Political Involvement in "Mobilized" Society:

The Interactive Relationships among Mobile Communication, Social

Network Characteristics, and Political Life

Scott W. Campbell[1]

Nojin Kwak[2]

"Mobile 2.0: Beyond Voice?"

Pre-conference workshop at the International Communication Association (ICA)

Conference

Chicago, Illinois

20 – 21 May 2009

[1] Department of Communication Studies, University of Michigan, Ann Arbor, MI 48104
[2] Department of Communication Studies, University of Michigan, Ann Arbor, MI 48104

Abstract

    In recent years mobile communication has emerged as a new channel for political discourse among close friends and family members. While some celebrate new possibilities for political life, others are concerned that intensive use of the technology can lead to small, insular networks of like-minded individuals with harmful effects on civil society. Drawing from a representative sample of adults in the U.S., this study examined how mobile-mediated discourse with close ties interacts with social network characteristics to predict levels of political participation and political openness. Findings revealed that use of the technology for discussing politics and public affairs with close network ties is positively associated with both political participation and openness, but that these relationships are moderated by the size and heterogeneity of one's network. Notably, levels of participation and openness decline with increased use of the technology in small networks of like-minded individuals. However, these trends are reversed under certain network conditions, showing the role of mobile communication in civil society is highly dependent upon the social context of its use.

Over the last several decades, scholars have become increasingly concerned about the deterioration of American civil society. Much of this concern stems from the belief that public life has eroded as a consequence of citizens retreating into their own private spheres of interest and relationships (Bellah et al., 1985; Gergen, 2008; Sennett, 1974). Putnam's (1995, 2000) empirical evidence of this decline has fueled these concerns and attracted even greater attention to the health of the American political process. According to Putnam (1995, 2000), during the latter part of the 20th century Americans became less interested in and knowledgeable of political matters. Furthermore, voter turnout trended downward, as well as other acts of political participation such as attending rallies, working for a political party, and writing to elected officials. Since the release of Putnam's book *Bowling Alone* (2000), political enthusiasm may be on the rise in the U.S., evidenced by higher levels of voter turnout in presidential elections. This positive turn offers hope that the course of recent trends in political participation is improving, however additional research is needed to establish whether increased participation is pervasive or solely reflected in the latest national elections. The decline and possible rise of political participation in American society raises important questions about changes in the ways in which its contemporary citizens make sense of and engage in the political process.

A reasonable place to start this line of inquiry is to examine new developments in the landscape of political talk. Indeed, talking about politics is a key ingredient to knowledgeable and active citizenship. Research demonstrates that political discussion leads to various forms of participation (Gastil, Deess, & Weiser, 2002; Lenart, 1994; McLeod, Scheufele, & Moy, 1999; Wyatt, Katz, & Kim, 2000; Kwak, Williams, Wang, & Lee, 2005) and aids in the understanding of political issues (Bennett et al., 2000; Kwak et al., 2005; Scheufele, 2000, 2002; Scheufele, Shanahan, & Kim, 2002). Therefore, insight into new ways that citizens exchange political views and information can lead to better understanding of the underlying conditions that help and hinder political involvement and the formation of opinions about public matters.

Communication technology has long been recognized as an integral component of civil society that offers both promise and peril for political discourse. While some celebrate new opportunities for free and open exchange of ideas through electronic media (e.g., Pool, 1984), others caution their use can privatize leisure time when individuals retreat from the public sphere in favor of individualized consumption (e.g., Putnam, 1995, 2000). The ascent of computer and mobile communication technology has heralded new hopes and fears about the media's role in

engaged citizenship. While some warn that time spent online can lead to social isolation (Kraut et al., 1998; Nie & Erbring, 2000, 2002; Nie and Hillygus, 2002), most of the evidence suggests that Internet use can foster civic and political engagement, particularly when used for information exchange (Jennings & Zeitner, 2003; Shah, Kwak, & Holbert, 2001; Shah, McLeod, & Yoon, 2001).

The rapid uptake of mobile communication technology warrants another step forward with research on the role of new media in political life. Despite it being the fastest diffusing medium, "there are but scant offerings on the contribution of mobile communication to political life" (Gergen, 2008, 297). This "contribution" is evident in the ways individuals used the technology for campaign updates and information during the last presidential election (Aleo-Carreira, 2008) and a spike in text messaging on its final day (AT&T, 2008). While some may be concerned that mobile communication may be replacing traditional face-to-face discourse (Gergen, 2008), evidence suggests that it often complements, even fosters, co-present interaction (Campbell & Kwak, 2007; Ishii, 2006; Ling, 2004; Wellman et al., 2003). As an added layer of communication, it is not surprising that use of the technology for information exchange has been linked to increased levels of political participation in a recent study (Campbell & Kwak, forthcoming).

Yet research in this area is still notably thin and concerns persist that mobile communication can detract from political life by feeding into an individualist ideology and social privatism. Gergen (2003) argues many now live in "floating worlds" of close friends and family members, which sustain their own realities, values, and logics through perpetual contact (Katz & Aakhus, 2002), much of which is maintained through the mobile phone. Gergen (2008) warns this social trend can lead to small, insular networks of like-minded close ties, which he characterizes as "monadic clusters." Most troubling is that these clusters have the potential to change the composition of civil society, as the traditional role of autonomous citizens is replaced by small enclaves of homogenous individuals. Gergen (2008) warns that continual mobile-mediated contact within monadic clusters can lead to political detachment when the dominant concerns are with the immediate lives of the participants themselves. Of course, individuals within these clusters may share an interest in political matters, however Gergen contends they will also tend to coalesce in their views, hindering open and deliberative political dialogue.

Gergen's theory of monadic clusters is a call for scholars to account for social network characteristics of close ties in studies of the political implications of electronic social media. Perceptions and uses of these media, such as computers and mobile phones, are substantially influenced by one's network of close ties (Campbell & Russo, 2003; Fulk, 1993; Fulk, Schmitz, & Ryu, 1995; Fulk, Schmitz, & Steinfield, 1990). On a broader level, "close tie relationships have theoretical importance because they are central in social influence and normative pressures (Burt, 1984: 127)" (McPherson, Smith-Lovin, & Brashears, 2006). Therefore, it is reasonable, if not intuitive, to assume that the characteristics of close ties play an important role in the nature of mobile-mediated political discourse as well as political attitudes and behavior. Drawing from the existing research and Gergen's theoretical discussion of monadic clusters, the purpose of this study was to examine how characteristics of these types of networks intersect with mobile phone use to predict involvement in political life. In particular, this study is concerned with how variation in network heterogeneity and size moderates the relationships between mobile-mediated discourse with close ties and political participation, as well as openness to alternative political views.

As noted above, informational use of mobile technology has recently been linked to increased levels of political participation (Campbell & Kwak, forthcoming), suggesting this added layer of information exchange and discourse might be helpful in reversing the trends Putnam observed. However, there is a dearth of research on the role of mobile communication in American political life, and what research there is on the topic has done little to account for the nature of the social networks in which mobile-mediated discourse takes place. Following Gergen's (2008) logic, it is possible that lower levels of network heterogeneity and size might constrain the political benefits of mobile-mediated discourse and information exchange.

