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Core Discussion Networks in Japan and America

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Abstract

Arguments regarding the high prevalence of interpersonal collectivism in Japan typically hinge on the assumption that Japanese communication networks are more enduring, frequently contacted, and dominated by kin and work ties than networks in Western countries. However, this assumption has not been examined using nationally representative data. Our analysis is based on core discussion network data collected from the 2003 Japanese General Social Survey and the 2004 American General Social Survey. Our results do not support this assumption in regards to frequency of contact nor dominance of kin and work ties. Nevertheless, there is some indication of high interpersonal collectivism in Japan insofar as Japanese core networks are somewhat more enduring than American core networks.

Keywords: networks, collectivism, individualism, Japan.

That Americans[1] have strong individualistic tendencies has rarely been disputed. Recent evidence supports this view by showing that Americans have been breaking commitments to local groups during the past two to possibly four decades in-favor of keeping more flexible but less strong networks of individually maintained ties (Putnam, 2000; Boase, Horrigan, Wellman, & Rainie, 2006; McPherson, Smith-Lovin, & Brashears, 2006). By contrast, the notion that Japanese are more collectivistic than American's has been contested, although there is a growing consensus that Japanese social institutions -- especially kin and work institutions -- demand greater interpersonally collectivistic behavior than American institutions. According to these theories, social institutions in Japan create a self-sustaining system of dependency and monitoring that encourages frequent communication and longstanding relationships with kin and co-workers, while making it difficult to form new relationships outside of these institutions.

Although much effort has been spent trying to explain why kin and work institutions cause personal networks to be more enduring and frequently contacted in Japan than in America, to our knowledge no studies have used nationally representative survey data to compare the frequency of communication and duration of personal networks in these two countries directly. In other words, these personal network differences have been assumed rather than demonstrated. This is likely because until recently social scientists did not have access to nationally representative data using similar personal network measures in both Japan and America. This paper is one of the first studies to draw comparisons in Japan and America using such data. Our analysis is based on core discussion network data collected from the 2003 Japanese General Social Survey (JGSS) and the 2004 American General Social Survey (GSS).

The Collectivist Concept in Communication Research

Early attempts to apply the collectivist concept to Japan were rooted in the argument that the rapid and relatively recent push towards modernization occurring since the turn of the 20th century has meant that contemporary relationships are still embedded in traditional social norms (Hata & Smith, 1983; Nakane, 1970). This kind of argument garnered greater attention from communication scholars after Hofstede and colleagues (1983, 1984) argued that key differences between cultures could be captured on four dimensions: individualism-collectivism, power-distance, masculinity-femininity, and uncertainty avoidance. Of these four dimensions, the individualism-collectivism dimensions has gained the most attention, with a reported one-third of published studies citing individualism-collectivism as a reason for observed cross-cultural differences (Hui & Yee, 1994). According to Hofstede, cultures with high levels of individualism tend to value individual initiative when forming relationships, as well as autonomy in many other domains in life. By contrast, collectivist cultures value emotional dependency, group solidarity, stable and predetermined friendships, and group oriented social obligations. For the sake of simplicity, we will refer to the individualism-collectivism concept as the "collectivist concept."

Communication scholars have heavily adopted Hofstede's collectivist concept as a means of explaining cross-cultural differences between nations. Gudykunst and Nishida's (1994) highly influential work on Japanese and North American differences, for example, draws on this concept extensively as a means of explaining cultural differences between these countries. This concept is also central in Gudykunst and Lee's (2002) literature review of cross-cultural communication research, and they argue that, "individualism-collectivism is a major dimension of cultural variability used to explain differences and similarities in communication across cultures" (p. 27). Gudykunst and Mody (2002) explain that this concept has been heavily used by communication scholars because of the interwoven nature of social psychological and communication processes. Given its central role in communication research, Hofstede's concept has been used to examine phenomena as diverse as the structure of international hyperlink networks (Barnett & Sung, 2006), to interpretations of the term 'participation' among corporate managers from several European nations (Stohl, 1993). These communication studies are examples of how Hofstede's collectivist concept, which was developed in the 1960s using samples of IBM employees, has been applied more recently to interpret data from general and diverse samples. We note that Hofstede's collectivist concept is most relevant to cross-cultural communication research where national cultures are being compared, and is potentially of less use to intercultural communication research where the focus is on how individuals from different cultures exchange cultural information (e.g. Arasaratnam & Doerfel, 2005; Barnett & Lee, 2002; Kincaid, Yum, Woelfel & Barnett, 1983).

Despite the popularity of Hofstede's collectivist concept, its use in communication research has not been without criticism. Gudykunst et al. (1996), for example, find that individual level factors are better predictors of low- and high-context communication styles across cultures than levels of collectivism. Others have argued that this concept lacks conceptual clarity, leading researchers to operationalize it in broad and inconsistent ways (Bond, 2002; Earley & Gibson, 1998; Fiske, 2002; Oyserman, Coon, & Kemmelmeier, 2002; Triandis, 1994). This lack of conceptual clarity has led to both empirically and morally based criticism on the grounds that it does not provide consistent empirical results (Earley & Gibson, 1998; Oyserman et al., 2002; Takano & Sogon, 2008) and it vastly oversimplifies tendencies of entire nations (Voronov & Singer, 2002). As a response, scholars have argued that the inconsistent findings

regarding this concept can be resolved if the concept includes a distinction between interpersonal and categorical collectivism.

Interpersonal and Categorical Collectivism

Interpersonal collectivism refers to the trust and value that is placed in others based on direct or indirect interpersonal connection. By contrast, categorical collectivism refers to the trust and value that is placed in others based on shared categorical characteristics, such as being in the same ethnic group or attending the same school. Berwer and Gardner (1996) were among the first to draw a conceptual distinction between categorical and interpersonal collectivism by arguing that there are two main kinds of collectivism reflected in the 'social-self': the relational self and the collective self. Making a similar distinction between relational and categorical collectivism, Yuki (2003) argued that Hofstede's collectivist concept is misleading because it is based on a strongly Western view of the self. Yuki, Maddux, Brewer, and Takemura (2005) provided empirical evidence that interpersonal collectivism is stronger in Japan than in America, while categorical collectivism is stronger in American than in Japan. Their results show that focusing on the interpersonal dimension of collectivism helps to explain why Japan is more collectivist than America, and it helps to resolve inconsistent findings that occur when using Hofstede's more general concept of collectivism.

The Institutional Approach and Interpersonal Collectivism

Although work by Yuki and colleagues resolves inconsistent findings that occur when using Hofstede's model, it does not provide a strong theory as to why levels of interpersonal collectivism differ so greatly in these two countries. Yamagishi and colleagues' institutional approach addresses this issue by providing a detailed and tested explanation of why interpersonal collectivism differs in Japan and America by positing that interpersonal differences fundamentally stem from different social opportunities and constraints in social institutions (Yamagishi, Cook, & Watabe, 1998; Yamagishi, Hashimoto, & Schug, 2008). The thrust of their argument is that cooperation and conformity in Japan -- the basis of stable, strong and closed interpersonal relationships -- is a default strategy to avoid negative reputation, rather than preference that is rooted in deeply held cultural beliefs. They argue that this default strategy is nurtured in Japanese social institutions because these institutions employ mechanisms of *mutual monitoring* and *strong dependence* to provide assurance of conformity to institutional norms, negating need for general trust. They further argue that American institutions lack these same mechanisms of control, and therefore Americans must have higher levels of general trust in order to form new relationships when old relationships break due to a lack of conformity. Yamagishi and colleagues rarely give tangible examples of institutions that are particularly influential in Japan and America, and instead draw on an all-purpose of definition of institutions as, "self-sustaining system[s] of shared beliefs, behaviors, and incentives among individuals" (Yamagishi et al., 2008, p. 579).

