Whose Space? Differences Among Users and Non-Users of Social Network Sites

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Are there systematic differences between people who use social network sites and those who stay away, despite a familiarity with them? Based on data from a survey administered to a diverse group of young adults, this article looks at the predictors of SNS usage, with particular focus on Facebook, MySpace, Xanga, and Friendster. Findings suggest that use of such sites is not randomly distributed across a group of highly wired users. A person's gender, race and ethnicity, and parental educational background are all associated with use, but in most cases only when the aggregate concept of social network sites is disaggregated by service. Additionally, people with more experience and autonomy of use are more likely to be users of such sites. Unequal participation based on user background suggests that differential adoption of such services may be contributing to digital inequality.

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Introduction

Social network sites (SNSs) have become some of the most popular online destinations in recent years (comScore, 2007a, 2007b). Not surprisingly, this level of user attraction has been accompanied by much coverage in the popular press, including speculations about the potential gains and harms stemming from the use of SNS services (Hempel, 2005; Magid, 2006; Stafford, 2006). Academic researchers have started studying the use of SNSs, with questions ranging from their role in identity construction and expression (boyd & Heer, 2006) to the building and maintenance of social capital (e.g., Ellison, Steinfeld, & Lampe, 2007) and concerns about privacy (e.g., Gross & Acquisti, 2005; Hodge, 2006). While these areas of inquiry are all important and worthy of exploration, a significant antecedent question has been largely ignored: Are there systematic differences between who is and who is not a SNS user, and are people equally likely to join the various types of services that exist? This article sets out to address this question.

A significant challenge for studies trying to answer questions about who is and is not using SNSs is that the samples on which they are based (e.g., Ellison et al., 2007)

typically include such a small number of non-users that there is little variance present to explain differentiated basic adoption of the services. On the rare occasions when data have been available on non-users in addition to users, the focus of the studies has been elsewhere. For example, Pasek, More, and Romer (2007) have disaggregated data by site and variance on the usage of SNSs, but they look at the predictive power of SNS usage on civic engagement, employing SNSs as an independent variable, rather than exploring what explains their use in the first place. This article fills a gap in the literature by: (1) explaining differences in SNS adoption and (2) disaggregating SNS usage by specific service to see whether it is possible to predict use of one service over another based on the background characteristics of the user, information about the social context of use, and experiences with the medium.

Disaggregating usage by site also makes an important methodological contribution to the study of SNSs. As the results show, disaggregating which specific site one is researching is important, because people do not randomly select into their uses, and aggregate analyses of SNS use may make it difficult to identify important trends. This suggests that researchers should tread lightly when generalizing from studies about the use of one SNS to the use of another such service. While these sites do share commonalities, they also have distinct features—whether at the level of site design or the particular communities who comprise their user base—that may attract different populations and may encourage different types of activities. Thus, an examination of SNSs both in the aggregate and with respect to specific sites is important in order to gain a better understanding of how use of such sites is spreading across various population segments and the social implications of their usage.

Differentiating Types of Internet Uses

The New Yorker's now-classic cartoon proclaimed in 1993 that "[o]n the Internet, nobody knows you're a dog" (Steiner, 1993), suggesting that identity was so hidden online that opportunities would be widely open to all, regardless of background characteristics that may have traditionally disadvantaged some people compared to others. The idea that people would be on an equal footing online assumes that offline characteristics are not mirrored in people's online pursuits. However, subsequent research has found this not to be the case, for example, with respect to gender identity (Herring, 1993). Researchers have observed that despite initial impressions and arguments about how users shed their offline identities in online interactions (Turkle, 1995), offline identities very much carry over to online behavior (boyd, 2001; Smith & Kollock, 1999). This suggests that the Internet is not necessarily leveling the playing field in the way that the above-mentioned cartoon would have us believe, given that people bring constraints and opportunities from their offline lives with them to their online interactions and activities.

Indeed, studies looking at how different people use the Internet in their everyday lives have found systematic differences across types of users. For example, even after women caught up with men (in the United States) concerning basic connectivity

statistics, their uses continued to differ. Men have been shown to spend more time online and claim higher-level skills than women (Bimber, 2000; Hargittai & Shafer, 2006; Jackson, Ervin, Gardner, & Schmitt, 2001; Ono & Zavodny, 2003), consistent with earlier literature on women and technology use more generally (Frissen, 1995; Hall & Cooper, 1991; Herring, 1994; Livingstone, 1992). Factors such as socioeconomic status have also been shown to predict types of Internet uses (Howard, Rainie, & Jones, 2001; Livingstone & Helsper, 2007; Madden & Rainie, 2003). For example, so-called "capital-enhancing" activities (DiMaggio & Hargittai, 2002), such as looking for financial, political, or government information online, are associated with socioeconomic status (Howard et al., 2001). Moreover, the circumstances under which people use the medium—such as their autonomy (Hassani, 2006) and experience of use (Howard et al., 2001)—are also related to the purposes to which they put the medium. Research has shown that more locations where one has Internet access and more time spent online are associated with more diverse types of uses (Hargittai & Hinnant, 2005).

