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ABSTRACT

The advance of web technology has allowed increasingly number of people to have access to Social Network Sites. Different members of society, including people of all ages and social classes, have used Facebook, Twitter and LinkedIn. This study examines the relationship between the use of Social Network Sites and the formation of social capital. Using data from a web survey of employees in Japan (n = 244) and Brazil (n = 251), positive associations between SNS use and social capital development were found in both countries. Cultural differences seem to influence this process; in Brazil, intensity of SNS use has a stronger association with bridging and bonding social capital when perceived enjoyment is high; in Japan, employees use SNS for utility and enjoyment reasons, but perceived enjoyment does not interfere with social capital gains. Implications and future research are discussed.

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INTRODUCTION

Social Network Sites (SNSs) are basically structured around a profile and a display of connections. These sites are distinguished by supporting additional services such as blogging (LiveJournal), audiovisual content sharing (Flicker, Last.FM, YouTube) or status updates (Twitter). In addition, SNS may be directed to a specific audience, such as work-related connections (LinkedIn), exclusive membership (ASmallWorld), online dating, ethnic, religious, or sexual identity or particular content genres (Ellison, Steinfield, & Lampe, 2007; Papacharissi & Mendelson, 2011).

The use of SNSs has been widely studied in university populations (Amichai-Hamburger & Vinitzky, 2010; Ellison et al., 2007; Ellison, Steinfield, & Lampe, 2011; Steinfield, Ellison, & Lampe, 2008; Subrahmanyam, Reich, Waechter, & Espinoza, 2008; Tong, Van Der Heide, Langwell, & Walther, 2008; Valenzuela, Park, & Kee, 2009; Vitak, Ellison, & Steinfield, 2011), especially because Facebook was primarily developed to serve such communities. The main studies of SNSs analyze their impact on social capital—benefits from personal relationships, which enable the achievement of certain ends (Coleman, 1988).

The present research focuses on the use of SNSs by ordinary workers, in an attempt to analyze the consequences of their use in the organizational context. Therefore, the overarching purpose of this research is to analyze the formation of social capital through SNS use and to explore other variables that may lead to its development. In this study, I concentrate on a potential variable; namely, perceived enjoyment of SNSs (K. Y. Lin & Lu, 2011). The motivation to use SNSs reflects the reasons that people spend time in such online environments. This study proposes to examine how such a motivation may influence social capital gains.

Although several academic researchers have explored the increase of social capital generated by SNS use (Burke, Marlow, & Lento, 2010; Ellison et al., 2007, 2011; J. H. Lin, Peng, Kim, Kim, & LaRose, 2011; Pfeil, Arjan, & Zaphiris, 2009; Steinfield, DiMicco, Ellison, & Lampe, 2009; Steinfield et al., 2008; Valenzuela et al., 2009; Vitak et al., 2011), most have focused on a single country, which limits the applicability of their findings in cross-cultural contexts. In this sense, Dou (2011) and Kim,

Sohn, & Choi (2011) investigated users from the US, Korea and Japan to confirm the influence of culture on communication styles and motivations for using SNSs. Ji et al. (2010) analyzed the influence of SNS functions on social capital increase in the US, Korea and China, concluding that each country typically uses certain SNS functions intended to form social capital.

People living in different social and cultural contexts may present distinct patterns of SNS use, but the existing studies are limited to comparisons of the US with some Asian countries. Thus, this article also has the objective of comparing Japanese and Brazilian SNS users, who while having different patterns of SNS usage, show some similar cultural characteristics.

Although the number of Japanese Facebook users more than doubled in 2012 (Nielsen, 2012), as of April 2013, Japan had 13.6 million Facebook users, which represents only 13.75% of its online population (Checkfacebook, 2013a). On the other hand, the Brazilian population is recognized for its active participation on SNSs. In April 2013, Facebook had 71.2 million users, or 89.88% of the Brazilian online population. This is the second highest position in the international ranking, second only to the United States (Checkfacebook, 2013b).

Regarding cultural characteristics, Japan and Brazil are considered collectivist countries, with members concerned with relationships and giving priority to group achievement (Gouveia & Clemente, 2000; Hofstede, 2001; Triandis, 2001). While the Japanese population is considered to be vertical, with concerns about hierarchy (Singelis, Triandis, Bhawuk, & Gelfand, 1995), the Brazilian population is considered to be affective, willing to express emotions and feelings (Trompenaars & Hampden-Turner, 2012). Thus, the present study explores how cultural differences may influence motivation to use SNSs and analyzes its effects on the development of social capital in Japan and Brazil.

This study contributes to the literature by relating variables that affect the relationship between SNS use and the maintenance of social capital. Furthermore, this study demonstrates that such relationships also vary depending on cultural context. The practical implications of the results are recommendations for organizational members on the use of SNSs – specifically on how to achieve their managerial goals.

LITERATURE REVIEW

An SNS is a web-based service that allows users to construct an individual profile to interact with contacts and enables the friends' networks to be viewed within the system. These sites allow users to learn detailed information about contacts, to share it with other people and to build online human relationships (Boyd & Ellison, 2007; Kwon & Wen, 2010; Valenzuela et al., 2009).

