Realizing the Social Internet?
Online Social Networking Meets Offline Social Capital

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Abstract:

Does Internet use have the potential to build social capital? Emerging evidence suggests that politically knowledgeable, interpersonally trusting, and civically engaged individuals share particular patterns of Internet use. In previous national survey studies, Internet use has been divided into a handful of excessively broad categories, and researchers have been unable to address newer, category-spanning Internet uses as well as the potential impact of individual websites. By examining the use of online social networks in a nationally representative sample of young people, this study explores the varied relationships between indicators of social capital and Internet use on a site-specific level (i.e. Myspace vs. Facebook). Indeed, differences between social networking sites are as large as those between more global categories of use (e.g., informational vs. social networking) and are robust to attempts to account for differences between the users of the sites. In explaining these relationships and exploring the differences between social networking sites, we suggest that website use induces a site-specific culture that can either encourage or hinder social capital.

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Realizing the Social Internet?
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"Instant information creates involvement in depth" - Marshal McLuhan

The last century ushered in the world of instant information. Mass popularization of the radio, telephone, and television fundamentally changed the ways in which people interact. What was once the domain of the letters, parlor meetings, and soapboxes was now the realm of electronic communication. Messages could travel instantly from coast to coast and it became possible to broadcast ideas to a disparate audience in the comfort of their homes. With each of these technologies, a familiar debate emerged: Was the new medium complementing, supplementing, or supplanting face-to-face community (Czitrom, 1982; Lowery & DeFleur, 1983; Rogers & Chaffee, 1983)?

The world of instant information conformed neither to the images of dystopists, who believed that new media would destroy traditional community, nor to those of utopists, whose vision is reflected in McLuhan's statement. Instead, specific patterns of media use have best explained the relationship between medium and society. People who spend inordinate amounts of time watching entertainment television tend to be less civically engaged, while those using the telephone to maintain social relationships tend to have broader social networks (Baym, Zhang, & Lin, 2004; Norris, 1996; Shah, McLeod, & Yoon, 2001). Indeed, researchers have consistently found that both the medium used and the type of use can account for differences among individuals (McLeod, 2000; McLeod, Rush, & Friederich, 1968; Pasek, Kenski, Romer, & Jamieson, 2006; Shah, McLeod et al., 2001).

With the advent of the Internet, the debate over the effects of new media reemerged. While some envisioned a "virtual community," which would lower the costs of collective action

and expand individuals' social networks (Delli Carpini, 2000; Rheingold, 2000), others worried about a new addiction, which would reduce social ties and draw users into a cycle of depression and loneliness (Kraut *et al.*, 1998; Nie, 2001; Nie & Erbring, 2000). A decade after the popularization of the Internet, neither scenario has emerged. Instead, research reflects a medium that has some positive influence on users' social ties, but where only certain Internet uses contribute to social capital (Wellman, Haase, Witte, & Hampton, 2001; Zhao, 2006). Hence, differentiation has become a theme in furthering our understanding of Internet effects. Parsing between informational, communicative, recreational, social, product consumption, and financial management uses of information technology is quickly becoming a rallying cry in the literature (Bimber, 2000; Shah, Kwak, & Holbert, 2001; Wellman et al., 2001; Zhao, 2006).

This study marks an first attempt to isolate the relationship between social capital and one such niche category of Internet use, online social networking, in a nationally representative sample of young Americans. Social networking sites (SNSs) are a particularly intriguing category of Internet use because of their feature set and enormous prevalence in younger age cohorts (nearly 60% of 14- to 22-year olds report using some social networking site in the study). Online social networks are expected to relate to relatively high levels of social capital because users interact with other users and because online interactions build on offline social relationships (boyd, 2006; Ellison, Steinfeld, & Lampe, 2007). Further, two specific social networking sites dominate the virtual landscape. MySpace and Facebook represent the vast majority of young SNS users and provide the first opportunity to explore the possibility of site-specific relationships.

Social Capital

Social networks provide the fundamental building blocks for collective action. As the quality of a society's social networks improve, through greater interpersonal trust and shared activities, members are more likely to participate in the civic and political life that forms the basis for modern democracy (Coleman, 1988, 1990; Putnam, 1993). Declining American social capital, therefore, has been a matter of persistent concern over the last decade (Putnam, 1995, 2000b; Skocpol & Fiorina, 1999). If citizens are less connected to one another and less trusting, democracy suffers (Putnam, 1993). Similarly, political knowledge provides a critical service for democracy and has been included in many analyses of social capital (Delli Carpini & Keeter, 1996; Putnam, 2000b). If citizens are motivated toward collective action but are unaware of the issues and implications surrounding that action, it is unlikely that they will act accordingly.

Young people seem to be at the heart of America's declining social capital. Today's youth are marked by lower levels of community involvement, interpersonal trust, and political knowledge than older Americans (Miller, 1992; Putnam, 2000b; Soule, 2001). Further, these lower levels seem to result from generational, rather than life cycle effects (Soule, 2001). As Putnam (2000b) predicts, social capital declines have been coupled with diminishing political participation among young adults (Brody, 1978; Cassell & Luskin, 1988; Levine & Lopez, 2002). These decreases have been apparent not only with regard to voting, but across the entire spectrum of participation, including attending rallies, volunteering on campaigns, and running for office (Putnam, 2000b).

The strong relationship between social capital and political participation has led many researchers to posit that civic socialization mechanisms that encourage civic engagement, interpersonal trust, and political knowledge among individuals will, in turn, build a citizenry

that is more interested, motivated, and active politically (Lake & Huckfeldt, 1998; Putnam, 2000b). Many have imagined the Internet as that socializing tool. Providing instant information and mass-to-mass communication, Internet use demonstrates considerable civic potential. But could young people reverse declining social capital through online interaction?

Internet and Social Capital

Internet communication has the unique ability to transmit information and build relationships among large groups of physically disconnected individuals. Indeed, these potential "virtual communities" were hailed as novel new ways to jump-start civic engagement and diminish the cost of collective action (Delli Carpini, 2000; Rheingold, 2000; Sproull & Kiesler, 1991). Early studies, however, identified just the opposite effect. Internet users were spending less time in social interactions and tended to become depressed and lonely as they engaged with the new medium (Kraut et al., 1998; Nie & Erbring, 2000). Similarly, young Internet users were less trusting than young people who were not on the Internet (Jennings & Zeitner, 2003).