Research on refined understandings of the digital divide has found that even once people go online, differences exist among their online pursuits (DiMaggio, Hargittai, Celeste, & Shafer, 2004; Hargittai, 2002, 2007; Livingstone & Helsper, 2007; Mossberger, Tolbert, & Stansbury, 2003; van Dijk, 2005). Given that various background characteristics of people, the context of their Internet uses, and their level of experience have all been shown to influence types of Web uses in general, it is worth considering whether they may also relate to social network site usage in particular. That is, given earlier work on differentiated Internet use among people from different backgrounds, there is no reason to assume equal adoption of SNSs across population segments. Work that focuses solely on users of social network sites excludes, by definition, people who are not SNS users. Insofar as these people are systematically different from those who embrace these services, it is problematic not to know anything about them, since researchers thereby risk unintentionally excluding entire groups of people from discussion about SNSs.

The Challenges of Studying SNS Adoption

An important reason for the scarcity of work that predicts SNS usage is the lack of appropriate data necessary to address such questions. Despite Internet user studies starting to focus on particular online behaviors, rather than considering all online actions to be uniform (Howard & Jones, 2004; Wellman & Haythornthwaite, 2002), categorizations of online activities have remained relatively broad, making it difficult to understand who does what online, why, and how this influences the rest of people's lives. Additionally, because the popularity of SNSs is relatively recent, initial data collection efforts about Web uses did not focus on them. It is more customary to ask about the topics people encounter on websites (e.g., Internet use for the purposes of gathering information about news or health matters) than to inquire in detail about the particular sites and communities in which people may be participating. Moreover, because individuals' goals and activities on SNSs are extremely varied,

investigating their uses through traditional survey instruments poses several new and distinct challenges. Perhaps due to such methodological challenges, most related work has focused on more exploratory questions regarding SNS usage, typically relying on qualitative methods (e.g., boyd, 2008; Dwyer, 2007).

Another challenge in studying social network site usage stems from the fact that large-scale questionnaires (e.g., the Current Population Survey and the General Social Survey) have mainly focused on adult populations, with relatively few young people represented in their samples. Yet, young people are known to be some of the most likely to participate on some SNSs (e.g., Facebook's initial focus on college students and then high school students left out older people by design), suggesting that concentrating on adolescents and young adults is especially important if researchers are to gain a better understanding of how such sites are being incorporated into people's lives. Moreover, because young adults are much more wired than their older counterparts (Fox, 2004; Madden, 2006), it can be beneficial to focus studies on this population, especially if the goal is to understand refined measures of use once basic access and connectivity are controlled for.

One study has addressed questions similar to those raised here, although it focused on a somewhat different age group (12–17 year olds) and different aspects of SNS use. The Pew Internet and American Life Project administered a survey on the social network site usage of teens in late 2006 (Lenhart & Madden, 2007). Although the survey did not ask about social network site usage by service (except to inquire on which service users updated their profiles the most often), the study offers helpful insight into differences in various young people's adoption of such sites. Namely, the data suggest different uptake by age and gender within the group of 12–17 year olds in the sample and also some differences by race and ethnicity. However, the study does not present more detailed analyses and also lacks the data that would allow comparison of SNS adoption by service.

College students in the U.S. constitute an ideal population in which to study differences in particular types of digital media uses, given their high connectivity levels. Often, the lack of data on young people's experiences with information and communication technologies makes it difficult to know whether assumptions about their active online participation are warranted. It would be incorrect to assume that simply using the medium can be equated with equal use of all sites in similar ways. A systematic study of everyday digital media practices is essential to understanding how communication and information technologies are affecting the lives of different types of young adults. The next section introduces the unique data set used in this study to address these questions, followed by findings from bivariate and logistic regression analyses explaining differential social network site adoption.

Methods

The analyses presented here are based on data representing a diverse group of mainly 18- and 19-year-old college students. The study was conducted in February and

March of 2007 at the University of Illinois, Chicago, which is a U.S. urban public research university.[1] *U.S. News and World Report* (2006) ranked this campus among the top 10 national universities as regards campus ethnic diversity, suggesting that this school offers an ideal location for studies of how different kinds of people use online sites and services.

The project had the support of the First-Year Writing Program at the university, ensuring that a representative sample of the school's undergraduate student body would participate. The writing course offered through this program is the only course on campus that is required of all students; thus, enrollment in it does not pose any selection bias. Out of the 87 sections offered as part of this course, 85 took part in the study, constituting a 98% participation rate on the part of course sections. Overall, there was a final response rate of 82% based on all of the students enrolled in the course. In order to control for time in the program, this article focuses on students in the first-year class.