Traditionally, political theory has favored the assumption that heterogeneity in discussion networks has a positive impact on the public sphere, particularly with regard to opinion formation. As Arendt (1968) and Habermas (1989) assert, exposure to alternative views fosters interpersonal deliberation and reflection, which enhances one's ability to form opinions. Furthermore, exposure to so-called "cross-cutting" views (Mutz, 2002a, 2002b) is thought to promote greater awareness of and appreciation for alternative perspectives, thereby providing individuals with a more robust and sympathetic framework for making decisions about political matters (Benhabib, 1992; Manin, 1987).

However, these assumptions about heterogeneous communication environments have endured with little empirical testing. Only recently have scholars begun to investigate the effects of diverse discussion networks on political attitudes and behavior. Notably, Mutz (2002a) found that exposure to dissonant political views through discussion networks enhances awareness of legitimate rationales for opposing viewpoints, although it does not deepen assessments of one's own rationales. Connecting this heightened awareness to political attitudes, Mutz reports findings of increased tolerance when exposure is through more intimate ties. In other words, cross-cutting discourse deepens one's knowledge of alternative perspectives, however only in cases of close ties does it contribute to political tolerance.

While interpersonal exposure to dissonant views may have certain positive effects on awareness and tolerance, these effects do not necessarily translate to increased political participation. In a separate study, Mutz (2002b) found that individuals whose discussion networks involve greater disagreement tend to have lower levels of political participation. Mutz attributes this finding to both intra- and interpersonal conflict stemming from dissonant discourse within the networks. On the intrapersonal level, disagreement in discussion networks can lead to political ambivalence, even in the absence of new information. On the interpersonal level, individuals in diverse discussion networks are thought to be less likely to participate in politics because they prefer to avoid conflict with fellow network members. As Mutz (2002b) concludes, "the kind of environment widely assumed to encourage an open and tolerant society is not necessarily the same kind of environment that produces an enthusiastically participative one" (p. 851).

In order to further contextualize the associations between network ties and political engagement, Kwak et al. (2005) examined the interactive effect of network size on heterogeneity and found individuals in small networks tend to be more politically active when their discussion partners have similar backgrounds and viewpoints. While this finding is consistent with Mutz's for the negative effect of heterogeneity on participation, Kwak et al. also found that as network size increases, the negative trend for heterogeneity is reversed. That is, they found heterogeneity to be positively associated with political participation when discussion networks are larger, revealing the conflict from exposure to diverse views is mitigated by the size of one's network.

Collectively, the research in this area tells a complex story about the intersections between political discourse, network characteristics, and political involvement. Heterogeneity both helps

and hinders involvement in political life, depending on the size and level of discourse within one's network. On the one hand, individuals exposed to diverse viewpoints through political discussion can gain deeper insights and greater appreciation for the perspectives of others, particularly when the exposure is through close friends and family members. Yet, in order for this exposure to benefit participation levels, networks must be large enough in order for individuals to feel comfortable acting on their political views. Extending this line of research to a mobile communication context, this study aimed to address the following hypotheses regarding the interactive effects of mobile communication, network size, and heterogeneity.

First, in line with previous research (Campbell & Kwak, forthcoming), we predict that increased use of the mobile phone to discuss politics and public affairs with close network ties will be positively associated with political participation and openness. Because mobile communication offers an added layer of political discourse, and political discourse fosters participation and deliberative opinion formation, we anticipate use of the technology for this purpose plays a positive role in political life when examined on its own, i.e., without accounting for social network characteristics.

H1: Mobile-mediated discourse with close ties will be positively associated with levels of political participation and openness.

Next we examine the interactive effects of the two network characteristics of key concern – size and heterogeneity. Past research shows that members of larger discussion networks tend to be more politically active and knowledgeable (Kwak et al., 2005; Mutz, 2002b). It stands to reason that individuals are better able to tap into the benefits of a large discussion network when connected through the mobile, particularly for discourse about public affairs. Therefore, we anticipate a positive interaction effect for network size and mobile-mediated discourse with close social ties.

H2: Positive associations between mobile communication and participation/openness will increase significantly as networks are larger in size.

With regard to heterogeneity, the research discussed above reveals important distinctions between its effect on participation and its effect on openness. Heterogeneity has been negatively linked to participation, yet exposure to dissonant views of close ties contributes to greater understanding and appreciation for alternative perspectives (Mutz, 2002b). This research provides grounds for expecting that mobile communication can enhance political openness when

used for cross-cutting discourse among close ties, but that its use in cross-cutting networks will not foster political participation.

H3: Positive associations between mobile communication and political openness will increase significantly as networks are more heterogeneous.

H4: Increased network heterogeneity will have a negative effect on associations between mobile communication and political participation.

The hypotheses advanced so far examine the two-way interactions among mobile-mediated discourse and each of the social network characteristics when considered separately. For a more nuanced account, it will be fruitful to include three-way interaction terms so that the effects of both network characteristics on associations between mobile communication and political life are considered together. While Gergen's (2008) theoretical discussion of monadic networks suggests that frequent mobile communication in small, homogenous networks of close ties has negative consequences for political attitudes and behavior, this claim is speculative, and it is difficult to project specific interaction patterns from the empirical findings available in the existing literature. Therefore, we advance the following research question.

RQ2: How are the associations among mobile communication and the indicators of political life affected by network size and heterogeneity when these characteristics are accounted for simultaneously?

Method

Sample

The data for this study came from a national mail survey that was conducted during the 2008 presidential campaign. The data collection was conducted by the research firm *Synovate*. A massive number of people were contacted via mail and asked to express their willingness to participate in mail, telephone, or online surveys, and if so, to provide basic demographic information. A balanced sample was then drawn from among the more than 500,000 people who agreed to participate in the pre-recruited "mail panel."

In order to ensure representativeness, the sample for the current survey was drawn to reflect demographic distributions within the five Census divisions of household income, population density, panel member's age, gender, and region. This stratified quota sampling method was used to select 2,218 mail survey respondents. There were 66 undeliverable surveys, and 1,018 usable responses were received. Thus, the response rate was 47.3 percent. This stratified quota sampling

method differs markedly from more conventional probability sample procedures yet produces highly comparable data (Putnam, 2000; Putnam & Yonish, 1999). Because this study examines the role of mobile-mediated political discussion within one's close network, the analyses reported in this study were conducted among 896 respondents whose close network consisted of at least three people.

Demographic characteristics of the current sample resemble the profiles of the national population figures reported in U.S. Census Bureau's 2007 American Community Survey (ACS), with respect to education attainment (the median education level for those 25 or older in both data sets is some college), household income (the median in the ACS and the current study is $50,000-74,999 and $50,000 – 59,999, respectively), and age (the median age for those 18 or older in the ASC and the current study is 45-54 and 53, respectively). However, there is a greater percentage of male respondents in the sample (59.7%) than in the ACS (48.6%).

