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## Professional and Personal Social Networking and Enhancement of Social Capital in Young Adults

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### ABSTRACT

*This study compares the use of personal and professional social networking sites by young adults for social capital enhancing activities. The research is based on a survey of college-age adults (n=292) who were asked about their use of two social networking sites of contrasting architectures: the more interactive, social/personal-oriented site Facebook, and the relatively less interactive, professional/business-oriented site LinkedIn. Data were analyzed to determine the relationships among demographic and technology experience factors, and respondents' use of these sites for social capital enhancing activities. Findings suggest that increasing age and number of SNS profiles are positively related, while gender is not related significantly with social capital enhancing activities on Facebook and LinkedIn. Higher income levels were significantly and positively related with Facebook use but not with LinkedIn use. Surprisingly, the more social-oriented Facebook was used in more social capital enhancing ways than the more professional-oriented LinkedIn, suggesting that for college-age students, socially-oriented sites such as Facebook serve as a platform for the interactions which form a foundation of social connections on which more professional, social capital enhancing activities are based.*

**Keywords:** Social Media, social networking, social capital, Facebook, LinkedIn

## INTRODUCTION

This study addresses the following questions:

How are the two most popular social networking sites used for personal versus professional social capital building among tech-savvy Silicon Valley undergraduate students? How do the variables of age, income, years of Internet usage, number of profiles, gender and ethnicity affect this use? What are the implications of these differences for the future of social networking

This article presents our research and its results in the following order:

- 1: Background literature and guiding concepts, including evolution of social capital
- 2: The special status of Facebook and Linked In
- 3: Hypotheses 1-6
- 4: Methods
- 5: Results and analysis
- 6: Discussion
- 7: Limitations

## BACKGROUND LITERATURE AND GUIDING CONCEPTS

### SOCIAL MEDIA AS PRIMARY MODE OF SOCIAL INTERACTION: INCREASING POWER AND INFLUENCE OF SOCIAL MEDIA

Society exists in relationships between people, and the attempts to implement society online have historically appeared as blogs, forums, messaging apps of all types, and elaborate social networking environments such as LinkedIn, Facebook, Twitter, and YouTube (Johnston, Tanner, Lalla, & Kawalski, 2011). Social networking sites (SNS) are among the most significant of recent emerging technologies, and SNS have become a primary mode of societal interaction.

For example, in June of 2017, Facebook management announced that Facebook had more than two billion users, or more than the population of any single country and nearly thirty percent of the population of the Earth (Chaykowski, 2017). Facebook's dominance and power in the West is considered by some analysts to be a serious societal problem, as the concentration of power in Facebook's control is an unprecedented human phenomenon. Top management at Facebook has repeatedly expressed its intention to modify the course of the company to better suit what company management consider the objectives of society (Bergstein, 2017).

This phenomenon, largely driven by “technology natives” who have been surrounded by technology since birth, has the potential to effect a change in the theories we use to explain technology use (Vodanovich, Sundaram, & Myers, 2010). Studies of the use of SNS represent foundational work for how these theories might change. This study focuses on use specifically related to social capital enhancing activities. It seeks to answer the question, “What are the differences in the social-capital enhancing use of two top social networking sites (SNS), of contrasting architectures and purpose?”

## **SOCIAL NETWORKING HAS BECOME A FUNDAMENTAL ELEMENT OF INDIVIDUAL DEVELOPMENT AND SUPPORT**

The recent suggestion by Steinfield, Ellison et al. (Steinfield, Ellison, Lampe, & Vitak, 2012) that the Internet is “not a substitute for other forms of interaction, but (additive to or a supplement)” to other forms of communication appears to be less and less the case in many parts of the world. This wave of change is emerging in spite of the fact that a digital divide remains for economic reasons in many parts of the world.

Young adults have special support needs during their early development, beginning in early teenage years, and Internet use has been extensively studied as a source of identity development and social connectedness. It is well established that Internet usage can be a basis of a sense of “identity, competence, and social connectedness” and many theorists, including Erikson (McLeod, 2013), stress the essentiality of psychosocial and identity formation during development. The Internet provides an important environment and context for identity testing and experimentation (Bannon, McGlynn, McKenzie, & Quayle, 2015). In the study by Starcic, Barrow, Zajc, and Lebenicnik (Starcic, Barrow, Zajc, & Lebenicnik, 2017) students perceive that SNSs can influence their professional identity development as SNSs can provide the opportunity to network with professional organizations, publicize and discuss work experiences within networks, and discuss about professional events. In addition, students believe that visibility on SNSs can influence future job prospects. Many researchers find the influence of Internet channels as a pillar of identity development to be a generally positive but unstoppable social phenomenon.

Social capital among young adults is multifaceted. Social capital theorists have defined bridging and bonding subtypes to which the subtype of maintained social capital was recently added (N. B. Ellison, Steinfield, & Lampe, 2010; Nicole B

Ellison, Steinfeld, & Lampe, 2007). In addition negative social capital has arisen with the definitions of enemies in online participants (Johnston et al., 2011).

Early developers of social capital theory include Coleman, Putnam and others (Nicole B Ellison, Rebecca Gray, Cliff Lampe, 2014). In the definitions of social capital developed by Coleman and Bourdieu, social interactions can be described as occurring within the “social space” consisting of “force relations” between both the amount and the different types of capital and the respective participants (Coradini, 2010). As a result, “social position... results from the amount and composition of the capital” wielded by individuals in the group context. Bourdieu pointed out social capital is unique in that capital “held by an individual agent is increased by the capital possessed by proxy. . .of their connected groups” (Coradini, 2010).

Social capital is defined in a wide variety of ways across different fields. For this paper, we refer to the definition by Coleman, later adopted by Ellison (Coleman, 1988; Nicole B Ellison et al., 2007) that social capital “refers to the resources accumulated through the relations among people.” Social capital enables an individual to leverage these resources to achieve desirable outcomes such as upward social mobility. Examples of social capital enhancing uses include searching for financial, political, or government information online (DiMaggio & Hargittai, 2001). In general, the use of social capital leads to better social conditions across an organization or society as greater wealth and connections among members lead to safer communities with better social services and financial well-being. On the other hand, the cohesion and trust that accrues from drawing on social capital in a given community has a negative side, as non-members may be excluded from the benefits enjoyed by community members, hence reinforcing social inequities (Hargittai, E. and Hinnant, 2008; Steinfeld, Ellison, & Lampe, 2008).