More recent analyses suggest that aggregate Internet use has a generally positive relationship with social capital. Kraut and colleagues (2002) conducted a follow-up analysis of the individuals from their study. They found that Internet users, over the long term, were no more depressed or lonely than non-users. Other evaluations have identified broader social ties among Internet users and have been unable to replicate findings of reduced interpersonal trust. Though views on the Internet have now come full-circle, the medium is no longer viewed as a panacea for civic society. Instead, many studies are finding evidence of limited social network expansion, but stop short of declaring Internet use a universal positive (Katz & Rice, 2002;

Quan Haase, Wellman, Witte, & Hampton, 2002; Shah, Cho, Eveland Jr., & Kwak, 2005; Shklovoski, Kraut, & Rainie, 2004; Wellman et al., 2001).

Despite these checkerboard results, many researchers still see considerable promise in Internet use. Young people, in particular, have readily adopted various uses of the medium, and the Internet now accounts for a large portion of younger generations' political information (Eveland Jr., Marton, & Seo, 2004; Kohut et al., 2000; Levine & Lopez, 2004). If the Internet can be used as a tool to build social capital, it offers hope that we can stem the tide of youth civic disengagement. But simply encouraging young people to use the Internet is unlikely to make a difference. Most young people are already online (88%), and little evidence suggests that social capital has correspondingly skyrocketed (Pew Internet and American Life Project, 2006).

Differentiation

The inconsistent pattern of demonstrated "Internet effects" stems from a lack of methodological consistency across studies. Researchers need to be more careful when comparing time diary studies with longitudinal analyses or contrasting the effects of types and hours of use. In response to these concerns, many have called for the differentiation of Internet use (Bimber, 2000; Shah, Kwak et al., 2001; Zhao, 2006). A variety of studies have categorized general types of Internet use that are thought to encompass the major differences between websites. Informational uses, social uses, recreational uses, communicative uses, and others are identified as fundamentally different media use patterns. By incorporating these categories into our analyses, their proponents argue, we can gain a more nuanced picture of Internet effects (Bimber, 2000; Shah, Kwak et al., 2001; Zhao, 2006). Indeed, the debate about broadcast

television has evolved toward a similar "mixed bag" consensus (Norris, 1996; Pasek et al., 2006; Putnam, 2000a).

Two studies in particular explore various Internet uses as they relate to civic outcomes. In one study, Shah, Kwak, and Holbert (2001) divide Internet use into four categories: social recreation (i.e. playing an online game or participating in a chat room), product consumption, financial management, and information exchange (i.e. exploration of interests, searches for information, and sending email). They find consistently positive relationships between information exchange and social capital measures while identifying consistently negative correlations with social recreational uses. In the second study, Zhao (2006) divides Internet users into three categories: web users, email users, and chat users. Chat users demonstrate the most social connections followed by email users, but email users are the most likely to interact with their social connections offline. This line of research helped to raise the importance of differentiating types of uses as well as types of users.

A number of studies have found that informational Internet use, in particular, is related to greater social capital. Those using the Internet for information demonstrate higher levels of internal efficacy, political knowledge, and civic participation (Eveland Jr. *et al.*, 2004; Johnson & Kaye, 2003; Kenski & Stroud, 2006; Pasek et al., 2006). Differing levels of civic engagement across various uses of the medium confirm the trend toward differentiation. But how much do we need to differentiate Internet use? The categories proposed by Shah, Kwak, and Holbert (2001) and those introduced by Zhao (2006) all seem to capture meaningful differences in media effects, but they also gloss over huge distinctions between site types, features, and designs as well as user characteristics and their relationship with the medium.

Even if informational Internet use has the aggregate effect of building social capital – a conclusion for which we need a prospective analysis – it is unlikely that every informational website contributes equally to the endeavor. An understanding of generalized political knowledge is much more likely to emerge after encountering a news website than from a gossip outlet, for instance. Similar distinctions should be expected in each of the other generalized categories of use. Social engagement in an online bulletin board embodies fundamental differences from playing a computer game, though both fall into the social/recreational category outlined by Shah and colleagues (2001). But before we embark on a prospective analysis, we must establish a more informed understanding of the differences among website users by building a theoretical foundation within which they can be compared. Expanding the available classifications and refining existing categories of use is critical in assessing social capital within virtual environments.

Social Networking Websites

Ideally, the most civically engaging uses of the Internet will be those that encourage interpersonal interaction, broaden social ties, and provide valuable information about how individuals can become more civically and politically involved. Social networking websites (SNSs) are particularly suited to these functions. Social networking websites represent a sizeable category of web services where users establish online personae through use of a "profile" and interact by "friending" and "messaging" other users over the Internet (boyd, 2006; Ellison et al., 2007). By utilizing these tools, participants are able to more efficiently interact with a larger network of acquaintances.[1] The socially catalytic features of networking websites

[1] The larger social networking sites, like MySpace, Facebook, and Friendster, also allow users to identify personal interests, acknowledge mutual friendships, and exchange contact information (Liu, Maes, & Davenport, 2006). Further, interactions on these sites often reflect offline relationships, making the sites perfect venues for exploring how online interaction relates to offline community (boyd, 2006).

foster a culture that is ideal for virtual communities to expand and social capital to develop. Measures of SNS use consequentially embody an integral category in examining potential Internet effects at the user level. In this case, the relationship between SNS users and their measures of social capital.

SNS use represents a boon for researching the interaction between social capital and Internet use because of the prevalence of the sites, especially among youth. Approximately 60% of our sample reported having a profile on at least one social networking site.[2] At the time of the study, MySpace and Facebook represented the 7th and 49th largest American websites respectively with MySpace recording over 51 million unique American visitors monthly and Facebook accounting for 14 million (Both sites have grown since then) (ComScore Networks, 2006).

Website Culture

Social capital differences between types of Internet use or between specific websites can emerge for three distinct reasons: Varying levels of social capital can be a product of the users of a site, the functions that a site offers, or some pattern of interactions among site users based on the site features. This first difference is likely to be closely tied to demographics. Even if individuals logging onto the New York Times do nothing more to gain knowledge over those playing online games, we would expect a more educated, higher SES, more urban, and more civically engaged crowd to be reading the headlines in the first place.