SNSs complement the network of relationships in the offline world by providing both the technical and the social infrastructure for social interaction. For example, the tools provide technical support for communication through applications (wall posts, messages, comments) and information about users' contacts. The identifying information serves as a social lubricant, providing clues about the profile owner's social status, physical attractiveness, credibility, cultural tastes and political affiliation, in addition to other aspects of personality (Ellison et al., 2011; Steinfield et al., 2008; Tong et al., 2008).

The passive observation of social news also allows users to track the activities of connections and may lower the barriers to initiating communication, both because potential commonalities are revealed and because crucial information about others is provided (Burke et al., 2010; Steinfield et al., 2008; Vitak et al., 2011). One's apparent friend network on SNSs can easily become much larger than traditional offline networks, because technology facilitates greater numbers of connections, and social norms inhibit refusals of friend requests (Tong et al., 2008). Thus, the characteristics presented here demonstrate how SNSs can collaborate in the formation and increase of social capital.

Social capital

The theory of social capital has been increasingly used by sociologists, political scientists, and economists to answer to a broad range of questions regarding relationships among individuals. In organizational studies, the concept of social capital is also gaining currency because it has proven to be a powerful factor in managerial success (Adler & Kwon, 2002).

In social sciences, the development of the social capital concept is typically associated with names such as Pierre Bourdieu, James Coleman and Robert Putnam. Bourdieu was responsible for the first systematic contemporary analysis of social capital (Portes, 1998). Bourdieu (1986) considers the

concept of capital in its economic form (when it relates to commercial exchanges) without disregarding its cultural and social aspects. Coleman (1988) affirms that social capital consists of a variety of entities that form a social structure and facilitate actions within this structure. Although the concept of social capital has diverse origins and styles of evidence, these scholars all agree on a social capital metaphor in which social structure defines a kind of capital that can create an advantage for individuals or groups. This means that people and groups that do well are somehow better connected with other people or groups (Burt, 2005).

Putnam (2000) delineated two basic forms of social capital: bonding and bridging. Bonding social capital describes benefits from dense relationships such as reciprocity, solidarity, social and psychological support, and reliable labor for local entrepreneurs. Bridging social capital consists of sparser relationships, with benefits, such as linkage to external assets and information diffusion, derived from distant acquaintances and connections. Bridging social capital is linked to what network researchers call "weak ties," referring to individuals who are more likely to move in different circles of connections and thus to have access to useful information. Access to individuals outside one's close circle provides access to nonredundant information, resulting in benefits such as employment connections, new opportunities and perspectives (Granovetter, 1973, 1983).

The Internet provides several ways to create new relationships as well as to maintain existing ones. On this basis, Williams (2006) developed and validated the Internet Social Capital Scales (ISCSs)—a series of scales to measure bridging and bonding social capital in the Internet context. Numerous studies have used this scale to relate social capital increase to SNS use (Burke et al., 2010; Ellison et al., 2007, 2011; Ji et al., 2010; Steinfield et al., 2008). Burke et al. (2010) demonstrated that greater use (text exchanges, nontext feedback such as the "like" button or photo tagging) and consumption of SNS services (reading of general broadcasts such as status updates, public conversations, pictures or messages) may be associated with bridging and bonding social capital.

Motivation to use SNSs

Although the use of SNSs has been the subject of several studies, the motivation to spend time on SNSs has not yet been related to the formation of social capital. Existing studies have demonstrated

various motivations for SNS use according to gender and age. Sheldon (2009) concluded that females were using SNSs to maintain existing relationships, while males tended to use them as dating tools to make romantic acquaintances and to establish relationships. Pfeil et al. (2009) found differences in friend networks, posts and media usage between teenagers and older people.

K. Y. Lin & Lu (2011), on the basis of previous studies relating motivation theory to information technology acceptance, propose two factors affecting individual motivations for SNS use: extrinsic benefits (usefulness) and intrinsic benefits (enjoyment). Perceived usefulness is considered to be the degree to which a person believes that using a system would improve his or her performance (Davis, 1989). McAfee (2009) states that SNSs create very useful digital environments that capture and spread knowledge easily, provide high-quality answers to important questions and increase both the number and strength of ties among people. Thus, the ultimate goal of using SNSs is to accelerate and improve our ability to connect, communicate and collaborate (Jue, Marr, & Kassotakis, 2009).

Perceived enjoyment is adapted from the work of Davis, Bagozzi, & Warshaw (1992) and defined as the extent to which the activity of using SNSs is perceived to be entertaining. Activities on Facebook, such as posting photos and videos, sharing links and applications, and playing games appear to be a source of pleasurable experiences. K. Y. Lin & Lu (2011) found that enjoyment was the most important factor affecting Facebook users' behavior in Taiwan.

Cross-cultural differences

Many cross-cultural studies have been conducted based on Hofstede's cultural dimensions. According to Hofstede (2001), culture is a mental program that affects human thinking, feeling, and acting in predictable ways. These mental programs are most clearly expressed in the different values that predominate among people from different countries. Five cultural dimensions were provided to categorize the differences in the mental program: power distance, uncertainty avoidance, individualism, masculinity and long-term orientation.

The role of communication has frequently been studied through the dichotomy of individualism and collectivism. Members of individualistic cultures tend to be autonomous, independent and self-reliant, behaving primarily on the basis of their attitudes rather than the norms of their in-groups.

Competition is encouraged, and personal achievement is valued. In contrast, members of collectivistic cultures see themselves as interdependent within their in-group (such as family, tribe, or nation). Consequently, they are especially concerned with relationships, prioritizing group achievement and harmony instead of individual success (Hofstede, 2001; Triandis, 2001).