The survey was administered on paper instead of online. Relying on an online questionnaire when studying Internet uses could create a bias toward people who spend more time online, given that they may be more inclined to fill out the questionnaire and also, perhaps, more inclined toward higher rates of participation on the sites of research interest. The average survey completion time was approximately 30 minutes. The survey included detailed questions about respondents' Internet uses (e.g., experience, types of sites visited, and online activities) and their demographic background.

Basic demographic information was measured using standard modes of operationalization. Students were asked their year of birth, and this information was used to calculate their age, which is included in the models as a continuous variable. Male is the base gender category (male = 0, female = 1). Information about race and ethnicity was collected using the U.S. Census Bureau (2000) questionnaire format, and dummy variables are used in the statistical model, with White as the omitted category. Consistent with work by others, parental education was used as a measure of socioeconomic status (e.g., Carlson, Uppal, & Prosser, 2000; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Stice, Cameron, Hayward, Taylor, & Killen, 1999). Since asking about household income has limited utility with such an age group (both because students do not know their parents' income and because those who live in dorms may not know how to interpret "household"), and since educational level is constant in this group (every respondent is in the first year of college), parental schooling is a helpful measure. This information is included in the model as dummy variables, with some college education (but no college degree) as the base.

Both the question about living at home with parents and the question about having access to the Internet at a friend's or family member's house is included as a dummy variable, where 1 signals yes to that question, and 0 stands for no. Finally, figures for both hours spent online per week and number of years a respondent has been an Internet user are logged in the analyses, given that an additional hour or year, respectively, likely has diminishing returns as the values increase. The analyses first consider only the core background characteristics of the user (age, gender, race and

ethnicity, parental education). Then, a second model includes information about context and experience with use supplementing the core demographic variables.

The 1,060 first-year students included in these analyses represent a diverse group of people.[2] Fifty-six percent of the respondents are female, 44% are male. Almost all are 18 or 19 years old, with a mean age of 18.4 and a median of 18. Fewer than half are White and non-Hispanic. Slightly less than 8% claim African or African-American descent, almost 30% are of Asian or Asian American ancestry, and just under one-fifth are of Hispanic origin. These students come from varied family backgrounds. Over a quarter of respondents have parents whose highest level of education is high school, with an additional 20% whose parents do not have a college degree. While it may seem that sampling from a college population assumes a highly educated group, 25% of first-years at this university drop out of college by their second year (Ardinger et al., 2004) and fewer than half (43.6%) will graduate within six years of enrollment (University of Illinois-Chicago, 2004). Unlike many U.S. colleges, over half of the students at this university commute from home and live with their parents (53.1%).

Baseline access and use statistics (Table 1) for the sample suggest that the Internet is not a novel concept in most of these students' lives. On average, participants have access to the Internet at over six locations and have been users for over six years. When asked how often they go online, the vast majority report doing so several times a day. They estimate spending 15.5 hours visiting Web sites weekly (excluding email, chat, and VoIP). While there is certainly some amount of variation in access and use, there are no basic barriers standing in the way of these young adults accessing the Internet. Limits may be put on their uses due to other factors (e.g., the need to share resources at home, limited hours of access due to employment), but they all have basic access. This suggests that traditional concerns about the so-called digital divide do not apply to these students as regards basic availability of the Internet. Thus looking at such a wired group of users allows us to hold basic access to digital media constant and focus on differences in details of use instead.

Findings

Differences in Social Network Site Usage

Who uses SNSs, and are different students equally likely to use the various services available in this realm? The survey included questions about six SNSs: Bebo,

Table 1 Basic IT access and use statistics for sample participants

	Mean	Standard deviation
Number of Internet access locations	6.2	(2.1)
Number of Internet use years	6.4	(2.0)
Number of hours on the Web weekly*	15.5	(10.0)

Note: *This measure only concerns Web use and excludes time spent on email, chat, or VoIP.

Facebook, Friendster, MySpace, Orkut, and Xanga. For each, respondents were first asked to report whether they had ever heard of the site. Next, they were asked to indicate their experiences with it, using the following options: "no, have never used it," "tried it once, but have not used it since," "yes, have tried it in the past, but do not use it nowadays," "yes, currently use it sometimes," and "yes, currently use it often."

Overall, 88% of respondents are SNS users, and 74% report using at least one SNS often. Only one student claims not to have heard of any of the six SNSs included on the survey, so non-use is not a result of not being familiar with these services. Rather, despite knowing about such sites, over 12% of the sample does not use any of them.

Table 2 shows the proportion of SNS users by specific site. Facebook is the most popular service among these students, with almost four in five using it, and over half of the overall sample doing so frequently. MySpace is used by more than half of the sample, although just over one-third uses it often. The other four sites (Xanga, Friendster, Orkut, and Bebo, in that order of popularity) are significantly less widespread in this group, with each used by less than 10% of the sample.

