacting non-Korean acquaintances. The three network variables together explained about 26% of the variance of PCT usage for host weak ties, *F* (3, 174) = 19.82, *p* < .001. See Table 4.7 for the summary of regression analysis for RQ2d of the current study.

Table 4.7

Linear Regression Analysis on PCTs use for Host Weak Ties (RQ2d)

Model	β	*p*	R^2
Network size	.228	.001**	
Network diversity	.390	.000***	.255***
Network centrality	.073	.265	

** *p* < .01 *** *p* < .001.

Combining all the results of the four regression analyses between network variables and PCTs use, the study found that Korean immigrant's network centrality within their ethnic church communication network had a statistically significant

relationship only with PCTs use for coethnic strong ties, whereas network size seems to be closely related to PCTs use for weak ties both for coethnic and host ties, and network diversity is closely relevant to PCT usage for host ties both for strong and weak ties.

Social Capital, PCTs use, and Intercultural Development (RQ3)

The last research question examined how social capital embedded in the Korean immigrant church communication networks influences their intercultural development together with their personal communication technologies (PCTs) usage. The results of the first and the second research questions of the current study showed various associations between Korean immigrants' social capital, intercultural development, and their PCT usage. Therefore, it was expected that PCTs use could facilitate either ethnocentric or ethnorelative development depending on the types of social ties for which the PCTs were used. In order to examine the relationships between variables in more detail, a total of four hierarchical regression analyses were conducted between network characteristics, PCT usage, and intercultural development. For the first two regression models, three network variables (i.e., size, diversity, and centrality) and PCT usage for coethnic ties (strong and weak) were considered as predictors of ethnocentric development, and for the latter two regression models, three network variables and PCT usage for host ties (strong and weak) were regressed onto ethnorelative development.

First, after controlling for the effect of length of immigration and English proficiency, PCT usage for coethnic strong ties did not significantly predict ethnocentric development of Korean immigrants, $\beta = .033$, $t = .417$, $p = .677$. When

the three network variables were entered into the regression model, network centrality

appeared to be a statistically significant predictor of ethnocentric development, $\beta =$

.187, $t = 2.57$, $p < .05$, as was the case for RQ1 (H2b), and the model explained about

11% of the variance, $F(6, 171) = 3.52$, $p < .01$. Table 4.8.1 summarizes the results of

the first hierarchical regression analysis for RQ3.

Table 4.8.1

Hierarchical Regression Analysis for Ethnocentric Development (PCT Coethnic

Strong Ties)

Model	β	p	R^2
Length of immigration	.076	.314	
English	-.276	.000**	.071**
Length of immigration	.088	.278	
English	-.287	.000**	.071**
PCT use for coethnic strong ties	.033	.677	
Length of immigration	.092	.260	
English	-.265	.001**	
PCT use for coethnic strong ties	.038	.654	
Network size	-.024	.769	.110**
Network diversity	-.036	.662	
Network centrality	.187	.011*	

* $p < .05$, ** $p < .01$, *** $p < .001$.

Another hierarchical regression analysis was performed to see the effect of

simultaneous embeddedness in multiple networks (i.e., information, emotional

support, and help) by including aggregated Indegree centrality scores of three different networks.

Table 4.8.2

Hierarchical Regression Analysis for Ethnocentric Development (PCT Coethnic Strong Ties & Multiple Networks)

Model	β	p	R^2
Length of immigration	.076	.314	.071**
English	-.276	.000***	
Length of immigration	.088	.278	
English	-.287	.000***	.071**
PCT use for coethnic strong ties	.033	.677	
Length of immigration	.114	.168	
English	-.274	.001**	
PCT use for coethnic strong ties	.041	.637	
Network size	-.010	.902	.097**
Network diversity	-.066	.417	
Multiple networks centrality	.147	.046*	

* *p* < .05, ** *p* < .01, *** *p* < .001.

The result was very similar to the one using only information network centrality. Multiple networks centrality was still a statistically significant predictor of Korean immigrants' ethnocentric development, β = .147, *t* = 2.01, *p* < .05, and the model

explained 10% of the variance, $F(6, 171) = 3.06$, $p < .01$. Although the amount of explained variance was not greater than the case of using one type of centrality score (i.e., information network centrality), the result of regression analysis using multiple networks centrality also confirms the effect of one's structural positions in intracultural organizational networks influencing ethnocentric development (see Table 4.8.2 for a summary).

Next, when the PCT usage for coethnic weak tie variable was entered into the regression model, the results were very similar to the one for PCT usage for coethnic strong ties (see Table 4.8.1 and Table 4.9). Neither of the PCT use variables for coethnic strong and weak ties appeared to have a statistically significant direct impact on ethnocentric development. However, Korean immigrant's English proficiency and their network centrality within their ethnic church information network had significant influences on their ethnocentric development.

Table 4.9

Hierarchical Regression Analysis for Ethnocentric Development (PCT Coethnic Weak Ties)

Model	β	p	R^2
Length of immigration	.118	.141	
English	-.295	.000***	.084**
PCT use for coethnic weak ties	.122	.116	
Length of immigration	.126	.119	
English	-.265	.001**	
PCT use for coethnic weak ties	.134	.103	.123**
Network size	-.058	.482	
Network diversity	-.036	.652	

Network centrality	.181	.014*

* $p < .05$, ** $p < .01$, ***$p < .001$.

Considering the significant associations between PCT usage for coethnic ties and network characteristics found in the analyses for RQ2a and RQ2b of the current study (see Table 4.3 and Table 4.4), a path model can be suggested between PCT usage for strong coethnic ties, network centrality, and ethnocentric development (see Figure 4.2). As shown in the model and the previous regression analyses, PCT usage for contacting fellow Korean strong ties does not affect ethnocentric development directly, but rather indirectly through increasing one's network centrality within their ethnic church organization.

Figure 4.2

A Path Diagram for Ethnocentric Development Process
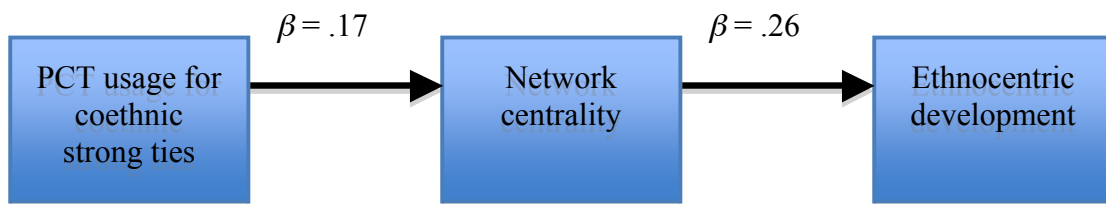
The next hierarchical regression analysis for ethnorelative development found that PCT usage for host strong ties was not a statistically significant predictor, $\beta = .126$, $t = 1.58$, $p = .116$. Both control variables (i.e., length of immigration, English proficiency) did not predict the ethorelative development significantly, either. The

three variables (i.e., length of immigration, English, and PCT usage) together also did not predict ethnorelative development significantly, F (3, 174) = 1.02, p = .386.

When the three network variables were entered into the regression analysis, none of the network variables were found as statistically significant predictors of ethnorelative development. The six predictors including network diversity did not explain significant amount of variance of ethnorelative development, F (6, 171) = .959, p = .454. Table 4.10 summarizes the results of the third hierarchical regression analysis for RQ3 of the current study.

Table 4.10

Hierarchical Regression Analysis for Ethnorelative Development (PCT Host Strong Ties)

Model	β	p	R^2
Length of immigration	.054	.492	.003
English	-.037	.639	
Length of immigration	.062	.431	
English	-.081	.328	.017
PCT use for host strong ties	.126	.116	
Length of immigration	.034	.672	
English	-.106	.213	
PCT use for host strong ties	.042	.660	.033
Network size	.040	.636	
Network diversity	.140	.137	
Network centrality	-.016	.833	

When the PCT usage for host weak ties variable was entered into the regression model for ethnorelative development, it was not found to be a statistically

significant predictor, $\beta = .017$, $t = .219$, $p = .827$. As with the result of RQ1 of the current study, network diversity was a statistically significant positive predictor of ethnorelative development, $\beta = .194$, $t = 2.138$, $p < .05$. This means that the more diverse communication network a Korean immigrant has, the more likely s/he is aware of cultural differences and willing to adapt to them. However, the six variables (i.e., length of immigration, English proficiency, PCT usage for host weak ties, and three network variables) together did not explain a statistically significant amount of the variance of ethnorelative development, $F (6, 171) = 1.11$, $p = .359$. The following Table 4.11 summarizes the results of the last hierarchical regression analysis for RQ3 of the current study.