To support this theory Yamagishi and colleagues have conducted a number of experiments which provide evidence that the mechanisms underlying the preference for interpersonal collectivism in Japan are the result differing default strategies rather than deeply held cultural beliefs (see Cook et al. 2005; Kiyonari, Yamagishi, Cook, & Cheshire, 2006; Yamagishi, 1988; Yamagishi et al., 1998; Yamagishi & Yamagishi, 1994). Although the institutional approach put forward by Yamagishi and colleagues has not been without criticism (see Yosano & Hayashi, 2005) it provides a framework for understanding the mechanisms of interpersonal collectivism in

Japan that has both internal consistency and reasonable amounts of empirical support. It is important to note, however, that this work mainly uses experiments to show the *mechanisms* of interpersonal collectivism; it does not use nationally representative data to show relationships are actually more stable and longer lasting in Japan than in America.

Work and Kin Institutions in Japan and America

Although Yamagishi and colleagues defined 'institution' in broad terms, they refer to work and kin institutions as being particularly salient to understanding why relationships are typically more enduring in Japan than in America (Yamagishi, Jin, & Miller, 1998; Yamagishi et al., 1998; Yamagishi & Yamagishi, 1994). Work by Hechter and Kanazawa (1993), and Miller and Kanazawa (2000), provides a rich empirical basis for saliency of work and kin institutions in Japan by focusing on the mechanisms of dependency and mutual monitoring in both of these institutions.

Regarding dependency in the workplace, Hechter and Kanazawa (1993) argue that although Japanese workers tend to be less satisfied with their jobs than American workers, they are less likely to change jobs because they lack the opportunity to find better paying jobs. By contrast, American workers are far more likely to change jobs and find positions of equal or higher status and pay. Concerning mechanisms of mutual monitoring in the workplace, they argue that Japanese workers are pressured to socialize with their coworkers after work, workers see each other in company subsidized housing, they are constantly monitored in the open-concept office designs that Japanese companies typically use, and they interact constantly in small groups to complete assigned tasks. By contrast, American workers are more prone to work on projects independently, work at home or away from the office, and work in solitude when in the workplace.

Kanazawa and colleagues have argued that Japanese kin institutions also promote mutual monitoring and frequent contact in several ways. In contrast to American households, thin walls found in most Japanese homes promote monitoring and ensures that the presence of other family members is known at all times, the greater presence of older adults living with their first born male further results in constant surveillance, as does the greater gendered division of labor that ensures women will be working in the home throughout the day. Also in contrast to America, the relatively low rates of divorce in Japan further promotes dependency since it decreases the pool of potential mates should divorce occur, and it carries with it a stigma that makes remarrying difficult. As with Yamagishi and colleagues, Kanazawa and colleagues focus on the *mechanisms* of interpersonal stability in Japan and America, but they do not use nationally representative data to directly show that relationships are actually more stable and longer lasting in Japan than in America.

Recent Social Change in Japan

Although there is evidence to support the claim that Japanese tend to be more heavily dependent on their jobs than Americans, much of this evidence was collected before the economic downturn that occurred in Japan during the 1990s. Since that time the downsizing of many Japanese companies has caused the practice of lifetime employment to wither. Moreover, there is evidence that Japanese people are now working in temporary part-time jobs much more than in the past (Ministry of Health, Labour and Welfare, 2007).

Due in part to the increased percentage of Japanese in temporary part-time jobs, the percent of adults living in their parents' homes has increased in recent years. Research conducted by the

Japan Statistical Association (2007) shows that the percent of Japanese between 20 and 34 years of age living in their parents' homes increased between 1980 and 1995, and then plateaued between 1995 and 2006. It also showed that those aged 35-44 who are living with their parents increased substantially since 1995, with recent research showing that 16 percent of this age group lived with their parents in 2006. The unemployment rate of this group is more than twice that of the general population.

There is also evidence that spousal relationships have become less stable and constricting in recent years. Although divorce is not as common in present day Japan as it is in America, the percent of couples divorcing has been increasing steadily since the 1970s (Ministry of Health Labour and Welfare, 2008a; Ministry of Health Labour and Welfare, 2008b). At the same time that divorce has been increasing, the percent of Japanese choosing to get married has decreased dramatically (Cabinet Office Director-General for Policies on Cohesive Society, 2004).

These rapid changes in work and kin institutions may have different and somewhat contradictory implications for relational stability in Japan. On the one hand, full time workers may be more dependent on their employers given the increasing difficulty of securing full time employment elsewhere. The increasing number of Japanese adults living with their parents may also be an indication that these individuals are more dependent on their families and more heavily monitored when at home. On the other hand, the increasing prevalence of part time workers means that an increasing proportion of Japanese workers are no longer heavily dependent in their employers. Moreover, the increasing proportion of Japanese who are single implies that at least in regards to spousal relations, kin networks are more fluid than they were ten years ago.

Personal Networks, Core Networks, and Institutions

Personal networks are all those individuals with whom an individual communicates (Wellman, 1988; Wellman, 2007). Given the focus on direct links between individuals, particularly as they are enacted through the communication process, network analysis has been an extremely fruitful approach for communication scholars (Barnett & Richards, 1993; Monge & Contractor, 2003). It has allowed communication scholars to address critical topics such as social influence (Rice, 1993; Weimann 1983), the diffusion of innovation (Valente, 1996), and even the network structure of communication scholars (Barnett & Danowski, 1992; Doerfel & Barnett, 1999).

The personal network module first introduced in the 1985 GSS and repeated again in the 2004 GSS has provided social scientists with nationally representative data regarding the basic features of core discussion networks in America. Data collected using the personal network module has played a central role in the debate over whether Americans have become increasingly isolated in recent decades (Fischer, 2009; Hampton, Sessions, Ja Her, & Rainie, 2009; McPherson, Smith-Lovin, & Brashears, 2006) and it has also been used to describe the types of core networks maintained by Americans (Marsden, 1987). Although there has been criticism of the module concerning the finding that isolation has increased in recent decades (Fischer, 2009; Hampton, Sessions, Ja Her, 2011), the nationally representative network data collected using this module remains the most appropriate and available sources of data for this analysis. As will be discussed in greater detail below, the JGSS and GSS questions focus on core ties that are at the center of an individual's personal network. As such, they represent an important, but small part of an individual's social world.

It may be argued that the type of institutional influence discussed by Yamagishi, Kanazawa and colleagues does not occur in core networks, since individuals may be intrinsically motivated

to maintain frequent and long lasting contact with core networks. However, even core relationships incur periods of struggle and discontent during which times core ties may be broken if not for institutional dependency. Moreover, if it is true that kin and work institutions involve more monitoring in Japan than in America, there is further reason to believe that most core ties will exist in these institutions simply because there is little opportunity to form close relationships elsewhere. Given these considerations, it is reasonable to apply the arguments advanced by Yamagishi, Kanazawa and colleagues directly to core networks.

