Mobilizers Mobilized: Information, Expression, Mobilization and Participation in the Digital Age

Hernando Rojas
Eulalia Puig-i-Abril

University of Wisconsin-Madison

This study assesses differences in use of Information Communication Technologies (ICT) and relates them to patterns of expressive political participation, mobilization efforts, and traditional civic participation. Relying on data collected in August 2008 from a random sample of respondents designed to represent Colombia's adult urban population, this paper provides evidence that informational uses of ICTs (Internet and mobile phones) are significantly related to expressive participation in the online domain, which in turn results in a host of traditional or offline civic and political participatory behaviors indirectly through mobilization efforts. That these relationships occur within the context of a society in crisis suggests that new communication technologies offer an additional pathway to democratic political engagement in such societies.

For some time, empirical research on the uses of Information and Communication Technologies (ICTs) focused on issues of access, digital inequalities, and descriptions of how they were used. More recently, important efforts were undertaken to explore possible relations between specific uses of new communication technologies and individual and societal level consequences. Currently, research is emphasizing more complex models that explore the potential of ICTs to foster supplementary or alternative pathways to democratic political engagement and societal integration.

Robust research traditions within the fields of communication (McLeod, Scheufele, & Moy, 1999), political science (Delli-Carpini & Keeter, 1996; Huckfeldt, Beck, Dalton, & Levine, 1995), and sociology (Gamson, 1992) have consistently linked information and information seeking/processing behaviors with different forms of civic and political engagement. While there have been some disagreements regarding the boundaries and causal ordering of information seeking and participatory behaviors, current understanding privileges theoretical models in which exposure to

information may lead to awareness of political opportunities, increased interest in community, political knowledge, and dynamics that result in civic and political participation (Eveland & Thomson, 2006; Kim & Ball-Rokeach, 2006; Shah et al., 2007).

As the political communication subfield works to explicate the concepts involved in this process and sort out the relationships between these concepts more precisely, there has been, and will continue to be, some redundancy as well as model inconsistencies. But overall, there appears to be increasing congruency in treating communication variables as mediating and/or moderating variables through which structural and individual antecedents result in a series of cognitive and expressive processes that activate civic behaviors.

This dynamic of information transforming original orientations, or behavioral habits, into subsequent new behaviors has been found not to be medium dependent (see for example Althaus & Tewksbury, 2000), although there can be important medium specificities (Shah, McLeod, & Yoon, 2001). Not surprisingly, informational uses of the Internet (Wellman, Quan-Haase, Witte, & Hampton, 2001) and online interpersonal interactions (Shah, Cho, Eveland, & Kwak, 2005) have been related to increased civic participation. Despite characteristics that differentiate blogs from traditional news sources online, the use of blogs has also been related to increased online expressive participation (Puig-i-Abril, & Rojas, 2007), online political participation (Gil de Zuñiga, Puig-i-Abril, & Rojas, 2009) and offline participation (Rojas, Puig-i-Abril, E., & Perez, 2007).

This study seeks to contribute to this communication mediation tradition by developing a model that explores how informational uses of information communication technologies (ICT) foster expressive forms of participation that result in mobilizing efforts and ultimately in civic participation. In doing so, it advances a model of how activities in the online domain can "spill" over to the offline domain, it also offers a new pathway to democratic political engagement using insights from the persuasion literature suggesting that our efforts to persuade others might be especially successful in persuading ourselves, and finally it examines Internet uses side by side with mobile telephone use.

To test our model we have selected Colombia, a society where traditional forms of democratic participation have been hindered by violent political struggles and the online domain may offer alternative possibilities for democracy to work.

Review of the Literature and Proposed Advancements

The Communication Mediation Model

The Communication Mediation Model reflects an O-S-O-R model (Markus & Zajonc, 1985). The first O (orientations) considers personal attributes, community integration, and core values; the S (stimulus) considers communications such as media use and interpersonal discussion; the second O represents subsequent orientations (knowledge, cognitive complexity, and political efficacy) that can mediate

the relationship between communication and participation; and the R represents the subsequent behavioral response.