## **SOCIAL CAPITAL POWER – OBTAINING THE COOPERATION OF OTHERS**

Two forms of social capital - bridging and bonding forms of social capital - have been identified and studied in large social networks such as Facebook (Y. Jung, Gray, Lampe, & Ellison, 2013; Nicole B Ellison, Rebecca Gray, Cliff Lampe, 2014). Bridging and bonding forms of social capital have been studied in large social networks such as Facebook and some researchers employ measures of bridging and bonding social capital in terms of psychometric tools such as the Internet social capital scales (ISCS) (Appel et al., 2014; Bannon et al., 2015).

A third form of social capital that leverages resources continues to emerge as a potent social phenomenon (Nicole B. Ellison, Steinfield, & Lampe, 2007; Nicole B Ellison, Rebecca Gray, Cliff Lampe, 2014). Countless individuals often use Facebook in an attempt at “resource mobilization attempts... broadcasted request for assistance” in various ways (Y. Jung et al., 2013). Consistent with this definition Social Capital Power in the Facebook era has been described as “a prominent framework that examines the resources (e.g., assistance) individuals can access from their social networks” (Y. Jung et al., 2013).

Recent research on requesting favors on social networks in which the offers of assistance are visible in the network suggest that practice in building social network based resource requests, with corresponding offers of help, may increase the participants’ social capital.

Civic participation via social networks exemplifies online resource mobilization. Online civic participation through social networks implies leveraging the cooperation of others. Younger people in general are blending online social activities and off-line social activities in new ways, and this extends to such social activities as civic participation, such as in democratic processes. “Social capital theory is mainly about participation in cooperative networks of individuals and institutions...” (Hirzalla & Zoonen, 2011) “whereas online and off-line group social civic engagement have their respective locations, or ‘places’” (Hirzalla & Zoonen, 2011). On the other hand, online civic participation activities require fewer resources and less geographic accessibility, and thus the potential to mobilize resources online is more available to resource-limited individuals than ever in history.

The rapidly increasing use of social networking and thus the force of social capital and social networking is spread widely among every demographic subgroup imaginable. The demographic distribution of social network users is continuously evaluated, and it is not dominated by millennials. In the United States, baby boomers are at least as likely as millennials to use advanced online services. Gaming is dominated by younger groups such as millennials, but most other ordinary online functions are equally represented by generations Y, X and boomers.

## **RECENT STUDIES ON SOCIAL CAPITAL FORMATION AND THE EMPLOYMENT RELATIONSHIP**

Several additional recent articles shed light on the relationship between social capital formation and social media in the professional employee environment. These relationships are especially interesting when investigated among prospective employees.

For example, a recent study in Israel, limited to Israeli professionals, looked at professional information disclosure for building professional social capital on different types of social networks. The researchers found interesting differences between the development of professional social networks on Facebook and LinkedIn, in which LinkedIn professional disclosures showed evidence of a network of working friends that changed the character of these disclosures. Facebook entries appeared to have been prepared for a broader audience and general professional introduction (Zhitomirsky-Geffet & Bratspiess, 2016). Another study found that corporations typically use two SNSs, Facebook and LinkedIn, for internal professional communications, but will adopt additional SNSs for external, promotional purposes. Thus, employees are automatically guided to the use Facebook and/or LinkedIn for professional social capital building. Researchers found significant differences between industry type in adoption of specific categories of SNSs (Kim, Kim, & Nam, 2014).

Social media capital building disclosures can have unexpected effects on the professional capital building environment. An intriguing study from Australia found that use of social media in the professional working environment tends to lead to considerable tensions between employees and their employers on several important bases. One of the issues of considerable concern to both employees and employers is the now widespread practice of employers using employee lifestyle disclosures on SNS to investigate potential employees and profile them. Both professional and personal social capital information are gathered by the employers. Profiles of reputation and ability to perform are formed from social capital disclosures without consent or knowledge of the potential employee (McDonald & Thompson, 2016).

## **INCREASES IN EMPLOYER SNS SEARCH SOFTWARE AND METHODS**

The focus on using professional and personal social capital- building postings among programming professionals has gotten to be so routine that at least one group

has developed an automatic search engine prototype to evaluate large numbers of potential employees based on their LinkedIn, Twitter, and technical posting site profiles. This site extracts from these SNS all mention of programming languages, which are then hierarchically categorized according to technical difficulty, enabling evaluation of thousands of potential applicants very quickly (Giri, Ravikumar, Mote, & Bharadwaj, 2016).

Despite such increasingly well-known activities by employers, undergraduates remain particularly naïve about the importance of professional versus social capital building activities. One study from the UK found that deficiencies in comprehending the importance of professional versus social capital building affect the employability of many undergrads. The boundaries between social and professional capital building on SNS are evidently not well understood, leading to an inadequate focus on the professionally focused SNS, LinkedIn, versus the more socially focused SNS, Facebook. Successfully employed postgraduates spent four times as much time and effort on building their LinkedIn professional social capital profile. The study concluded that educational institutions should address this knowledge and employability gap (Benson, Morgan, & Filippaios, 2014).

### **MODERATING INFLUENCES ON DISCLOSURE IN SNS REMAINING COMPLEX AND MULTIFACTORIAL**

Given the established practice by employers of screening employees using social media and the evolving awareness of these trends by those seeking employment, recent research is focused on the development of the effects of self-disclosure on online image is moderated by self-efficacy. A recent large study, for example, showed that focused professional image development efforts by jobseekers included careful efforts to create a professional image, whereas relatively careless remarks or what could be considered improper self-disclosure was affected by other moderating variables, such as age and education (El Ouiridi, Segers, El Ouiridi, & Pais, 2015). The influences of disclosure of personal information in social media in the context of the online job search is obviously multi-factorial, complex, evolving, and exhibiting varying characteristics in varying job-seeking environments. Self-concept as a professional overall, as well as the perceived self-efficacy of the mode of social media as a job-seeking tool, appear to be primary on exactly what is disclosed in social media by job seekers (El Ouiridi et al., 2015).