Criterion Variables

Political participation. Respondents were asked about four types of involvement in traditional forms of political participation: attending a political meeting, rally, or speech; working for a candidate or a party; contacting a public official or a political party; and contributing money to a candidate or a political party (McLeod et al., 1999; Milbraith & Goel, 1971; Xenos & Moy, 2007). Respondents reported the frequency of involvement in each type of participation in the past month on a seven-point scale, ranging from "none in the last month" to "everyday." The responses were summed to form an additive index (Cronbach α = .74).

Political openness. Respondents were asked to report how much they agreed with three statements that attempted to measure the extent to which they were receptive to open dialogue with others with different views: "I am interested in learning about alternative political perspectives," "I enjoy talking to others with different political views, because it helps me realize we share similar feelings on some issues," and "I enjoyed discussing politics with others I don't know very well." A six-point response scale, ranging from "definitely disagree" to "definitely agree," was used for each item, and responses were added as an index (Cronbach α = .76).

Measures of Strong Personal Ties: Network Characteristics and Political Mobile Phone Use

Size. Respondents were asked how many people they had in their network of strong personal ties, which were defined as "those who you feel very close to and with whom you are

frequently in contact to discuss various things, including your personal issues and feelings." The responses ranged from "zero" to "more than 20 people" (*M*: 8.6; *SD*: 6.2).

      Heterogeneity. Three items were used to tap the degree of heterogeneity of one's strong ties. Respondents were asked to report how many of the people in their network of strong personal ties had the same level of political interest; how many of them shared the same political views; and how many of them supported the same presidential candidate in the election. The responses were recorded on a five-point scale, consisting of "none," "only some," "about half," "most of them," and "all." The responses were reverse-coded and added to form an index (Cronbach α = .86).

      Mobile phone use for political discourse. In order to tap respondents' political use of the mobile phone with their close ties, an item that asked about the frequency of the mobile phone for discussing politics and public affairs was used. An eight-point response scale, ranging from "none in the last month" to "several times a day," was used (*M*: 2.6; *SD*: 1.8).

Control Variables

      As control variables, this study included age, gender, education, household income, political interest, newspaper use, and television news use (local and national programs), which have been found to influence the criterion variables (Jeffres, Atkin, & Neuendorf, 2002; Jennings & Zeitner, 2003; Shah et al., 2001; Shah et al., 2005). To measure political interest, respondents were asked to state how much they agreed with the following statement, "I am very interested in politics," on a six-point scale, ranging from "definitely disagree" to "definitely agree" (*M* = 3.5, *SD* = 1.6). For media use variables, respondents were separately asked about how often in the past month they used national nightly news, local television news program, and daily newspapers. The two television items were combined as an index (Cronbach α = .72).

Interaction Terms

In order to carry out analyses corresponding to H2, H3, and H4, this study created interaction terms between mobile-mediated discourse and each of the two measures of close network features (i.e., network size and network heterogeneity). In addition, to investigate the RQ, this study created a three-way interaction term among political mobile phone use and the two network variables. To reduce potential problems with multicollinearity between interaction terms and their components, all the component variables were standardized prior to the formation of the interaction terms (Cronbach, 1987; Jaccard, Turrisi, & Wan, 1990; Kwak, 1999).

Results

Findings concerning H1 are presented in Table 1. A hierarchical regression was separately run for political participation and political openness. In each analysis, a host of control variables and two measures of network features were controlled for in order to identify the independent contribution of mobile-mediated political discourse in political participation and openness. As shown in Table 1, control variables, as a block, accounted for a significant amount of variance in both criterion variables (11.1% and 25.3% for political participation and openness, respectively). After the control, the block of network measures was found to make a significant contribution, although the positive relationship between network heterogeneity and either criterion variable was not strong enough to be significant. As for network size, however, findings indicated that the more people one has in her/his close network, the more likely s/he is to be politically engaged and open to diverse views. After the strong contribution of both blocks were taken into consideration, use of the mobile phone for political dialogue with close ties was found to be strongly related to political participation ($\beta = .15$, $p<.01$), thereby supporting H1. The relationship between the mobile measure and political openness was positive, but only marginal in significance ($\beta = .06$, $p<.09$).

[Insert Table 1 about here.]

While the findings in Table 1 suggest that mobile-mediated political dialogue could be a positive factor, the analyses reported in Table 2 examined a possibility that the role of mobile-mediated political discussion might be strengthened or weakened depending on the nature of one's network of close ties. As shown in Table 2 and expected in this study (H2), the interaction term between mobile phone use and network size was found to be significant for both political participation ($\beta = .20$, $p<.01$) and openness ($\beta = .06$, $p<.08$), the latter of which was marginally significant. Both of the interaction results indicate that the positive relationship between political use of the mobile phone with close others and each criterion variable tends to be greater among those whose close personal network is greater in size.

[Insert Table 2 about here.]

Both interaction terms were plotted in Figure 1. As shown in the figure, for those whose network size is greater, more frequent use of the mobile phone with close ties for discussing politics and public affairs is associated with an increase in political participation (top panel) and political openness (bottom panel). However, for those whose close network consists of a smaller

number of people, the positive relationship is not observed. Instead, frequent use of the mobile phone for political discussion within a small network of friends does not appear to make individuals more participatory (top panel) or more open to alternative perspectives (bottom panel).

[Insert Figure 1 about here.]

Findings concerning H3 and H4, both of which inquired about the role of heterogeneity of close network as a moderator, are also shown in Table 2. For both criterion variables, the interaction term was significant. Given that the heterogeneity variable approached only marginal significance in Table 1, the findings in Table 2 thus suggest that the role of network heterogeneity tends to be more clearly identified when its interactive relationship with political use of the mobile phone is examined.

As for political participation, the negative interaction term (β = -.08, p<.05) indicates that people's political discussion with close others is more likely to be associated with political activism when the mobile-mediated discussion occurs within a more homogeneous network (see the top panel of Figure 2), which supports H3. As for political openness, as expected (H4), the interaction term is positive (β = .09, p<.05), which indicates that the positive contribution of political use of the mobile phone is likely to be evident among those whose close ties have dissonant views on issues (see the bottom panel of Figure 2). When considered together, the findings in Figure 2 demonstrate that the benefits of political mobile phone use may vary depending on the degree of homogeneity or heterogeneity that exists in one's close network. As presented in Figure 2, discussing politics by mobile phone with close others with similar views may tend to mobilize people, but mobile-mediated political discussion with close others with dissimilar views may help people become more open to dissonant perspectives.

[Insert Figure 2 about here.]

Table 3 presents findings concerning the research question of this study. The three-way interaction term analyzed in Table 3 attempts to understand the role of mobile-mediated political discourse with the influence of network size and heterogeneity simultaneously considered. Given that the findings in Table 2 and Figures 1 and 2 clearly demonstrated that at the bivariate-level the three variables significantly interacted with each other, the analyses reported in Table 3 are an attempt to test how all three variables work together in generating political activism and openness.