Table 4.11

Hierarchical Regression Analysis for Ethnorelative Development (PCT Host Weak Ties)

Model	β	p	R²
Length of immigration	.057	.477	
English	-.042	.609	.003
PCT use for host weak ties	.017	.827	
Length of immigration	.007	.932	
English	-.088	.298	
PCT use for host weak ties	-.095	.304	
Network size	.079	.353	.037
Network diversity	.194	.034*	
Network centrality	-.016	.834	

Combining the results of the last two regression analyses (See Table 4.10 and Table 4.11) between PCTs use for host ties, network characteristics, and ethnorelative development, along with the results of RQ2c and RQ2d showing strong associations between PCTs use for host ties and network diversity, another path model can be proposed (see Figure 4.3). PCT usage for host ties do not seem to have a strong direct influence on ethnorelative development, but it does for increasing Korean immigrant network diversity. In addition, out of the three network variables, only network diversity seems to have a direct positive influence on ethnorelative development, as shown by the result of RQ1 (H1a) of the current study. Therefore, a three-step, two-path model can be proposed as a result of the hierarchical regression analyses (see Figure 4.3).

Figure 4.3

A Path Diagram for Ethnorelative Development Process
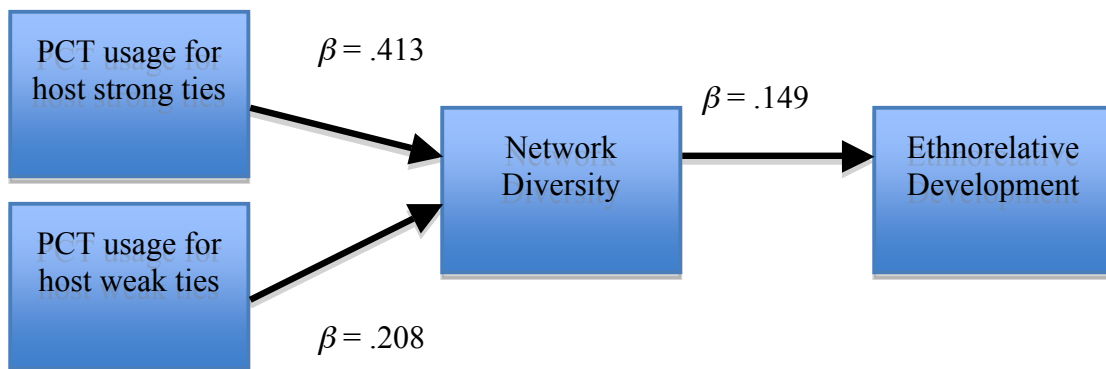
V. Discussion

The last chapter of this dissertation first presents the summary of research findings and then discusses those findings in light of their theoretical, methodological and practical implications. A few limitations of the study are discussed along with suggestions for future research directions.

Summary of Research Findings

Based on data collected via an organizational member survey in a Korean immigrant church, this study analyzed the relationships between Korean immigrants' social capital, their personal communication technologies (PCTs) usage, and their intercultural development. The research proposed three questions and six hypotheses based on a review of literature in immigrant social network studies, communication technology usage, and intercultural communication.

The first research question of the current study was to examine the influence of Korean immigrants' social capital on their intercultural development. The first two hypotheses predicted the direct association between network diversity and intercultural development: positive association with ethnorelative development (H1a) and negative association with ethnocentric development (H1b). Only H1a was marginally supported by the hierarchical regression analysis of the data. The second two hypotheses predicted the direct association between network centrality within an intracultural communication network and Korean immigrants' intercultural development: negative association with ethnorelative development (H2a) and positive association with ethnocentric development (H2b). Only H2b was supported by the regression analysis. The last two hypotheses predicted significant influences of

Korean immigrants' occupations on their ethnorelative (H3a) and ethnocentric (H3b)

development; only H3a was supported by showing that the professional group had

higher scores in ethnorelative development than the unskilled labor group did.

Therefore, a conclusion from the analysis for the first research question of the current

study is that different types of social capital (i.e., network diversity, centrality, and

prestige coming from various occupations) have distinctive relationships with

immigrants' intercultural development. Individual immigrants' length of immigration

and English proficiency were controlled for in the regression analyses considering

previous research findings on their significant impact on immigrant's acculturation

(Kim, 2001; Lee at al., 2003).

The second research question of this study was to explore the influence of

Korean immigrants' social capital on their PCT usage. A total of four regression

analyses were performed to examine the direct relationships, if any, between the three

network variables (i.e., size, diversity, and centrality) and PCTs use across four

different types of social ties (i.e., coethnic strong ties, coethnic weak ties, host strong

ties, and host weak ties). The analyses found that network size had positive

associations with PCTs use for all types of social ties, whereas network centrality was

associated only with PCT usage for coethnic strong ties, and network diversity with

PCT usage for host ties (both strong and weak). Thus, it appears that Korean

immigrants who have a large social network tend to use PCTs frequently to contact

their coethnic and host national friends and coworkers (both strong and weak ties).

Further, Korean immigrant participants who were located closer to the center of their

church communication network, thus scoring high in their network centrality, tend to

use PCTs frequently to contact their coethnic strong ties. Not surprisingly, participants who had more diverse social networks (having more host nationals as members) tend to use PCTs frequently to contact their host friends and coworkers of both strong and weak ties.

The last research question of this study was to examine the relationships between all key constructs (i.e., social network, PCTs use, and intercultural development) in order to test the theoretical model of this study proposed earlier in Chapter II (see p. 65). Based on the results of the analyses for the first two research questions of this study, it was expected that PCTs use for coethnic ties might facilitate or mediate the influence of social capital on ethnocentric development, whereas PCTs use for host ties might do the same for ethnorelative development. A total of four hierarchical regression modeling analyses were performed for each type of PCT usage, with length of immigration and English proficiency as control variables. As a result, when ethnocentric development was modeled with PCT usage for coethnic strong and weak ties together with network characteristics (i.e., size, diversity, and centrality), only network centrality was a statistically significant positive predictor. When ethnorelative development was modeled with PCT usage for host weak ties together with network variables, only network diversity was a statistically significant positive predictor and the model itself was not significant.

The fact that PCT usage variables had significant associations with network variables, but not with intercultural development directly suggested a possibility of path modeling between the three key constructs. Two path models were proposed as a result: one between PCT usage for coethnic strong ties, network centrality, and

ethnocentric development and another between PCT usage for host ties, network diversity, and ethnorelative development. It appears that if a Korean immigrant uses PCTs frequently to contact coethnic close friends and coworkers, the person's network centrality increases, and if the person is located closer to the center of intracultural communication networks (e.g., information network of the ethnic church), it is more likely that the person has ethnocentric attitudes and beliefs. In a similar process (though in the other direction), if a Korean immigrant uses PCTs frequently to contact host national friends and coworkers of both strong and weak ties, the person's network diversity increases, which will lead to likelihood of developing ethnorelative cultural attitudes and beliefs.

Theoretical Implications & Contributions of the Study

The findings of this study can be discussed in light of several theoretical concepts and frameworks. Although previous studies have conceptualized particular sources of immigrant social capital as bounded solidarity and enforceable trust (Portes & Sensenbrenner, 1993) that are distinguished from more general sources of social capital (i.e., value introjections and reciprocity transactions), research has not approached the concept of social capital directly from a social networks perspective. Despite the wide variations in operationalizing social capital (Adler & Kwon, 2002), scholars have clearly indicated that social capital is generated from resources embedded in webs of social relationships; that is, social networks (Burt, 1992; Coleman, 1988; Lin, 1999). Research has used measures such as life satisfaction (Ellison et al., 2007, 2011), trust (Park, Han, & Kaid, 2012), or number of social ties for approaching the concept of social capital, but they have hardly incorporated

network measures directly, especially those of structural properties due to the difficulty of constructing whole networks with clear boundaries. The findings of this study, which show a unique influence of network centrality within ethnic religious communication networks on immigrant's ethnocentric development, suggest that to capture the effect of social capital more fully, research has to consider immigrants' structural positions within their intracultural organizational communication networks.

Another unique contribution of this study lies in its theorizing between the concept of social capital and intercultural development (Hammer et al., 2003). Based on theoretical frameworks of immigrant cross-cultural adaptation (Kim, 2001), cultural convergence (Barnett & Rosen, 2007; Rogers & Kincaid, 1981), and Smith's (1999) theoretical propositions on communication networks and immigrant acculturation, this study has found significant associations between different types of social capital embedded in Korean immigrants' organizational communication networks and their intercultural development. The findings about network diversity influencing ethnorelative development seem to suggest that *bridging social capital* might be more relevant to ethnorelative cultural attitudes and beliefs, whereas the findings about network centrality associated with ethnocentric development seem to suggest that *bonding social capital* might be more relevant to ethnocentric cultural attitudes and beliefs in the case of Korean immigrants.