Research Questions

Before posing our research questions we would like to make clear that the purpose of our analysis is to compare indicators of interpersonal collectivism in Japan and America, not categorical collectivism. Although we do not examine both dimensions of collectivism, the literature discussed above indicates that interpersonal collectivism is a highly salient dimension of collectivism in Japan. We would also like to make clear that the main goal of this paper is not to examine the causal relationship between institutions and personal network composition. Research by Yamagishi and colleagues has shown strong support for causal link between institutional structure and personal network composition given certain initial conditions. Although the primarily experimental nature of this research has allowed Yamagishi and colleagues to demonstrate a high level of internal validity, the external validity of this research – i.e. the extent to which results can be applied to larger populations – is questionable. In order to generalize the results of these experiments to entire nations it must be shown that certain assumptions that guided the design of these experiments are valid. Specifically, it must be shown using nationally representative data that work and family institutions do in fact dominate the composition of personal networks more in Japan than in America, personal network members are known for longer periods of time in Japan than in America, and personal networks members are contacted more frequently in Japan than in America. The main goal of this paper is to examine the external validity of these assumptions.

Institutional Dominance in Core Networks

As discussed above, Kanazawa and colleagues argue that kin and work institutions dominate adult social life in Japan. Monitoring and dependency are thought to discourage the formation of relationships with individuals outside of these institutions more so in Japan than in America, making them the primary source of core relationships in Japan. On the other hand, recently collected statistics discussed above suggest that work and kin institutions are not as strong as they once were in Japan, and therefore kin ties may not be more prominent in Japanese core networks than in American core networks. Accordingly, our first research question is:

1.0. Do kin and work core ties dominate core networks more in Japan than in America?

Core Tie Duration

Regarding core tie duration, Yamagishi and colleagues have assumed that relational duration will generally be greater in Japan than in America. To examine the validity of this assumption, our second research question is:

2.0. Are core ties known for longer periods of time in Japan than in America?

Going beyond a basic comparison of tie characteristics, we can further infer from Hechter and Kanazawa's argument that work and kin ties will be more strongly associated with relational

duration in Japan than in America. As discussed above, greater relational duration may be the result of higher dependency on these institutions because it deters people from breaking with institutionally bounded relationships during times of conflict. However, again, if recent statistics suggest a lower significance of kin and work institutions in present day Japan, core tie kin and work ties may not be more strongly associated with relational duration and frequency of interaction in Japan than in America. Given these opposing arguments, we pose the following sub-question:

2.1. Are core work and kin ties are longer lasting in Japan than in America?

Although evidence provided by Kanazawa and colleagues suggests that kin and work institutions act to enhance relational duration in Japan more than in America, there is little reason to assume that relationships maintained outside of these institutions are subject to similar pressures. Accordingly, we ask:

2.2. Are core friend only ties known for similar periods of time in Japan and America?

Frequency of Core Tie Contact

Yamagishi, Kanazawa and colleagues emphasize the importance of mutual monitoring in Japan, arguing that such monitoring is less common in American institutions. Although the JGSS and GSS data sets do not measure visual or auditory monitoring directly, they do contain tie level information about frequency of communication. Since monitoring in personal networks involves some form of contact, however briefly, we can infer that a lack of frequent contact implies a lack of mutual monitoring. We use the JGSS and GSS frequency of contact measures as proxy measures indicating a *lack* of mutual monitoring. Accordingly, our third question is:

3.0. Are core ties contacted more frequently in Japan than in America?

Focusing on this question such that it more explicitly takes into account the influence of kin and work institutions, and the lack of influence from friend only ties, we further ask:

3.1. Are core work and kin ties more frequently contacted in Japan than in America?

3.2. Are friend only core ties contacted just as frequently in Japan as in America?

Method

Survey Design

For our analysis we use data from the JGSS and GSS network batteries. The JGSS network battery was administered in the fall of 2003 and the GSS network battery was administered in the spring of 2004. The JGSS survey used a multistage probability sample and had a response rate of 51.5 percent. 3,663 respondents completed the main section of the survey, while two separate modules – sections A and B – were divided evenly among the respondents. We use section B, which has 1,706 respondents and includes questions measuring core networks. The American GSS used a multistage probability sample and had a response rate of 70.4 percent. 2,812 adults age 18 or older completed the main questionnaire, 1,467 of which completed the core network module.

Comparing Core Network Name Generator Measures

Core network data collected by the America GSS is based on a name generator question that asks respondents to list the names of those with whom they discuss important matters. The exact wording of the question is as follows: “From time to time, most people discuss important matters with other people. Looking back over the last six months who are the people with whom you

discussed matters important to you?" Approximately 4.8 percent of the respondents listed more than five names. After soliciting these names respondents are then asked a series of questions about each of these names, such as how long they have known each other and how frequently they communicate.

Evidence collected in America suggests that differences in the meaning of "important matters" may not greatly affect the properties of network using this data insofar as this stimulus tends to elicit frequently contacted strong relationships that are at the core of an individual's network (Bailey & Marsden 1999; Bearman & Parigi, 2004; Marin, 2004; Straits, 2000). Accordingly, discussion networks elicited using this measure are often referred to as "core" networks in the literature. Developers of the JGSS core networks module wanted to ensure that the key question soliciting core tie names captured the original meaning of the American version as closely as possible. The core networks battery was first administered to a national sample in Japan during the 1993 CNEP election survey using wording that was directly translated from English to Japanese. The data from this survey showed lower numbers of core ties than found in the American GSS data. Follow-up research conducted by the designers of this questionnaire aimed as explaining this difference indicated that Japanese respondents did not report the names of alters with whom they discuss matters of personal importance, since naming these alters was thought to give the immodest impression that they themselves were people of importance. Given that the research reported above showed Americans often include both matters that are of importance to larger groups as well as matters of personal importance, the JGSS name generator question was modified to include those with whom respondents "confide" as a means of capturing ties of with whom they discuss matters of personal importance, i.e. "I'm going to ask you about the people you often talk to. First, please think of the people with whom you discuss matters important to you or those in whom you confide." Although this modification alters the wording of the American GSS question, it better captures its original meaning and thereby improves the comparability of the two questions.

Comparing Other Core Network Measures

JGSS questions measuring duration of core ties is worded in the same way as the original GSS questions. Unlike the "discussion important matters" question, the straightforward nature of these questions ensures that translation does not affect their meaning. However, questions regarding frequency of contact between each alter and the respondent differed significantly in the JGSS and GSS. The GSS question asks respondents to estimate how often they "talk to" each alter, without any mention of conversation that might occur by telephone or email. By contrast, the JGSS frequency of contact question asked respondents to estimate how often they "talk with [tie name] (including phone calls and e-mail)". By explicitly including phone calls and email, it is possible that the JGSS will elicit higher levels of interaction than the GSS question. Previous research has shown that email is more likely to add-on to telephone and in-person contact rather than substitute for it completely (Wellman, Quan Haase, Witte, & Hampton, 2001), and this inclusion of mediated communication in the JGSS question may elicit more frequent contact overall since people sometimes email or call between in-person visits. Given the difference between the wording of the JGSS and GSS frequency of contact questions, we compare these two questions with the understanding the GSS data yields more conservative estimates of interaction frequency than the JGSS data. After presenting the results of our analysis we will discuss the implications of this issue in greater detail.

The JGSS and GSS questionnaires also differed concerning their categorization of different types of kin and work roles. Because the exact role of a kin or work tie is not relevant to our research questions, we combined kin roles and work roles to make two separate kin tie and work tie variables. In the somewhat uncommon case where a tie is identified as being both a kin member and someone known from work, the tie is counted only as a kin and not a work tie because kin institutions are typically less voluntary than work institutions. We further created a "friend only" role for ties that were exclusively identified as friends because we wanted to completely separate institutional ties from non-institutional ties in our analysis.