Triandis (2001) affirms that people from Western societies are considered to be higher on the individualism scale, whereas Asian, African and South American societies are considered to be lower. According to Hofstede's Individualism Index Value (IDV), Japan and Brazil score 46 and 38 respectively, and compared with other nations, both may be considered intermediate, because the United States and Australia score 91 and 90 while Asian countries such as South Korea and Taiwan score 18 and 17, respectively.

Studies involving SNS users from the United States, South Korea and China have shown significant differences in the use of SNS functionalities and formation of social capital. People from collectivist countries value strong relationships and emphasize activities related to their communities and close friends (Ji et al., 2010). In these countries, being a good member of a community is regarded as a virtue, and SNS users tend to focus on existing relationships with social and intimate others from whom they can acquire useful information and social support (Dou, 2011; Kim et al., 2011).

HYPOTHESIS DEVELOPMENT

Intensity of SNS use and social capital

Using American college students as a sample, Ellison et al. (2011) found that use of Facebook by individuals to connect with 'total strangers' had no impact on their social capital. This is probably because American students primarily use SNSs for social reasons involving people from their offline lives rather than looking for new friends or finding groups to talk about specific issues (Subrahmanyam et al., 2008).

Despite these findings, SNSs still increase bridging social capital. Steinfield et al. (2008) concluded that students with lower self-esteem gained more from the use of Facebook because they may face more difficulties in approaching people in their classes or dormitories. Therefore, the social and

technical tools provided by Facebook may mitigate fears of rejection and facilitate communication in initial social interactions, contributing to the formation of bridging social capital (Ellison et al., 2007, 2011). Various studies have shown how SNSs can be used to help students maintain preexisting close relationships and consequently increase bonding social capital (Burke et al., 2010; Ellison et al., 2007). Messages exchanged between existing friends are both a product of the friendship and a means of facilitating and maintaining such friendships (Burke et al., 2010).

Based on these prior studies, I propose that the same positive relationship between intensity of SNS use and increased social capital will be found among Japanese and Brazilian employees, which results in the following hypotheses.

> *Hypothesis 1a: Greater intensity of SNS use will be positively related to amount of bridging social capital.*

> *Hypothesis 1b: Greater intensity of SNS use will be positively related to amount of bonding social capital.*

Motivation to use SNSs and social capital

As discussed in the literature review, motivations to spend time on SNSs are divided into intrinsic benefits (enjoyment) and extrinsic benefits (usefulness) (K. Y. Lin & Lu, 2011). In this study, I will consider the proposition that perceived enjoyment has no direct relationship with social capital gains, because adults normally do not associate pleasure and reward, especially during working hours. Individuals who consider time spent on SNSs as nonproductive are common (Boyd & Ellison, 2007; Skeels & Grudin, 2009), probably because they perceive SNSs as a source of pleasure that brings no potential benefits. At this point, I hypothesize that perceived enjoyment is better exploited if it interacts with intensity of SNS use. Therefore, in the next section, I present some cross-cultural differences between Brazil and Japan that may reveal the interaction effect.

At the same time, I posit that individuals who recognize SNSs as useful will consider them to be a tool to achieve the benefits arising from both weak and strong connections. Therefore, the hypotheses below indicate how perceived usefulness can be directly related to increased bridging and bonding social

capital; that is, the more an individual recognizes the usefulness of SNS, the greater will be his or her social capital.

Hypothesis 2a: Perceived SNS usefulness will be positively related to amount of bridging social capital.

Hypothesis 2b: Perceived SNS usefulness will be positively related to amount of bonding social capital.

Cross-cultural differences and social capital

Although Brazil and Japan show similar rates of collectivism, the Brazilian population has a more affective culture, with individuals showing their emotions and seeking immediate outlets for their feelings though smiles, laughter, grimaces and gestures (Trompenaars & Hampden-Turner, 2012). Thus, because they have an affective nature, I posit that Brazilian people enjoy maintaining personal relationships and verbal communication in online environments. This cultural difference can be verified by the high rates of connections by SNSs: while users around the world have 195 friends on average, Brazilians usually achieve up to 360 friends (Ale, 2010). Users from Brazil also spend more time on social media sites than Japanese users, with an average of 4 hours 33 minutes per day compared with 2 hours 50 minutes per day (Nielsen, 2010).

From exploring such differences, I posit that in the case of Brazil, intensity of SNS use has an interaction effect with perceived enjoyment. I predict that in Japan, the interaction effect will not be significant, especially because Japanese people use SNSs as an extension of their offline activities, being less engaged with such websites.

Therefore, when Brazilians perceive SNS use as enjoyable, engagement with such websites affects their amount of social capital. This means that although these users are spending time on SNS activities that are fun and not necessarily related to social capital gains, because they use SNS more intensively, such engagement probably brings new connections and reinforces strong ties.

Conversely, when people do not perceive SNSs as enjoyable, the effects on social capital may be less emphasized. This is because some individuals use SNSs as a social obligation, just because their

offline connections do so. That is, they feel compelled to respond to friendship requests, to follow events or to check SNSs only to avoid exclusion from their friends' networks. These individuals use SNSs for passive observation of social news (Burke et al., 2010), which influences their amount of social capital. Thus, I hypothesize that in Brazil, employees with a strong perceived enjoyment will make greater gains in social capital when they increase their SNS use, as stated in hypothesis 3.