As shown in the table, the three-way interaction term was found to be significant for political participation (β = -.21, p<.01). This positive three-way interaction term for political participation suggests that the patterns of the relationship between mobile phone use and network heterogeneity in the top panel of Figure 2 would be manifest among those whose close network is greater in size. However, the marginally significant interaction term for political openness (β = -.06, p<.06) suggests that the patterns of the relationship in the bottom panel of Figure 2 would be more evident among those whose close network is smaller, given that the interaction term between mobile phone use and network heterogeneity was positive in Table 2. The three-way interactive relationships are plotted in Figures 3 and 4.

[Insert Table 3 about here.]

As shown in Figure 3, in explaining people's political participation the interplay between mobile phone use and network heterogeneity demonstrates markedly different patterns between networks of different sizes. When one's network consists of a larger number of close ties (see the top panel of Figure 3), the patterns of the relationship between mobile phone use and network heterogeneity appear similar to those reported in Figure 2, with the mobile phone variable having a positive contribution when mobile-mediated political discussion occurred within a more homogeneous network of close ties. However, when the size of the network is smaller, the patterns of the interactive relationship between mobile phone use and the network variable appear just opposite. That is, use of the mobile phone for political discussion is positively associated with political participation only when, though small in number, close ties in people's network present divergent views on issues in their conversation by mobile phone.

[Insert Figure 3 about here.]

Figure 4 presents findings concerning political openness. As shown in the figure, when the size of one's close network is large, mobile-mediated political discussion is related to a similar degree of increase in political openness regardless of the levels of network heterogeneity. However, for those who count only a small number of people as close ties, the more heterogeneous one's close network is, the more likely one's use of the mobile phone for political discussion is to lead to political openness, a pattern that was also observed in Figure 2. One important difference between Figures 2 and 4, however, is that when one's close network is small, on average, those with heterogeneous close network tend to have greater political openness than others with homogeneous close networks.

[Insert Figure 4 about here.]

Discussion

Before discussing the individual results, we first draw the overall conclusion that mobile communication has emerged as a meaningful resource for political discourse. Existing research on the content of mobile-mediated exchanges has largely emphasized use of the technology for strengthening relationships and the coordination of daily life activities (Ling & Yttri, 1999, 2002; Ling, 2004, 2008). As Gergen (2008) notes, very little research has be done on the extent to which mobile phones are used for political discussion and the consequences this has for civil society. The findings from this study, coupled with reported mobile phone use for political communication during the 2008 presidential election (Aleo-Carreira, 2008; AT&T, 2008), demonstrate that the technology is not only a social tool for maintaining relationships and coordinating plans, but also a resource for political information and discussion. In other words, the emergence of mobile communication technology has added a new dimension to civil society, which, as the present findings suggest, may have important implications for levels of political participation and openness.

As expected, when examined on its own mobile phone use for political discourse among close ties is positively associated with both political participation and political openness, indicating it can play a positive role in political life. However, findings for the subsequent hypotheses reveal that these relationships are moderated by the size and heterogeneity of one's network of close ties. Tests of the two-way interaction effects indicate that some of Gergen's (2008) premises about social network characteristics and mobile communication are valid, particularly those regarding size. Figure 1 shows that having a small network mitigates the positive associations between mobile communication and both indicators for political life. These findings suggest that frequent use of the technology for discourse in small networks of close ties may not be beneficial for political life. Yet at the same time, the patterns in the slopes for network size also shed light on a different side of the story offered by Gergen. His thesis draws attention to the potential political drawbacks of intensive mobile communication in small social networks. While those drawbacks are evident in Figure 1, so are some very positive trends for use of the technology in larger networks. Increased use of the technology for discourse in larger networks is positively associated with both political participation and openness, providing grounds for optimism when considering the civic implications of mobile phone use in social

networks. While mobile-mediated discourse in smaller networks may hinder participation and openness, the potential benefits of the technology for members of larger networks appear to be greater than the potential drawbacks in smaller networks (as indicated by the angles of the interaction slopes in Figure 1). Although the causal direction of these relationships requires further investigation, the findings offer evidence that mobile communication with a large number of close ties might substantially boost levels of involvement and appreciation for alternative views expressed in political dialogue.

Next we consider the two-way interactions for mobile communication and heterogeneity. Mutz's (2002a, 2002b) research suggests that heterogeneous discussion networks tend to detract from political participation, but have the potential to increase political understanding and tolerance. Findings from this set of analysis (in Figure 2) provide new insight into ways that mobile communication can feed into these trends. Participation levels are higher with increased mobile-mediated discourse in both homogenous and heterogeneous networks. However, the rise in participation is notably greater for those with close ties who share similar political views (top of Figure 2). An explanation for this might be that mobile communication enhances the intra- and interpersonal comfort associated with political discourse with like-minded others, thereby fostering a social environment in which one feels both confident and safe to act on their political views. This interpretation resonates with Mutz's argument that homogenous discussion networks create such an environment, while also showing that mobile communication has the potential to enhance this effect.

With regard to political openness, the findings show that mobile-mediated discourse interacts with heterogeneity in a very different way. That is, only in heterogeneous networks of close ties do we see increased levels of openness with frequent mobile-mediate discourse (bottom of Figure 2). As with the case above, it appears that mobile communication has the potential to enhance the benefit of a given network characteristic, except in this case the benefit stems from diversity among close ties, rather than similarity. This finding resonates with Mutz's (2002a) that exposure to cross-cutting views among close network ties enhances political tolerance. Bearing in mind this is not the case for weaker network ties, there is again reason for optimism about the role of mobile communication in political life. Mobile phones are prominently used for maintaining relationships with good friends and family members, i.e., "close" network ties (Ling, 2004, 2008). While this may raise concerns about the formation of

monadic clusters (Gergen, 2008), Mutz's findings suggest that it is primarily through discourse with *close* ties that individuals actually gain appreciation for alternative political perspectives. In this vein, it seems that mobile communication technology – again, a prominent social resource for close ties – has the potential to enhance political openness by increasing exposure to dissonant views of others who one trusts but does not necessarily agree with.

The three-way interaction effects reveal similar patterns for size and heterogeneity, while shedding more light on possible effects of mobile communication on political life. Consistent with Gergen's (2008) concept of monadic clusters, levels of political participation and openness are lower with increased use of the technology in small networks of like-minded individuals (bottom of Figures 3 and 4). However, the figures also show that these negative associations between mobile communication and political life are reversed under certain network conditions. While political both indicators of political life decline with mobile phone use in small like-minded networks, those who use the technology for political talk in heterogeneous networks that are small tend to be more politically active and open. In other words, increased mobile communication with diverse others mitigates the negative effects of having a small network of close ties. In fact, the findings suggest that it reverses them. While enlightening, this three-way interaction effect is not necessarily surprising in the case of political openness, considering diversity among close ties has been found to foster political tolerance. However, it is unexpected for political participation, which in the broader context of political talk decreases through exposure to diverse views of network members. This finding shows that mobile communication not only has the potential to enhance established trends in political life, but also to reverse them (for the better in this case) in certain types of social networks. Indeed, the effects of mobile communication on civil society can only be understood in the context of whom and how many one uses the technology with.