In a broader context, this study also contributes to the burgeoning area of study in sociology of culture and social network methods by explicating the relationship between culture and connectivity (Pachucki & Brieger, 2010). A networks approach provides useful techniques for specifying cultural concepts

ranging from narrative networks to classification systems, tastes, and cultural

repertoire, while a cultural approach complements and establishes a new agenda for

moving beyond prevalent forms of structural analysis that ignore action, agency, and

intersubjective meanings (i.e., communication) (Pachucki & Brieger). In a similar

vein, Fuhse (2012) also argued that ethnic categories and cultural differences are

rooted in the structure of social networks. From his empirical research on the

integration of Italian immigrants in Germany, Fuhse found that the segregation of

migrant groups in networks of personal relationships determines the extent to which

cultural differences can be bridged (conceptualized as "cultural holes" by Pachucki &

Brieger), as well as the salience of ethnic categories in multicultural societies.

According to these sociologists' views, the communication-centered approach to

immigrant social networks research, detailed in chapter II, and the fact that

intercultural communication is a fruitful area to be explored with a network

theoretical approach can be supported more strongly.

Particularly, the second research question of this study about the relationships

between the uses of personal communication technologies (PCTs) and social network

characteristics was derived from the theoretical premises of Apparatgeist (Katz &

Aakhus, 2002) and Ling's (2008) conception of bounded solidarity on the effect of

mobile communication possibly facilitating insularity of communities from the rest of

the society (also captured by Gergen's [2008] term "monadic clustering"). Among the

examples that Katz and Aakhus suggested of the latent social dimensions of PCT

usage, there were *networks of social ties* based on sentiment, interest, and obligation

that will bring advancement of self, group, and values within group, society, and

culture, respectively. Previous research has shown mixed findings on the effects of PCTs use on social networks; some studies found mobile phone usage strengthens existing social ties and makes one's social networks more dense and insular, whereas email and social media usage broadens the scope of one's social network, thus increasing the size and diversity of networks. Others have found that depending on one's current network situations, mobile communication can be also used to maintain and increase weak ties. The findings of this study suggest that frequent PCTs use, regardless of the kind of social ties, contributes to the increase of Korean immigrants' network size, and that PCTs use for coethnic strong ties is significantly connected to network centrality. Finally, PCTs use for host ties seems to be relevant to network diversity. As such, by studying how Korean immigrants' social networks of information, emotional support, and help are maintained by their PCTs use for distinctive social ties (i.e., coethnic vs. host nationals, strong vs. weak ties), an empirical test of theoretical premises of Apparatgeist was partially achieved.

It is possible some readers will questions the combining of multiple channels into a single measure. However, the relatively high scores of combined PCT usage for eight different kinds of media (i.e., cellular phone calling, texting, email, landline, instant messaging, social media, and Skype) were high enough (.75 and above) and the media multiplexity hypothesis (Haythornthwaite, 2002) was supported through this study (showing people use multiple media frequently for their strong ties whereas they use less number of PCTs for their weak ties less frequently) sheds some support for doing this. According to previous research, phone calling, texting and instant messaging were found more as strong tie media whereas email and social media were

used for maintaining and expanding weak ties (Boase, 2008; Ellison et al., 2007, 2011; Kim et al., 2007). However, the current study has found statistically significant associations between texting and email usage with coethnic strong ties and network centrality, which means people also use email for their strong tie communication. Research on social media also found that predominant usage was to maintain existing ties rather than to create new ones (Ellison et al., 2007, 2011). Therefore, it is arguable who people communicate with through PCT could have a larger impact than that of the particular media affordances a PCT has. It becomes even more difficult to separate each different technological characteristic and its distinctive impact when several media functions are converged into one device such as in a Smartphone.

Matsuda's (2005) selective interpersonal relationships theory on mobile communication seems applicable to the case of Korean immigrants' PCTs use based on the findings of this study. According to the theory, increased urbanization and mobility of modern society brought wider pools of social networks (i.e., increased network size and diversity) for people. Matsuda asserted that using mobile communication allows partial and selective maintenance of those social relationships, but the quality of relationships can be very rich. The case of Korean immigrant participants of the current study seems to apply; they use PCTs for contacting different types of social ties in distinctive ways. Their use of PCTs for contacting fellow Koreans who are their close friends and coworkers tends to put them in a more central location of their intracultural organizational communication networks. However, using PCTs for contacting non-Korean friends and coworkers allows for more opportunities to have diverse social networks.

Finally, the findings of this research shed light on theoretical predictions of cultural convergence (Barnett & Rosen, 2007; Rogers & Kincaid, 1981). The theory suggests that when communication within a system flows without restrictions, a global culture will be formed over time. The world can be viewed as a system and the increased connectivity of different parts of the world (due to the usage of advanced information and communication technologies) will facilitate the formation of a universal culture that might become something closer to the culture of a country producing and exporting the greatest number of cultural messages and products. However, cultural convergence theorists projected that this process of convergence can be delayed by the formation of certain boundaries within the system. Distinctive ethnic cultural groups and organizations exist even within one nation, for which the U.S. is a typical example, and many of those cultural groups seem to maintain their customs and traditions more or less consistently over time by keeping their boundaries active. The case of Korean immigrant church organizations seems to contribute at least on a short-term basis to maintaining those cultural boundaries by letting members within the system tighten their networks; they could use various communication technologies to maintain their intracultural networks, as shown from this study. It is when those immigrants form ties with non-Koreans and communicate with them frequently that those cultural boundaries are loosened and the formation of a global culture might be continued.

Methodological Implications of the Study

Borgatti, Jones, and Everett (1998) provided a systemic classification of different conceptions of social capital inspired by Wellman and Bartram's email

message to the SOCNET listserv on January 10 in 1997. According to their

classification, there are two fundamentally different usages of the term, social capital:

one conceives of social capital as a quality of groups (e.g., the whole society) and the

other as the value of an individual's social relationships. The first view is exemplified

by scholars like Putnam (1995) and Fukuyama (1995), and the other view is

represented by Burt (1992) and Lin (1986). The group-level social capital is partly

cultural and partly socio-structural; it includes such things as rule of law, social

integration, and trust. The individual-level social capital is a source of material,

information, and emotional resources one has within his or her social relationships,

and depending on an actor's position in a social network, the opportunities and

constraints for the benefit of information and control vary (Burt).

    With this clear distinction of social capital in mind, Borgatti et al. (1998)

suggested various ways of measuring social capital in terms of network properties:

size, density, heterogeneity, prestige for ego-network measures (i.e., Burt's view of

social capital), and various centrality measures (e.g., closeness, betweenness,

eigenvector; Freeman, 1979; Bonacich, 1972) for whole-network measures. In line

with Putnam's (1995) view of social capital, since it is a group-level quality, various

measures for group cohesion such as density, centralization, and homophily were

suggested by Borgatti et al. Despite these scholars' efforts in formalizing the notion

of social capital, various network measures were not adopted actively enough by

previous research. The current research was by its nature of data collection an ego-

network approach, but also adopted whole-network measures such as centrality by

gathering data within a target organization. As a result, the measures of social capital

for this study incorporated both individual-level and group-level measures, while mostly following Burt's (1992) approach to social capital.

Müller, Wellman, and Marin (1999) explained how to use SPSS to study ego-centered networks and provided detailed information about the process of combining "tie wise" data with "network wise" datasets into one. This way, one can not only calculate focal individuals' (i.e., ego) network characteristics (e.g., size, composition), but also can consider focal individuals' ties and network members' characteristics (e.g., demographics and relationships). This method assumes that each record is an independent unit of analysis (Wellman, 1998). However, the ties of a focal individual are inherently not independent from each other; they are clustered in the focal individual's network. Therefore, a sample of many focal individuals' ties is not a fully independent sample even if the focal individuals were sampled independently. There could be potentially more connections between actors in the whole network that were not captured from ego-centered network data. Müller et al. notes that the variance in such data sets should be lower than in a fully independent sample.

The current study partially overcomes this limitation in considering the connections of alters by gathering alters' network data within a given organizational boundary and also by using UCINET, as advised by Müller at al. (1999), for calculating whole network properties such as Indegree centrality, which did take the alters' connections to one another into account as long as they were identified with their unique ID numbers assigned from the coding process. However, while importing data from UCINET to SPSS, some actors' information, those who were mentioned in

the network data by others, but did not participate in the main survey, could not be incorporated in the main analysis. Because of this, it is possible that the centrality score of each participant might not accurately reflect the structural location of the person and is possibly lower, thus the network might be less dense than the actual case. If the response rate of the survey was higher and the network data was complete, it is possible that the association between network centrality and ethnocentric development could be even stronger and the effect of emotional support and help exchange network could also be significant.