The second difference between websites resides in the features that sites have. This is the aspect of web use that corresponds to the "type of use" categories outlined by Shah and colleagues, Zhao, and others. Indeed, categories of use like online social networking or news

[2] Since the survey was conducted on a nationally representative sample of young people, this high rate of SNS use allows for a meaningful analysis.

websites are marked by the availability of certain types of information and certain features that remain essentially constant across a category. News sites have news stories and generally the ability to share a story with a friend (usually by email). Social networking sites offer the ability to create a profile and share various types of text and multimedia information, utilizing connections between individuals on the sites. And chatting sites and programs allow users to send each other real-time text messages. The types of site, in fact, frequently define the types of use. Hence, users of a specific type of website may exhibit social capital if the features common to that category build social capital.

Finally, the nature of the users, functionality, and history of a given website have the potential to emphasize certain traits among individuals who engage with the site. If high social capital individuals are drawn to a particular website and they proceed to interact with one-another and build upon that social capital, a "website culture" emerges as the source for the relationship. This website culture has the potential to produce a virtuous circle building civic engagement, political knowledge, and interpersonal trust among users with already-high social capital.

Website culture can be understood as a novel type of "two-step flow" effect, where individual users provide information they receive from various media to others connected to them in a way that progressively informs the network. Because the social network facilitates the flow of information (either on the network itself or by maintaining interpersonal ties), the diffusion of information on a particularly engaged network becomes viral. More people receive information on a more civically active social network and they are more likely in turn to pass on that information to others. This effect should create a virtuous circle where information flows reach farther than through traditional media.

This notion is distinctly different from either an initial differences hypothesis or from the proposal that website effects depend on the type of site. Selection differences between site users should remain static despite use. In these cases, the relationship from site use to social capital is, in fact, a spurious one. Alternatively, differences driven by types of website use are a meaningful category of Internet effects. In these cases, using a particular type of website may be exposing an individual to a particular type of political information that could increase political knowledge or encourage involvement. The website culture option, to date unexplored, proposes that sites that do not directly offer information may still come to provide it. This would be the case because social interactions among individual users facilitate the sharing of information within the site context. From this perspective, such sites could act as a meaningful public square, building a web of information among site users. Social capital gain, therefore, would be partially a function of the individuals drawn to that site and partially a function of the site's ability to facilitate the exchange of information. Ideally, SNSs should operate in this third context. If website culture, as outlined here, is responsible for any of the variation in social capital among Internet users, the difference should be best observed by comparing individual websites within a given "type of use" category.

Facebook and MySpace

Despite the large feature set shared across most common social networking websites, the sites also have important differences. The two largest such sites, Facebook and MySpace, which we compare in this paper, differ with regard to the individuals who use the sites and the information that they share. These differences stem from different histories and different target populations. Though both offered very similar features at the time of the study (they have since diverged considerably), Facebook was initially targeted towards college students and thus

focused on connecting users through their high school, business, and college communities while MySpace was catered towards musical interests and tended to reinforce connections that coincided with shared interests rather than shared physical community (boyd, 2007, in press; Hargittai, 2007). Facebook's community also began at elite colleges, with the site initially open only to Harvard students, and then to Ivy League institutions (boyd, 2007). Both sites used a similar "viral marketing" strategy, spreading in a peer-to-peer manner. Though Facebook's popularity was no longer preponderantly elite by the time of the study, the history of the network would suggest that Facebook should have a slightly more civically engaged and politically astute user base (Hargittai, 2007). Moreover, Facebook's emphasis on having its users replicate their real-life identities (through internal policing) and communities (through the provision of college, high-school, workplace, and regional network affiliations) tend to reinforce existing communities and information networks (boyd, 2007; Hargittai, 2007). This scenario should turn moderate initial differences between the user bases of Facebook and MySpace into a large website culture gap (see Table 2 below). Facebook users should inadvertently maneuver their advantages in social capital and their stronger ties into a more efficacious community.

The Current Study

To examine the potential impact of SNS use, this study includes four assessments of variously differentiated Internet use in predicting civic engagement, political knowledge, and interpersonal trust. First, informational Internet users are compared to the general public with regard to these three outcomes. Informational Internet use establishes a baseline to account for what has traditionally been the single most civically positive use of the medium. Second, this study compares informational Internet use with the use of social networking websites. If social

networking websites build social capital, use of these sites should be positively related to each of the outcome variables. These two analyses allow us to place the use of social networking websites in the "types of use" paradigm.

To establish the potential for the website culture explanation to determine differences between the social networking websites measured, dummy variables for Facebook and MySpace use as well as the interaction between the two are incorporated into the analysis, replacing the overall SNS category. Because the sites provided similar features, comparing the differences that remain after demographic controls offers some insight into the amount of difference that may be due to a website culture effect. Finally, we will attempt to confirm any effect by looking at Facebook and MySpace use among current college students, the subgroup of strongest common support.

Hypotheses

A broadening literature on the social correlates of Internet use suggests that the Internet has significant potential to build social capital. Reflecting much of this literature, we expect that young people using the Internet for information will exhibit higher levels of civic engagement, political knowledge, and interpersonal trust than non-users even when controlling for demographics (H1). Reflecting our expectation that social networking sites will be a particularly engaging use of the Internet, we expect that civic engagement will be more prevalent among individuals who use social networking websites frequently, even when accounting for informational Internet use (H2). Facebook and MySpace are expected to be different due both to differences between the users of the two sites (H3), and also due to website culture (H4). We expect that the analyses using a more homogeneous sub-population (current college students) will provide an insight into a possible website culture effect.

Methods

This study uses data from the 2006 National Annenberg Survey of Youth (NASY), a survey conducted by the Adolescent Risk Communication Institute at the Annenberg Public Policy Center of the University of Pennsylvania. The survey involved 900 telephone interviews with respondents conducted between May 1st and August 10th, 2006. Within each household, the 14 to 22 year old with the most recent birthday was requested. In households where a potential respondent was away at school, the interview was either scheduled when the respondent was home or by phone. For those under 18 years of age, parental permission was obtained. An incentive of $10 was provided to all participants. The survey was approved by the Institutional Review Board of the University of Pennsylvania. Schulman, Ronca, & Bucuvalas, Inc. conducted the interviews. Descriptive results of the survey are reported after weighting by number of telephone lines, region, sex, race, age and education. The response rate for the survey (AAPOR formula 3) was 48%. The unweighted sample was not far off from U.S. Census Bureau demographic estimates for this age group.