Data Preparation

To address research questions that focus on network level attributes (e.g. the number of ties known from work) we use one case per respondent, giving a total of 1,706 JGSS cases and 2,812 AGSS cases. To address research questions that focus on dyadic tie level attributes -- i.e. duration of relationship, frequency of contact, and social role -- one case was created for each alter in a respondent's core network. This increased the total number of cases to 6,824 for the JGSS data, and 5,686 for the GSS data. Sampling weights constructed for the JGSS and GSS data sets were applied to all descriptive and robust multivariate analyses to increase the representativeness of the results.[2] All data preparation and analysis was conducted using STATA statistical analysis software.

Analysis and Results

Institutional Dominance in Core Networks

The first research question asks about the presence of kin and work institutions in Japanese and American core networks. To address this question we draw on descriptive results regarding the number of ties in each social role (see Table 1). These results show that kin ties are more prevalent in core tie networks in Japan than in America, while work ties are equally prevalent in core tie networks in Japan and America. Japanese core networks have a mean of 1.41 core ties, while American core networks have a mean of 1.07 core ties. Approximately 38 percent of GSS respondents report that none of their core ties are kin, while only 25 percent of JGSS respondents report that none of their core ties are kin. Thus, Japanese respondents are more likely to report having at least one core tie that is a kin member than American respondents. Regarding work ties, core networks have almost exactly the same mean number of work ties in Japan and American (0.25 and 0.27 ties respectively). As shown in Table 1, the percent distribution of work ties in American and Japanese core tie networks is nearly equal, differing only by a maximum of 1 percent.

We also look at the prevalence of friend only core ties in Japan and America, since these ties have no institutional connection. Our results show that Japanese respondents have larger number of friend only ties than American respondents. Japanese respondents report a mean of 0.63 friends only ties, while American respondents report a mean of 0.37 friend only ties. 37 percent of Japanese respondents report having at least one friend only tie, while 26 percent of American respondents report having at least one friend only tie.

To summarize, we find that Japanese core networks typically have higher numbers of kin and friend only ties, and similar numbers of work ties.

Table 1

Comparison of Core Network Size in Japan and America

	Total Size		Kin Ties		Work Ties		Friend Only Ties		Other Ties	
Number of Ties	Japan	America	Japan	America	Japan	America	Japan	America	Japan	America
0	8%	22%	25%	38%	83%	82%	63%	73%	90%	85%
1	19%	20%	32%	31%	11%	11%	20%	18%	7%	10%
2	23%	20%	25%	17%	4%	5%	11%	7%	2%	3%
3	20%	17%	12%	9%	1%	2%	4%	2%	1%	1%
4	12%	9%	6%	4%	1%	0%	2%	0%	1%	0%
5 +	18%	12%								
Mean	2.64	2.06	1.41	1.10	0.25	0.27	0.63	0.38	0.16	0.22
SD	1.55	1.64	1.16	1.14	0.63	0.65	0.98	0.72	0.53	0.61
Mode	2	0	2	0	0	0	0	0	0	0
N	1,706	1,426								

Core Tie Duration

Our second set of questions asks about the relational duration of core ties in Japan and America. We start by presenting tie level descriptive results regarding the relational duration of all ties in the JGSS and GSS data sets (see Table 2). These descriptive results show that Japanese core ties tend to be known for somewhat longer periods of time than American core ties. When relational duration is calculated over all core ties, Japanese core tie relational duration is a mean of 24 years while American core ties relational duration is a mean of approximately 22 years. This higher mean can be largely attributed to the relatively high percentage of Japanese ties known for more than 30 years and the relatively high percentage of American ties known for five years or less. Approximately 36 percent of the Japanese ties were known for a mean of more than 30 years, while only 30 percent of American ties were known for a mean of more than 30 years. By contrast, approximately 10 percent of American ties are known for five years or less, while about 13 percent of Japanese ties are known for five years or less.

Although descriptive statistics show that Japanese respondents typically know their alters longer than American respondents, differences in population composition may be contributing to these results. For example, given that the Japanese respondents tend to be older than the American respondents by a mean of 5.6 years, and people have more time to maintain relationships as they grow old, it is possible that the longer duration of core alters in Japan is explained by its older population. See Table 3 for a comparison of demographic characteristics in the GSS and JGSS data sets. To account for the possible contribution of demographic characteristics to our finding that relationships are more enduring in Japan than in America, we use robust OLS regression to control for the influence of age, city size, and years of education (results presented in Table 4).[3] Although this data is nested – it contains both respondent and alter data – we use robust regression instead of multilevel analysis because we do not wish to introduce additional errors by adding another level to the model, there is no compelling theoretical reason to include both levels, and interpretation of such models is generally difficult.

As recommended by Franzese (2005) and Rogers (1993) we use robust regression to deal with the influence of the repeated respondent level data that exists when a respondent has more than one alter.

Table 2

Comparison of Relational Duration and Frequency of Contact in Japan and America

	All Ties		Kin Ties		Work Ties		Friend Only Ties		Other Ties	
	Japan	America	Japan	America	Japan	America	Japan	America	Japan	America
Duration of Relationship (years)										
Mean	26	22	33	30	13	9	16	15	19	12
SD	17	17	15	15	11	9	12	14	16	12
0-5 years	13%	20%	4%	6%	32%	50%	20%	30%	26%	41%
6-30 years	51%	50%	41%	48%	60%	46%	69%	57%	54%	51%
30+ years	36%	30%	55%	47%	8%	3%	10%	12%	20%	8%
N	3,893	2,664	2,317	1,481	344	301	940	546	278	335
Frequency of Contact (days per year)										
Mean	191	228	219	251	211	248	126	191	158	158
SD	114	105	114	95	103	94	93	112	95	106
Almost every day	41%	57%	56%	68%	46%	66%	12%	41%	20%	25%
At least once a week	37%	30%	26%	24%	41%	27%	53%	39%	58%	48%
At least once a month	16%	10%	13%	7%	10%	7%	25%	17%	15%	21%
Less often	6%	2%	5%	1%	3%	71%	10%	4%	6%	6%
N	4,006	2,797	2,424	1,486	343	302	943	546	279	335

Table 3

Demographic Characteristics of Respondents

	Japan	America
Age		
Mean	49.36	44.77
SD	17.26	16.20
Education, Years		
Mean	13.97	13.80
SD	3.42	2.83
Female	53%	55%
Working	64%	68%
City Size		
(0 = town; 1 = small city; 2 = large city)		
Mean	2.00	1.27
SD	0.64	0.77

This regression analysis includes both the JGSS and GSS data sets, and a flag variable is used to identify if each respondent is in either the JGSS or GSS data set. The flag variable is treated as a main independent variable, and duration of relationship is treated as the dependent variable. The purpose here is not to make causal inference, but to see if there is a significant difference between these two data sets on a key dependent variable while controlling for the influence of demographic factors on this same dependent variable. If the association between the JGSS flag variable and the dependent variable is significant even when controlling for demographic factors, this shows that a significant difference between the JGSS and GSS data sets cannot be attributed simply to certain demographic differences in the data sets.