One possible reason for the partial support of hypotheses (i.e., H1a, H2b, and H3a supported, but H1b, H2a, and H3b not supported) could be found in the nature of ethnocentric and ethnorelative development being not mutually exclusive. The intercultural developmental inventory was originally devised with five distinctive dimensions of intercultural developmental stages (i.e., denial/defense, minimization, reversal, acceptance, integration), and earlier stages (i.e., denial/defense, minimization, and reversal) were considered more ethnocentric whereas later stages (i.e., acceptance and integration) were ethnorelative. This categorization does not guarantee any "mutual exclusiveness" between ethnocentric and ethnorelative development, thus the influence of network diversity on ethnorelative development (i.e., H1a) might not work the same with ethnocentric development (i.e., H1b) and again, the significant association between network centrality with ethnocentric development (i.e., H2b) might not be the same with ethnorelative development (i.e., H2a). This also explains why the reliability scores for both ethnocentric and

ethnorelative development were lower (i.e., around .4) than the level of normally

acceptable level (i.e., .7 and above) for a scale development.

The figure 5.1 shows the component plot of the factor analysis for the items

measuring intercultural development and it illustrates the point about ethnocentric and

ethnorelative dimensions being not mutually exclusive with each other.

However, the reasons for non-supported hypotheses of this study could be

conceptual issues rather than methodological ones. As Lee et al. (2003) has found the

three different types of Korean immigrants' acculturation (i.e., assimilation,

integration, and segregation), the development of intercultural sensitivity can be a

matter of different types, rather than a simple dichotomy between ethnocentric versus

ethnorelative development. From the earlier stage of denial and defense to a later

stage of integration, there could be in-between stages that cannot be clearly

categorized into either ethnocentric or ethnorelative. For an analytical purpose, the

current study dichotomized the several stages of intercultural development, of which

itself might not be a linear process, with sacrificing the reliability of the scales.

Figure 5.1

A Component Plot of Factor Analysis for the Intercultural Development Scales

Component Plot in Rotated Space
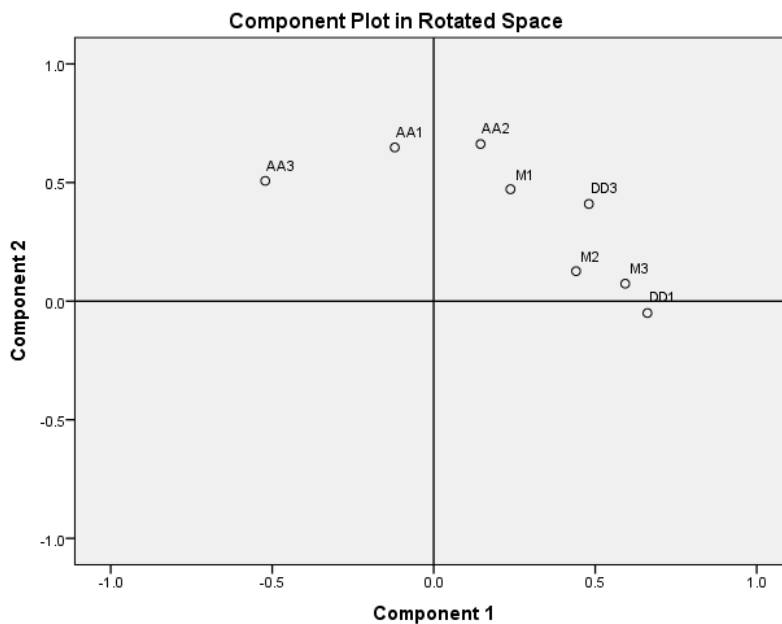
Practical and Policy Implications of the Study

The original intercultural development scales (Hammer, 1998) were created

for the purpose of measuring individuals' intercultural sensitivity, and the

intercultural development inventory (IDI) has been used in the context of

international business and educational training for many years. What distinguishes

intercultural development from traditional measures of acculturation/assimilation is

that IDI is more about awareness of and willingness to adjust to cultural differences,

not necessarily about changing one's attitudes and behaviors toward those of host

culture, as was the case for traditional perspectives of acculturation. Scholars have

criticized the monolithic and normative view of acculturation, charging that it does

not properly explain the actual reality of many immigrant community lives, especially

of the first generations. It is probably not a matter of enforcement or judgment that

certain immigrants have to adopt a culture of the host society or not (they actually

contribute to increasing the overall diversity of a society by keeping their own ethnic

cultures). Actually, if an immigrant is somewhat forced to acculturate into the host

culture, it would not be too different from the 'reversal' stage of ethnocentrism. The

reversal stage of intercultural development indicates that one thinks an adopted

culture is superior than the original. But in order to communicate well with members

of the host society and enjoy the benefits of a new and diverse environment, it will be

important to know the cultural differences between their own and others' cultures and

maintain an open mind, which is being ethnorelative (i.e., not assuming one's own

culture is superior to others' and being able to compare/contrast cultural differences).

This study showed that over-embeddedness of Korean immigrants in their

ethnic religious communication networks could reinforce their ethnocentric cultural

views, and highlighted the structural effect (i.e., centrality) of communication

networks. Using personal communication technologies frequently for contacting their

close fellow Korean friends and coworkers can increase their network centrality.

Based on these findings, it is recommended that immigration policies for ethnic

minority groups should not only provide English proficiency training, but also devise

a way to tap into existing ethnic/religious organizations and provide members of

those organizations ways to interact more with host members and experience 'other'

cultures. That way, one does not have to incorporate different cultures unwillingly,

but can at least learn about cultural differences and how to appropriately interact with

others in social situations of one culture or another.

"Melting pot" used to be a metaphor describing a diverse American society

being composed of many immigrants from various cultures living together and

growing acculturated. However, if one looks into the actual daily life of those U.S. immigrants and their socializing more in depth, many of them do not live in a melting pot, but something more like in a "mosaic" society. This is especially true in large metropolitan cities like New York City, Chicago, and Los Angeles, where many immigrant communities are centered on certain geographic locations and are more or less segregated from other communities. Even if one does not live in those ethnic enclaves physically, if the person's social networks are composed mostly of coethnic friends, coworkers, and family members, that is not very different from living in an ethnic enclave, and thus without many opportunities to interact with host members. It is not the case that one immigrant chooses to remain ethnocentric, but rather that one person has limited time and energy for maintaining social networks. Thus, one's over-embeddedness in ethnic/religious communication networks becomes a structural barrier to interacting with host members, from which one would gain experience dealing with cultural differences and more understanding of them.

As was shown from the research findings of this study, being over-embedded in coethnic social networks can increase immigrants' ethnocentric cultural attitudes and beliefs, which could also increase the chance of misunderstanding and conflicts between different social and cultural groups. Therefore, policy makers and activists for immigrant communities should consider ways to provide more opportunities to those immigrants for interaction with non-coethnic, host national members. The issue becomes more important considering those over-embedded immigrants might be opinion leaders and gatekeepers of their communities, having significant social influences on other members' cultural attitudes and beliefs. According to McMichael

and Manderson's (2004) study about Somali women immigrants, gossip networks

could work as a self-regulating mechanism for individuals' clarification of judgment,

belief, and norms. Therefore, if the contents of those immigrant communication

networks consist mostly of value judgments, beliefs, and norms based on one's own

cultural origin, it is likely that the person's ethnocentric cultural views could be

reinforced through the network mechanism.

Organizational communication research can benefit from the findings of this

study in terms of relationships between communication networks, technology usage,

and organizational members' cultural attitudes and beliefs. The fact that those Korean

immigrant church members who are located closer to the center of the information

network tend to defend Korean culture more provides broader implications for

community organizing and organizational culture. This might not be the same with

organizations of which members are racially and ethnically diverse; but if an

organization wants to imbue certain meanings and culture into its members, it will be

most efficient to approach those central actors in the communication networks first

and persuade them over to those cultural messages. While those central actors who

have many ties within the organization interact with other members in line with those

cultural messages, it is more likely that other members will also accept those

messages. What flows through communication networks is not only information and

emotional support, but also social influence.

Limitations of the Study

There are several limitations to note from this dissertation research. First of

all, during the process of creating composite scales of ethnorelative and ethnocentric

development scores using the intercultural developmental inventory (IDI) measures (Hammer et al., 2003), due to the reduced number of measures (i.e., fifteen for the survey questionnaires) compared to the original 50 items, relatively low reliability scores were obtained. Although the purpose of the factor analysis for IDI measures was not to test the reliability of the original scales but to dichotomize the measures into two dimensions (i.e., ethnorelative and ethnocentric), it is strongly recommended to use the original 50-items measure for a future study if acquiring acceptable levels of scale reliability is paramount.

The findings of the current study cannot be readily generalized to any other case or immigrant group, due to the fact that the sample organizations and participants were not randomly chosen.[1] Other immigrant groups in the U.S. might not have their ethnic religious organizations as one of the key social networking places or as cultural institutions actively contributing to their protection of ethnic culture. However, the fact that the demographic distributions of Korean immigrant participants for the current study were not very different from those of Korean immigrants from the 2010 Census data suggests some generalizability of findings to other cases of Korean immigrant church members.