## **THE SPECIAL STATUS OF FACEBOOK AND LINKEDIN**

### **FACEBOOK AND LINKEDIN – DIFFERENCE IN SOCIAL CAPITAL PURPOSES?**

We adopt the definition of SNS from Boyd and Ellison (Boyd, 2008) as: “web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.”

While most past studies have treated SNS and related Internet tools in the aggregate, Hargittai (Hargittai, E. and Hinnant, 2008; Hargittai & Shafer, 2006; Hargittai & Walejko, 2008) found that there were significant differences in the use of various SNS by different groups. SNS usage varied by ethnicity, parental education, living context, number of places to access the Internet and experience with the medium. Hargittai’s (2008) work differentiated usage across Facebook, MySpace, Xanga, and Friendster. While Facebook remains the top social networking site, the three other SNS have steadily lost users and/or have closed down. The current study updates Hargittai’s work by contrasting usage of two top SNS which have grown in stature in the second decade of the 21<sup>st</sup> Century – Facebook, which remains the top SNS for social interaction and Linked which is recognized as the top SNS for professional networking. While newer SNS platforms like twitter, snapchat, and Instagram have risen in prominence, their more focused emphasis on limited text, media, and ephemeral content place them in a different category of SNS from the more general-purpose sites like Facebook and LinkedIn.

LinkedIn and Facebook have the largest and longest-established use for personal and professional communications that could conceivably be applied for social capital development. LinkedIn identifies itself as having staked its claim as the professional profile of record” as early as 2006 (LinkedIn, 2014) and has been accepted in this context in by industry and working professionals (Bersin, 2012; Claybaugh & Haseman, 2013; Zhitomirsky-Geffet & Bratspiess, 2016) and Facebook is widely known as a venue for both social and professional interaction. By contrast, Snapchat and Instagram are designed for casual and temporary social communications (Bayer, Ellison, Schoenebeck, & Falk, 2016; Piwek & Joinson, 2016).

Aside from their consistent placement among top SNS sites, Facebook and LinkedIn provide a useful contrast that the authors leverage in this study. These two sites are on opposite sides of the spectrum in terms of purpose and architecture,

at least when it comes to the original vision of its founders. Facebook's primary purpose is social interaction while LinkedIn's primary purpose is professional networking. As with all technologies, actual use many not match the original intent of its founders and developers. One of the questions this paper seeks to explore is whether actual use of a given SNS matches its original purpose.

Aside from the contrast in purpose, a key difference between LinkedIn and Facebook is the level of user control over the display of information (Papacharissi, 2009). As summarized in Table 1, Facebook provides users with the flexibility and tools to build a relatively personal and customized site while LinkedIn limits users to a business-oriented presentation of information via templates that follow resume formats. These contrasting architectures result in relatively higher interactive use on Facebook, and more static, less interactive use on LinkedIn.

**Table 1: Summary Contrasting Architectures of Facebook and LinkedIn (Papacharissi, 2009).**

<b>Point of Comparison</b>	<b>Facebook</b>	<b>LinkedIn</b>
Imprint	A social utility that connects you with people around you	A business-oriented social networking site, which brings together your professional network
Criteria for membership	Publicly accessible	Publicly accessible
Access to private information	Complex system of access and control that produces a space that is used more for social interaction  Allows users to determine the balance between what is made public and what remains private, allowing users to control access	System of access and control mirrors that of the professional world – “online Rolodex” emphasis on connecting with minimal opportunity for interaction  Provides members with a “professional sense of place” enabling and suggesting professional modes of interaction – referrals, introduction, networking, professionally

		related questions, answers, and conversation
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## HYPOTHESES

This study will test several hypotheses on the relationships among type of SNS (social vs professional), demographic factors, and social capital enhancing activities.

**Architecture.** Given the close alignment between the architecture of LinkedIn's professional-oriented site and social capital enhancing activities such as researching job information, we expect that:

**H1.** Users will be more likely to use professional SNS than social SNS for social capital enhancing activities.

**Age.** The use of online services among age groups in the U.S. continues to evolve. Young adults are more likely than the aged to be using certain types of SNS (Jones & Fox, 2009; Zickuhr, 2010) and lead in their use of specific communication tools (instant messaging, chats). Examples include engaging in hobbies or entertainment (Fox & Madden, 2005; Jones & Fox, 2009; Madden & Rainie, 2003; Zickuhr, 2010), obtaining information on leisure time activities (Howard, Rainie, & Jones, 2008), and seeking health materials (Cotten & Gupta, 2004). By contrast, older users are more likely to use the Internet to conduct job searches and use government sites (both capital enhancing) than younger users (Fox and Madden 2005). Furthermore, younger people tend to rate highly the importance of SNS in their everyday life (Hargittai 2007). Hence we propose that:

**H2a.** Younger users will be more likely than older users to use social-oriented sites for social capital enhancing activities,

**H2b.** Older users will be more likely than younger users to use professional-oriented sites for social capital enhancing activities.

**Income.** Higher income levels tend to be associated with higher levels of social capital enhancing activities on SNS (Hargittai, E. and Hinnant, 2008; Junco, Merson, & Salter, 2010) higher importance given to SNS (J.-Y. Jung, Qiu, & Kim, 2001), greater texting, and greater likelihood of cellphone ownership (Cotten & Gupta, 2004). Students with at least one parent with a graduate degree, associated with higher income levels, are also more represented in Facebook. Hence, we propose that:

**H3.** Higher income levels will be associated with greater use of both social-oriented and professional-oriented sites for capital enhancing activities.