We first run a model with only JGSS flag variable to establish that there is a statistically significant positive association between being a JGSS respondent (as opposed to the GSS respondent) and relational duration. The results of this regression confirm the existence of a statistically significant relationship between these two variables ($p < 0.01$), indicating that Japanese respondents have significantly longer relationships than American respondents. We then run the same model again, but this time including independent variables for age, city size[3] and years of education. Results of this second regression show that even when taking into account the influence of these factors on relational duration, the positive association between being a JGSS respondent and relational duration remains statistically significant.

In sum, these descriptive and multivariate analyses show that core relationships are maintained for somewhat longer periods of time in Japan than in America.

In question 2.1 we ask whether kin and work ties are longer lasting in Japan than in America. To address this question we start by reporting descriptive results regarding the mean duration of work and kin ties in America and Japan (see Table 2). These results show slightly longer relationships with kin and work ties in Japan than in America. Japanese core kin ties are known for a mean of 33 years, while American core kin ties are known for a mean of 30 years.

Japanese core work ties are known for a mean of 13 years, while American core work ties are known for a mean of 9 years.

To account for demographic factors influencing relational duration in the JGSS and GSS data sets, we use regression models that compare kin and work relational duration between countries while controlling for demographic differences (Table 4). These regression models show that although both kin and work ties are known for significantly longer periods of time in Japan than in America ($p < 0.01$) without controlling for demographic variables, only work ties are known for significantly longer periods of time in Japan than in America ($p < 0.01$) when controlling for these factors.

Research question 2.2 asks about the duration of friend only ties in Japan and America. Descriptive statistics show no major difference in relational duration in Japan and America (see Table 2). Friend only ties are known for a mean of 16 years in Japan, and 15 years in America. Nevertheless, controlling for the influence of demographic factors using robust OLS regression indicates that the similar duration of friend only ties in Japan and America is the result of differing demographic composition in these two populations. This multivariate analysis shows that when demographic factors are not included in the model, there is no statistically significant difference ($p < 0.01$) in relational duration of friend only ties between the JGSS and GSS data sets. However, when demographic factors are included in the model, friend only ties are known for significantly longer periods of time ($p < 0.01$).

To address research questions 2.1 and 2.2, we also compare strength of associations regarding social role and relational duration in Japan and America. To do this we use robust OLS regression models in which social roles are independent variables and relational duration is the dependent variable (see Table 6). Given that we are most interested in comparing informal friend only ties with more formal kin and work ties, we use social role dummy variables with friend only ties as the reference category. We include one dummy variable for ties other than kin, work or friend only, since the logic of using dummy variables requires exhausting all possible categories. Because we are comparing the associations of these variables between Japan and America, we run these models separately for the JGSS and GSS data sets.

Controlling for demographic factors, our multivariate analyses generally show similar associations between social role and relational duration in Japan and America. In both Japan and America, kin ties are known for significantly longer periods of time than friend only ties ($p < 0.01$), while work and other ties are known for significantly shorter periods of time ($p < 0.01$) than friend only ties. Although the strength of association between kin ties and duration of relationship is slightly stronger in America than in Japan (unstandardized coefficients are 11.45 and 13.96, respectively), the direction and statistical significance of the associations between social role dummy variables and duration of relationships are the same for both the JGSS and GSS data.

In sum, results from the second set of questions indicate that work and friend only ties are known for longer periods of time in Japan than in America. There is no evidence that kin ties are known for longer periods of time in Japan than in America. Moreover, associations between relational role and duration of relationship are similar in strength for Japanese and American respondents.

Frequency of Core Tie Contact

Our third set of questions asks about the frequency of contact with core ties in Japan and America. We first use descriptive statistics to compare the frequency of contact measures and

remind the reader that the JGSS measure includes telephone and email communication while the GSS measure does not include these media explicitly (see Table 2). Descriptive results generally show that American core ties are contacted more frequently than Japanese core ties. The mean number of days per year that core ties are contacted in America is 228, while in Japan it is 191. Approximately 57 percent of American core ties are contacted almost every day, while 41% of Japanese core ties are contacted as frequently. Considering that the JGSS measures were more prone to elicit more frequent contact than the GSS measures by explicitly including telephone and email communication, the finding that American core ties are typically contacted more than Japanese core ties is particularly strong.

As with duration of relationship, we also run a robust regression analysis on frequency of interaction to see if duration of relationships differs significantly between the JGSS and GSS data sets when controlling for the influence of different demographic characteristics (results presented in Table 5). As recommended by Long (1999), we use robust ordered logistic regression rather than robust OLS regression because the dependent variable consists of only four categories that are not equidistant.[4] Results from this analysis show that GSS respondents have higher levels of contact than JGSS respondents ($p < 0.01$), and this remains true when including demographic characteristics ($p < 0.01$).

In sum, these results show that frequency of contact is higher in America than in Japan. This finding is particularly strong considering that the American GSS measures did not explicitly include mediated contact while the JGSS measures did include such contact.

Research question 3.1 asks whether kin and work relationships are more frequently contacted in Japan than in America. Descriptive statistics (Table 2) show that kin and work ties are contacted more in America than in Japan; JGSS kin ties are contacted a mean of 219 days per year, while GSS kin ties are contacted a mean of 251 days per year. Moreover, about 56 percent of JGSS kin ties are contacted almost every day, while 68 percent of GSS kin ties are contacted almost every day. Regarding work ties, JGSS work ties are contacted a mean of 211 days per year, while GSS work ties are contacted a mean of 248 days per year. About 20 percent more GSS work ties than JGSS work ties are contacted at least daily (66 percent and 46 percent, respectively). Using ordered logit regression to control for differing demographic traits in the JGSS and GSS data sets (Table 5), we also find that kin and work ties are more frequently contacted in America than in Japan. There are negative and statistically significant ($p < 0.01$) associations between JGSS kin and work ties, and frequency of contact. These associations remain significant when controlling for age, city size and years of education.

Research question 3.2 asks whether friend only relationships are more frequently contacted in Japan than in America. Descriptive results (Table 2) show that friend only ties are contacted more frequently in America than in Japan. JGSS friend only ties are contacted a mean of 126 days per year, while GSS friend only ties are contacted a mean of 191 days per year. Approximately 41 percent of GSS friend only ties are contacted almost daily, but only 12 percent of friend only ties are contacted almost daily. When robust ordered logit regression is used to control the influence of demographic factors (Table 5), there is a negative association between JGSS friend only ties and frequency of contact.