The lack of qualitative data analysis can be considered as another limitation of the current study. As mentioned earlier in the review of relevant literature (Chapter II) for this dissertation, interviews, focus groups, and ethnographic observations of immigrant social lives can give deeper insights on their social networking habits and cultural adaptation. Studies have found that gossip plays an important role in

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[1] The response rate of 40% for the survey was not ideal either in constructing the whole network of the sample organization.

immigrant women's social lives both as an immediate source of information and a self-discipline mechanism (McMichael & Manderson, 2004), but the current study could not capture those kinds of details from collecting data through a survey method. If more details were collected and analyzed, it would have enriched interpretations of the findings of the current study; for example, this study only measured the frequency of personal communication technologies usage (PCTs), but a qualitative interview could examine the meanings of those PCTs use in Korean immigrants' lives and possibly the actual contents of those communication as well.

Finally, the current study proposed two linear path models between PCT usage, network characteristics, and intercultural development as a conclusion of the data analyses, but the direction of influence can be reversed depending on time points and theoretical approaches. It could be the case that one's intercultural development (both ethnocentric and ethnorelative attitudes and beliefs) influences social networking patterns and the networking influences one's usage of PCTs. A recent study comparing American and Korean college students' Facebook usage (Choi, Kim, Sung, & Sohn, 2011) found "culturally" distinctive patterns of social networking between the two groups, so the researchers assumed the direction of influence from culture to technology usage and to social capital. Another dissertation also showed how Korean and American culture could influence each country's college students' usage of social network sites distinctively (Cho, 2010).

In order to identify the direction of influence more clearly and claim causality of the proposed path models, collection of longitudinal data is required; due to the cross-sectional nature of data gathered for this research, the linear path models could

not be confirmed. Considering the interactive and co-constitutive relationships

between communication and culture (Carey, 1989), it is plausible to theorize a two-

way interactive model between communication networks, PCTs use, and culture. This

study aimed to examine how communication processes at both the micro level (i.e.,

PCT usage) and macro level (i.e., position in organizational communication

networks) influence one's intercultural development, and partially achieved the goal

by showing significant influences of communication network centrality on

ethnocentric development and those of communication network diversity on

ethnorelative development.

Directions for Future Research

Based on the research findings and discussions of this study, several new

directions can be proposed in pursuit of further inquiry. First, to verify research

findings and enrich interpretations of them, more data can be collected from Korean

immigrants of the sample organization, or possibly other Korean immigrant churches

as well, by using focus groups or individual interviews. Interviewers can ask about

members' social lives revolving around their ethnic religious organizational activities,

what kinds of benefits (i.e., social capital) they gain, and any limitations they feel

about those social networking opportunities within and outside of their ethnic

churches. Questions about their personal communication technologies (PCTs) usage

can examine the actual content of those messages exchanged among Korean

immigrants in more depth, especially in how they are relevant to their cultural beliefs

and attitudes. The current study only examined the frequency of PCTs use, so

studying communication messages will enrich the interpretations of the research findings.

Second, according to the results of this study, usage of social network sites (SNSs) seemed not so prevalent among Korean immigrant organizational members. However, it was even more recently that SNSs became a useful tool to organize many church activities especially among young adults, and many church members are still finding each other on SNSs like Facebook, LinkedIn, and Skillspage—this observation came from the researcher's first hand experiences as the sample organization's member for about six years. Along with the ethnographic field observation, future research can benefit from utilizing more qualitative research methods such as interviews and cyber ethnography. That way, the interactive and co-constitutive relationships between communication networks and culture could be verified even further.

The amount of variance explained by the regression models of this study for intercultural development was not large: it ranged from 9.7% to 11%. The reason for this modest effect size seems to originate from weak and indirect associations between social capital and culture. A future study can examine more direct impacts of immigrants' social capital embedded in their ethnic religious communication networks on other relevant aspects such as their civic and political participation (Matsaganis et al., 2011; Putnam & Campbell, 2010), psychological health (Vega, Kolody, Valle, & Weir, 1991; Kim, 2001), and their organizational identification (Scott, 2007). Although Putnam and Campbell (2010) have found that overall personal interfaith ties are increasing in U.S. society, polarization between religious

conservatives and secular liberals is also increasing according to their national survey

on Americans' religious beliefs and lives. Most Korean immigrant church

organizations maintain a very conservative culture, and if they remain insulated from

the rest of the society by their unique social networking pattern, it makes sense why

core groups in those ethnic religious organizations could be very ethnocentric in their

cultural attitudes. Therefore, it is worthwhile to examine how much those Korean

immigrants engage in civic and political matters, if at all, and how their ethnic

religious communication networks might influence the process of civic and political

engagement.

Putnam and Campbell's (2010) study has found that religious people tend to

participate more in civic and political matters, and that their overall life satisfaction

was higher than for non-religious people. This is partially the effect of social capital

generated from their religious communities, which might be the case for Korean

immigrants as well. Vega et al. (1991) have found that family emotional support has a

significant impact on Mexican immigrant women's likelihood of having depression,

and Kim (2001) has theorized in her model (see p. 28 in Ch. II) that psychological

health is one of the major outcomes of cross-cultural communication. How

organizational members identify with their fellow members and the organization itself

through their communication could be an even more direct consequence of

organizational communication networks. A future study can examine these issues and

find stronger structural impacts of communication networks.

As it will be the case for many social phenomena, people's social

relationships and their networks do change over time. In order to verify the causal

relationships between PCTs use, communication networks, and intercultural

development proposed with two path models of this study as a conclusion (see p. 102

and p. 105 in Ch. IV), more data can be collected at different points in time to see

longitudinal changes in Korean immigrant church members' communication

networks and their consequential effect on cultural attitudes and beliefs. If the

patterns identified in this study persist over time, it is possible that those Korean

immigrants who have most of their social relationships within their ethnic church

organizations and interact mostly within them to seek information, emotional support,

and help for daily life will remain ethnocentric, which would also contribute to the

insularity of the Korean immigrant community in U.S. society. Whether second and

third generations of Korean immigrants might be more interculturally sensitive due to

their frequent interactions with non-Koreans is another issue to be examined with

longitudinal data.

Last, but not least, a future study can examine other immigrant groups, such as

Hispanics or other Asian immigrant groups, in U.S. society in terms of their

communication networks, PCTs use, and intercultural development and thus test the

generalizability of findings of this study. Depending on whether those other

immigrant groups have any strong ethnic/religious organizations that become the

main source of their social networking and social capital, similar phenomena could be

identified. If that is shown to be the case, one could expect that the associations

between PCTs use for coethnic strong ties, network centrality, and ethnocentric

development and those between PCT usage for host ties, network diversity, and

ethnorelative development are generalizable to many other immigrant groups'
intercultural development processes.

Conclusion

Homophily as one of the main principles of social networking, meaning
people tend to socialize with those who are similar to them, is nothing new. Among
many possible categories and factors that could generate homophilious social
networking, race was found very prominent in a recent study of American high school
students (Currarini, Jackson, & Pin, 2010). Although Asian American students were
less likely to only socialize with their fellow Asian students compared to Hispanic
and Black students, the overall rate was seven times higher than White students'
making friends only with their fellow White students according to Currarini et al.'s
research finding. This race homophily phenomenon was more prominent in a larger
school, for which the reason might be structural due to more availability of the same
race friends.

What is more important than this known phenomenon of race homophily is
the possible consequence of this insular and racially-bounded social networking.
What would be social, cultural, and political effects when people mostly interact with
similar others, not experiencing diverse others? This is where the concept of social
capital comes into play, and it is notable that how scholars have found not only
positive effects of social capital (e.g., Coleman's and Putnam's views) such as trust,
life satisfaction and emotional support, but also potentially negative effects of social
capital (e.g., Burt's view) such as redundant information within closed networks and

upper limits of social mobility (e.g., termed bamboo ceiling for Asian Americans being discriminated in the workplace promotion).

Along with a new theoretical concept of structural holes that points out unique benefits of a particular structural position within a network, Burt (1992) pointed out that information that is being circulated within a closed, tightly-knit network (which might be efficient for generating trust and exerting normative control among members) will create an "echo" effect so the same information is circulated over and over, which makes it more like a gossip rather than new information and perspectives. In line with this concept is the strength of weak ties (Granovetter, 1973) that people could benefit more from their acquaintances (i.e., weak ties) than their close friends and family (i.e., strong ties) in terms of receiving novel information such as a new job opportunity.

The goal of this study was to examine the impact of immigrant social capital (especially of Koreans, who are famous for their race homophily among many other immigrant populations in the US) on their intercultural development. The basic assumption was that there are interactive and co-constitutive relationships between communication (social interactions) and culture (Carey, 1989); while pre-established cultures influence how people communicate, how people interact (for example, who they talk to, how many they talk to, and what kind of network positions they occupy) also contributes to formation of their cultural attitudes and developments.

This research has found statistically significant relationships between one's structural position (i.e., network centrality) within their coethnic church networks and their ethnocentrism that the more central one is within the organizational

communication networks, the more ethnocentric he or she tends to be meaning s/he is more defensive about her own culture, denies and minimizes the influences of cultural differences in daily life. On the contrary, if one has diverse others in their communication networks, he or she tends to have more ethnorelative intercultural development, being willing to adapt to cultural differences.