**Experience.** Experience with the Internet and SNS are associated with more capital enhancing activities (Hargittai, E. and Hinnant, 2008). Specifically, it is not how long someone has been online but amount of time on the web that is associated social capital enhancing activities (Hargittai & Walejko, 2008). Hence, we propose:

**H4.** Experience will exhibit a positive relationship with capital-enhancing activities on both professional and personal social networking sites.

**Gender.** Prior research has shown that the differences in Internet use by gender have all but disappeared (Ono & Zavodny, 2003; Wasserman & Richmond-Abbott, 2005) (even though there are differences in specifics (Foehr, 2006; Hargittai & Shafer, 2006; J.-Y. Jung et al., 2001)). Hence, we expect that there will be no differences in the use of professional and social-oriented sites based on gender.

**H5.** Gender will not be associated with differences in social capital enhancing activities on both professional and personal SNS.

**Ethnicity.** Past research has shown ethnicity based differences in the use of SNS (Hargittai, 2008; Hargittai & Walejko, 2008; Junco et al., 2010). Hence, we propose:

**H6.** Ethnicity will be associated with differences in social capital enhancing activities on both professional and personal SNS.

## METHODS

The authors developed a survey based on the work of Hargittai and Hinnant (2008) and Hargittai (2008) and Jung, Qui, & Kim (J.-Y. Jung et al., 2001) on the capital enhancing activities of young adults on the Internet. A listing of the survey items corresponding to each study variable is provided in Tables 2 and 3, and the entire survey is presented in Appendix A. The surveys were administered in Fall 2009 and Spring 2010, during a period where social media was just about to start a period of peak growth. Facebook had at this point grown to 500 million users in seven years from its founding. It would double that number in only two years to one billion users in 2012 (Madrigan, 2012). LinkedIn had grown to 75 million users in 2010 to more than double this number at 200 million in 2012 (White, 2013).

Study participants were in several introductory Management Information Systems courses taken by undergraduate business majors in two campuses of a large, masters

only public university system. Students were given incentives to complete the surveys in the form of course credits, although there was no penalty for non-participation in the study. The average age of study participants was 25.86 making the participants part of a group that is widely recognized as comprising the primary users of SNS (Hargittai, E. and Hinnant, 2008). In 2016, 86% of users aged 18-29 years use at least one social media site, compared to 80%, 64%, and 34% for users aged 30-49, 50-64, and 65+ respectively (Pew Research Center, 2017).

**Table 2: Survey Items corresponding to study independent variables**

<b>Independent Variable</b>	<b>Survey Item</b>
Age	Respondent asked for Year of Birth
Income	Respondent asked for Mother's and Father's highest education level
Years on Internet	Respondent asked "Approximately how many years have you been using the Internet?"
Number of Profiles	Respondent asked "How many profiles do you have on social network websites?"
Gender	Respondent asked to indicate Male or Female Gender
Ethnicity	Respondent asked to indicate ethnicity as American Indian, African American, Asian, Hispanic, White, or Other. (1)

(1) – To designate ethnicity, we use the term White instead of Caucasian. The word Caucasian was created with along four other races, Ethiopian, Mongolian, Malayan, and Red, by Johann Blumenbach. However, this five-race topology was later perceived as a flawed system of racial classification and thus invalidated (Moses, 2017). Even though the term Caucasian is still used in the U.S. official government documents as well as in social science and medical research, we feel that it is more appropriate to use the term white, which is more internationally recognizable.

### ***Dependent Variables***

Student scores on the study dependent variables of Internet Connected Index (ICI) based on Jung et al. and Social Capital Enhancing Activities (SCE) based on Hargittai & Hinnant (Hargittai, E. and Hinnant, 2008; J.-Y. Jung et al., 2001) were built from specific survey items and coded items as listed in Table 3.

ICI is a measure of the importance of a communications technology – e.g. the Internet, SNS—in a person's everyday life (Loges & Jung, 2001). It is composed of three dimensions – history and context, scope and intensity, and centrality in one's life. This study only includes the first two dimensions: history and context,

and scope of intensity in the ICI measure. We chose to omit the third dimension due to its subjective nature and hence greater potential for bias, particularly given the increased pervasiveness of SNS, the Internet, and computers in the present day versus 2001 when the ICI was developed.

**Table 3: Survey Items corresponding to components of the study dependent variable**

<b>Measure</b>	<b>Operationalization</b>	<b>Survey Items</b>
Internet Connectedness Index (ICI) <b>history and context</b> dimension component: Home Computer History (1) (Jung, Qui, & Kim, 2001)	Number of years a person has owned a personal computer at home (Jung, Qui, & Kim, 2001)	How many years have you been using the Internet?
ICI <b>history and context</b> dimension component: Task Scope (Jung, Qui, & Kim, 2001)	Breadth of tasks for which a person connects to the Internet – work-related, school-related, personal-related (Jung, Qui, & Kim, 2001)	Check the boxes below to indicate if you have used the following SNS for each activity listed in the first column of each row (Facebook & LinkedIn)
ICI <b>history and context</b> dimension component: Site Scope (2) (Jung, Qui, & Kim, 2001)	Number of places where a person connects to the Internet (home, work, school, etc.) (Jung, Qui, & Kim, 2001)	Where do you access the internet?
ICI <b>scope and intensity</b> dimension component: Goal Scope (Jung, Qui, & Kim, 2001)	Number of media-system dependency goals pursued through online activities (social understanding, self understanding, action orientation, interaction-orientation, solitary play, social play) (Jung, Qui, & Kim, 2001)	Check the boxes below to indicate if you have used the following SNS for each activity listed in the first column of each row (Facebook & LinkedIn)
ICI <b>scope and intensity</b> dimension component:	Internet activities undertaken other than	How familiar are you with the following SNS?

(Jung, Qui, & Kim, 2001)	email (Jung, Qui, & Kim, 2001)	
<b>ICI scope and intensity</b> dimension component: Time Spent on Interactive online activity (Jung, Qui, & Kim, 2001)	How often individuals participate in any online activities interacting with others (Jung, Qui, & Kim, 2001)	How many linkages do you have for each of the SNS sites?
Social Capital Enhancing Activities (Hargittai & Hinnant, 2008) (3)	Users visits to web sites that relate to national and international news, politics, health and financial information, government services, and the presidential elections (Hargittai & Hinnant, 2008)	Check the boxes below to indicate if you have used the following SNS for each activity listed in the first column of each row (Facebook and LinkedIn)

(1) - The history and context dimension refers to the length of time and variety of contexts that one has had to experience a communications technology.