Hypothesis 3a: In Brazil, perceived SNS enjoyment will moderate the relationship between intensity of SNS use and the amount of bridging social capital such that the relationship will be stronger for individuals with high rather than low perceived enjoyment.

Hypothesis 3b: In Brazil, perceived SNS enjoyment will moderate the relationship between intensity of SNS and the amount of bonding social capital such that the relationship will be stronger for individuals with high rather than low perceived enjoyment.

METHOD

Sample and procedure

To fulfill the goals of this study, an online fieldwork service was contracted in January 2013 to recruit Japanese and Brazilian workers to complete a questionnaire. There were three criteria for respondents from both countries: they were to work full time, to have at least one year of experience in their current organization and to have an active SNS account. This procedure resulted in a sample size of 244 in Japan and 251 in Brazil. In Japan, 78.3% of respondents were male, and 21.7% were female, with an average age of 40.69 years (SD = 10.143). In Brazil, 70.1% of respondents were male, and 29.9% were female, with an average age of 44.7 years (SD = 14.731). I added two quality check questions to ensure that inquiries were being properly understood. Respondents were asked for a certain response; for example, "*please choose option 5.*" If the respondent did not comply with the request, he/she was excluded from the sample, because he/she was probably choosing alternatives without reading the question.

Measures

The survey instrument includes measures of three broad topic areas (intensity of SNS use, motivations to use SNSs, and social capital), which are discussed in more detail below. All items were originally written in English and then translated into Japanese and Portuguese. The final Japanese and Portuguese versions were compared by a Brazilian researcher fluent in all three of these languages to assure comparability.

I collected information about demographic and other descriptive variables, such as gender, age, level of study, internet use, possession of a smartphone and the SNS where the respondent is registered (Mixi, Facebook, Orkut, Twitter, LinkedIn, Google+, or other). Table 1 shows descriptive characteristics of the sample. Daily hours of internet use were measured through a response scale from 1 (less than one hour) to 7 (more than 10 hours).

Table 1 also shows the correlations among the variables. Correlations among predictors pose a potential threat to the validity of regression analysis because they could produce high levels of multicollinearity. The Variance Inflation Factor (VIF) was examined for each independent variable and never exceeded 2.6 in the Brazilian sample and 3.7 in the Japanese sample, which means that multicollinearity was not an issue (F. J. Lin, 2006). Although there is disagreement among statisticians about what value of VIF indicates multicollinearity, we can safely disregard it because this VIF was caused by the inclusion of products of variables (independent × moderator) (Allison, 2012).

Intensity of SNS use

Measures of intensity of SNS use were based on previous studies (Ellison et al., 2007; Papacharissi & Mendelson, 2011; Steinfield et al., 2008; Valenzuela et al., 2009) and showed high rates of reliability (Cronbach's Alpha JP = .902; BR = .906). This measure includes four self-report assessments to estimate employee engagement with an SNS. After recent news about increasing time spent on the website by users around the world, our research was intended to ascertain the number of hours that Japanese and Brazilian employees are logged into SNS systems, the number of hours that

they actually spend on the system and the number of times that they check the SNS page per day. I also asked about their number of SNS connections.

Finally, a series of 7-point Likert scale attitudinal questions was used to assess each participant's emotional connection to an SNS and how it was integrated into his or her daily activities (Ellison et al. 2007, Steinfield et al. 2008). An independent sample *t-test* revealed significant differences between intensity of SNS use in the samples from Japan and Brazil, $t(493) = 8.821$, $p < .001$ (see Table 2 for item wording, descriptive statistics and *t-test* results).

Motivations to use SNSs

Reasons to use SNSs were measured using six items developed in research by K. Y. Lin & Lu (2011), who proposed two factors affecting individuals' motivation for SNS use: extrinsic benefits (usefulness) and intrinsic benefits (enjoyment). Items were adapted from Kwon & Wen, (2010) and K. Y. Lin & Lu (2011) to verify the reasons why people use an SNS, whether for its usefulness or enjoyment.

As stated by Jue et al., (2009), an SNS may help users to connect, to collaborate and to communicate. Accordingly, in the organizational context, people benefit from the use of SNSs by the creation and strengthening of ties, information searches, and furthering of careers through self-promotion (DiMicco et al., 2008; Skeels & Grudin, 2009). Activities on SNSs such as posting photos and videos, sharing links and applications, and playing games appear to be a source of pleasurable experiences that may bring satisfaction (K. Y. Lin & Lu, 2011). Thus, I included questions on fun and enjoyment from the use of SNSs.

Respondents were asked to indicate their level of agreement on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). An example of a statement concerning perceived usefulness is "Using an SNS enables me to acquire more information and to know more people" (Cronbach's Alpha JP = .928; BR = .915). A sample for perceived enjoyment is "Using an SNS provides me with a lot of enjoyment" (Cronbach's Alpha JP = .838; BR = .729).

Independent sample *t-test* revealed significant differences between Japan and Brazil with regard to perceived usefulness, $t(493) = 7.217$, $p < .001$. Because the variances of perceived enjoyment in Brazil and Japan were not equal, the degrees of freedom were reduced to compensate for violation of

homoscedasticity (Berkman & Reise, 2012). Even so, this test also indicates significant differences between perceived enjoyment in both countries, $t(492) = 4.862$, $p < .001$. Based on the results of a paired-samples *t-test*, no significant difference was found between perceived usefulness and perceived enjoyment in Japan. This difference was only found in Brazil, $t(250) = 5.174$, $p < .001$.