Collectively, the findings from this study shed new light on the structure of the relationships between mobile communication, social networks, and political life. However, it is important to recognize that we examined only one aspect of mobile communication – discourse on politics and public affairs. It is possible that use of the technology for other purposes would yield disparate results. Indeed, research and theory have established that differential forms of mediated content can have differential social consequences, particularly for civic life (Campbell & Kwak, forthcoming; Finn, 1997; Katz, Blumler, and Gurevitch, 1974; Norris, 1996; Shah,

Kwak, & Holbert, 2001). Although the scope of this study was explicitly concerned with informational uses of mobile telephony, we also ran a set of post hoc analyses exploring whether its use for purely social reasons alters the results. When the measure for mobile-mediated political discourse was replaced with use of the technology for sociability (i.e., to "to catch up or stay in touch") with close ties, the meaningful findings from the original analyses were rendered statistically insignificant. These results show that the nature of mobile communication is an important consideration in examining its role in political life and should be further explored in future research.

While the findings shed new light on the roles of mobile communication, social networks, and civil society, it is important to acknowledge some limitations of the study that should also be addressed in future research. Because the data are cross-sectional in nature, it is difficult to say whether mobile communication influences involvement in political life, or whether the arrow of causality points in the other direction. Other contexts of political discourse have been found to significantly influence political involvement (Mutz, 2002b), providing some theoretical foundation for presuming mobile-mediated discourse has a similar effect. However, this presumption needs to be verified through investigations using experimental and/or multi-wave panel approaches. These undertakings will not only allow researchers to examine effects on political life, but the causal relationships between the use of mobile technology and social network characteristics as well. For purposes of developing a theoretical model, it will be useful to know the directions of causality among all of these components.

Because it directly extends previous research on political talk, the scope of the present study narrowly focused on mobile-mediated discourse. Future investigations should broaden the scope of mobile phone use to account for other features of the technology as well. Mobile communication technologies are becoming increasingly multi-media, supporting not only interpersonal discourse, but the exchange of photographs, location-based information, and mass communication content through the Internet. As Koskinen (2008) argues, the use of these and other multi-modal aspects of the technology may have significant ramifications for civic society and therefore warrant further investigation.

It is also important for future investigations to examine different user segments. As foundational research, the purpose of this study was to provide new insights into trends in civil society as a whole. While this approach helps address broad questions about the roles of mobile

communication and social networks in political life, additional research is needed to examine whether these trends cut across qualitatively different types of users. At the end of his theoretical essay on monadic clusters, Gergen (2008) himself acknowledges, "[i]t is quite possible … that the groups characterized above as monadic are not highly general, but represent a particular niche" (pp. 306-307). One way of differentiating subpopulations is to put them in age groups. Indeed, age plays an important role in not only frequency of mobile use, but how people conceptualize and appropriate the technology (Ling, 2004). There are also other, less obvious, approaches for niche variation that should be considered. For example, Campbell and Kwak (forthcoming) found that competence using mobile technology has a significant effect on the extent to which its use is linked to civic and political involvement, suggesting that differentiating between mobile "techies" and less sophisticated users may yield disparate results. Therefore, additional research is needed to account for variations in mobile phone users as well as their usage patterns. Despite these limitations, the present study increases our understanding of the social context surrounding a burgeoning new channel for political communication in American civil society.

Considering Putnam's (1995, 2000) dire account of declining political participation in the U.S., followed by the counter-trend of increased voter turnout in the latest national elections, it is important for scholars to examine recent changes in civil society and how its members are engaged in political talk. While it would be premature (at best) to assert that the rise of mobile communication has increased voter turnout, the findings from this study give some cause for optimism about the role the technology plays in political life. However, such optimism must be qualified with recognition that the possible benefits of mobile-mediated discourse hinge on the size and heterogeneity of one's network ties, illustrating the importance of accounting for these and other aspects of social context in future research.

Table 1

Predictors of Political Participation and Openness

	Political Participation			Political Openness		
	β		t Value	β		t Value
Control Variables						
Age	.07	#	1.82	-.03		-.80
Gender (high: female)	-.05		-1.61	-.09	**	-3.15
Education	.16	**	4.44	.09	**	2.81
Household income	-.06	#	-1.72	-.04		-1.35
Political interest	.16	**	4.68	.45	**	14.05
Newspaper news use	.09	**	2.66	.01		.28
Television news use	.02		.65	.02		.69
R2 (%)	11.1			25.3		
Features of Close Network						
Size of close network	.11	**	3.17	.07	*	2.23
Heterogeneity of close network	-.06		1.62	-.05		1.58
Inc. R2 (%)	2.0			0.9*		
Mobile Phone use						
Political discussion with close ties	.15	**	4.27	.06	#	1.74
Inc. R2 (%)	2.0			0.3#		
Total R2 (%)	15.0			26.5		

Note: Entries are standardized final regression coefficients after controlling for the control variables.

# p<.10; * p<.05; ** p<.01

Table 2

Two-Way Interactive Relationships between Mobile-Mediated Political Discussion and Features of Close Network in Accounting for Political Participation and Openness

	Political Participation			Political Openness		
	β		*t* Value	β		*t* Value
Prior Blocks (R^2, %)	15.0%			26.5%		
Mobile-mediated political discussion						
X Size of close network	.20	**	5.90	.06	#	1.79
X Heterogeneity of close network	-.08	*	2.27	.09	*	-2.62

Notes:

1. Prior blocks include age, gender, education, household income, political interest, newspaper news use, television news use, mobile-mediated political discussion, size of close network, and heterogeneity of close network

2. Entries are standardized regression coefficients after controlling for the prior blocks.

# p<.10; * p<.05; ** p<.01

Table 3

Three-Way Interactive Relationships among Mobile-Mediated Political Discussion with Close Ties, Heterogeneity of Close Network, and Size of Close Network in Accounting for Political Participation and Openness

	Political Participation			Political Openness		
	β		*t* Value	β		*t* Value
Prior Blocks (R^2, %)	20.5			28.1		
Interaction Term						
Mobile-mediated political discussion X Network heterogeneity X Network size	-.21	**	6.09	-.06	#	1.94

Notes:

1. Prior blocks include age, gender, education, household income, political interest, newspaper news use, television news use, mobile-mediated political discussion, size of close network, and heterogeneity of close network, mobile-mediated political discussion X size of close network, mobile-mediated political discussion X heterogeneity of close network, and heterogeneity of close network X size of close network.