Uses of personal communication technologies (PCTs) such as mobile phone calling, texting, and emailing facilitate this process between social networking and intercultural development in unique ways; it did not affect the process unilaterally, but depending with whom one is using PCTs. Traditionally, immigrant studies have found that both ethnic and host mass media are important sources for their acculturation and they found those media effects are mediated through *interpersonal* communication (Kim, 2001). Considering that people access even mass media contents through their PCTs nowadays and communicate with others also through PCTs, it becomes necessary to incorporate PCT usage when examining immigrant's cultural development. This research has found that Korean immigrant's usage of PCTs with their coethnic strong ties does facilitate their network centrality within the church communication network, which develops more of ethnocentric attitudes and beliefs. However, if Korean immigrants use PCTs often to contact non-Korean friends and coworkers, that seems to facilitate their network diversity, which in turn will facilitate their development of intercultural sensitivity.

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Appendix I. Survey Questionnaires

1. How long have you lived in the United States?

(   ) years (   ) months

2. What was the purpose for you to come to the US first? Please indicate the reason below.

1) Family immigration
2) Business
3) Study abroad
4) Others (reason:)

3. Are you living with your **immediate family** members (examples: parents, spouses, children or siblings, etc.) right now?

1) Yes   Number of family (   )
2) No

4. Do you have any other family members or relatives living in New Jersey, New York, Connecticut, or Pennsylvania?

1) Yes   Number of family/relatives living in NJ, NY, CN, or PA (   )
2) No

5. Do you have any other family members or relatives living in other states than those in question #4?

1) Yes   Number of family/relatives living in other states (   )
2) No

6. Which states do they live? Please answer as many as you can remember.

(   )

7. Do you have any **immediate family members** who are currently living in Korea?

1) Yes   Number of family members living in Korea (   )
2) No

8. Are you involved in any type of social activities with other **Koreans or Korean Americans** such as hobby clubs, professional or religious organizations? If so, for each type of organization below, please indicate how often you participate in their activities. (if you're not involved in any of the following, you can skip this question and go to #10.)

a. Hobby clubs (examples: sports, book clubs, knitting)

1..........................2..........................3..........................4..........................5
| Rarely | A few | a few times | about once | more than |
| or never | times a year | a month | a week | once a week |

b. Religious organization (examples: church, campus religious club, missionary organization)

1..........................2..........................3..........................4..........................5
| Rarely | A few | a few times | about once | more than |
| or never | times a year | a month | a week | once a week |

c. Occupational/professional organization

1..........................2..........................3..........................4..........................5
| Rarely | A few | a few times | about once | more than |
| or never | times a year | a month | a week | once a week |

d. Others (specify names:)

1..........................2..........................3..........................4..........................5
| Rarely | A few | a few times | about once | more than |
| or never | times a year | a month | a week | once a week |

9. Are you involved in any type of activities with **Non-Koreans** such as hobby clubs, professional, religious or community organizations? If so, for each type of organization below, please indicate how often you participate in their activities. (if you're not involved in any of the following, you can skip this question and go to #11.)

e. Hobby clubs (examples: sports, book clubs, knitting)

1..........................2..........................3..........................4..........................5
| Rarely | A few | a few times | about once | more than |
| or never | times a year | a month | a week | once a week |

f. Religious organization (examples: church, campus religious club, missionary organization)

1..........................2..........................3..........................4..........................5
| Rarely | A few | a few times | about once | more than |
| or never | times a year | a month | a week | once a week |

g. Occupational/professional organization

1..........................2..........................3..........................4........................5
Rarely   A few   a few times   about once   more than
or never   times a year   a month   a week   once a week

h. Others (specify names:)

1..........................2..........................3..........................4........................5
Rarely   A few   a few times   about once   more than
or never   times a year   a month   a week   once a week

10. How many **Korean** or **Korean American** friends and coworkers do you contact daily or weekly basis? (Please write numbers below in the parenthesis)

1) Friends: About (   )
2) Coworkers: About (   )

10-1. How many of your friends/coworkers are from the **church** you belong to?

1) Friends: About (   )
2) Coworkers: About (   )

10-2. Among the media options below, how often do you use each one of them for contacting your Korean friends and coworkers?

Media options	N/A	Not at all 1	Once in a few years 2	A few times a year 3	Monthly 4	Weekly 5	Daily 6	A few times a day 7
In-person meeting		1.........2.........3.........4.........5.........6.........7						
Cellular phone – voice calling		1.........2.........3.........4.........5.........6.........7						
Texting		1.........2.........3.........4.........5.........6.........7						
Landline telephone		1.........2.........3.........4.........5.........6.........7						
Email		1.........2.........3.........4.........5.........6.........7						
Instant Messaging (e.g., IM, G-chat, Kakaotalk)		1.........2.........3.........4.........5.........6.........7						
Facebook/Cyworld/Twitter		1.........2.........3.........4.........5.........6.........7						
Skype		1.........2.........3.........4.........5.........6.........7						

11. How many **Korean or Korean American** friends and coworkers do you contact **from time to time, on a less than daily or weekly basis**? (Please write numbers below in the parenthesis)

1) Friends: About (   )

2) Coworkers: About (   )

11-1. How many of them are from the **church** you belong to?

    1) Friends: About (   )
    2) Coworkers: About (   )

11-2. How often do you use each of the media below for contacting those Korean friends and coworkers whom you contact **less often**?

Media options	N/A	Not at all 1	Once in a few years 2	A few times a year 3	Monthly 4	Weekly 5	Daily 6	A few times a day 7
In-person meeting		1.........2.........3.........4.........5.........6.........7						
Cellular phone – voice calling		1.........2.........3.........4.........5.........6.........7						
Texting		1.........2.........3.........4.........5.........6.........7						
Landline telephone		1.........2.........3.........4.........5.........6.........7						
Email		1.........2.........3.........4.........5.........6.........7						
Instant Messaging (e.g., IM, G-chat, Kakaotalk)		1.........2.........3.........4.........5.........6.........7						
Facebook/Cyworld/Twitter		1.........2.........3.........4.........5.........6.........7						
Skype		1.........2.........3.........4.........5.........6.........7						

12. How many **Non-Korean** friends and coworkers do you contact daily or weekly? (Please write a number below in the parenthesis)

    1) Friends: About (   )
    2) Coworkers: About (   )

12-1. Among the media options below, how often do you use each one of them for contacting your **Non-Korean** friends and coworkers?

Media options	N/A	Not at all 1	Once in a few years 2	A few times a year 3	Monthly 4	Weekly 5	Daily 6	A few times a day 7
In-person meeting		1.........2.........3.........4.........5.........6.........7						
Cellular phone – voice calling		1.........2.........3.........4.........5.........6.........7						
Texting		1.........2.........3.........4.........5.........6.........7						
Landline telephone		1.........2.........3.........4.........5.........6.........7						
Email		1.........2.........3.........4.........5.........6.........7						
Instant Messaging (e.g., IM, G-chat, Kakaotalk)		1.........2.........3.........4.........5.........6.........7						
Facebook/Cyworld/Twitter		1.........2.........3.........4.........5.........6.........7						
Skype		1.........2.........3.........4.........5.........6.........7						

13. How many **Non-Korean** friends and coworkers do you contact from time to time, on a less than daily or weekly basis? (Please write numbers below in the parenthesis)

    1) Friends: About (   )
    2) Coworkers: About (   )

13-1. How often do you use each of the media below for contacting those **Non-Korean** friends and coworkers whom you contact **less often**?

Media options	N/A	Not at all 1	Once in a few years 2	A few times a year 3	Monthly 4	Weekly 5	Daily 6	A few times a day 7
In-person meeting		1.........2.........3.........4.........5.........6.........7						
Cellular phone – voice calling		1.........2.........3.........4.........5.........6.........7						
Texting		1.........2.........3.........4.........5.........6.........7						
Landline telephone		1.........2.........3.........4.........5.........6.........7						
Email		1.........2.........3.........4.........5.........6.........7						
Instant Messaging (e.g., IM, G-chat, Kakaotalk)		1.........2.........3.........4.........5.........6.........7						
Facebook/Cyworld/Twitter		1.........2.........3.........4.........5.........6.........7						
Skype		1.........2.........3.........4.........5.........6.........7						

14. How often do you contact family members/relatives and friends **who currently live in Korea**?

Not at all 1	Once in a few years 2	A few times a year 3	Monthly 4	Weekly 5	Daily 6	A few times a day 7

    1) Friends: 1...........2............3.............4.............5...........6.............7

    2) Family members: 1...........2............3.............4.............5...........6.............7

    3) Relatives   1...........2............3.............4.............5...........6.............7

14-1. How often do you use each of the media below for contacting those Korean friends and family members/relatives **who live in Korea** now?