Social Capital

Measures of bridging and bonding social capital were based on Williams (2006), who developed and validated the Internet Social Capital Scales (ISCS). Previous studies have also utilized this scale to relate increased social capital to SNS usage (Burke et al., 2010; Ellison et al., 2007, 2011; Ji et al., 2010; Steinfield et al., 2008). Based on the results of these previous studies, I decided to use 12 items (six for each type of social capital) in my study. Participants were asked to indicate their agreement with statements such as, "Interacting with people online/offline gives me new people to talk to" as a measure of bridging social capital. As an example statement of bonding social capital, we have "There is someone online/offline I can turn to for advice about very important decisions." The answers to these statements were reported on a 7-point Likert scale and exhibited high reliability, as we can see from the Cronbach's Alpha for bridging social capital (JP = .924; BR = .873) and bonding social capital (JP = .914; BR = .868).

Independent sample *t-tests* revealed significant differences between Japanese and Brazilian samples in regard to bridging social capital, $t(493) = 7.188$, $p < .001$, and bonding social capital, $t(493) = 2.943$, $p < .01$. Paired-samples *t-tests* demonstrated significant differences between bridging and bonding social capital in Japan $t(243) = 6.109$, $p < .001$ and Brazil $t(250) = 11.848$, $p < .001$.

RESULTS

Hierarchical moderated regressions were conducted to explore research hypotheses regarding SNS use and increased social capital. To reduce potential multicollinearity, independent and moderator variables were standardized before computing the product terms (Dawson, 2013). In the first step of the regression analysis, control variables, intensity of SNS use and the moderators were entered. In the

second step, two-way interactions relevant to the hypotheses were entered. The results of the hierarchical regression analysis for both samples are shown in Table 3.

To test hypotheses 1a and 2a, I first investigated the extent to which demographic factors, internet use, possession of SNS accounts, intensity of SNS use, perceived usefulness and perceived enjoyment predict bridging social capital; R^2 for this model was .547 in Japan and .410 in Brazil. In Brazil, the 'Mixi' variable was considered a constant, because almost none of the Brazilian employees indicated that they had accounts with this SNS. Therefore, after first controlling for demographic factors and other independent variables, the extent to which employees use SNSs contributes significantly to their amount of bridging social capital (JP: scaled beta = .323, $p < 0.001$, BR: scaled beta = .225, $p < 0.05$), supporting hypothesis 1a. Furthermore, perceived usefulness contributes positively to the amount of bridging social capital in both countries (JP: scaled beta = .351, $p < 0.001$; BR: scaled beta = .489, $p < 0.001$), supporting hypothesis 2a. Contrary to expectations, perceived enjoyment was not related to bridging social capital in any country.

To explore hypothesis 3a, an additional pair of analyses examined whether SNS intensity interacted with perceived enjoyment (see Table 3), which raised R^2 to .549 in Japan and .425 in Brazil. The relationship between SNS use and bridging social capital varied based upon the degree of perceived enjoyment in Brazil (SNS × enjoyment: scaled beta = .141, $p < 0.05$), supporting hypothesis 3a. Employees reporting high rather than low perceived enjoyment appeared to gain bridging social capital if they used SNSs more intensely, suggesting that benefits derived from SNSs may be beneficial for them. A plot of the significant interactions at one standard deviation above and below the mean perceived enjoyment score is shown in Figure 1. As expected, no significant connection was found between amount of bridging social capital and the interaction of SNSs with perceived enjoyment in the Japanese sample.

Bonding social capital was also significantly predicted by intensity of SNS use (JP: scaled beta = .463, $p < 0.001$ BR: scaled beta = .426, $p < 0.001$), which supports hypothesis 1b. Hypothesis 2b was also supported in both countries, because perceived usefulness was significantly related to bonding social capital (JP: scaled beta = .333, $p < 0.001$; BR: scaled beta = .473, $p < 0.001$). As predicted,

perceived enjoyment was not directly associated with bonding social capital in any country. R^2 in the first step of this regression analysis was .353 in Japan and .419 in Brazil.

To explore hypothesis 3b, the interaction between intensity of SNS use and perceived enjoyment was examined, which increased R^2 to .354 in Japan and .434 in Brazil (see Table 3). In Brazil, the relationship between SNS use and bonding social capital varied according to the degree of perceived enjoyment (scaled beta = .162, p < .05). Employees reporting high rather than low perceived enjoyment appeared to gain in bonding social capital if they used SNS more intensely, which led us to accept hypothesis 3b. A plot of the significant interaction at one standard deviation above and below the mean perceived enjoyment score is shown in Figure 2. In Japan, the interaction of perceived enjoyment with intensity of SNS use was not significant for bonding social capital.

DISCUSSION

This study examined how cultural differences influence the amount of bridging and bonding social capital created by SNS use and perceived enjoyment. Similar to previous studies (Burke et al., 2010; Ellison et al., 2007, 2011; Steinfield et al., 2008; Subrahmanyam et al., 2008), this article showed how the use of SNSs may interact with social capital. Therefore, SNSs play an important role in the process by which ordinary Japanese and Brazilian workers form and maintain social capital.