Independent Variables

The focus of this study was to determine the relationships between social networking websites and a variety of outcome variables. Five measures were used to assess the impact of general social networking as well as the differential impact of the two most popular social networking websites. A measure of overall use of social networking asked respondents to identify how often they "use online journals like Blogger or social network sites like Myspace or Facebook." Respondents' registered use of the sites from "never" (0) through "most days"

(3) (Mean = 1.42, SD = 1.30)[3]. Respondents were also asked how frequently they "use a computer to go online to get information" (similarly coded; Mean = 2.39, SD = .93). To assess relationships with specific sites, respondents indicated "which, if any, of the following social network sites [they] use[d]?" Two dummy variables identify users of Facebook (Mean = .16) and MySpace (Mean = .46). Finally, a dummy variable for the use of both services is included to assess possible interaction effects (Mean = .09).

[TABLE 1 ABOUT HERE]

Outcome Variables

Three dependent variables evaluated the impact of social networking sites. Respondents reported on their individual levels of civic engagement, interpersonal trust, and political knowledge. Civic engagement was measured as the frequency with which they report "participat[ing] in a club or other extra-curricular activity." The item is coded on a three-point scale ranging from "never" (0) to "most days" (2) (Mean = .93, SD = .82). Interpersonal trust was assessed with four-point scales for two items measuring whether adolescents agree or disagree with the statements (Strongly disagree = 0, strongly agree = 3) that most people "will take advantage of [them] if they get the chance" (Mean = 1.55, SD = 1.05) and that "most people only look out for themselves" (Mean = 1.80, SD = .94). The items were standardized and averaged to produce an index for interpersonal trust (Pearson's r = .336).

To assess political knowledge, we asked six items that tapped general understanding as well as current knowledge of the U.S. political system: (1) "Do you know what office Dick

[3] Many of the blogging websites could and should be considered social networking sites for those writing entries. The results obtained for all analyses in this study were also repeated excluding those identifying only blogging sites on the follow-up question "which, if any, of the following social network sites do you use?" All relationships were consistent with the findings reported for the full measure.

Cheney holds? If yes, what is it?" (2) **"**What are the major political parties in this country?" (3) "Which party has the most members in the House of Representatives?" (4) **"**Which party, as far as you know, is more conservative?" (5) "Whose responsibility is it to determine if a law is constitutional? Is it the President, the Congress, or the Supreme Court?" and (6) "How much of a majority is needed in the House and Senate to override a presidential veto? Is it one-half, two-thirds, or three-quarters?" Questions 3 and 4 were only asked of respondents who named the Democrats and Republicans as major political parties in question 2 (Delli Carpini & Keeter, 1993, 1996).

A political knowledge scale was created by summing correct answers with incorrect/don't know/refused responses treated as incorrect. Respondents had to provide the correct office for Dick Cheney in order to receive a correct score. Items 3 and 4 were scored as incorrect if respondents did not name the two parties in question 2. Item 2 was not scored separately. The resulting 5-item scale was reliable with a Cronbach's alpha of .68. On average, respondents answered 2.51 items correctly (Mdn = 2.0, SD = 1.65).

Control Variables

In assessing the correlates of certain types of Internet use, demographic variables are important in controlling for availability and usage of the medium. In this study we control for racial-ethnic identity, gender, median neighborhood income (imputed by zip code), age, and educational status of respondents. The weighted sample was 50.8% male, 17.1% Hispanic, 14.6% black, 6.7% non-black/non-white/non-hispanic identifiers. Whites and females served as reference groups. The average age was 17.8 years old (SD = 2.46). The unweighted sample closely approximated the weighted one with regard to demographic measures. Demographic profiles of users of Facebook and MySpace are provided in Table 2.

[TABLE 2 ABOUT HERE]

In the weighted sample, 25.1% of respondents were current college students, 23.9% of respondents were not currently in school, and 52.0% reported being in high school, which was assessed as our reference group[4]. Finally, neighborhood household income was measured by matching self-reported zip codes with the 2000 U.S. Census Bureau median household income estimates (Mean = $45,320, SD = $17,489). Approximately 4% of the sample could not provide a valid zip code. We assigned the mean sample value to these cases (N = 36).

Analysis

Four separate analyses compare the relationships between social networking and our outcome variables. First, demographic variables and informational Internet use are used to predict each of the three outcome variables in ordinary least squares (OLS) regressions. This analysis will confirm the previously observed strong relationship between informational Internet use and social capital (see above). Second, the measure of overall SNS use is introduced into each of these regressions. If SNS use is related to social capital, it should remain correlated after controlling for both demographics and informational Internet use. A third series of regressions examines the differences between MySpace and Facebook as social networking websites. These regressions include demographic variables, informational Internet use, and dummy variables representing Facebook use, MySpace use, and the use of both services. Finally, the differences between Facebook and MySpace are explored across educational groups. Current college students are presumed to be more homogeneous across a variety of unobserved variables. A large discrepancy in the relationships observed between current

[4] Educational status was assigned based on respondents' indications that they were currently attending school and the level of school that they reported attending, if they were still in school.

college students and either high school students or those not in school would suggest that social capital differences between the sites are likely a product of initial differences between the users of each site. Alternatively, if current college students show similar effect sizes to other populations, it is strong suggestive evidence that website culture may be driving, or at least contributing to, differences. Interaction terms between site use and current college attendance are inserted into the model to explore differences between current college students and the larger sample.

Results

Table 3, Step 1 shows the results of regressing each measure of social capital onto demographics and informational Internet use. As hypothesized (H1), use of the Internet for information was positively related to civic engagement (B = .167, s.e. = .030) and political knowledge (B = .283, s.e. = .056) after controlling for demographic variables. A corresponding relationship between informational Internet use and interpersonal trust was not apparent, though results tended in that direction as well (B = .048, s.e. = .031).