Media options	N/A	Not at all 1	Once in a few years 2	A few times a year 3	Monthly 4	Weekly 5	Daily 6	A few times a day 7
In-person meeting		1.........2.........3.........4.........5.........6.........7
Cellular phone – voice calling		1.........2.........3.........4.........5.........6.........7
Texting		1.........2.........3.........4.........5.........6.........7
Landline telephone		1.........2.........3.........4.........5.........6.........7
Email		1.........2.........3.........4.........5.........6.........7
Instant Messaging (e.g., IM, G-chat, Kakaotalk)		1.........2.........3.........4.........5.........6.........7
Facebook/Cyworld/Twitter		1.........2.........3.........4.........5.........6.........7
Skype		1.........2.........3.........4.........5.........6.........7

15. When was the last time you visited Korea? Please write in year.

Year (   )

15-1. How often do you visit Korea?

1) More than once a year
2) Once a year
3) Once in 2-3 years
4) Once in 4-5 years
5) Once in 10 years
6) Never since immigration

15-2. What are the main reasons for visiting Korea? Please check all that applies.

1)   Visiting family/relatives and friends
2)   Business trip
3)   Travel/vacation
4)   Others (   )

16. How many hours do you watch Korean TV programs **daily**? (Please combine your watching time through the Internet, cable TV, and DVD rentals).

1..........................2..........................3..........................4..........................5
Less than   30mins-   1-2hour   2-3hours   more than
30 mins   1 hour   3 hours

16-1. What kind of Korean programs do you watch? Please check the frequency for each type of program.

	Do not watch at all		Watch monthly		Watch daily

1) News

1................2................3................4................5

2) Entertainment shows

1................2................3................4................5

3) Drama/sitcom

1................2................3................4................5

4) Current affair/documentary

1................2................3................4................5

5) Korean movies

1................2................3................4................5

16-2. Are you using any **Korean media in the US**? Please check the frequency for each type of media below.

	Do not use at all		Use monthly		Use daily

1) Korean newspaper in the US

1................2................3................4................5

2) Korean broadcasting in the US

1................2................3................4................5

3) Korean website

1................2................3................4................5

(e.g., Missy USA, heykorean.com, bada.us, etc.)

17. How many hours do you watch **American TV programs** daily? (Please combine your watching time through the Internet, cable TV, and DVD rentals).

1..........................2..........................3..........................4..........................5

Less than 30 mins	30mins- 1 hour	1-2hour	2-3hours	more than 3 hours

17-1. What kind of American programs do you watch? Please check the frequency for each type of program.

	Do not watch at all	Watch monthly	Watch daily

1) News   1................2................3................4................5

2) Entertainment shows

                      1................2................3................4................5

3) Drama/sitcom 1................2................3................4................5

4) Current affair/documentary

                      1................2................3................4................5

5) Movies   1................2................3................4................5

17-2. Are you subscribing any American newspaper or using internet to read American news? Please check the frequency for each type of media below.

	Do not use at all	Use monthly	Use daily

1) American newspaper   1................2................3................4................5

2) American internet news   1................2................3................4................5

18. How well do you speak **English** compared with most Americans?

1........................2........................3........................4
very much   somewhat   only a little   as well as
worse   worse   worse   most Americans

18-1. How well do you speak **Korean** compared with most Koreans in Korea?

1........................2........................3........................4
very much   somewhat   only a little   as well as
worse   worse   worse   most Koreans

18-2. How often do you eat **American, or non-Korean food** weekly?

Not at all.................Once a week.................A few times a week.................Daily

18-3. How often do you eat **Korean food** weekly?

Not at all.................Once a week.................A few times a week.................Daily

18-4. Did any of your family members (current or ancestral) get married to **non-Koreans**?

Not at all................A little................Some................Many

18-5. How comfortable do you feel living in American society?

Not at all................A little................Somewhat................Very much

18-6. How comfortable do you feel living in Korean American society?

Not at all................A little................Somewhat................Very much

18-7. How much are you interested in learning and understanding the ways most Americans behave and think?

1) Not at all, there's no need to learn because I can live in Korean ways

2) A little, but I don't want to make a conscious effort

3) Somewhat, I want to learn if chances are given,

4) Very much, I would like to try the best I can,

5) No need, I know how most Americans behave and think.

18-8. How do you think of the following statement?

"Koreans should always be Korean: They cannot and should not assimilate."

1	2	3	4	5
Strongly Disagree	Somewhat Disagree	Neither disagree nor agree	Somewhat Agree	Strongly Agree

18-9. Please read the following statements and indicate how strongly you agree with each of those.

1) It is appropriate that people do not care what happens outside their country.

1	2	3	4	5
Strongly Disagree	Somewhat Disagree	Neither disagree nor agree	Somewhat Agree	Strongly Agree

2) Korean culture's way of life should be a model for the rest of the world.

1	2	3	4	5
Strongly Disagree	Somewhat Disagree	Neither disagree nor agree	Somewhat Agree	Strongly Agree

3) People should avoid individuals from other cultures who behave differently.

1............................2............................3............................4............................5
Strongly   Somewhat   Neither disagree   Somewhat   Strongly
Disagree   Disagree   nor agree   Agree   Agree

4) People from our culture are less tolerant compared to people from other cultures.

1............................2............................3............................4............................5
Strongly   Somewhat   Neither disagree   Somewhat   Strongly
Disagree   Disagree   nor agree   Agree   Agree

5) People from Korean culture are lazier than people from other cultures.

1............................2............................3............................4............................5
Strongly   Somewhat   Neither disagree   Somewhat   Strongly
Disagree   Disagree   nor agree   Agree   Agree

6) Family values are stronger in other cultures than inKorean culture.

1............................2............................3............................4............................5
Strongly   Somewhat   Neither disagree   Somewhat   Strongly
Disagree   Disagree   nor agree   Agree   Agree

7) Our common humanity deserves more attention than cultural differences.

1............................2............................3............................4............................5
Strongly   Somewhat   Neither disagree   Somewhat   Strongly
Disagree   Disagree   nor agree   Agree   Agree

8) I feel rootless because I do not think I have a cultural identification.

1............................2............................3............................4............................5
Strongly   Somewhat   Neither disagree   Somewhat   Strongly
Disagree   Disagree   nor agree   Agree   Agree

9) Human behavior worldwide should be governed by natural and universal ideas of right and wrong.

1............................2............................3............................4............................5
Strongly   Somewhat   Neither disagree   Somewhat   Strongly
Disagree   Disagree   nor agree   Agree   Agree

10) I have observed many instances of misunderstanding due to cultural differences in gesturing or eye contact.

1..............................2..............................3..............................4..............................5
Strongly   Somewhat   Neither disagree   Somewhat   Strongly
Disagree   Disagree   nor agree   Agree   Agree

11) I evaluate situations in my own culture based on my experiences and knowledge of other cultures.

1..............................2..............................3..............................4..............................5
Strongly   Somewhat   Neither disagree   Somewhat   Strongly
Disagree   Disagree   nor agree   Agree   Agree

12) When I come in contact with people from a different culture, I find I change my behavior to adapt to theirs.

1..............................2..............................3..............................4..............................5
Strongly   Somewhat   Neither disagree   Somewhat   Strongly
Disagree   Disagree   nor agree   Agree   Agree

13) Cultural differences are less important than the fact that people have the same needs, interests and goals in life.

1..............................2..............................3..............................4..............................5
Strongly   Somewhat   Neither disagree   Somewhat   Strongly
Disagree   Disagree   nor agree   Agree   Agree

14) I do not identify with any culture, but with what I have inside.

1..............................2..............................3..............................4..............................5
Strongly   Somewhat   Neither disagree   Somewhat   Strongly
Disagree   Disagree   nor agree   Agree   Agree

15) I do not feel I am a member of any one culture or combination of cultures.

1..............................2..............................3..............................4..............................5
Strongly   Somewhat   Neither disagree   Somewhat   Strongly
Disagree   Disagree   nor agree   Agree   Agree

19. When you need **information in daily life**, whom do you usually contact? Please write their names in the space below in order that comes up to your mind. **[Including your family members and non-Korean friends, you don't need to fill in all 6 people, but if you have more than 6 persons, you can write their names next and below number 6]**

1)(   )   2)(   )

3)(   )   4)(   )

5)(   )   6)(   )

19-1. Using a check mark (√), please indicate those, if any, next to their names who belong to the church you go to.

19-2. Please provide brief demographic information for each of the person you mentioned above following the order you put their names.

1) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

2) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

3) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

4) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

5) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

6) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

19-3. For each person above, please indicate using a check mark (√), whether you use the following media to contact the person.

Media	Person 1	Person 2	Person 3	Person 4	Person 5	Person 6
Voice calling						
Texting						
Facebook						
Email						
Landline						
IM						

20. When you need **emotional support** such as advice and condolence, whom do you usually contact? Please write their names in the space below in order that comes up to your mind.