(2)- The scope and intensity dimension captures the range of personal goals one attempts to meet through digital communications, the range of online applications one uses, and the amount of time spent meeting personal goals using the range of online applications at one's disposal.

(3) - Our use of a single assessment question (with multiple boxes) for social capital enhancing activities is justified in psychometric practice. Specifically, Hoepfner, Kelly et al. (Hoepfner, Kelly, Urbanoski, & Slaymaker, 2011) state that "There are also psychometric advantages associated with the use of single-item measures. The use of a single-item measures reduces the chance of common method variance, where spurious correlations are observed due to the use of the same response format rather than the content of items. Additionally, the face-validity of the single-item measure should not be discounted. Here, it is important to note that the intended use of single-item measure is to assess unidimensional or global constructs, where it has been shown that single-item measures have comparable or equal predictive validity compared to multiple-item measures for constructs in psychological, marketing, and medical research." In addition, university students are subject to frequent, extensive and burdensome surveys, leading to survey fatigue (Porter, Whitcomb, & Weitzer, 2004) and resulting in highly problematic response distortions.

**Table 4: Goal Scope Coding Scheme based on Jung, Qui, & Kim (2001)**

<b>Code</b>	<b>Definition</b>
Social Understanding	To stay on top of events and groups that you care about
Self Understanding	To express yourself or your opinions

Action Orientation	To accomplish business, financial, or work tasks
Interaction Orientation -	To get advice on how to deal with other people, such as doctors and other health professionals
Solitary Play	To play or amuse yourself
Social Play	To play for social reasons like making new friends

Each subject's score on our second dependent variable measure, social capital enhancing (SCE) activities, based on Hargittai and Hinnant (2008), is the total number of the following activities that students identified as a use they have for an SNS: got news, looked for info about products, sought news and articles about politics, sought information about the government, sought information about a job, did work online, sought health information, did research for school, obtained training, sought financial information, bought/sold stocks, bonds, etc. For each respondent, a separate SCE score for each SNS – Facebook and LinkedIn -- was calculated.

To test hypothesis one, paired sample t-tests were conducted in order to compare respondents' social capital enhancing activity between the two social media platforms of Facebook and LinkedIn. This statistical method was used since for each respondent, we measured the same dependent variables (SCE and ICI) on two social media platforms. That is, for each respondent, we had measures of SCE and ICI on Facebook and measures of SCE and ICI on LinkedIn. A paired sample t-test was used to determine if there was a significant difference among the SCE and ICI scores across the two social media platforms.

Hypotheses two to six were tested for each social media platform using multiple regression analysis. This analysis was conducted to determine the relationship between the independent variables of age, income, experience, income and ethnicity, and the dependent variable of ICI.

## RESULTS

Table 5 provides descriptive statistics on all the independent and dependent variables for the entire sample (n=292). These results strongly suggest that the socially-oriented SNS Facebook tends to be used more for social capital enhancing activities than the professionally-oriented SNS LinkedIn (Average Facebook ICI of 6.7 vs. LinkedIn ICI of 3.83 for the entire sample; Average Facebook SCE of 1.75 vs. LinkedIn SCE of 0.16). The average age for the sample (25.86) is higher than the average age of traditional College students. Average years on Internet (10.48) and Average number of SNS profiles (2.1) suggest that the sample was composed



of experienced users. The sample was balanced between of males and females (135 vs. 157) and was primarily composed of white persons, with the next largest ethnic category (Asians, n=70) totaling less than half of those self-identifying as white (n=164).

**Table 5: Descriptive Statistics for Study Variables**

Variable	Mean	S.D	N
Average ICI Facebook	6.7	1.77	292
Average ICI LinkedIn	3.83	1.16	292
Social Capital Enhancing Activities Facebook	1.75	1.26	292
Social Capital Enhancing Activities LinkedIn	0.16	0.502	292
Age (1)	25.86	5.67	292
Income	8.24	2.39	292
Years on Internet	10.48	2.802	292
Number of Profiles	2.1	1.32	292
Gender -- Male			135
Gender -- Female			157
American Indian			5
African American			12
Asian			70
Hispanic			24
White			164
Other Ethnicity			17

- (1) The students in the Business programs in the universities in which the surveys were conducted (large, public, masters only institutions with the Carnegie classification: Master's Colleges and Universities: Larger Programs) include a significant proportion of more mature, working students who are completing their degrees, and thus the mean age is slightly above that of traditional undergraduates.

### SCE AND ICI

Table 6 shows a strong correlation between SCE and ICI for each SNS. Facebook ICI has a .519 correlation to Facebook SCE ( $p \leq .01$ ) and LinkedIn ICI has a .732 correlation with LinkedIn SCE ( $p \leq .01$ ). Because of these strong correlations, subsequent findings will only report on findings using ICI as the dependent variable.

**Table 6: Correlations among Dependent Variables**

	<b>Average ICI Facebook</b>	<b>Average ICI LinkedIn</b>	<b>Social Capital Enhancing Activities Facebook</b>	<b>Social Capital Enhancing Activities LinkedIn</b>
<b>Average ICI Facebook</b>	1	***0.428	***.519	***0.173
<b>Average ICI LinkedIn</b>		1	**0.149	***0.732
<b>Social Capital Enhancing Activities Facebook</b>			1	*0.108
<b>Social Capital Enhancing Activities LinkedIn</b>				1
*p<= 0.10, ** p<=0.05, *** p<= 0.01				
N=292				

A paired sample t-test was conducted to assess the statistical significance of the differences in Average ICI for Facebook vs. Average ICI for LinkedIn, with results suggesting that there are significant differences in the social capital enhancing activities of subjects across the two platforms. Facebook usage resulted in a higher ICI than LinkedIn usage ICI. Contrary to hypothesis 1, the findings of this study show that users were more likely to use socially-oriented SNS (Facebook) than professionally-oriented SNS (LinkedIn) for social capital enhancing activities. The mean difference in Average ICI (Facebook ICI minus LinkedIn ICI) was 2.86 ( $t = 29.625$  with  $p \leq .01$ , see Table 7).