Table 3 reports the demographic breakdown of SNS users, first in the aggregate (second column) and then by site (columns 3–6). Orkut and Bebo are excluded from the table due to their extremely low levels of use in this group.

The differences among the user populations of these services are not particularly pronounced on most variables. Some trends, nonetheless, are notable. First, the percentage of Asian/Asian American users fluctuates considerably, depending on the service. In particular, Asian/Asian American students in the sample are least represented on MySpace, whereas Xanga and Friendster are especially popular with this group. Second, students of Hispanic origin make up a considerably larger segment of MySpace users than their representation in the sample as a whole. Third, there is a relationship between parental education and use of some SNSs. In particular, students who have at least one parent with a graduate degree are more represented on Facebook, Xanga, and Friendster than they are in the aggregate sample, while students whose parents have less than a high school education are disproportionately users of MySpace.

Table 2 Familiarity and experience with social network sites among participants (percentages)

	Uses it*	Has heard of it	Has never used it	Tried it once, but no more	Used to use it, no longer
Facebook	78.8 (62.8)	99.4	14.2	3.6	3.4
MySpace	54.6 (38.4)	99.5	20.8	9.4	15.2
Xanga	6.2 (1.9)	76.4	61.7	11.8	20.3
Friendster	3.3 (1.0)	43.3	84.7	5.6	6.4
Orkut	1.6 (.6)	5.8	97.1	.5	.8
Bebo	.6 (0)	9.6	95.4	2.8	1.2

Notes: *These figures summarize the percentage of students who currently use the site "sometimes" and "often." Figures for those reporting use of the site *often* are in parentheses.

Table 3 Descriptive statistics for the sample demographics (percentages)

	Full sample	SNS users	Facebook users	MySpace users	Xanga users	Friendster users
Women	55.8	56.9	56.3	60.4	56.9	60.0
Age						
18	64.8	65.3	66.1	65.9	61.5	68.6
19	32.2	31.6	31.5	30.4	36.9	28.6
20–29	3.0	3.1	2.4	3.6	1.5	2.8
Race and Ethnicity						
White, non-Hispanic	42.7	43.2	44.9	44.0	20.6	3.0
Hispanic	18.8	18.4	14.5	25.2	9.5	3.0
African American, non-Hispanic	7.7	7.4	7.9	8.2	3.2	0
Asian American, non-Hispanic	29.6	29.9	31.6	21.3	65.1	93.9
Native American, non-Hispanic	1.2	1.1	1.1	1.3	1.6	0
Parent's Highest Level of Education						
Less than high school	7.4	7.4	6.0	10.0	1.5	0
High school	19.0	18.3	17.6	20.1	16.9	8.6
Some college	20.1	19.5	18.8	20.9	20.0	11.4
College	34.4	35.5	37.4	34.9	33.9	57.1
Graduate degree	19.1	19.2	20.1	14.1	27.7	22.9
Lives with parents	53.1	51.4	48.2	54.5	49.2	58.8

This rather simple look at the data shows that social network site usage in the aggregate attracts a diverse set of students across services, but that certain groups are more represented on some sites than others. The important methodological take-away point here—in addition to the substantive ones about specific groups of users—is that when studying users of one SNS, researchers should exercise caution in generalizing the findings to users of another social network site.

Another way to look at the data is to consider the levels of SNS popularity by type of user attribute. Table 4 presents SNS usage statistics broken down by gender, race and ethnicity, and parental educational background. This breakdown is presented for SNS use in the aggregate and then separately for Facebook, MySpace, Xanga, and Friendster. (Due to Bebo's and Orkut's low rate of use in this sample, no disaggregated figures are presented for those two sites.)

Table 4 shows significant differences according to type of user. When it comes to aggregate SNS usage, women are more likely to use such services than are men, but once disaggregated by type of site, depending on the service, the differences all but disappear. That is, while female students in the sample are much more likely to use MySpace, there is little difference between young women and young men in the group when it comes to Facebook, Xanga, or Friendster use.

Regarding race and ethnicity, the most pronounced findings concern students of Hispanic and Asian origin. Hispanic students are significantly less likely to use Facebook (60% compared to 75% or more for other groups), whereas they are much

Table 4 Percentage of different groups of people who use any SNS and specific social network sites[+]

	Any SNS	Facebook	MySpace	Xanga	Friendster
Gender					
Male	85*	78	49***	6	3
Female	89*	80	59***	6	4
Race & ethnicity					
White, Non-Hispanic	89	83**	57	3***	0***
Hispanic	86	60***	73***	3*	1*
African American, NH	84	80	58	0	0*
Asian American, NH	88	84**	39***	13***	10***
Native American, NH	83	75	58	8	0
Parental education					
Less than high school	88	64***	73***	1*	0*
High school	83*	73*	57	6	2
Some college	85	74*	57	6	2
College	90*	86***	55	6	6
Graduate degree	88	83	41***	9*	4

Notes: + Use is defined as "use sometimes" or "use often." *$p < .1$, **$p < .01$, ***$p < .001$

more likely than others to use MySpace (73% among Hispanic students compared to 58% or less among all others). In contrast, like White students, Asian and Asian American students are much more likely to use Facebook than others, but they are significantly less likely to use MySpace. Additionally, this group of students is especially active on Xanga and Friendster compared to others.