When the results for perceived usefulness and perceived enjoyment are combined, the findings highlighted the role that people's motivations play in this relationship. First, perceived usefulness was found to influence the size of social capital in Japan and Brazil. Employees who recognize the usefulness of SNSs appear to have greater bridging and bonding social capital. These individuals probably make good use of SNSs by connecting to as many people as possible while at the same time maintaining preexisting strong relationships.

Moreover, perceived enjoyment did not appear to influence social capital directly. As predicted, Japanese and Brazilian adults appear not to associate pleasure with rewards. Individuals from the study sample seemed not to connect enjoyable time spent on SNSs with the possibility of increasing their social capital.

In an attempt to explore cultural differences further, interaction between intensity of SNS use with perceived enjoyment was demonstrated for each country. The Brazilian population is considered affective, emotive and sociable, with large numbers of friends and much time spent on social media sites. This characteristic was verified by the present study because Brazilian employees scored higher on every question regarding intensity of SNS use (see Table 2). This research showed through an interaction effect that as a consequence of this engagement, intensity of SNS use mattered to social capital when users enjoyed spending time on SNSs. This means that employees who perceived enjoyment built weak and strong ties as they maintained personal relationships in online environments.

On the other hand, employees who did not feel such enjoyment had less social capital, even if they spent more time on SNSs. These employees probably connect to an SNS to follow their friends' activities. These individuals are obliged to use SNSs, and even when connected to the site, they merely answer others' requests or passively read other people's posts. Because of this reduced engagement, these individuals may gain less social capital.

Inside organizations, bridging social capital is associated with the kind of weak ties that facilitate access to nonredundant information, greater interest in connecting globally, and greater ability to access expertise within the company, in addition to new opportunities and perspectives. Bonding social capital may offer closer and reliable bonds to employees' networks, in addition to reciprocity, solidarity and social support, which results in greater willingness to contribute to the company (Putnam, 2000; Steinfield et al., 2009).

In the case of Japan, the interaction of intensity of SNS use and perceived enjoyment was not significant. As discussed above, Japanese people use SNSs less intensively (M = 2.56, SD = 1.06) than Brazilians (M = 3.53, SD = 1.35). Moreover, a paired-samples *t-test* showed no significant difference between perceived usefulness and enjoyment. Indeed, perceived enjoyment scores (M = 4.41, SD = 0.20) were lower than those for perceived usefulness (M = 4.44, SD = 0.17), which contradicts the finding of K. Y. Lin & Lu (2011). Such low engagement with SNSs and low perceived enjoyment scores, in addition to the small sample size of this study, may have influenced the results, especially if their interaction was very weak.

The motivations for Japanese employees to spend time on SNSs are both intrinsic and extrinsic, which may be a possible explanation for their minor involvement in social media. As in previous studies (Dou, 2011; Ji et al., 2010; Kim et al., 2011), Japanese people, like those in other collectivistic countries, have been shown to value strong relationships and to emphasize activities related to close friends, as can be seen in the regression analysis results relating SNS use to both types of social capital (bridging social capital: scaled beta = .323, $p < 0.001$, bonding social capital: scaled beta = .463, $p < 0.001$).

Implications for practice

Results of the investigation have implications for management practice. First, research findings provide evidence that activities on SNSs may influence the construction of social capital. Online social network tools may be helpful to build both weak and strong ties. SNSs are considered to be a low-cost method to maintain a large network and subsequently to gain the associated bridging benefits (Vitak et al., 2011). At the same time, SNSs may help individuals to maintain bonding social capital by functioning as a complement to preexisting close relationships (Ellison et al., 2007)

Hierarchical regression analysis yielded different results in Japan and Brazil, confirming the importance of understanding and managing cultural differences before taking managerial decisions. Doing business in different cultures requires adaptation to the value systems and norms of that culture. According to Hill (2005), international businesses that are ill-informed about either of these aspects of another culture are likely to fail. Moreover, lack of knowledge about cultural influences on communication may cause misunderstandings between companies and people in other countries. When companies utilize SNSs to communicate with an international audience, they need to be aware of differences in SNS use to improve their understanding of the public in other countries and to build relationships effectively (Dou, 2011).

In Brazil, results indicate that perceived enjoyment of SNS activities may influence the construction of social capital. Brazilian employees with high levels of perceived SNS enjoyment showed increased social capital when they used SNSs more intensively. We may consider that these employees enjoy spending time on such websites and reap the benefits of connection, communication and collaboration offered by SNSs.

These research results suggest that Brazilian managers should encourage employees to use SNSs to increase their number of weak ties and to gain access to relevant information to perform their work. SNSs have become a means of communication by which employees can directly communicate with anyone, including those in high management positions. Thus, SNSs may lower hierarchical barriers because individuals may talk to anyone about any matter, even those related to entertainment and unrelated to work. SNSs may be used in collaboration for greater connection between bosses, subordinates and people from different departments, which can facilitate the flow of information (Yokoyama & Sekiguchi, 2013).

SNSs may also be used to complement employees' offline relationships and to increase their bonding social capital. Co-workers usually become friends through daily life and should use SNSs to complement these relationships by sharing pictures, comments and opinions on the web. The creation of connected employees may help organizations to increase trust, feelings of belonging, a sense of responsibility, and consequently, work engagement (Jue et al., 2009; Steinfield et al., 2009; Yokoyama & Sekiguchi, 2013).