**Table 7: Paired Samples t-test to compare Average ICI on FB and LI**

Average ICI	Mean	Mean Difference Facebook-LinkedIn	t
Facebook	6.7	2.86	***29.625
LinkedIn	3.83		
*p<= 0.10, ** p<=0.05, *** p<= 0.01			
N=292			

Multiple regression analysis shows that the independent variables of Age, Income, Years on Internet, Number of Profiles, Gender and Ethnicity explain .348 (p<=.01) of the variance in Average ICI for Facebook and .278 of the variance in Average ICI for LinkedIn. R-square and F statistics are significant at the .01 level for both models (Table 8).

**Table 8: Results of Multiple Regression Analysis**

Dependent Variables	Standardized Coefficients	
	Average ICI Facebook	Average ICI LinkedIn
Age	***-0.273	**0.104
Income	**0.125	-0.022
Years on Internet	0.080	**0.123
Number of Profiles	***0.458	***0.474
Gender (Male = 1)	0.036	0.029
American Indian	0.027	-0.031
African American	**-.0144	**-.0141
Asian	-0.153	-0.074
Hispanic	-0.050	-0.038
White	0.088	-0.077
R-square	0.348	0.278
F-statistic	***14.973	***10.806
*p<= 0.10, ** p<=0.05, *** p<= 0.01		
N=292		

### ***Age Group***

Age is significantly related with average ICI for both Facebook (-.273) and LinkedIn (.104) (Table 8). Age is negatively correlated with average ICI for Facebook and positively correlated with average ICI for LinkedIn, supporting hypothesis 2.

### ***Income***

Income is significantly and positively related only with average ICI for Facebook (.125) and not for LinkedIn (Table 8). Hence hypothesis 3 is supported by the findings of this study for the socially-oriented SNS Facebook but not for the professionally-oriented SNS LinkedIn.

### ***Experience Online***

Years on Internet, as a measure of experience with technology, is significantly and positively related only with average ICI for LinkedIn (.123) and not for Facebook (Table 8), supporting hypothesis 4 for LinkedIn but not for Facebook.

Number of profiles, as a measure of experience with technology, is significantly and positively related with both average ICI for Facebook (.458) and average ICI for LinkedIn (.474) (Table 8). Hence, hypothesis 4 is supported for both Facebook and LinkedIn when experience is measured using number of SNS profiles that a user has established.

### ***Gender***

As expected, gender was not significantly related with average ICI for both Facebook and LinkedIn, supporting hypothesis 5.

### ***Ethnicity***

Among the ethnicity variables, only the African American variable is significantly and negatively related with both average ICI for Facebook (-.144) and average ICI (-.141) for LinkedIn (Table 8). As listed in Table 5, there were only 12 individuals self-identifying as African-American among the 292 respondents in the study (4%), the authors cannot make reasonable claims about the validity of this finding. The study sample is overwhelmingly composed of respondents who have self-reported as being part of the non-disadvantaged White or Asian (80%) ethnicities. Hence the study findings are inconclusive regarding hypothesis 6.

Table 9 summarizes the findings of this study with regard to the study hypotheses.

**Table 9: Study findings on Proposed Hypotheses**

<b>Hypothesis</b>	<b>Facebook</b>	<b>LinkedIn</b>
H1. Users will be more likely to use professional SNS than social SNS for social capital enhancing activities	Not Supported, opposite found. Social SNS more likely to be used for social capital enhancing activities	Not Supported, opposite found. Professional SNS less likely to be used for social capital enhancing activities
H2. Younger users will be more likely to use social-oriented sites for social capital enhancing activities while older users will be more likely to use professional-oriented sites for capital enhancing activities.	Supported	Supported
H3. Higher income levels will be associated with greater use of both social-oriented and professional-oriented sites for capital enhancing activities.	Supported	Not Supported
H4a. Experience (measured as years on Internet) will exhibit a positive relationship with capital-enhancing activities on both professional and personal social networking sites.	Not Supported	Supported
H4b Experience (measured as number of SNS profiles) will exhibit a positive relationship with capital-enhancing activities on both professional and personal social networking sites.	Supported	Supported
H5. Gender will not be associated with differences in social capital enhancing activities on both professional and personal SNS.	Supported	Supported

H6. Ethnicity will be associated with differences in social capital enhancing activities on both professional and personal SNS.	Inconclusive	Inconclusive
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## DISCUSSION

The two strongest findings of the study are that social-oriented sites are more likely than professional-oriented sites to be used for social-capital enhancing activities, and that experience measured as number of SNS profiles is positively associated with use of both social- and professional-oriented sites for social-capital enhancing activities. The finding that social-oriented site Facebook is more likely to be used than professional-oriented site LinkedIn for social-capital enhancing activities is surprising since the primary purpose of the latter is seemingly more directly linked to social capital enhancement. Additionally, previous research (Benson et al., 2014; Starcic et al., 2017) has shown that LinkedIn has progressively been utilized for e-recruitment while Facebook is perceived as the SNS for entertainment and not for business networking. Students are also aware of the different use of the two SNS and understand that LinkedIn is a professional SNS and should not be used to make friends (Benson et al., 2014).

One explanation for this finding is the contrasting architectural features of the two sites (see Table 1, above) (Papacharissi, 2009). While Facebook's architecture is more customizable and encourages interaction and engagement, LinkedIn's architecture tends to prescribe professional formats and results in static user pages. The interactive, customizable architecture of Facebook appears better than LinkedIn at enabling activities that more closely resemble users' non-SNS, non-online social capital enhancing activities. Users may instinctively gravitate towards interaction as a means of building relationships. These interactions may be primarily social and not have an explicit professional or social-capital enhancing purpose, but nevertheless build the trust and familiarity that form the foundation for building social capital. In effect, Facebook provides an online analog of the informal coffee or lunch meetings that forge bonds among professionals that then, in turn, facilitate professionally-oriented activities. LinkedIn with its more restrictive, less interactive architecture has limited facility to support such informal activities.