There are also significant differences according to parents' level of education. The most pronounced finding is that students whose parents have less than a high school degree are significantly less likely to be on Facebook and are significantly more likely to be MySpace users. In contrast, those who have at least one parent with a college education are significantly more likely to be Facebook users, while those who have at least one parent with a graduate degree are considerably less likely to spend time on MySpace. Xanga also seems to appeal more to those whose parents have higher levels of education. However, since there is a relationship between parental education and a student's race and ethnicity, it is best to look at these associations using more advanced statistical techniques that allow other factors to be controlled while the relationship between the various background variables and SNS usage is examined. The next section does this by considering what predicts SNS use on the whole and with regard to specific sites when controlling for other factors in the model.

Explaining Differences in SNS Use

In this section, using logistic regression analyses, I look at the relationship of several factors and SNS usage concurrently.[3] I first consider the relationship of the

background variables to any social network site usage (Table 6), followed by an examination of the likelihood of using four specific sites: Facebook, MySpace, Xanga, and Friendster (Table 7). This approach is helpful, in that it isolates the relationship of various background characteristics and SNS usage while controlling for other factors.

Explaining Any SNS Use

The findings presented in Table 5 suggest that numerous factors influence whether a student uses social network sites, while the results in Table 6 suggest that the predictors are not uniform across different services. The figures presented in both tables are "odds ratios," meaning that any number greater than 1 constitutes a higher propensity to engage in SNS usage, whereas a number less than 1 suggests that the type of characteristic lowers the likelihood of social network site usage. First, I consider the findings for overall SNS usage, followed by an examination of specific site uses separately.

The first column in Table 5 shows how core background characteristics are associated with any SNS use. The only variable in the core demographic model that is related to SNS use at a statistically significant level is gender. Women are more likely to use SNS than their male counterparts are. This finding is consistent with literature on women's larger propensity to engage in person-to-person communication online as compared to men (e.g., Pew Internet and American Life Project, 2000). In this aggregate model with demographic background characteristics only, other factors, such as a student's race and ethnicity and parental schooling level, do not show a statistically significant relationship with use of SNS.

Once more variables are added to the model, additional correlates of use emerge (see the second column on Table 5). Gender remains an important predictor of SNS use, while the other demographic variables continue to show no statistically significant relationship with aggregate SNS usage. However, in addition to gender, both context of use and experience with the medium are related to the adoption of such services. In particular, students who live at home with their parents are considerably less likely to use SNSs than those who live with roommates or on their own. Having Internet access at a friend's or family member's place shows the opposite relationship: Such resources increase the likelihood of use considerably. Regarding experience, how long someone has been online is not related to SNS usage; however, time spent on the Web is. This is not surprising, since SNS usage can take a lot of time. In fact, it may be SNS use, precisely, that results in these people spending more time online. Before offering an interpretation of some of the above findings, I turn to an examination of specific site usage.

Explaining Specific SNS Use

The columns in Table 6 present results of models predicting the use of Facebook, MySpace, Xanga, and Friendster, respectively. As a reminder, use of any one service is not contingent upon any other. That is, respondents could indicate use of any or all

Table 5 Results of logistic regression analyses explaining SNS use (standard errors in parentheses)

	SNS use(any one of the four SNS)	
	Background only	Full model
Age	0.946	0.950
	(0.102)	(0.112)
Gender	**1.563***	**1.660***
(Male = 0, Female = 1)	(0.307)	(0.333)
Hispanic	0.803	0.919
	(0.220)	(0.259)
African/African	0.606	0.621
American	(0.212)	(0.226)
Asian/Asian	0.966	1.007
American	(0.227)	(0.243)
Parents' education:	1.294	1.799
Less than high school	(0.553)	(0.815)
Parents' education:	0.852	0.905
High school	(0.242)	(0.262)
Parents' education:	1.496	1.392
College degree	(0.410)	(0.387)
Parents' education:	1.194	1.057
Graduate degree	(0.365)	(0.329)
Living with		**0.640***
Parents		(0.135)
Has Net access @		**2.022****
friends'/family's		(0.537)
Hours on Web/		**1.431****
week (logged)		(0.186)
Years online		0.957
(logged)		(0.262)
N	1,032	1,011
Chi^2	11.819	32.416
Pseudo R^2	0.015	0.042

Note: *# $p < .1$, *$p < .05$, **$p < .01$, ***$p < .001$

of these services. The first in each pair of models considers background characteristics only, while the second adds context and experience variables, just as in Table 5.