2. Entries are standardized regression coefficients after controlling for the prior blocks.

# p<.10; * p<.05; ** p<.01

Figure 1

Predicting Political Participation and Openness with Mobile-Mediated Discourse X Close Network Size

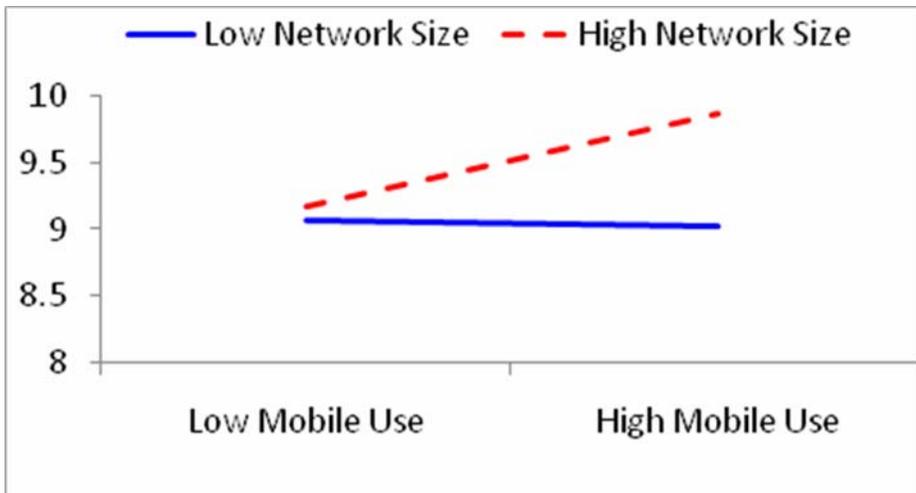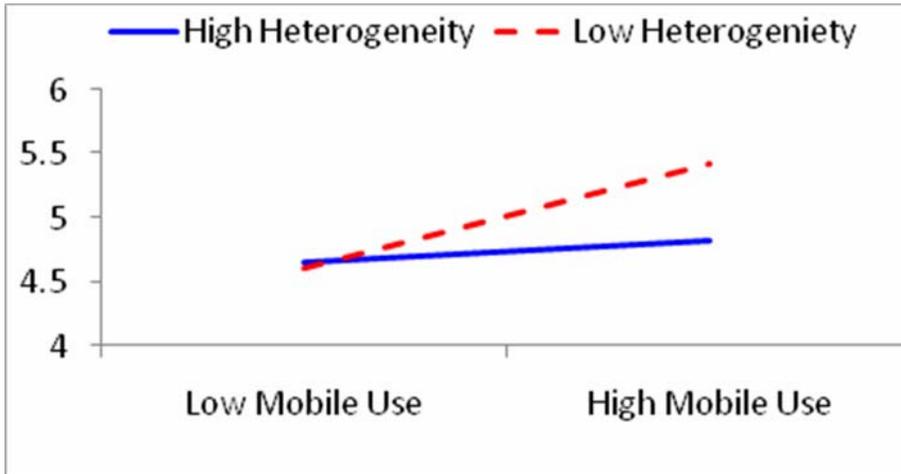### Political Participation
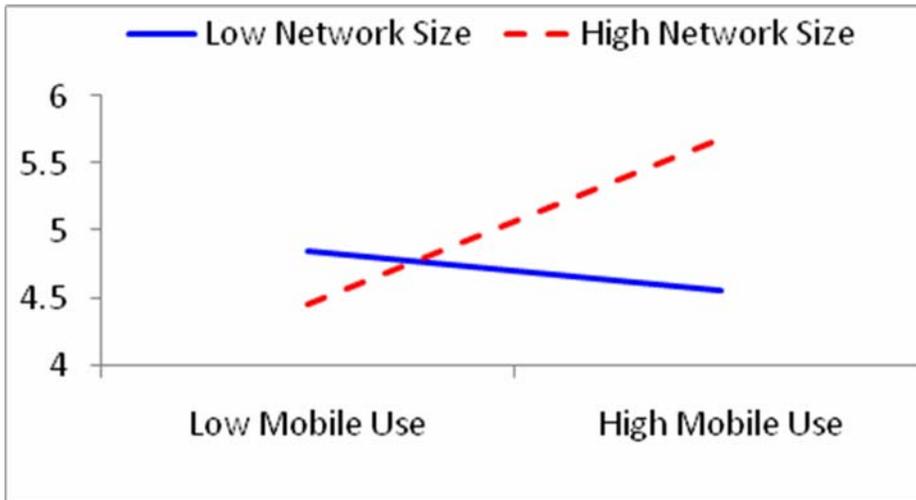
Political Openness

Figure 2

Predicting Political Participation and Openness with Mobile-Mediated Discourse X Network Heterogeneity
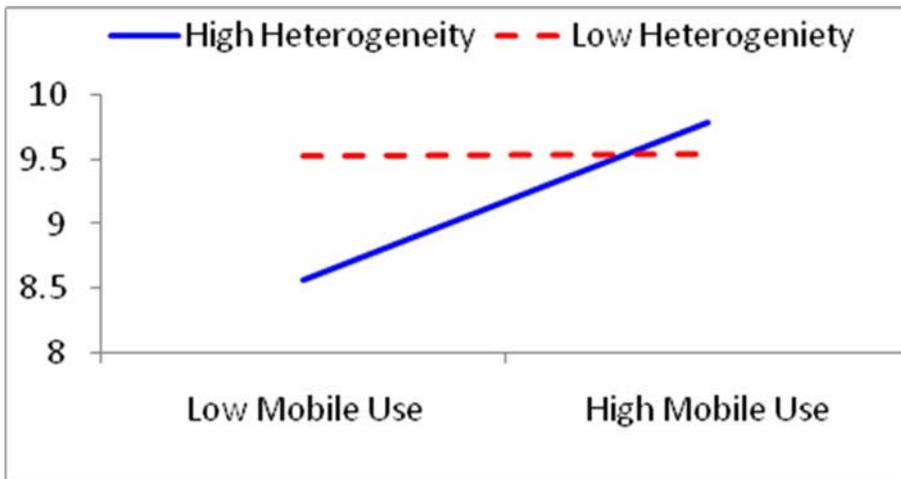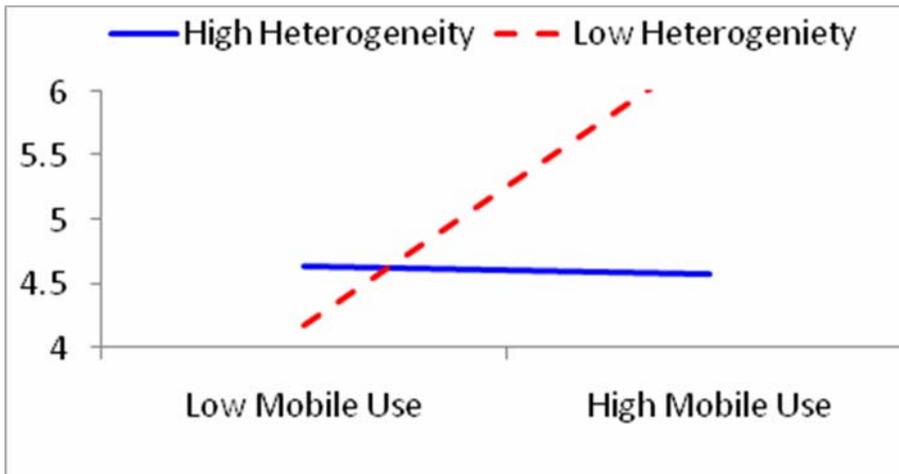