Using robust ordered logistic regression to examine the relationship between frequency of contact and social role while controlling for sample composition (Table 6) we generally find similar directions and statistical significance of association between social role and frequency of contact in Japan and America. Compared to friend only ties, both JGSS and GSS kin and work ties are positively associated with frequency of contact ($p < 0.01$). In other words, both kin and

Table 4

Robust OLS Regression Predicting to Relational Duration

	All Ties				Kin Ties				Work Ties				Friend Only Ties				Other Ties			
	Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t
JGSS (ref = GSS)	3.49	5.51 **	2.71	5.70 **	3.40	4.93 **	0.87	1.91	3.85	3.74 **	4.92	4.87 **	1.59	1.68	3.24	4.05 **	7.37	4.43 **	5.03	3.43 **
Age			1.14	6.04 **			1.10	6.01 **			-0.44	-0.66			0.40	1.15			0.52	0.68
Age, Square Root			-7.09	-2.87 **			-6.99	-2.90 **			12.42	1.48			0.82	0.19			0.17	0.02
City Size			0.53	1.27			-0.28	-0.70			1.53	1.66			0.80	1.21			0.40	0.23
Education, Years			-0.11	-0.99			0.01	0.10			0.04	0.17			-0.11	-0.57			-0.32	-0.80
Constant	22.38	45.84 **	18.15	2.45 *	29.95	55.29 **	26.82	3.68 **	8.99	13.30 **	-56.75	-2.11 **	14.86	19.06 **	-7.72	-0.58	11.95	12.78 **	-10.42	-0.36
Adjusted R-squared	0.00		0.41		0.00		0.43		0.00		0.37		0.00		0.37		0.00		0.35	
N	6,557		6,534		3,798		3,780		645		643		1,486		1,484		613		612	

* p < 0.5, ** p < 0.01

Table 5

Robust Ordered Logit Regression Predicting to Frequency of Contact

	All Ties				Kin Ties				Work Ties				Friend Only Ties				Other Ties			
	Coef.	z	Coef.	z	Coef.	z	Coef.	z	Coef.	z	Coef.	z	Coef.	z	Coef.	z	Coef.	z	Coef.	z
JGSS (ref = GSS)	-0.65	-10.75 **	-0.59	-9.47 **	-0.552	-7.12 **	-0.46	-5.82 **	-0.90	-4.38 **	-1.01	-3.74 **	-1.373	-8.11 **	-1.39	-8.04 **	0.01	0.03	-0.01	-0.02
Age			0.04	1.66			0.08	2.27 *			0.08	0.48			0.16	2.84 **			0.35	2.66 **
Age, Square Root			-0.70	-2.01 **			-1.33	-2.62 **			-1.80	-0.79			-2.27	-3.19 **			-5.71	-3.07 **
City Size			0.20	3.81 **			0.28	3.95 **			0.10	0.47			0.12	0.95			-0.03	-0.17
Education, Years			-0.03	-2.21 *			-0.01	-0.60			-0.03	-0.60			0.00	0.06			-0.23	-4.36 **
Pseudo R-squared	0.00		0.01		0.00		0.01		0.00		0.05		0.00		0.01		0.00		0.12	
N	6,676		6,651		3,910		3,890		695		693		1,489		1,487		614		613	

* p < 0.5, ** p < 0.01

Table 6

Regression Models Predicting to Duration of Relationship and Frequency of Contact

	Duration of Relationship Robust OLS Regression						Frequency of Contact Robust Ordered Logistic Regression					
	Japan			America			Japan			America		
	Coef.	t		Coef.	t		Coef.	z		Coef.	z	
Social Role/Focus (ref = Friend Only Tie)												
Kin Tie	11.45	22.76	**	13.81	18.96	**	1.72	20.04	**	1.21	9.95	**
Work Tie	-5.05	-7.31	**	-6.03	-6.87	**	1.57	11.28	**	1.15	5.74	**
Other Tie	-4.02	-3.36	**	-5.42	-4.70	**	0.68	5.53	**	-0.39	-2.53	*
City Size	0.18	0.55		-0.00	-0.01		0.21	3.75	**	-0.02	-0.25	
Age	0.94	6.26	**	0.75	4.12	**	0.10	3.82	**	-0.00	-0.09	
Age, Square Root	-5.18	-2.70	**	-3.43	-1.46		-1.58	-4.52	**	-0.24	-0.57	
Male	1.04	2.41	*	-0.83	-1.44		-0.24	-3.14	**	-0.24	-2.34	*
Education, Years	-0.09	-1.03		-0.08	-0.76		-0.02	-1.23		-0.08	-4.29	**
Constant	11.96	2.11	*	6.50	0.87							
Adjusted R-squared & Pseudo R-squared	0.56			0.50			0.07			0.07		
N	3,872			2,662			3,985			2,666		

* p < 0.5, ** p < 0.01

work ties are contacted more frequently than friend only ties in Japan and America. Comparing the unstandardized coefficients shows that the strength of these associations is similar in both the JGSS and GSS data sets (1.72 and 1.21, respectively, for kin ties, and 1.57 and 1.15, respectively, for work ties).[5]

In sum, results pertaining to our third set of research questions show no support for the argument that kin and work institutions use higher levels of monitoring in Japan than in America. To the contrary, even though the JGSS measure includes all forms of mediated and unmediated contact while the GSS measure did not explicitly include mediated contact, these results show that there is more frequent communication with kin, work, and friend only ties in America than in Japan. These results further show that in both Japan and America there is more frequent contact with kin and work ties than with friend only ties.

Discussion

Institutional Dominance in Core Tie Networks and Core Tie Duration

This paper provides minor support for the assumption by Yamagishi and colleagues that core relationships are longer lasting in Japan than in America. We find that Japanese core network ties are known for a mean of approximately two years longer than American core network ties, and that this difference is statistically significant when controlling for demographic differences between the Japanese and American samples.

Nevertheless, we found little evidence to support Hechter and Kanazawa's argument that Japanese people are more likely to maintain enduring kin ties than Americans. Moreover, our results show that core friend ties that exist outside of formal institutions are more enduring in Japan than in America. This finding does not support the argument put forth by Kanazawa and colleagues that the demanding nature of institutions in Japan makes it difficult to maintain enduring friend only relationships.

In regards to the presence of kin and work ties in core networks, our findings provide only minor support for Hector and Kanazawa's argument. On the one hand, we find that kin ties are somewhat more prevalent in Japanese core networks than in American core networks. On the other hand, this finding might be a result of the recent trend for young single adults to live at home with their parents rather than marry and obtain full-time work. Moreover, we do not find support for Hector and Kanazawa's argument that work ties dominate networks in Japan more than in America – core work ties are equally prevalent in both countries. This finding is particularly interesting when considering that full-time workers may value their work ties more in light of the increasing prevalence of part-time work.

The finding that friend only relationships are in greater abundance and longer lasting in Japan and America also raises new questions for the institutional theory proposed by Yamagishi and colleagues. It is possible that friend only ties are more abundant in Japan than America because Japanese school institutions create strong ties that continue to exist into adulthood. However, this explanation would be inconsistent with Yamagishi and colleagues argument that mechanisms of dependency and monitoring in institutional settings are responsible for maintenance of ties, not internalized feelings of connection.

It may be argued that the definition of 'institution' provided by Yamagishi, Hashimoto, and Schug (2008) is general enough in nature that it can be applied to relationships that occur both in formal institutions and those that occur in informal friendship groups. However, they would need to explain in greater detail how and why such dependencies and monitoring might occur more in informal friendship relationships in Japan than in America. Alternatively, given the rapid social change occurring in Japan, it is possible that their theory no longer applies.

Frequency of Core Tie Contact

Our finding that there is more frequent communication with core ties in America than in Japan does not support the assertion that there is more mutual monitoring in Japan than in America. This finding is particularly interesting considering that the JGSS question used to measure frequency of interaction in Japan included both mediated and unmediated communication, while the American GSS question did not explicitly include mediated communication. We can think of three possible explanations.

First, because frequency of interaction does not measure visual monitoring directly, it is possible that Americans have more frequent communication while Japanese have more visual or auditory monitoring. However, it is difficult to imagine that monitoring would not include some minimal amount of contact -- it is unlikely that Japanese people would be in visual proximity of their core ties for days at a time without communicating in any way.

Second, it is possible that the frequent use of mobile phone texting in Japan allows for the impression of mutual monitoring without shared geographical space or even communication. However, it is still difficult to believe that kin and work ties would not send at least one or two mobile phone text messages a day if their goal was to sustain some impression of monitoring.