[TABLE 3 ABOUT HERE]

In Step 2 of Table 3, the inclusion of SNS use did not fully confirm the hypotheses (H2). Though online social networking was strongly related to offline civic engagement (B = .079, s.e. = .021), SNS use was negatively related to interpersonal trust (B = -.062, s.e. = .022) and unrelated to political knowledge (B = .017, s.e. = .041).

Step 3 in Table 3 disaggregates social networking by website used. As predicted, Facebook and MySpace did not operate consistently across outcomes (H3 and H4). Facebook use is strongly related to increased civic engagement (B = .491, s.e. = .112) and greater political knowledge (B = .859, s.e. = .209). Facebook users were also somewhat less trusting than non-

users, but the relationship was not significant (B = -.194, s.e. = .116). MySpace users, however, were not significantly more likely to engage in clubs than non-users (B = .043, s.e. = .058) and were less likely to express general trust in others (B = -.192, s.e. = .061). MySpace users also demonstrated markedly lower levels of political knowledge than non-users in their cohort (B = -.246, s.e = .109).

While significant initial differences were observed between Facebook and MySpace users (H3; see Table 2 above), those initial differences do not seem to have accounted for the relationship with measures of social capital. Indeed, when interacting current college students with both Facebook and MySpace use for each outcome as shown in Table 3, Step 4, there were no significant relationships. College students using MySpace were somewhat more knowledgeable than other MySpace users, but the relationship was not statistically significant (B = .359, s.e. = .222). In all other regards, the relationships among the most homogeneous population and region of greatest common support did not differ meaningfully from those in the overall sample.

Discussion

This study provides the first empirical analysis of the relationship between online social networking and offline social capital in a nationally representative sample. We build on previous analyses stressing the need to differentiate between various uses of the Internet. Those who used the Internet for social networking or for information showed demonstrably different patterns of civic engagement, interpersonal trust, and political knowledge. Additionally, the study echoes and refines calls for further differentiation (Lupia & Philpot, 2005). Large differences between Facebook users and MySpace users undermine the suggestion that general

categories of use, such as social networking or information searching, can be meaningfully examined. Instead, we suggest that many websites have distinct structural features and site-specific attributes that induce a unique website culture. These cultural features, we contend, in turn influence the effects that a given site can have on its users as well as the type of users that are drawn to the site.

Building Social Capital Online?

Reflecting earlier studies, we find that young people using the Internet for information do indeed show greater social capital than their non-using friends (H1) (Eveland Jr. *et al.*, 2004; Johnson & Kaye, 2003; Kenski & Stroud, 2006; Pasek et al., 2006). Individuals who frequently use the Internet for information are more likely to participate in offline clubs and groups and to demonstrate high levels of political knowledge. Interestingly, the relationship does not hold for interpersonal trust. However, once we control for the use of social networking sites, we find that informational Internet use is positively related to trust.

Our results for social networking websites are less conclusively positive than those of informational use. Though SNS users report much higher levels of civic engagement than non-users, they do not demonstrate additional political knowledge, and actually say that they are less trusting of others (H2). Though these results neither confirm nor deny the existence of site-specific differences, they are quite consistent with Shah et al.'s work on Social-Recreational Internet uses (2001). They also allow us to put the use of social networking sites into the "types of use" model for Internet effects.

The third analysis, however, portrays a very different picture. The vast discrepancies between users of Facebook and MySpace cannot be due to types of site use, as they are both similar social networking sites. In fact, the specific sites make at least as much of a difference

as the types of site. This indicates support for one or both of the hypotheses predicting site-specific differences (H3 and H4) and provides a cautionary note for those attempting to aggregate types of Internet use. There are differences in the sites that need to be accounted for when assessing Internet effects. Two possibilities remain, however, for how specific websites may relate to differing levels of social capital. The discrepancies could be introduced either by the individuals who join the sites, or as a function of what the sites do.

Users of Facebook and MySpace are quantifiably different. Indeed, Facebook users in this study were more likely to be in college, were generally somewhat older, and were more affluent than MySpace users (Table 2), a series of results that are reflected in some early qualitative and non-representative literature (boyd, 2007; Hargittai, 2007). These differences, however, were robust to statistical controls and had only a moderate impact on social capital measures in the first place (H3). Though this information is suggestive of a site-based effect, it is equally probable that other unmeasured demographic differences between these two groups could have accounted for the relationship. To assess and potentially offset these possibilities, the differences between the sites were examined within the group of highest common support, current college students. The similarity of these results to those of the aggregate measured population suggests that the differences in users likely do not account for the entire relationship between the use of particular websites and social capital. Hence some of that difference may be attributable to website culture (H4).

Interpreting Website Culture

At some level it seems far-fetched to claim that Internet use of various types and of diverse contents may have the potential to encourage civic engagement. While it may seem reasonable for the New York Times to endow readers with political information, a direct

connection between online social networking and political knowledge is more difficult to justify. Indeed, this paper's obvious critique comes in the inability of a cross-sectional design to provide causal evidence that website culture is in any way herding individuals toward greater civic engagement.

Undoubtedly, self-selection plays an important role in determining who joins what site. This is especially true as sites gain diverging reputations (e.g. music for MySpace or college activities for Facebook). But our results and the results of others suggest that some website effect is present. First, the sheer strength of the relationship between social capital and specific websites over and above that of traditionally impactive demographic variables would necessitate a hugely important series of omissions. Though the demographics included are not exhaustive, it is hard to imagine that they fall so short of a complete explanation if initial differences are indeed the answer. Second, the persistence of equally strong differences when focusing on current college students is an unlikely scenario from the initial differences context. Additionally, among a non-probability sample of students by Ellison et al. (2007), the intensity of Facebook use relates to social capital.

Limitations and Future Studies

Exploration of Internet effects has suffered from a lack of strong longitudinal analyses – this paper is no exception. The cross-sectional analysis provided in this paper cannot discriminate between whether social networking websites are encouraging civic involvement or whether civically involved youth are simply more likely to join social networking websites. Nonetheless, this analysis does provide some hope that these sites could provide a means to successful engagement.

Researchers exploring Facebook will note that the site gained its early following in the elite college market. This initial audience could bias our comparison of Facebook and MySpace. The rapid expansion of Facebook between 2004 and 2006, opening to almost all institutions of higher learning and eventually high schools and workplaces as well, brought in many users who should offset any such effect. Additionally, controls used in this study were designed to best approximate what we believed would be the notable differences between the general Facebook population, the general MySpace population, and others. Education and socio-economic status should account for the vast majority of residual differences. Finally, inclusion of the informational Internet variable should further reduce the likelihood of such an effect, as such use is likely to be more consistently biased toward students at elite colleges.