Although in most cases the age of students does not relate to whether they use a service, it does seem to matter when it comes to Facebook. Generally speaking, there is little variance on this characteristic, with the majority of respondents (97%) in their late teens. Nonetheless, the older participants are sufficiently different in their use of Facebook to yield a statistically significant result. Specifically, while four in five students 18 or 19 years of age use the service, only about three in five among those 20–29 do so.

Table 6 Explaining use of specific SNS: Facebook, MySpace, Xanga, and Friendster (standard errors in parentheses)

	Facebook use		MySpace use		Xanga use		Friendster use	
	Back-ground only	Full model	Back-groundonly	Full model	Back-groundonly	Full model	Back-groundonly	Full model
Age	**0.829***	**0.804***	1.051	1.067	1.199	1.195	0.815	0.846
	(0.073)	(0.072)	(0.085)	(0.089)	(0.152)	(0.151)	(0.273)	(0.294)
Gender	1.290	**1.353#**	**1.381***	**1.531****	1.322	1.393	**2.062#**	**2.112#**
(Female = 1)	(0.210)	(0.227)	(0.185)	(0.212)	(0.363)	(0.394)	(0.793)	(0.851)
Hispanic	**0.343****	**0.369*****	**1.667***	**1.821****	1.302	1.298	3.044	–
	(0.072)	(0.080)	(0.333)	(0.379)	(0.664)	(0.667)	(4.330)	
African/African	0.789	0.713	0.896	0.935	0.790	0.620	–	–
American	(0.250)	(0.238)	(0.227)	(0.251)	(0.614)	(0.488)		
Asian/Asian	0.994	0.994	**0.466*****	**0.448*****	**5.517*****	**4.702*****	**49.511*****	**54.401*****
American	(0.203)	(0.210)	(0.072)	(0.072)	(1.801)	(1.565)	(50.554)	(56.093)
Parents' education:	0.977	1.315	1.633	**1.991***	**0.174#**	**0.162#**	–	–
Less than high school	(0.302)	(0.424)	(0.511)	(0.652)	(0.184)	(0.173)		
Parents' edu:	1.016	1.148	0.930	0.920	0.848	0.802	1.139	1.014
High school	(0.238)	(0.279)	(0.194)	(0.199)	(0.370)	(0.354)	(0.968)	(0.880)
Parents' edu:	**1.949****	**1.791***	1.113	1.073	0.624	0.624	2.550	2.445
College degree	(0.443)	(0.418)	(0.206)	(0.206)	(0.238)	(0.240)	(1.646)	(1.634)
Parents' edu:	1.495	1.257	**0.613***	**0.601***	1.181	1.008	1.676	1.803
Graduate degree	(0.387)	(0.334)	(0.131)	(0.133)	(0.468)	(0.413)	(1.208)	(1.337)
Living with parents		**0.468*****		0.952		0.870		1.586
		(0.085)		(0.135)		(0.247)		(0.633)
Has Net access @		**1.659***		**1.909****		0.583		0.698
friends'/family's		(0.394)		(0.425)		(0.220)		(0.363)

(continued)

Table 6 *Continued*

	Facebook use		MySpace use		Xanga use		Friendster use	
	Back-ground only	Full model	Back-groundonly	Full model	Back-groundonly	Full model	Back-groundonly	Full model
Hours on Web/		**1.474*****		**1.493*****		**1.631***		0.784
Week (logged)		(0.163)		(0.142)		(0.341)		(0.205)
Years online		0.938		1.321		0.926		**0.241***
(logged)		(0.215)		(0.259)		(0.377)		(0.149)
N	1,027	1,006	1,025	1,004	1,027	1,006	827	713
Chi^2	63.823	98.162	79.798	112.163	46.289	49.830	65.486	68.631
Pseudo R^2	0.060	0.094	0.056	0.081	0.098	0.108	0.233	0.263

Note: *# $p < .1$, *$p < .05$, **$p < .01$, ***$p < .001$

The higher likelihood of women using these services holds in the case of all but one SNS: There does not seem to be any statistically significant difference between men and women when it comes to the use of Xanga.

In the earlier bivariate analyses of the data, race and ethnicity showed a relationship to people's propensity to use some social network sites. More refined analyses allow a consideration of whether these findings are robust, when other factors are held constant. The results suggest that they are. Hispanic students are significantly less likely, in this sample, to use Facebook than are Whites (the omitted category). Conversely, they are considerably more likely to use MySpace. That is, even when controlling for students' parental education, context of, and experience with use, there are significant differences in whether students of Hispanic origin use Facebook and MySpace compared to White students not of Hispanic origin.

The other group in the sample showing significantly different behavior compared to Whites is Asians/Asian Americans. They are significantly less likely than both White and Hispanic students to use MySpace. In contrast, they are considerably more likely to use Xanga and Friendster than White students, when other factors are controlled.