Therefore, while one may argue that a company should not encourage employees to spend time on SNSs during working hours because they are not directly related to work tasks, it could be considered that increasing social capital may be a productive use of time. Moreover, the results of the present investigation highlight the importance of managers' educating employees about the correct use of SNSs, so that they may reach their goals more effectively without losing time on other activities. Managers should train the whole workforce in how, why and when to use SNSs in their daily work to achieve organizational objectives (Hallam, 2013). Thus, organizations should develop specific policies to instruct employees about the personal and corporate benefits arising from social network formation and also about the associated risks, such as inappropriate content, personal safety, information confidentiality and or legal penalties (Li, 2010; McAfee, 2009).

Training and policies for SNS use should also be adopted in Japanese organizations. Even though no interaction effect was found in the Japanese sample, such actions could contribute to improving online relationships among employees. The present study demonstrated that Japanese employees use

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SNSs both for their usefulness and for enjoyment. Moreover, it showed how Japanese people value the maintenance of bonding social capital even in online environments. These people use SNSs as an extension of their offline life, and they may reinforce existing offline relationships. Based on this knowledge, companies can develop training to enable employees' integration into online environments and to build trust, reciprocity, feelings of support, and willingness to contribute to the corporation.

Limitations and future research

Some difficulties may result in limitations that should be considered. First, online surveys are considered to limit respondents' availability, because certain populations are less likely to have internet access or to respond to online questionnaires. Nevertheless, because this study is intended to analyze the influence of SNS use on social capital, I considered an online survey to be suitable for achieving the research objective. Future studies intending to compare individuals who do not possess SNS accounts should try other methods.

Another limitation is that the lack of an interviewer to clarify possible doubts can lead to less reliable data, and the use of an online fieldwork service brings a risk of respondents repeating the survey. To eliminate these limitations, I added quality check questions to ensure that respondents properly understood the inquiries and did not just choose alternatives to gain the benefits of participating in the survey.

For future studies, I suggest repeating this study using different methods, such as case studies and employee surveys conducted in field settings. Furthermore, future research could explore other factors that influence the effects of bridging and bonding social capital. Although the investigation examined perceived usefulness and enjoyment as two separate variables, I propose that personality or situational variables may also be considered.

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Table 1: Descriptive Statistics and correlations among variables used in the study

Japan	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Gender	0.217	0.413											
2. Age	40.693	10.143	-0.248**										
3. Level of study [a]	3.549	0.944	-0.043	-0.056									
4. Internet hours [b]	3.492	1.570	-0.019	0.001	-0.044								
5. Smartphone	0.102	0.304	-0.014	0.197**	-0.082	0.101							
6. Smartphone hours [b]	1.580	1.199	0.121	-0.222**	0.079	0.289**	.a						
7. Intensity of SNS use	2.564	1.063	0.140*	-0.100	0.130*	0.212**	0.009	0.382**					
8. Usefulness	4.439	1.415	0.177**	-0.076	0.067	0.067	-0.041	0.208**	0.678**				
9. Enjoyment	4.410	1.241	0.096	-0.075	0.093	0.084	-0.032	0.209**	0.723**	0.802**			
10. Bridging social capital	3.826	1.201	0.100	-0.065	0.096	0.073	-0.045	0.161*	0.623**	0.664**	0.595**		
11. Bonding social capital	3.475	1.341	0.072	-0.147*	0.126*	0.093	-0.079	0.134*	0.464**	0.460**	0.358**	0.756**	

Brazil	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Gender	0.299	0.459											
2. Age	44.701	14.731	-0.028										
3. Level of study [a]	3.641	1.015	-0.027	0.113									
4. Internet hours [b]	4.263	1.560	-0.004	-0.233**	0.085								
5. Smartphone	0.291	0.455	0.023	0.249**	-0.128*	-0.142*							
6. Smartphone hours [b]	2.051	1.725	-0.033	-0.285**	-0.099	0.356**	.a						
7. Intensity of SNS use	3.531	1.353	0.218**	-0.229**	-0.061	0.361**	-0.114	0.297**					
8. Usefulness	5.291	1.207	0.148*	-0.098	-0.105	0.166**	-0.014	0.082	0.569**				
9. Enjoyment	4.948	1.222	0.247**	-0.098	-0.011	0.114	-0.018	0.041	0.628**	0.627**			
10. Bridging social capital	4.616	1.246	-0.020	-0.031	0.055	0.190**	-0.018	0.038	0.498**	0.611**	0.495**		
11. Bonding social capital	3.837	1.395	-0.059	-0.244**	0.064	0.183**	-0.079	0.129	0.505**	0.487**	0.364**	0.694**	

[a] Response categ: 1 = Basic education, 2 = High school, 3 = Vocational school, 4 = College, 5 = Graduate school
[b] Response categ.: 1 = less than 1 hour, 2 = 1–2 hours, 3 = 2–4 hours, 4 = 4–6 hours, 5 = 6–8 hours, 6 = 8 to 10 hours, 7 = more than 10 hours.
*$p < .05$, **$p < .01$, .a cannot be computed because at least one of the variables is constant