This study makes a number of recommendations for future longitudinal analyses of differentiated Internet use in the Millennial Generation. The first is that such studies should be longitudinal. Though case studies can provide valuable insights into overarching patterns, this analysis suggests that such broad trends may be misleading. The differences identified in this study between Facebook and MySpace are better resolved through experimental and quasi-experimental designs, where users' social capital is compared to changing patterns of Internet use.

The second critical recommendation of this analysis is the need to address website culture. Not all websites within a general category of use behave similarly. To account for possible website culture effects, studies must do one of two things. For large-scale studies of multiple Internet uses, researchers should include analyses of individual websites within each broad category. This step will ensure that sites of a given type are indeed behaving similarly across outcome measures. For small-scale studies on Internet effects, research should be

examined within the confines of specific websites. Simply encouraging users to join any social networking site in a study would prove a problem if some were to join MySpace and some Facebook.

Conclusions

This study constitutes an initial exploration into the relationship between civic engagement and social networking websites. Contrary to expectations, social networking sites appear to relate inconsistently to measures of social capital. Overall, SNS users are more civically engaged but less trusting than non-users. Exploration of the effects of Facebook and MySpace, the two largest social networking sites, suggests that social networking cannot be examined in the aggregate. Facebook users demonstrated greater political knowledge and civic engagement while MySpace users generally had lower knowledge and were also less trusting of others.

We interpret these differences as the result of varying "website cultures" across social networking sites. Particularly, differences in anonymity and connection to "real-life networks" are presumed to underlie differences in users' social capital. If the Internet is indeed having an effect, that effect must be measured within the confines of a particular site-specific culture. Differentiation merely to the level of general usage types is insufficient for parsing these effects.

The results of this study give little weight to the notion that online social networking may be the key to Rheingold's idealized "virtual community." Nonetheless, differences between social networking sites suggest that they may have some ability to encourage social capital. If this is indeed the case, emerging social and interactive Internet uses may yet provide

a means, though likely not a panacea, for addressing declining civic engagement and energizing the Millennial Generation toward greater civic and political participation.

Resources:

Baym, N. K., Zhang, Y. B., & Lin, M.-C. (2004). Social Interactions Across Media: Interpersonal Communications on the internet, telephone, and face to face. *New Media and Society, 6*(3), 299-318.

Bimber, B. (2000). The Study of Information Technology and Civic Engagement. *Political Communication, 17*, 329-333.

boyd, d. (2006). Friends, Friendsters, and MySpace Top 8: Writing Community Into Being on Social Network Sites. *First Monday, 11*(12).

boyd, d. (2007, June 24). Viewing American class divisions through Facebook and MySpace. *Apophenia Blog Essay*.

boyd, d. (in press). Why Youth (Heart) Social Network Sites: The Role of Networked Publics in Teenage Life. In D. Buckingham (Ed.), *Identity*: Macartur Foundation.

Brody, R. A. (1978). The puzzle of political participation in America. In A. King (Ed.), *The New American Political System* (pp. 287-324). Washington, DC: American Enterprise Institute.

Cassell, C. A., & Luskin, R. C. (1988). Simple explanations of turnout decline. *American Political Science Review, 82*(4), 1321-1330.

Coleman, J. S. (1988). Social Capital in the Creation of Human Capital. *American Journal of Sociology, 94*, S95-S120.

Coleman, J. S. (1990). *Foundations of social theory*. Cambridge, MA: Harvard University Press.

ComScore Networks. (2006). *Social Networking Sites Continue to Attract Record Numbers as MySpace.Com Surpasses 50 Million U.S. visitors in May* (Press Release).

Czitrom, D. J. (1982). *Media and the American Mind From Morse to McLuhan*. Chapel Hill, NC: University of North Carolina Press.

Delli Carpini, M. X. (2000). Gen.com: Youth, Civic Engagement, and the New Information Environment. *Political Communication, 17*, 341-349.

Delli Carpini, M. X., & Keeter, S. (1993). Measuring Political Knowledge: Putting First Things First. *American Journal of Political Science, 37*(4), 1179-1206.

Delli Carpini, M. X., & Keeter, S. (1996). *What Americans know about politics and why it matters*. New Haven, Conn.: Yale University Press.

Ellison, N. B., Steinfeld, C., & Lampe, C. (2007). The Benefits of Facebook "Friends:" Social Capital and College Students' Use of Online Social Network Sites. *Journal of Computer-Mediated Communication, 12*, 1143-1168.

Eveland Jr., W. P., Marton, K., & Seo, M. (2004). Moving Beyond "Just the Facts": The Influence of Online News on the Content and Structure of Public Affairs Knowledge. *Communication Research, 31*(1), 82-108.

Hargittai, E. (2007). Whose space? Differences among users and non-users of social network sites. *Journal of Computer-Mediated Communication, 13*(1).

Jennings, M. K., & Zeitner, V. (2003). Internet Use and Civic Engagement: A Longitudinal Analysis. *Public Opinion Quarterly, 67*, 311-334.