There is also a statistically significant relationship between the parental education of students and their choice of social network sites in the case of some services. Students whose parents have a college degree are significantly more likely to use Facebook than are those whose parents have some college education without a college degree (the base category in the models). Regarding predictors of MySpace use, the results suggest that students whose parents have less than a high school degree are considerably more likely to be users than those whose parents have some college education, while those who have at least one parent with a graduate degree are significantly less likely to be on MySpace compared to the omitted category. Xanga users show the opposite trend. Students whose parents have less than a high school education are much less likely to use Xanga than those with parents who have some college education. In sum, there seems to be a positive relationship between parental schooling and the use of Facebook and Xanga, and a negative relationship between parental education and the use of MySpace.

Turning to living context, the analyses suggest that students who live with their parents (just over half of this sample) are significantly less likely to use Facebook than are other students. This variable shows no statistically significant relationship with the use of any other service.

Consistent with literature on the importance of number of access points to the network (Hassani, 2006), the results suggest that for students in this sample, having access to the Internet at a friend's or family member's house increases the likelihood of using both Facebook and MySpace, when controlling for other factors. This finding, yet again, implies that existing inequalities are perpetuated in online activities.

Finally, as regards whether experience with the medium is related to specific SNS uses, the data suggest that Facebook, MySpace, and Xanga usage are all associated

with more hours of Internet use weekly. This is not necessarily surprising, since the mere fact of using these services could lead students to spend more time online. In contrast, long-term experience with the medium—that is, how many years a student has been an Internet user—is not associated with adoption of most of these services. Only in the case of Friendster is there a significant relationship with veteran status—namely, students with fewer Internet user years behind them are considerably less likely to use that service. This finding is to be expected, since Friendster was more popular in the U.S. a few years ago, suggesting that people who have been online longer would be more likely to have adopted it in the first place.

To summarize the findings, it is clear that while an aggregate look at SNS use does not show much systematic relationship between a student's demographic characteristics and SNS experiences, disaggregating the analyses by site tells a very different story. Students with varying backgrounds select into different services, potentially limiting the extent to which they will interact with a diverse set of users on those services. Additionally, social context of use and experiences with the medium have predictive power when it comes to explaining both specific and general levels of SNS adoption, suggesting that students who have more resources are spending more time on these sites and have more opportunities to benefit from them.

Discussion

What explains the significant differences in SNS adoption by students' background characteristics discussed above? It is important to bear in mind that respondents in this study are all on the same campus. Given that a main component of these sites is the ability to keep in contact with one's social network, use of these sites and services cannot be viewed in isolation from the preferences that people in one's social network may have for use of one service over another. No social network data were available in this data set to probe deeper into whether or to what extent students' preferences for one SNS over another are influenced by their friends' SNS preferences. Nonetheless, based on what is known about these sites, it is fair to assume that one's existing offline network influences which site one embraces. Research has found that people often use these services to connect with those in their existing networks, rather than to seek out new friends and acquaintances (Ellison et al., 2007). And since it has long been known that people tend to socialize and spend time with others like them (Marsden, 1987), it is reasonable to expect that students from similar backgrounds might migrate toward the same services.

The findings may also be related to the different features of these systems. Although by the time of this study Facebook had opened up membership to everybody, initially membership had been restricted, requiring affiliation with an institution of higher learning. Requiring such an affiliation clearly limited the number and types of people who could sign up for the service in the beginning. In contrast, any Internet user could create an account on a site such as MySpace. Although these restrictions had changed by the time of this study, social networks are developed and

maintained over time, so these initial differences may still be relevant for uptake in later years. In a similar vein, although students in this study all had university addresses to use for signing up on Facebook, it may well be the case that prior to matriculation at the university, people in their networks had joined the service in lower numbers due to the site's initial limitations, thus making participation on that system less appealing. In sum, whether due to user characteristics or system features—or more likely, a combination of the two—it is important to note that in this sample, users from different racial and ethnic backgrounds are not equally drawn to the various social network sites.

Students' living context is significantly related to Facebook adoption. That is, students who live at home are considerably less likely to use Facebook than those who live with roommates or on their own. This could be due to different factors. One reason for this relationship may be that parents put limits on their children's Internet uses. Another possibility is that having to share machines at home leads to less time online and fewer opportunities to explore social network sites. Given that access to the Internet at a friend's or family member's house is also related to SNS use (positively by increasing the likelihood of use), these explanations about autonomy of use are plausible.

A different possible reason for these results is that by spending less time on campus, students who live with their parents know fewer of their peers and know less about them, thus perhaps having less of a desire to keep in touch with them at the level afforded by social network sites. Also, this finding seems to imply that Facebook use is mostly for keeping in touch with students on one's campus whom one sees during day-to-day college life, or that such a motivation may at least account for initial uptake of the service, possibly yielding other uses later as well. Students who live at home likely have much less exposure to their college peers than do students residing on campus. Ironically, by not using a service like Facebook, they are being exposed to their college buddies even less, because not only are they not interacting as much in person as those who live on campus, but they are also not following their peers' activities online.