Third, it may be that the kinds of institutionally based assurance relationships discussed by Yamagishi and colleagues do not require communication because norms of commitment are internalized. Although explaining these results through appeal to the existence of internalized norms of commitment and assurance among Japanese respondents is contrary to arguments made by Yamagishi and colleagues, this argument does have the potential to explain our other findings that friend only core relationships are more enduring and in greater abundance in Japan than in America.

Conclusion

Although we find minor support for the common assumption that interpersonal networks are generally more enduring in Japan than in America, we do not find clear support for the assumption that this is the result of the greater dominance of kin and work ties in Japanese networks. Moreover, we find no support for the assumption that kin and work institutions involve more frequent contact in Japan than in America. These findings are important because these assumptions are often taken for granted in theories that attempt to explain why interpersonal collectivism is higher in Japan than in America.

There are at least two possible reasons for the inconsistency between these findings and the theories of interpersonal collectivism discussed in this paper. First, recent evidence shows that kin and work institutions have been changing over the past 30 years, with the largest changes occurring during the past 15 years. It is possible that these changes have decreased dependence and monitoring in kin and work institutions substantially, to the point where their influence on relationships in Japan is similar to their influence in America. Although the validity of this hypothesis cannot be adequately addressed without longitudinal research specifically designed to examine the changing influence of these institutions on relationships in Japan, it is likely that rapid social change in Japan explains our findings to some extent.

Second, we speculate that different parenting styles in Japan and America may also help to explain our findings. It has been shown that Japanese parents tend to socialize their children so that their interpersonal relationships are more harmonious than their American counterparts (Rothbaum, Pott, Azuma, Miyake, & Weisz, 2000). This would help to explain why kin, work, and friend only ties were longer lasting in Japan and in America despite lower levels of contact. People would maintain relationships of all kinds for long periods of time, even though they might avoid frequent interaction. Such an internalized norm would also fit within the definition of institutions given by Yamagishi and

colleagues, insofar as they argue that institutions involve self-sustaining shared beliefs. Further research aimed at drawing nationally representative comparisons between both Japan and American in regard to these theorized internalized norms, interpersonal relationships, and institutions, might help to explain our intriguing results.

Finally, we would like to draw attention to the possibility that these results have implications that extend beyond Japan and America. Given the heavy use of the collective concept by communication researchers, greater attention to the dimension of interpersonal collectivism and the possible influence of work and kin institutions in other countries may provide for a more rich and nuanced understanding of cross-cultural differences. Such research would further help communication scholars understand the extent to which national differences in communication practices can be attributed to institutional structure as opposed to internalized norms.

[1] In this paper we limit our arguments regarding 'America' and 'Americans' exclusively to those living in the continental United States of America. We do this because our data is limited to this area, there may be substantial differences between those in the continental USA and those living in outlying states and territories.

[2] Both the GSS and JGSS used a two-stage sub-sample design whereby cases in which no response is given in the initial stage are subsampled. Weights are used to ensure that respondents from this subsample represent those who did not respond.

[3] We also control for the square root of age, since the relationship between relational duration decreases near the end of the life course. City size is a three-category variable consisting of small, medium and large cities. These cities are determined to be within one of the three categories based on a similarly coded variable in the JGSS and GSS data sets.

[4] Original categories for the frequency of contact variable are 3 = "almost every day", 2 = "at least once a week", 1 = "at least once a month" and 0 = "less often".

[5] We do not compare standardized z coefficients because they do not allow for accurate comparisons across models.

References

Arasaratnam, L., & Doerfel, M. L. (2005). Intercultural communication competence: Identifying key components from multicultural perspectives. *International Journal of Intercultural Relations,* 29, 137-163.

Bailey, S., & Marsden, P. V. (1999). Interpretation and interview context: Examining the general social survey name generator using cognitive methods. *Social Networks*, 21, 287-309.

Barnett, G., & Danowski, J. (1992). The structure of communication: A network analysis of the International communication association. *Human Communication Research*, 19, 264-285.

Barnett, G., & Lee, M. (2002). Issues in intercultural communication research. In W. Gudykunst & B. Mody (Eds.), *Handbook of international and intercultural communication* (pp. 275-290). Thousand Oaks, CA: Sage.

Barnett, G., & Richards, W., Jr. (1993). *Advances in communication network analysis.* Norwood, NJ: Ablex.

Barnett, G., & Sung, E. (2006). Culture and the structure of the international hyperlink network. *Journal of Computer-Mediated Communication,* 11, 217–238.

Bearman, P., & Parigi, P. (2004). Cloning headless frogs and other important matters: Conversation topics and network structure. *Social Forces*, 83, 535-557.

Boase, J., Horrigan, J. B., Wellman, B., & Rainie, L. (2006). *The strength of Internet ties*. Washington, D.C.: Pew Internet & American Life Project. Retrieved from www.pewinternet.org.

Bond, M. H. (2002). Reclaiming the individual from Hofstede's ecological analysis - A 20 year odyssey: Comment on Oyserman et al. (2002). *Psychological Bulletin*, 128, 73-77.

Brewer, M., & Gardner, W. (1996). Who is this "we": Levels of collective identity and self representations. *Journal of Personality & Social Psychology*, 71, 83-93.

Cabinet Office Director-General for Policies on Cohesive Society. (2004). *Syousika syakai hakusyo* [Translated from Japanese: *Small number of children society*, White Paper]. Tokyo, Japan: Cabinet Office Director-General for Policies on Cohesive Society. Retrieved July 7, 2008, from http://www8.cao.go.jp/shoushi/whitepaper/w-2004/html-h/html/g1211010.html.

Cook, K. S., Yamagishi, T., Cheshire, C., Cooper, R., Matsuda, M., & Mashima, R. (2005). Trust building via risk taking: A cross-societal experiment. *Social Psychology Quarterly*, 68, 121-42.

Doerfel, M. L., & Barnett, G.A. (1999). A semantic network analysis of the international communication association. *Human Communication Research,* 25, 589-603.

Earley, P. C., & Gibson, C. B. (1998). Taking stock in our progress on individualism-collectivism: 100 years of solidarity and community. *Journal of Management*, 24, 265-304.

Fischer, C. (2009). The 2004 GSS finding of shrunken social networks: An artifact? *American Sociological Review,* 74, 657-669.

Fiske, A. P. (2002). Using individualism and collectivism to compare cultures - A critique of the validity and measurement of the constructs: Comment on Oyserman et al. (2002). *Psychological Bulletin*, 128, 78-88.

Franzese, R. J., Jr. (2005). Empirical strategies for various manifestations of multilevel data. *Political Analysis*, 13, 430-446.

Gudykunst, W., & Lee, C. M. (2002). Cross-cultural communication theories. In W. Gudykunst & B. Mody (Eds.), *Handbook of international and intercultural communication* (pp. 25-50). Thousand Oaks, CA: Sage.

Gudykunst, W., Matsumoto, Y., Ting-Toomey, S., Nishida, T., Kim, K., & Heyman, S. (1996). The influence of cultural individualism-collectivism, self construals, and individual values on communication styles across cultures. *Human Communication Research, 22, 510-543.*

Gudykunst, W. & Mody, B. (Eds.). (2002). *Handbook of international and intercultural communication*. Thousand Oaks, CA: Sage.

Gudykunst, W., & Nishida T. (1994). *Bridging Japanese/North America differences*. Thousand Oaks, CA: Sage.