Another explanation may be the fact that Facebook is an SNS which young adults joined first. A study by Benson et al. (Benson et al., 2014) reveals that the average year students joined Facebook is 2008, and students did not join LinkedIn until

2011. The pattern of average use of both SNS may also play an important role: undergraduate students use LinkedIn, on average, about 1.13 hours per week while graduate students spend 4.39 hours per week on the professional SNS. However, both undergraduate and graduate students use Facebook more than 8 hours per week on average (Benson et al., 2014).

Experience, measured as number of SNS profiles, was positively associated with the use of both types of SNS for social-capital enhancing activities. This may be explained as a matter of opportunity, the more profiles a user has, the more activities he or she is likely to undertake on SNS, and the more likely these activities will include those which enhance social capital. However, there is an alternative and intriguing explanation, in light of the work that underscores how digital natives use SNS to experiment with their identities (Boyd, 2007; Turkle, 2011). Multiple SNS profiles are avenues for exploring these identities, allowing users to establish separate profiles for various identities. This latter explanation for the positive relationship between number of profiles and social capital enhancing activities would suggest that identity exploration might have a part in enhancing social capital. Multiple identities allow users to build relationships among users in multiple disparate groups, hence widening the scope of the networks they leverage to build social capital. Identity exploration also has the added benefit of enabling users to build knowledge of various domains, enhancing their ability to build relationships across various domains and extrapolate that knowledge to build relationships, and social capital in novel domains. Further study looking into the nature of the multiple profiles established by single users will shed light into the mechanisms of such multiple profiles, if any, that lead to enhanced social capital.

## LIMITATIONS

While the findings show significant differences in the use of social- and professional- oriented sites, additional measurements are needed to improve our understanding and confidence in these differences. More direct measures of use and experience could be employed to avoid bias inherent in a reliance on user perceptions of these as measured in surveys. Use can be measured more directly through logs or statistics provided by users or SNS providers, or by content analysis of user profiles. Experience can be measured more directly using survey items that ask users to demonstrate their knowledge of advanced technology concepts, much as Hargittai and Hinnant employed in their 2008 study (Hargittai, E. and Hinnant, 2008).

This study was conducted in the greater Silicon Valley region of Northern California that is a key epicenter for technology innovation. The sample itself may be biased towards advanced technology users with a greater propensity for utilizing emerging technologies for social capital enhancing activities, versus the rest of the U.S. and global users. Furthermore, usage may also be higher in this region due to peer effects, where users are more likely to go online when they are in close geographical proximity to users who have the propensity to go online or are already online (Agarwal, Animesh, & Prasad, 2009). Hence, care should be used in generalizing the study findings to users in other regions. Future studies encompassing wider geographic areas will provide a more robust picture of the use of SNS for social capital enhancing activities. By including information on usage patterns of underrepresented users in lower socio-economic classes, such studies are essential to generating the knowledge necessary to truly achieve social justice through the use of emerging, ubiquitous, widely accessible technologies such as SNS.

## CONCLUSIONS

This study highlighted differences in the use of two top social networking sites, Facebook and LinkedIn, of differing architectures, for social-capital enhancing activities. Contrary to expectations, the social-oriented Facebook was more strongly associated with social-capital enhancing activities than the professional-oriented LinkedIn. The more interactive nature of Facebook seems to provide a platform more conducive to conducting activities leading to the development of social capital. This suggests that even online, social capital enhancement incorporates a strong social networking, interactive foundation where individuals obtain key information and generate opportunities through interactive conversation with other individuals, rather than through non-interactive perusal of posted information. Users may see LinkedIn, with its more restrictive, static architecture, as stifling their ability to connect with and obtain information from individuals who may be able to provide them with information or opportunities for enhancing their social capital. Furthermore, interactive, customizable architectures such as that of Facebook provide support for informal social interactions that may be leveraged into professional interactions that lead to enhanced social capital.

Recent developments point to the unintended consequences of the finding that users rely heavily on Facebook as an information source. As Facebook has grown in stature, so has its reputation as a reliable source of news, despite evidence to the contrary. Unfortunately, this reputation and users' reliance on Facebook seems to have been exploited by groups aiming to sow misinformation (Chafkin,



2017), with significant consequences for future directions of some of the most powerful nations on earth.

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## APPENDIX A – SURVEY USED IN RESEARCH

Online Survey for article “Professional and Personal Social Networking and Enhancement of Social Capital in Young Adults”

Start of Block: Block 2

Start of Block: Demographics

Q2.1 Year of Birth

Q2.2 Gender

Male (1)

Female (2)

Q2.3 Ethnicity (Select all that apply)

American Indian (1)

African American (2)

Asian (3)

Hispanic (6)

Caucasian (7)

Other (9)

Q2.4 Which culture(s) do you most identify with?

Q2.5 Father's highest education level

▼ Elementary or less (1) ... Graduate Degree (6)

Q2.6 Mother's highest education level

▼ Elementary or less (1) ... Graduate Degree (6)

Q2.7 Year in school

Q2.8 On average, how many hours do you work each week?

Q2.9 On average, how many units do you take each semester?

Q2.10 What is your living situation (select the one that matches your situation best)

▼ Live in dorm or other school housing (1) ... Live with parents or other relatives (4)

Q2.11 On average, how many hours per day do you spend online?

Q2.12 Approximately how many years have you been using the Internet?

Q2.13 Where do you access the Internet (Please select all that apply)

Home (1)  
 Work (2)  
 School (3)  
 Internet Cafe (4)  
 Library (5)  
 Other, please specify (6)

Q2.14 How many profiles do you have on social network websites? (e.g. Facebook, MySpace, Friendster, Twitter, LinkedIn, etc.)?