Political Participation

Political Openness

Figure 3

Predicting Political Participation with Mobile-Mediated Discourse X Network Size X Network Heterogeneity
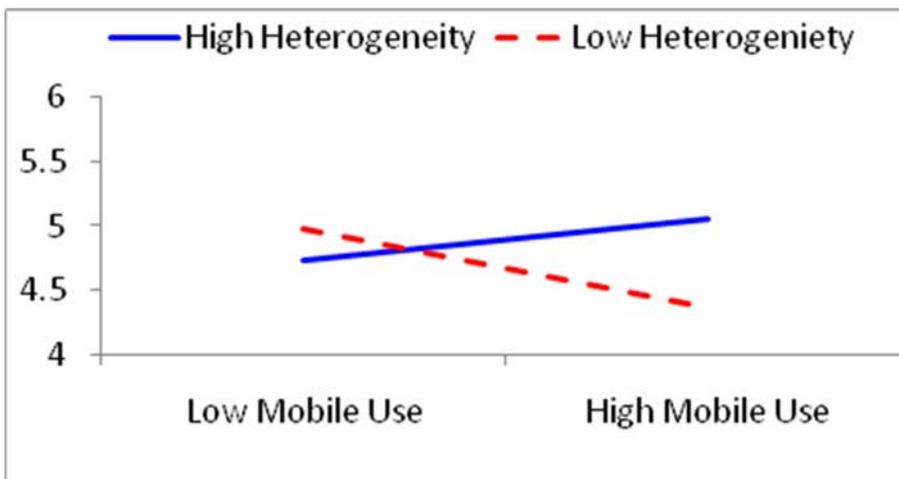
Figure 4

Predicting Political Openness with Mobile-Mediated Discourse X Network Size X Network Heterogeneity
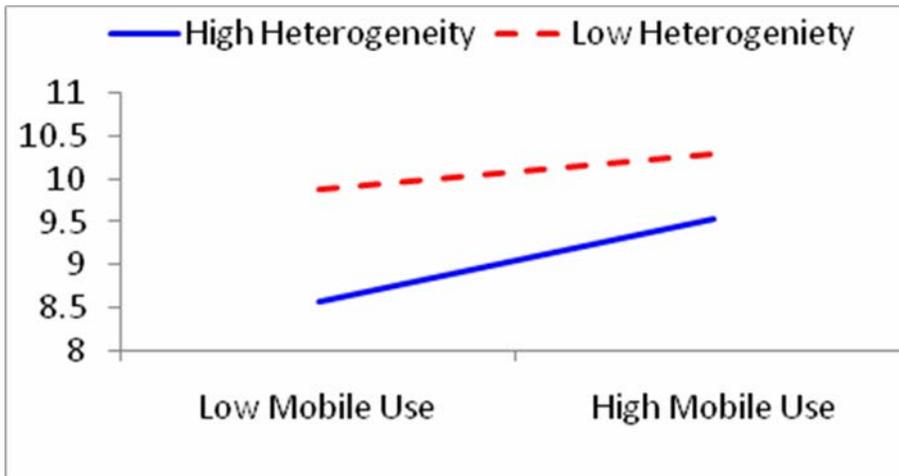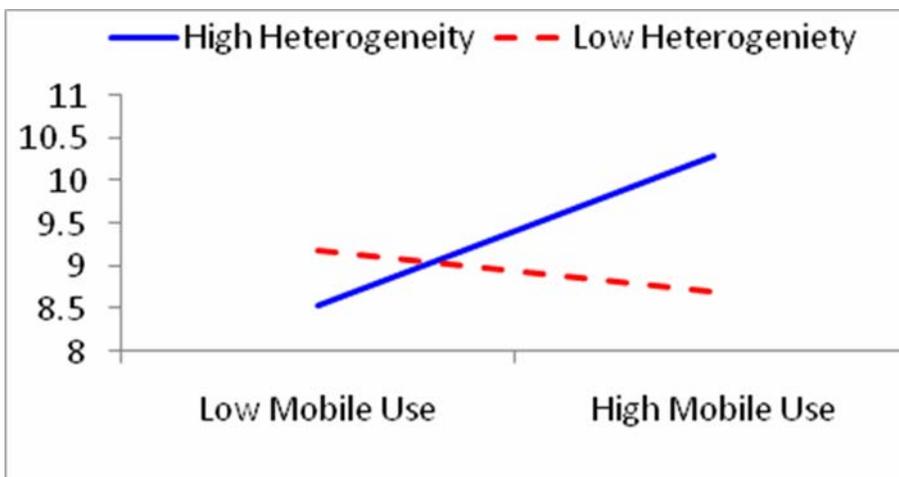
References

Aleo-Carreira, C. (2008, November 5). Did social media decide the U.S. presidential election in Obama's favor? [Online exclusive]. *The Industry Standard.* Retrieved from http://www.thestandard.com/news/2008/11/05/did-social-media-decide-u-s-presidential-election-obamas-favor

Arendt, H. (1968). Truth and politics. In H. Arendt (Ed.), *Between past and future: Eight exercises in political thought* (pp. 227-264). New York: Viking Press.

AT&T. (2008, November 6). *AT&T reports largest text messaging spike in company history on election night* [Press release]. Retrieved from http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26287

Bellah, R. N, Madsen, R., Sullivan, W. M., Swidler, A., & Tipton, S. M. (1985). *Habits of the heart: Individualism and commitment in American life.* Berkeley: University of California Press.

Benhabib, S. (1992). *Situating the self.* New York: Routledge.

Bennett, S. E., Flickinger, R. S., & Rhine, S. L. (2000). Political talk over here, over there, over time. *British Journal of Political Science*, *30*(1), 99-119.

Campbell, S. W., & Kwak, N. (2007, May). *Mobile communication and social capital in localized, glocalized, and scattered networks.* Paper presented at the ICA pre-conference, Mobile Communication: Bringing us Together or Tearing us Apart?, San Francisco.

Campbell, S. W., & Kwak, N. (forthcoming). Mobile Communication and Civic Life: Linking Patterns of Use to Civic and Political Involvement. *Journal of Communication.*

Campbell, S. W., & Russo, T. C. (2003). The social construction of mobile telephony: An application of the social influence model to perceptions and uses of mobile phones within personal communication networks. *Communication Monographs*, *70*(4), 317–334.

Cronbach, L. J. (1987). Statistical tests for moderator variables: Flaws in analyses recently proposed. *Psychological Bulletin, 102*(3), 414-417.

Finn, S. (1997). Origins of media exposure: Linking personality traits to TV, radio, print, and film use. *Communication Research, 24*(5), 507-529.

Fulk, J. (1993). Social construction of communication technology. *Academy of Management Journal, 36*(5), 921-950.

Fulk, J., Schmitz, J., & Ryu, D. (1995). Cognitive elements in the social construction of technology. *Management Communication Quarterly, 8*(3), 259-288.

Fulk, J., Schmitz, J., & Steinfeld, C. W. (1990). A social influence model of technology use. In J. Fulk & C. Steinfeld (Eds.), *Organizations and communication technology* (pp.117-139). Newbury Park, CA: Sage.

Gastil, J., Deess, E. P., & Weiser, P. (2002). Civic awakening in the jury room: A test of the connection between jury deliberation and political participation. *Journal of Politics*, *64*(2), 585–595.