Table 2: Summary statistics for intensity of SNS use

	Japan		Brazil	
	Mean	**SD**	**Mean**	**SD**
Intensity of SNS use αJP = .902; αBR = .906; t(493) = 8.821***	2.56	0.93	3.53	0.78
Hours per day logged on to SNSs [a]	1.50	1.18	2.96	1.82
Hours per day actually spent on SNSs [a]	1.26	0.80	2.28	1.48
Number of SNS checks per day [b]	1.86	1.25	2.39	1.50
Number of SNS friends [c]	1.49	1.10	3.60	2.04
SNS is part of my everyday activity. [d]	3.30	1.67	4.63	1.83
I am proud to tell people I use SNS. [d]	3.52	1.63	3.90	1.75
SNS use has become part of my daily routine. [d]	3.51	1.76	4.34	1.88
I feel out of touch when I haven't logged onto an SNS for a while. [d]	2.78	1.60	3.43	1.94
I feel I am part of an SNS community. [d]	3.26	1.66	3.77	1.87
I would be sorry if SNS shut down. [d]	3.16	1.63	4.01	2.16

[a] Response categories: 1 = less than 1 hour, 2 = 1–2 hours, 3 = 2–4 hours, 4 = 4–6 hours, 5 = 6–8 hours, 6 = 8 to 10 hours, 7 = more than 10 hours.

[b] Response categories: 1 = 1–2 times, 2 = 3–5 times, 3 = 6–8 times, 4 = 8–10 times, 5 = more than 10 times

[c] Response categories:1 = less than 50, 2 = 51–100, 3 = 101–200, 4 = 201–300, 5 = 301–400, 6 = 401–600, 7 = more than 600.

[d] Individual items ranged from 1 = strongly disagree to 7 = strongly agree.

Table 3: Moderated regressions predicting bridging and bonding social capital

	Bridging Social Capital				Bonding Social Capital			
	Japan		Brazil		Japan		Brazil	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Intercept	1.086 *	1.025	.716	.499 *	1.406 *	1.376 *	.973	.724
Gender	.028	.023	−.302	−.295	.056	.054	−.696 ***	−.688 ***
Age	.003	.002	.005	.004	−.003	−.003	−.017 **	−.017 **
Level of study	.057	.058	.082	.073	.146	.147	.216 *	.206 *
Internet hours	−.009	−.008	.026	.004	−.009	−.009	−.014	−.039
Smartphone hours	−.075	−.074	−.033	−.020	−.096	−.095	−.021	−.006
Mixi	.072	.078			.234	.237		
Facebook	−.283 *	−.279 *	.073	.153	−.277	−.274	−.086	.007
Orkut	−.294	−.332	−.213	−.250	−.206	−.226	−.182	−.224
Twitter	−.109	−.100	−.071	−.058	−.215	−.210	−.333	−.318
LinkedIn	.501	.451	.014	−.004	.363	.338	−.221	−.242
Google+	.324 *	.322 *	−.127	−.122	.233	.232	.007	.014
Others	.119	.109	−.333	−.417	−.044	−.049	−.424	−.521
Intensity of SNS use	.323 ***	.313 ***	.225 *	.226 **	.463 ***	.458 ***	.426 ***	.428 ***
Usefulness	.351 ***	.354 ***	.489 ***	.479 ***	.333 ***	.335 ***	.473 ***	.461 ***
Enjoyment	.074	.081	.032	.077	−.144	−.141	−.103	−.051
SNS × Enjoyment		.052		.141 *		.026		.162 *
R^2	.547 ***	.549 ***	.410 ***	.425 ***	.353 ***	.354 ***	.419 ***	.434 ***
ΔR^2		.002		.015		.001		.015

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

Figure 1: Plots of interaction between intensity of SNS use and perceived enjoyment of bridging social capital in Brazil
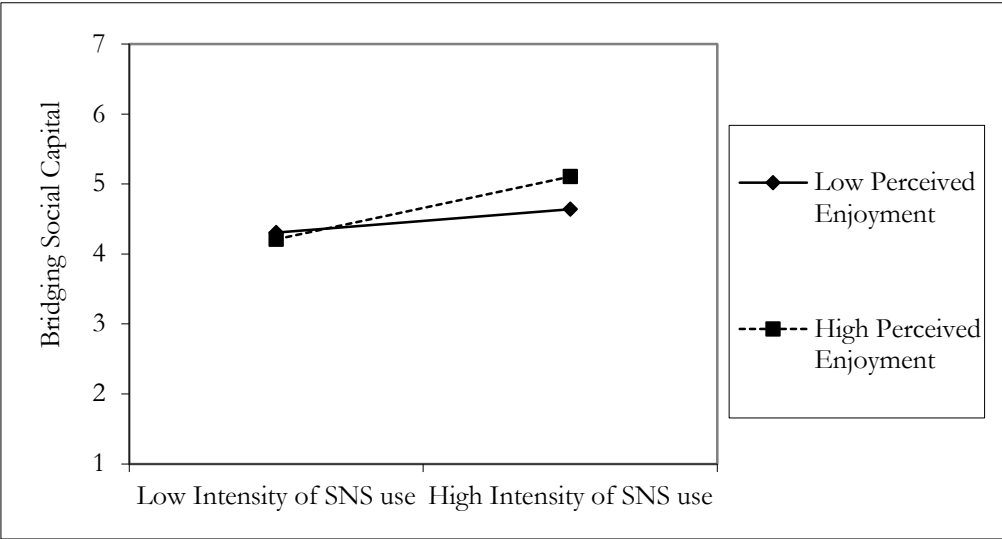
Figure 2: Plots of the interaction between intensity of SNS use and perceived enjoyment on bonding social capital in Brazil