Hampton, K. N., Sessions, L. F., & Ja Her, E. (2011). Core networks, social isolation, and new media: How Internet and mobile phone use is related to network size and diversity. *Information, Communication & Society,* 14, 130-155.

Hampton, K. N., Sessions, L. F., Ja Her, E., & Rainie, L. (2009). *Social isolation and new technology*. Pew Internet Project. Washington, D.C.: Pew Internet Project.

Hata, H., & Smith, W. A. (1983) Nakane's Japanese society as utopian thought. *Journal of Contemporary Asia*, 13, 361-388.

Hechter, M., & Kanazawa, S. (1993). Group solidarity and social order in Japan. *Journal of Theoretical Politics*, 5, 455-493.

Hofstede, G. (1984). *Culture's consequences: Cross-cultural research and methodology* (Vol. 5). Beverly Hills, CA: Sage.

Hofstede, G., Deregowski, J., Dziuraweic, S., & Annis, R. (1983). Dimensions of national cultures in fifty countries and three regions. In *Expectations in cross-cultural psychology* (pp. 335-355). Lisse, The Netherlands: Swets and Zeitlinger.

Hui, C. H., & Yee, C. (1994). The shortened individualism-collectivism scale: Its relationship to demographic and work-related variables. *Journal of Research in Personality*, 28, 409-409.

Japan Statistical Association. (2007). *Toukei* [Translated from Japanese: Statistics.]. Tokyo, Japan: Japan Statistical Association.

Kincaid, D. L., Yum, J. O., Woelfel, J., & Barnett, G. A. (1983). The cultural convergence of Korean immigrants in Hawaii: An empirical test of a mathematical theory. *Quality and Quantity,* 18, 59-78.

Kiyonari, T., Yamagishi, T., Cook, K. S., & Cheshire, C. (2006). Does trust beget trustworthiness? Trust and trustworthiness in two games and two cultures: A research note. *Social Psychology Quarterly*, 69, 270-283.

Long, J. D. (1999). A confidence interval for ordinal multiple regression weights. *Psychological Methods*, 4, 315–330.

Marin, A. (2004). Are respondents more likely to list alters with certain characteristics? Implications for name generator data. *Social Networks*, 26, 289-307.

Marsden, P. (1987). Core discussion networks of Americans. *American Sociological Review*, 52, 112-131.

McPherson, M., Smith-Lovin, L., & Brashears, M. (2006). Social isolation in America: Changes in core discussion networks over two decades. *American Sociological Review*, 71, 353-375.

Miller, A. S., & Kanazawa, S. (2000). *Order by accident: The origins and consequences of conformity in contemporary Japan*. Boulder, CO: Westview Press.

Ministry of Health Labour and Welfare. (2007). *Heiseinen koyou doukou tyousa kekka no gaikyo* [Translated from Japanese: Results of an employment tendency survey]. Tokyo, Japan: Ministry of Health Labour and Welfare, Japan.

Ministry of Health Labour and Welfare. (2008a). *Jinkou doutai toukei* [Translated from Japanese: Population movement statistics.]. Tokyo, Japan: Ministry of Health Labour and Welfare. Retrieved July 7, 2008, from http://www.jili.or.jp/lifeplan/event_type/lifeevent/mariage/10.html.

Ministry of Health Labour and Welfare. (2008b). *Rikon ni kannsuru toukei* [Translated from Japanese: Divorce statistics]. Tokyo, Japan: Ministry of Health Labour and Welfare. Retrieved July 7, 2008, from http://www1.mhlw.go.jp/toukei/rikon_8/repo1.html.

Monge, P. R., & Contractor, N. (2003). *Theories of communication networks*. London: Oxford University Press.

Nakane, C. (1970). *Japanese society*. Berkeley, CA: University of California Press.

Oyserman, D., Coon, H. M., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin,* 128, 3-72.

Putnam, R. (2000). *Bowling alone*. New York: Touchstone.

Rice, R. E. (1993). Using network concepts to clarify sources and mechanisms of social influence. In G. Barnett & W. Richards, Jr. (Eds.), *Advances in Communication Network Analysis* (pp. 1-21). Norwood, NJ: Ablex.

Rogers, W. (1993). Regression standard errors in clustered samples. *STATA Technical Bulletin*, 13, 19-23.

Rothbaum, F., Pott, M., Azuma, H., Miyake, K., & Weisz, J. (2000). The development of close relationships in Japan and the United States: Paths of symbiotic harmony and generative tension. *Child Development*, 71, 1121-1142.

Stohl, C. (1993). European managers' interpretation of participation: A semantic network analysis. *Human Communication Research*, 20, 97-117.

Straits, B. C. (2000). Ego's important discussants or significant people: An experiment in varying the wording of personal network name generators. *Social Networks*, 22, 123-140.

Takano, Y., & Sogon, S. (2008). Are Japanese more collectivistic than Americans?: Examining conformity in in-groups and the reference-group effect. *Journal of Cross-Cultural Psychology*, 39, 237-250.

Triandis, H. C. (1994). Theoretical and methodological approaches to the study of collectivism and individualism. *Cross Cultural Research and Methodology*, 18, 41-51.

Valente, T. W. (1996). Social network thresholds in the diffusion of innovations. *Social Networks*, 19, 69-89.

Voronov, M., & Singer, J. A. (2002). The myth of individualism-collectivism: A critical review. *Journal Social Psychology*, 142, 461-480.

Weimann, G. (1983). The strength of weak conversational ties in the flow of information and influence. *Social Networks*, 5, 245-267.

Wellman, B. (1988). Structural Analysis: From method and metaphor to theory and substance. In *Social structures: A network approach* (pp. 19-61). Cambridge: Cambridge University Press.

Wellman, B. (2007). The network is personal. *Social Networks*, 29, 349-356.

Wellman, B., Quan Haase, A., Witte, J., & Hampton, K. (2001). Does the Internet Increase, Decrease, or Supplement Social Capital? Social Networks, Participation, and Community Commitment. *American Behavioral Scientist*, 45, 436-455.

Yamagishi, T. (1988). Exit from the group as an individualistic solution to the public good problem in the United States and Japan. *Journal of Experimental Social Psychology*, 24, 530-442.

Yamagishi, T., Cook, K. S., & Watabe, M. (1998). Uncertainty, trust, and commitment formation in the United States and Japan. *American Journal of Sociology*, 104, 165-194.

Yamagishi, T., Hashimoto, H., & Schug, J. (2008). Preferences versus strategies as explanations for culture-specific behavior. *Psychological Science*, 19, 579-584.

Yamagishi, T., Jin, N., & Miller, A. S. (1998). In-group bias and culture of collectivism. *Asian Journal of Social Psychology*, 1(3), 315-328.

Yamagishi, T., & Yamagishi, M. (1994). Trust and commitment in the United States and Japan. *Motivation and Emotion*, 18, 129-166.

Yosano, A., & Hayashi, N. (2005). Social stratification, intermediary groups and creation of trustfulness. *Sociological Theory and Methods*, 20, 27-44.

Yuki, M. (2003). Intergroup comparison versus intragroup relationships: A cross-cultural examination of social identity theory in North American and East Asian cultural contexts. *Social Psychology Quarterly*, 66, 166-183.

Yuki, M., Maddux, W. W., Brewer, M. B., & Takemura, K. (2005). Cross-cultural differences in relationship and group-based trust. *Personality and Social Psychology Bulletin*, 31, 48-46.