Johnson, T. J., & Kaye, B. K. (2003). A Boost or Bust for Democracy? How the Web Influenced Political Attitudes and Behaviors in the 1996 and 2000 Presidential Elections. *The Harvard International Journal of Press/Politics, 8*(3), 9-34.
Katz, J. E., & Rice, R. E. (2002). *Social Consequences of Internet Use: Access, Involvement, and Interaction* (First ed.). Cambridge, MA: MIT Press.
Kenski, K., & Stroud, N. J. (2006). Connections Between Internet Use and Political Efficacy, Knowledge, and Participation. *Journal of Broadcasting and Electronic Media*(In Press).
Kohut, A., Rainie, L., Doherty, C., Parker, K., Flemming, G., Dimock, M., et al. (2000). *Youth Vote Influenced By Online Information: Internet Election Audience Seeks Convenience, Familiar Names* (Press Release).
Kraut, R., Kiesler, S., Boneva, B., Cummings, J. N., Helgeson, V., & Crawford, A. (2002). Internet Paradox Revisited. *Journal of Social Issues, 58*(1), 49-74.
Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukopadhyay, T., & Scherlis, W. (1998). Internet Paradox: A Social Technology that Reduces Social Involvement and Psychological Well-Being? *American Psychologist, 53*(9), 1017-1031.
Lake, R. L. D., & Huckfeldt, R. (1998). Social Capital, Social Networks, and Political Participation. *Political Psychology, 19*(3), 567-584.
Levine, P., & Lopez, M. H. (2002). *Youth Voter Turnout has Declined, by Any Measure* (Fact Sheet): CIRCLE.
Levine, P., & Lopez, M. H. (2004). *Young People and Political Campaigning on the Internet* (Fact Sheet). College Park, MD: University of Maryland.
Liu, H., Maes, P., & Davenport, G. (2006). Unravelling the Taste Fabric of Social Networks. *International Journal on Semantic Web and Information Systems, 2*(1), 42-71.
Lowery, S., & DeFleur, M. L. (1983). *Milestones in Mass Communication Research: Media Effects*. New York: Longman Inc.
Lupia, A., & Philpot, T. S. (2005). Views from Inside the Net:How Websites Affect Young Adults' Political Interest. *Journal of Politics, 67*(4), 1122-1142.
McLeod, J. M. (2000). Media and the Civic Socialization of Youth. *Journal of Adolescent Health, 27S*(2), 45-51.
McLeod, J. M., Rush, R. R., & Friederich, K. H. (1968). The Mass Media and Political Information in Quito, Equador. *The Public Opinion Quarterly, 32*(4), 575-587.
Miller, W. E. (1992). The Puzzle Transformed: Explaining Declining Turnout. *Political Behavior, 14*(1), 1-43.
Nie, N. H. (2001). Sociability, Interpersonal Relations, and the Internet: Reconciling Conflicting Findings. *American Behavioral Scientist, 45*(3), 420-435.
Nie, N. H., & Erbring, L. (2000). *Internet and Society: A Preliminary Report* (Report): Stanford Institute for the Quantitative Study of Society.
Norris, P. (1996). Does Television Erode Social Capital? A Reply to Putnam. *PS: Political Science and Politics, 29*(3), 474-480.
Pasek, J., Kenski, K., Romer, D., & Jamieson, K. H. (2006). America's youth and community engagement: How use of mass media is related to political knowledge and civic activity among 14 to 22 year olds. *Communication Research, 33*(3), 115-135.
Pew Internet and American Life Project. (2006, April 26). Demographics of Internet Users. from http://www.pewinternet.org/trends/User_Demo_4.26.06.htm
Putnam, R. D. (1993). *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton, NJ: Princeton University Press.

Putnam, R. D. (1995). Bowling Alone: America's Declining Social Capital. *Journal of Democracy, 6*(1), 65-78.
Putnam, R. D. (2000a). *Bowling alone : the collapse and revival of American community*. New York: Simon & Schuster.
Putnam, R. D. (2000b). *Bowling Alone: The Collapse and Revival of American Community*. New York: Touchstone.
Quan Haase, A., Wellman, B., Witte, J., & Hampton, K. (2002). Capitalizing on the Internet: Social Contact, Civic Engagement, and Sense of Community. In B. Wellman & C. Haythornthwaite (Eds.), *The Internet and Everyday Life*. Oxford, UK: Blackwell.
Rheingold, H. (2000). *The Virtual Community: Homesteading on the Electronic Frontier*. Cambridge, MA: MIT Press.
Rogers, E. M., & Chaffee, S. H. (1983). Communication as an Academic Discipline: A Dialogue. *Journal of Communication, 33*(3), 18-30.
Shah, D. V., Cho, J., Eveland Jr., W. P., & Kwak, N. (2005). Information and Expression in a Digital Age: Modeling Internet Effects on Civic Participation. *Communication Research, 32*(5), 531-565.
Shah, D. V., Kwak, N., & Holbert, R. L. (2001). "Connecting" and "Disconnecting" With Civic Life: Patterns of Internet Use and the Production of Social Capital. *Political Communication, 18*, 141-162.
Shah, D. V., McLeod, J. M., & Yoon, S.-H. (2001). Communication, Context, and Community: An Exploration of Print, Broadcast, and Internet Influences. *Communication Research, 28*(4), 464-506.
Shklovoski, I., Kraut, R., & Rainie, L. (2004). The Internet and Social Participation: Contrasting Cross-Sectional and Longitudinal Analyses. *Journal of Computer-Mediated Communication, 10*(1).
Skocpol, T., & Fiorina, M. P. (1999). Making sense of the civic engagement debate. In T. Skocpol & M. P. Fiorina (Eds.), *Civic Engagement in American Democracy* (pp. 1-27). Washington, DC: Brookings Institution Press.
Soule, S. (2001, October). *Will They Engage? Political Knowledge, Participation and Attitudes of Generations X and Y*. Paper presented at the German and American Conference "Active Participation or a Retreat to Privacy?" Potsdam, Germany.
Sproull, L., & Kiesler, S. (1991). *Connections: New ways of working in the networked organization*. Cambridge, MA: MIT Press.
Wellman, B., Haase, A. Q., Witte, J., & Hampton, K. (2001). Does the Internet increase, decrease or suppliment social capital? *American Behavioral Scientist, 45*(3), 436-455.
Zhao, S. (2006). Do Internet Users Have More Social Ties? A Call for Differentiated Analyses of Internet Use. *Journal of Computer-Mediated Communication, 11*(3).