Forming relationships with members of one's cohort is an important part of the college experience, and one could argue that services like Facebook facilitate such interactions. Ellison and colleagues (2007) found precisely such a relationship between Facebook use and the formation and maintenance of social capital. However, if students who are less likely to be around campus to build relationships in the first place are the ones who are also less likely to use online services that facilitate additional interactions with their peers, then it is precisely the students for whom use of such sites may make the most difference who are missing out. That is, if those who are already interacting less with others are also doing less of this online, then differential uses of such services may be contributing to a two-tiered social system, in which some people make and cultivate lots of networks in college, while others benefit from this part of the experience considerably less. Optimists about the Internet's potential to improve people's lives emphasize its ability to sidestep constraints

stemming from one's physical surroundings, but the findings of this study suggest that, if anything, people who are already constrained due to particular circumstances are precisely the ones not benefiting from some of the Web's potential.

To understand what is truly driving these findings about the limits put on the use of Facebook by living context, qualitative studies will be necessary to explore students' Internet uses in the home context and their involvement with SNSs, in particular in the context of life with their parents, as well as with their peers.

Conclusion

Using a unique data set with unprecedented granularity regarding SNS usage, coupled with detailed demographic background information about students, this study has looked at what types of user characteristics (from among a diverse group of first-year students at an urban public university) are most likely to be associated with social network site usage. In particular, this study has considered how people's demographic characteristics and the social surroundings of their uses might relate to the particular social network sites they embrace. When SNS usage statistics are considered in the aggregate, the results only show a relationship of gender to SNS use, in addition to the importance of context of use and experience with the medium. However, when specific site usage is considered, statistically significant relationships emerge between race and ethnicity and SNS uses, in addition to the predictive power of parental education.

In particular, Hispanic students are significantly more likely to use MySpace than are Whites in the sample, while Asian and Asian American students are significantly less likely to use MySpace. Additionally, the latter group is much more likely to use Xanga and Friendster than are Whites, a practice that may be due to these services' popularity in the Philippines, Singapore, Malaysia, and Indonesia (boyd & Ellison, this issue), where—given the immigrant nature of the sample—many students may have extended family and friends from earlier parts of their lives.

Regarding parental education, students whose parents have lower levels of schooling are more likely to be MySpace users, whereas students whose parents have higher levels of education are more likely to be Facebook users. These associations are not evident when aggregating all social network site usage, probably because the various relationships cancel each other out.

The goal of this article was to compare SNS users and non-users; the findings suggest some systematic differences in who chooses to spend time on such sites and who does not. Importantly, the findings also suggest that different populations select into the use of different services, posing a challenge to research that tends to collapse use of all social network sites. Most studies that look at SNS uses focus on one service only. The findings presented in this article suggest caution when generalizing findings from the use of one site to the use of other related services. A significant finding of the study is that aggregated SNS use statistics hide important differences concerning usage preferences within a diverse sample of users by specific site. Simply looking

at, for example, whether race and ethnicity are related to SNS use suggests that there are no differences across groups. However, once specific site usage is disaggregated in the analyses, significant divergences emerge. Insofar as use of Facebook is qualitatively different from the use of MySpace, and these uses in turn are different from the uses of Xanga and Friendster, recognizing and critically considering these differences is important for SNS use research, regardless of the methods of analysis used.

In addition to contributing to the methodological and substantive study of SNSs, the findings in this article also address issues explored in the digital inequality literature. The fact that students select into the use of different services based on their racial and ethnic background, as well as their parents' level of education, suggests that there is less intermingling of users from varying backgrounds than discourse about the supposed freedom of online interactions may suggest. At first glance, it may seem that on the Internet nobody knows who you are (Steiner, 1993). In reality, however, the membership of certain online communities mirrors people's social networks in their everyday lives; thus online actions and interactions cannot be seen as *tabula rasa* activities, independent of existing offline identities. Rather, constraints on one's everyday life are reflected in online behavior, thereby limiting—for some more than others—the extent to which students from different backgrounds may interact with students not like themselves.

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Notes

1 The author of this article is not now nor has ever been affiliated with this university in any way other than in the context of this study. Focus on this campus is not due to convenience; rather, it is the result of careful consideration about what type of student

population would be most helpful in addressing questions of interest in the research project.

2 The survey included a question verifying students' attentiveness to the questionnaire. A small portion of students (3.4%) were identified as not paying attention to question wording, suggesting that they were checking off responses randomly instead of replying to the substance of the question. The responses of these students have been excluded from the data and analyses presented here, so as to minimize error introduced through such respondents.

3 Students of Native American background have been excluded from these analyses, due to their small number.

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