Skip To: End of Survey If How many profiles do you have on social network websites? (e.g. Facebook, MySpace, Friendster, Twitt... = 0

End of Block: Demographics

Start of Block: SNS Experience

Q3.1 How familiar are you with each of the following Social Networking Sites (SNS)?

Using It (1) Have heard of it, but have never used it (2) Have never heard of it (3) Tried it once, but no more (4) Used to use it, but no longer do so (5)

Facebook (1)

MySpace (2)

Friendster (3)

Twitter (4)

LinkedIn (5)

Other (specify below) (6)

Other (specify below) (7)

Other (specify below) (8)

Q3.2 How many linkages do you have for each of the Social Networking Sites listed in the previous question?

Q3.3 Check the boxes below to indicate if you have used the following Social Networking tools for each activity listed in the first column of each row (you may check none, one, or more than one per row as appropriate).

Facebook (1) MySpace (2) Friendster (3) Twitter (4) LinkedIn (5)

Checked sports scores (1)

Sent instant message (2)

Sought information about a hobby (3)

Browsed just for fun (4)

Played a game (5)

Learn about movies, books, or music (6)

Watched a video clip or listened to an audio clip (7)

Took part in a chat (8)



- Listened to or downloaded music (9)
- Sent or received email (10)
- Checked weather (11)
- Got news (12)
- Researched travel plans (13)
- Made travel reservations (14)
- Looked for info about products (15)
- Sought news and articles about politics (16)
- Purchased products (17)
- Sought religious information (18)
- Sought information on the government (19)
- Looked for a place to live (20)
- Sought information about a job (21)
- Sought health information (22)
- Did work online (23)
- Did research for school (24)
- Obtained training (25)
- Sought financial information (26)
- Participated in online auction (27)
- Bought /sold stocks, bonds, mutual fund and other financial instruments (28)
- Gambled (29)
- Uploaded pictures, video, other media (30)
- Stayed in touch with family and friends (31)
- Determined the location of friends or family (32)
- Shared news received from friends (33)
- Promote a product or service (34)
- Connect with people with similar interests (35)
- Build your network of friends (36)
- Display your popularity (37)
- Catch up on the latest news (38)
- Catch up on the latest gossip (39)
- Connect with celebrities (40)
- Learn about the life of one of your role models (41)
- (1) Strongly disagree (1) 2 (2) 3 (3) 4 Neutral (4) 5 (5) 6 (6) 7 Strongly agree (7)
- Not applicable (8)
- Receiving advertisements in a Social Networking Site (SNS) is enjoyable and entertaining (1)
- SNS advertising is a good source of timely information (2)
- advertisements provide useful information (3)
- SNS advertising is irritating (4)

Advertisements are almost everywhere on SNSs that I visit (5) Content in SNS advertisements is often useless (6) I use SNS advertising as a basis for purchases (7)

I trust SNS advertisements (8)

Overall, I like SNS advertising (9) Overall, I trust SNS advertising

(10) Q3.4 The next set of questions will ask about advertisements that you encounter in Social Networking Sites (SNS) either via pop-ups, postings by SNS participants, or other means. Please select one answer per row.

Q3.5 I am willing to receive advertisements while in a Social Networking Site

Less than once a day (1)

once a day (2)

two times a day (3)

three times a day (4)

over four times a day (5)

Q3.6 What do you do when you receive an advertising message while in a Social Networking Site?

Ignore it completely (1)

Read it occasionally (2)

Read it after accumulating too many of them (3)

Read it when I get time (4)

Read it right away (5)

Q3.7 How much do you read the advertising messages you receive while in a Social Networking Site?

Not at all (1)

Read about a quarter of most messages (2)

Read about half of most messages (3)

Read about three quarters of most messages (4)

Read the whole message (5)

Q3.8 What would make you mistrust a Social Networking Site?

Unencrypted login (1)

Invitation sent based on another user's address book entries (2)

Advertising sent without my permission (3)

Difficulty with setting privacy preferences (4)

Other (please specify below) (5)

Q3.9 What are you more likely to respond to (select as many from the list that apply)?

An email invitation sent by an SNS using information from another user's address book (1) An email invitation set by a friend that you know both online and face-to-face

(2) An email invitation sent by a friend that you know only online (3)

An email invitation sent by a work colleague (4)

- An email invitation sent by your manager (5)
- An email invitation sent by an SNS based on information that you provided to another SNS or online service (6)
- An email invitation from a brand that I respect (7)
- An email invitation from a family member (8)
- An email invitation from a salesperson (9)
- An email invitation from a brick and mortar store where you shop (10)
- An email invitation from an online or brick and mortar store that you've never visited (11)
- Q3.10 What would influence you to provide permission to allow a Social Networking Site to use your personal information for marketing messages? (you may select more than one from the list below)
- Nothing, I would never allow an SNS to use my personal information for marketing (1)
- How much I trust the SNS to use the data appropriately (2)
- How much I trust the SNS to protect the data from unauthorized access (3)
- The convenience and value of recommendations (4)
- SNS is hosted by a respected institution or organization with a well-known, well respected brand (5)
- Certification from a third party such as Trust-e or Verisign (6)
- Q3.11 What would influence your decision to purchase a product online? (you may select more than one from the list below)
- Online rating system (e.g. Amazon customer review) (1)
- Expert Reviews (e.g. CNET) (2)
- A system generated recommendation (e.g. Itunes Genius recommendations, Amazon gold box) (3)
- A recommendation from a friend you've met face to face (4)
- A recommendation from a friend you've only met online (5)
- Comments on a blog, tweet, or discussion forum (6)
- Entertaining online advertising (7)
- Informative online advertising (8)
- Product placement in a game, SNS, or other online venue that I visit (e.g. game characters using the product) (9)
- Brand of the product or service (10)
- Availability of store pickup (11)
- Easy returns (12)
- Reliability of vendor (13)
- Free shipping (14)
- Low price (15)
- Promotions (16)
- One-click purchasing (17)

- Secure transactions (18)
- Available 24/7 and globally (19)
- No crowds or parking problems (20)
- No contact with sales people (21)
- Less environmental impact (22)
- Other (please specify below) (23)