1)(   )   2)(   )

3)(   )   4)(   )

5)(   )   6)(   )

20-1. Using a check mark (√), please indicate those, if any, next to their names who belong to the church you go to.

20-2. Please provide brief demographic information for each of the person you mentioned above following the order you put their names.

1) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

2) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

3) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

4) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

5) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

6) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

20-3. For each person above, please indicate using a check mark (√), whether you use the following media to contact the person.

Media	Person 1	Person 2	Person 3	Person 4	Person 5	Person 6
Voice calling						
Texting						
Facebook						
Email						
Landline						
IM						

21. When you have certain problems, whom do you usually contact for receiving **concrete help** such as getting a ride, asking for babysitting and/or borrowing money? Please write their names in the space below in order that comes up to your mind.

1)(   )   2)(   )

3)(   )   4)(   )

5)(   )   6)(   )

21-1. Using a check mark (√), please indicate those, if any, next to their names who belong to the church you go to.

21-2. Please provide brief demographic information for each of the person you mentioned above following the order you put their names.

1) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

2) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

3) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

4) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

5) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

6) Male/Female, age (   ), married/not, employed/unemployed, rich/middle/poor, college graduate/high-school or less, Korean/not, family/relatives/others

21-3. For each person above, please indicate using a check mark (√), whether you use the following media to contact the person.

Media	Person 1	Person 2	Person 3	Person 4	Person 5	Person 6
Voice calling						
Texting						
Facebook						
Email						
Landline						
IM						

22. The following questionnaires ask your demographic information.

1) Where was your birthplace?   (   )

2) What is the year of your birth?   (   )

3) Please indicate you biological sex?

Male (   )   Female (   )

4) What is your occupation?   (   )

5) How long have you been a member of the church you go to?

(   ) years (   ) months

6) How much is your monthly income?

      a. Below $1,500
      b. $1,500 – 2,500
      c. $2,500 – 3,500
      d. $3,500 – 4,500
      e. $4,500 – 5,500
      f. $5,500 – 6,500
      g. above 6,500

7) Please indicate your final education?

      a. Middle school or less
      b. Some high school
      c. High school diploma
      d. College degree
      e. Graduate degree

8) Please indicate your marital status

      a. Single
      b. Married
      c. Divorced

9) Where do you live? Please provide city and state information of your residence.

(City: , State:)

- Thank you very much for your participation in this survey!-

Appendix II. Additional Table and Figures

Table 6.1

Comparisons of Major Variables Between Early Responders and Late Responders

	Response Time	N	M	SD	t
Length of Immigration	Early	72	20.15	8.98	-2.04[*]
	Late	106	23.22	10.97	
English Proficiency	Early	70	2.13	.88	-1.63
	Late	106	2.36	.97	
PCT usage for coethnic strong ties	Early	70	10.70	7.19	-.91
	Late	104	11.83	8.52	
PCT usage for coethnic weak ties	Early	71	7.38	5.59	-.62
	Late	101	7.99	6.91	
PCT usage for host strong ties	Early	63	3.19	5.06	-1.25
	Late	94	4.38	6.33	
PCT usage for host weak ties	Early	65	2.08	3.14	-1.86
	Late	95	3.31	5.17	
Ethnorelative Development	Early	72	10.67	1.70	.73
	Late	105	10.47	1.86	
Ethnocentric Development	Early	72	16.06	2.72	2.61[*]
	Late	102	14.98	2.64	
Network Size	Early	72	19.74	18.94	-1.40
	Late	106	24.74	28.89	

Continued Table 6.

	Response Time	N	M	SD	t
Network Diversity	Early	72	16.72	21.00	.140
	Late	106	16.28	20.33	
Network Centrality	Early	48	.30	.27	2.58[*]
	Late	48	.17	.21	

*p < .05

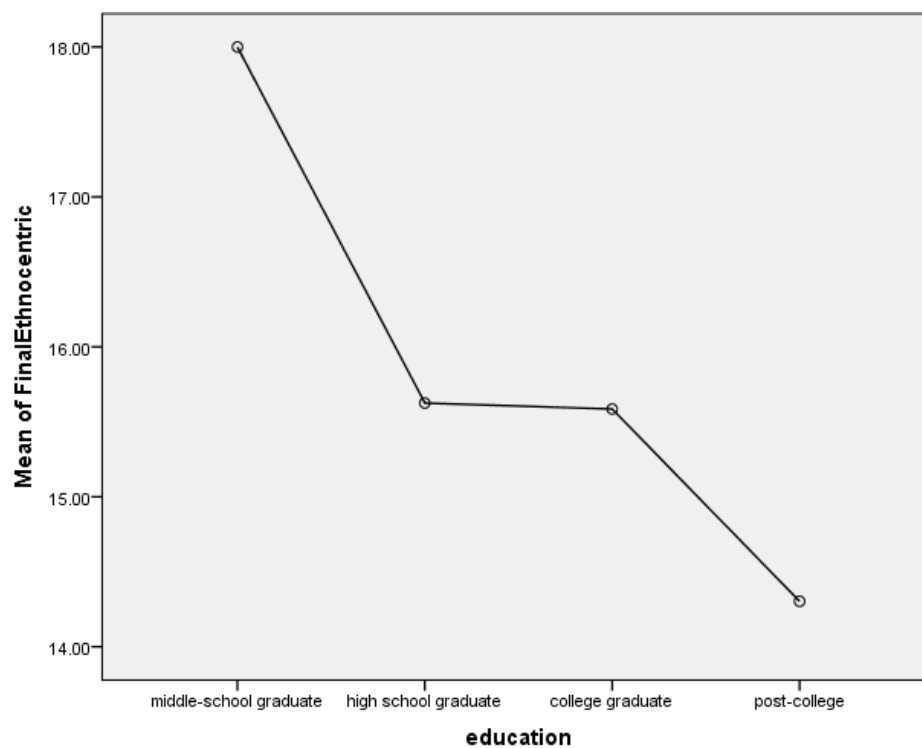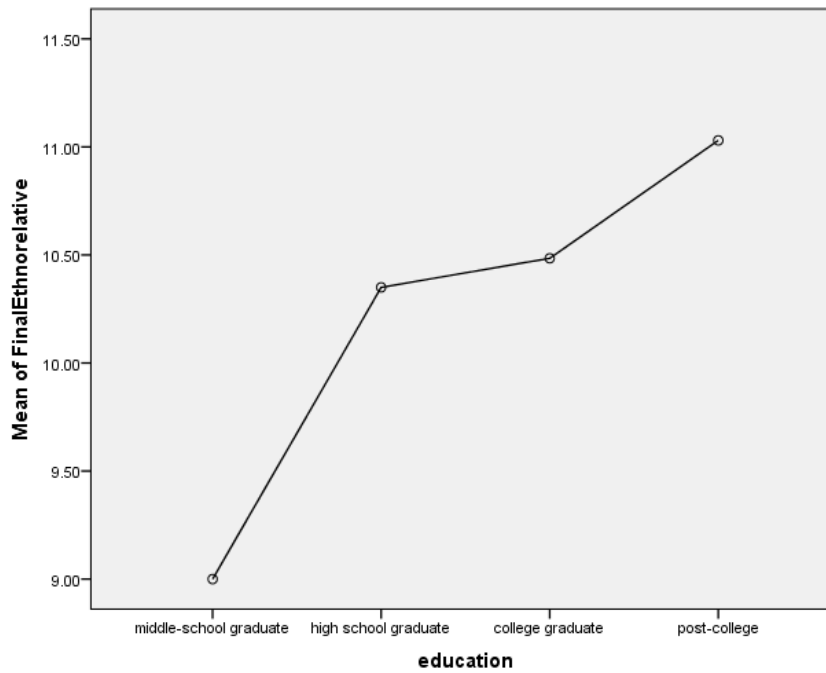Figure 6.1

A Comparison of Ethnocentric Development by Educational Level

Figure 6.2

A Comparison of Ethnorelative Development by Educational Level

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EDUCATION

May 2013	**Ph.D.** Communication, Information & Library Studies Rutgers University, New Brunswick, NJ.
May 2007	**M.A.** Communication Studies University of Kansas, Lawrence, KS.
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PUBLICATIONS

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Gibbs, J. L., Scott, C. R., Kim, Y. H., & **Lee, S. K.** (2010). Examining tensions in telework policies. In S. D. Long (Ed.), *Communication, relationships, and practices in virtual work* (pp. 1-25). New York: IGI Global.

Lee, S. (2004). A study on the motivations and usage of mobile phones by generation and lifestyle groups in Korean Society. *Communication Science, 23*, 191-220. (in Korean)

TEACHING EXPERIENCES

Fall 2010- Spring 2013	Organizational Communication Dynamics Online
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RESEARCH EXPERIENCES

Jan. 2008- May 2013	**Research Associate**, Center for Mobile Communication Studies Rutgers University.
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