Gergen, K. J. (2003). Self and community in the new floating worlds. In K. Nyiri (Ed.), *Mobile democracy: Essays on society, self, and politics* (pp. 103-114). Vienna: Passagen Verlag.

Gergen, K. J. (2008). Mobile communication and the transformation of the democratic process. In J. Katz (Ed.), *Handbook of mobile communication studies* (pp. 297-310). Cambridge, MA: MIT Press.

Habermas, J. (1989). *The structural transformation of the public sphere: An inquiry into a category of bourgeois society.* Cambridge, MA: MIT Press.

Ishii, K. (2006). Implications of mobility: The uses of personal communication media in everyday life. *Journal of Communication*, *56*(2), 346–365.

Jaccard, J., Turrisi, R., & Wan, C. K. (1990). *Interaction effects in multiple regression*. Newbury Park, CA: Sage.

Jeffres, L. W., Atkin, D., & Neuendorf, K. A. (2002). A model linking community activity and communication with political attitudes and involvement in neighborhoods. *Political Communication, 19*, 387 – 421.

Jennings, M. K., & Zeitner, V. (2003). Internet use and civic engagement: A longitudinal analysis. *Public Opinion Quarterly, 67*(3), 311-334.

Katz, J. E., & Aakhus, M. A. (Eds.) (2002). *Perpetual contact: Mobile communication, private talk, public performance.* Cambridge, UK: Cambridge University Press.

Katz, E., Blumler, J. G., & Gurevitch, M. (1974). Utilization of mass communication by the individual. In J. Blumler & E. Katz (Eds.) *The uses of mass communications: Current perspectives on gratifications research* (pp. 19-32). Beverly Hills, CA: Sage.

Koskinen, I. (2008). Mobile multimedia: Uses and social consequences. In J. Katz (Ed.), *Handbook of mobile communication studies* (pp. 241-255). Cambridge, MA: MIT Press.

Kraut, R. E., Patterson, M., Lundmark, V., Kiesler, S., Mukhopadhyay, T., & Scherlis, W. (1998). Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist*, *53*(9), 1017-1032.

Kwak, N. (1999). Revisiting the knowledge gap hypothesis: education, motivation, and media use. *Communication Research, 26*(4), 385-413.

Kwak, N., Williams, A., Wang, X., & Lee, H. (2005).Talking politics and engaging politics: An examination of the interactive relationships between structural features of political talk and discussion engagement. *Communication Research*, *32*(1), 87-111.

Ling, R. (2004). *The mobile connection: The cell phone's impact on society.* San Francisco: Morgan Kaufman Publishers.

Ling, R. (2008). *New tech, new ties: How mobile communication is reshaping social cohesion.* Cambridge, MA: MIT Press.

Lenart, S. (1994). *Shaping political attitudes: The impact of interpersonal communication and mass media*. Thousand Oaks, CA: Sage.

Ling, R., & Yttri, B. (1999). *Nobody sits at home and waits for the telephone to ring: Micro and hyper-coordination through the use of the mobile phone* (Report 30/99). Kjeller, Norway: Telenor Research and Development.

Ling, R., & Yttri, B. (2002). Hyper-coordination via mobile phones in Norway. In J. Katz & M. Aakhus (Eds.), *Perpetual contact: Mobile communication, private talk, public performance* (pp.139-169). Cambridge, UK: Cambridge University Press.

Manin, B. (1987). On legitimacy and political deliberation. *Political Theory, 15*(3), 338-368.

McLeod, J. M., Scheufele, D. A., & Moy, P. (1999). Community, communication, and participation: The role of mass media and interpersonal discussion in local political participation. *Political Communication*, *16*(3), 315-336.

McPherson, M., Smith-Lovin, L., & Brashears, M. (2006). Social isolation in America: Changes in core discussion networks over two decades. *American Sociological Review, 71*(3), 353-375).

Milbraith, L. & Goel, M. (1971). *Political participation* (2nd ed.). Chicago: Rand McNally.

Mutz, D. C. (2002a). Cross-cutting social networks: Testing democratic theory in practice. *American Political Science Review, 96*(1), 111-126.

Mutz, D. C. (2002b). The consequences of cross-cutting networks for political participation. *American Journal of Political Science, 46*(4), 838-855.

Nie, N. H., & Erbring, L. (2000). *Internet and society: A preliminary report.* The Stanford Institute for the Quantitative Study of Society. Retrieved from http://www.stanford.edu/group/siqss/Press_Release/internetStudy.html

Nie, N. H., & Erbring, L. (2002). Internet and society: A preliminary report. *IT & Society 1*(1): 275-283. Retrieved from http://www.stanford.edu/group/siqss/itandsociety/v01i01/v01i01a18.pdf

Nie, N. H., & Hillygus, S. D. (2002).The impact of Internet use on sociability: Time-diary findings. *IT & Society, 1*(1), 1-20. Retrieved from http://www.stanford.edu/group/siqss/itandsociety/v01i01/v01i01a01.pdf

Norris, P. (1996). Does television erode social capital? A reply to Putnam. *PS: Political Science and Politics, 29*(3), 474–480.

Pool, I. de S. (1984). *Technologies of freedom.* Cambridge, MA: Harvard University Press.

Putnam, R. D. (1995). Bowling alone: America's declining social capital. *Journal of Democracy, 6*(1), 65-78.

Putnam, R. D. (2000). *Bowling Alone: The Collapse and Revival of American Community.* New York: Simon & Schuster.

Putnam, R. D., & Yonish, S. (1999, May). *How important are random samples? Some surprising new evidence.* Paper presented to the annual meeting of the American Association of Public Opinion Research, St. Petersburg, FL.

Scheufele, D. A. (2000). Talk or conversation? Dimensions of interpersonal discussion and their implications for participatory democracy. *Journalism and Mass Communication Quarterly*, *77*(4), 727-743.

Scheufele, D. A. (2002). Examining differential gains from mass media and their implications for participatory behavior. *Communication Research*, *29*(1), 46-65.

Scheufele, D. A., Shanahan, J., & Kim, S. (2002). Who cares about local politics? Media influences on local political involvement, issue awareness, and attitude strength. *Journalism and Mass Communication Quarterly*, *79*(2), 427-444.

Shah, D. V., Cho, J., Eveland, W. P., Jr., & 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*(2), 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.

Sennett, R. (1974). *The fall of public man.* New York: W. W. Norton.

Wellman, B., Quan-Haase, A., Boase, J., Chen, W., Hampton, K., de Diaz, I. I., & Miyata, K. (2003). The social affordances of the Internet for networked individualism. *Journal of Computer-Mediated Communication, 8*(3). Retrieved from http://jcmc.indiana.edu/vol8/issue3/wellman.html

Wyatt, R. O., Katz, E., & Kim, J. (2000). Bridging the spheres: Political and personal conversation in public and private spaces. *Journal of Communication*, *50*(1), 71-92.

Xenos, M., & Moy, P. (2007). Direct and differential effects of the Internet on political and civic engagement. *Journal of Communication, 57*(4), 704–718.