Table 1 – Internet Usage and Outcome Distributions

	Total N = 900 %
Informational Internet Use	
most days	63.3
some days	19.3
less often	10.5
never	6.9
SNS Use	
most days	32.9
some days	15.8
less often	11.6
never	39.6
Facebook	16.0
MySpace	46.1
Both SNS Sites	8.7
Civic Engagement	
most days	30.2
some days	33.1
never	36.8
People will take advantage of me	
strongly agree	22.7
agree	30.0
disagree	26.6
strongly disagree	20.5
(missing)	0.2
Most people only look out for themselves	
strongly agree	23.9
agree	43.8
disagree	20.5
strongly disagree	11.8
(missing)	0.1
Political Knowledge (correct)	
Cheney Office	52.6
House Majority	48.9
More Conservative	42.2
Law Constitutional	52.1
Veto Override	55.5

Table 2 – Demographics of users of Facebook and MySpace and those using neither site

	Neither Site	MySpace	Facebook	Both
N	420	415	144	79
Male	51%	51%	43%	40%
White	59%	61%	75%	70%
Black	19%	11%	10%	9%
Hispanic	16%	20%	8%	11%
Other	6%	8%	7%	9%
Not in School	32%	18%	7%	8%
High School	51%	57%	21%	27%
College	17%	25%	72%	66%
Mean Income in Zip Code	$43,409	$45,678	$51,799	$46,299

Note: Categories are non-exclusive

Table 3 – Regressions of Social Capital Outcomes on Internet Uses

	Civic Engagement							
	Step 1		Step 2		Step 3		Step 4	
	Coef	s.e.	Coef	s.e.	Coef	s.e.	Coef	s.e.
Internet Use	**.147**	**.030**	**.110**	**.031**	**.134**	**.030**	**.135**	**.030**
SNS Use			**.079**	**.021**				
Facebook					**.491**	**.112**	**.482**	**.128**
MySpace					.043	.058	.023	.062
Both					-.103	.141		
Facebook*College							-.078	.163
MySpace*College							.006	.119
R- squared	.116		.129		.145		.145	
N	900		900		900		900	

	Interpersonal Trust							
	Coef	s.e.	Coef	s.e.	Coef	s.e.	Coef	s.e.
Internet Use	.048	.031	**.077**	**.032**	**.074**	**.031**	**.074**	**.031**
SNS Use			**-.062**	**.022**				
Facebook					-.194	.116	-.173	.133
MySpace					**-.192**	**.061**	**-.188**	**.064**
Both					.142	.147		
Facebook*College							.093	.170
MySpace*College							.082	.124
R- squared	.054		.062		.067		.067	
N	899		899		899		899	

	Political Knowledge							
	Coef	s.e.	Coef	s.e.	Coef	s.e.	Coef	s.e.
Internet Use	**.283**	**.056**	**.275**	**.059**	**.297**	**.056**	**.302**	**.056**
SNS Use			.017	.041				
Facebook					**.859**	**.209**	**1.134**	**.239**
MySpace					**-.246**	**.109**	**-.332**	**.116**
Both					.086	.264		
Facebook*College							-.383	.305
MySpace*College							.359	.222
R- squared	.233		.233		.266		.269	
N	900		900		900		900	

*Significant results ($p < .05$) bolded – both category excluded from Step 4 due to small N and near-collinearity with status as a current college student (see Table 2). Demographics controlled.

Appendix A: Full Table Results

	Civic Engagement							
	Step 1		Step 2		Step 3		Step 4	
	Coef	s.e.	Coef	s.e.	Coef	s.e.	Coef	s.e.
Constant	1.054	.278	.985	.277	1.154	.277	1.188	.279
Male	.062	.052	.071	.052	.078	.051	.081	.051
Hispanic	-.139	.072	-.150	.071	-.114	.071	-.114	.071
Black	.027	.076	.038	.076	.047	.076	.045	.076
Other Race	.044	.105	.048	.105	.074	.104	.070	.104
Income	.000	.000	.000	.000	.000	.000	.000	.000
Age	-.022	.016	-.019	.016	-.027	.016	-.029	.016
College	-.135	.089	-.161	.089	-.274	.092	-.250	.114
Not in School	-.439	.086	-.423	.085	-.415	.085	-.409	.085
Internet Use	.147	.030	.110	.031	.134	.030	.135	.030
SNS Use			.079	.021				
Facebook					.491	.112	.482	.128
MySpace					.043	.058	.023	.062
Both					-.103	.141		
Facebook*College							-.078	.163
MySpace*College							.006	.119
R- squared	.116		.129		.145		.145	
N	900		900		900		900	

	Interpersonal Trust							
	Step 1		Step 2		Step 3		Step 4	
	Coef	s.e.	Coef	s.e.	Coef	s.e.	Coef	s.e.
Constant	.268	.287	.332	.286	.334	.289	.302	.290
Male	-.016	.054	-.023	.053	-.022	.053	-.026	.054
Hispanic	-.065	.074	-.057	.074	-.053	.074	-.055	.074
Black	-.382	.079	-.391	.079	-.403	.079	-.403	.079
Other Race	-.173	.109	-.176	.108	-.171	.108	-.172	.109
Income	.000	.000	.000	.000	.000	.000	.000	.000
Age	-.019	.016	-.022	.016	-.021	.016	-.019	.017
College	-.038	.092	-.017	.092	-.003	.095	-.075	.119
Not in School	-.164	.088	-.177	.088	-.179	.088	-.189	.089
Internet Use	.048	.031	.077	.032	.074	.031	.074	.031
SNS Use			-.062	.022				
Facebook					-.194	.116	-.173	.133
MySpace					-.192	.061	-.188	.064
Both					.142	.147		
Facebook*College							.093	.170
MySpace*College							.082	.124
R- squared	.054		.062		.067		.067	
N	899		899		899		899	

	Political Knowledge							
	Step 1		Step 2		Step 3		Step 4	
	Coef	s.e.	Coef	s.e.	Coef	s.e.	Coef	s.e.
Constant	.625	.523	.610	.525	1.011	.519	1.122	.521
Male	.246	.098	.248	.098	.278	.096	.281	.096
Hispanic	-.900	.135	-.902	.135	-.816	.133	-.819	.133
Black	-.885	.144	-.883	.144	-.871	.141	-.887	.141
Other Race	-.502	.198	-.501	.198	-.427	.195	-.445	.195
Income	.000	.000	.000	.000	.000	.000	.000	.000
Age	.037	.030	.038	.030	.019	.030	.014	.030
College	.769	.167	.763	.168	.481	.171	.412	.213
Not in School	-.066	.161	-.062	.162	-.027	.159	-.020	.159
Internet Use	.283	.056	.275	.059	.297	.056	.302	.056
SNS Use			.017	.041				
Facebook					.859	.209	1.134	.239
MySpace					-.246	.109	-.332	.116
Both					.086	.264		
Facebook*College							-.383	.305
MySpace*College							.359	.222
R- squared	.233		.233		.266		.269	
N	900		900		900		900	