Under the rubric of communication mediation, Jack McLeod and colleagues (McLeod et al., 1996; McLeod, Scheufele, & Moy, 1999; McLeod, Scheufele, Moy, Horowitz, et al., 1999; Sotirovic & McLeod, 2001; McLeod et al., 2001) have provided evidence that interpersonal networks of political discussion and surveillance uses of media result in increased community integration and civic participation. Communication practices can have direct effects on participatory behaviors and indirect effects, through gains in political knowledge and political efficacy that result in participation.

Sandra Ball-Rokeach and colleagues used a different theoretical framework, called communication infrastructure or "storytelling neighborhood," to reach similar conclusions and provide evidence of how interpersonal and mediated communication practices result in community integration (Ball-Rokeach, Kim, & Matei, 2001; Matei, Ball-Rokeach, & Qiu, 2001; Matei & Ball-Rokeach, 2003).

Current research in communication mediation has parsed some of these relations. Eveland (2001; 2002) and Eveland Shah and Kwak (2003) have expanded our understanding of the "subsequent orientations" part of the model, posing a cognitive mediation mechanism that illustrates how paying attention to news and elaborating over news result in knowledge gains. Scheufele, Nisbet, Brossard and Nisbet (2004) have proposed replacing the notion of original orientations with that of a structure of social networks or a social setting in which political conversation takes place. Finally, Shah, et al. (2007) have cautioned about the underspecifications of the model and propose adding reflection as an intermediary between communication stimulus and subsequent orientations.

This study addresses the need for further specification in communication mediation and seeks to expand the model by suggesting possible feedback loops in which responses in the O-S-O-R model lead to higher order behavioral outcomes.

ICTs and civic life

Research that examines the antecedents of participation in communal life has consistently identified that social standing (see for example Verba, Schlozman, & Brady, 1995), interpersonal conversations (see for example Rojas, 2008; Rojas, Shah, Cho, Schmierbach, Keum, & Gil de Zuñiga, 2005), and news media use (see for example Kim & Han, 2005) predict engagement.

The emergence of a new communication technology always causes some concern regarding the deleterious effects the innovation might entail for civic life (for example see Bogart & Orenstein, 1965, and Robinson, 1976, for television). Concerns range from the possible inequalities derived from differential access levels to fears of social disintegration related to use. As one could expect, the Internet and mobile communication technologies have not been an exception.

The importance of Internet access, as well as certain inequalities in access, has been fairly well established in the literature (Hirt, Murray, & McBee, 2000; Hoffman &

Novak, 1998; Howard, Rainie, & Jones, 2001; Katz, Rice, & Aspden, 2001; Kavanaugh & Patterson, 2001; Nie & Erbring, 2000; Smolenski, 2000). Certain demographic characteristics (age, gender, SES) have been consistently associated with access levels and other forms of digital inequality.

While most indicators show that access gaps tend to close over time, new gaps appear as technology develops (DiMaggio, Hargitai, Russell Neuman, & Robinson, 2001). Bearing in mind the importance of Internet access for a host of quality of life, productivity, and civic integration indicators, it is important to understand the antecedents of access. Thus, the following research questions are posed:

Regarding antecedents of ICT access:

RQ1a: What are some of the antecedents of Internet access?

RQ1b: What are some of the antecedents of cellular phone adoption?

The first wave of research on the effects of the Internet on political participation provided mixed results because some studies employed access or time spent rather than specific uses; certain samples were not considered to be representative of the population; and causality and endogeneity problems were still being sorted out (for a summary of this debate see Nie, 2001).

Since then, most studies have habitually refuted dystopian views of new communication technologies. They have established positive relationships between informational uses of the Internet and social capital (Shah, Kwak, & Holbert, 2001), social involvement (Kraut, et al., 2002), political participation (Shah, Schmierbach, Hawkins, Espino, & Donovan, 2002), and civic engagement (Jennings & Zeitner, 2003). Wellman et al. (2001) have provided evidence that online interaction supplements interpersonal relations and results in increased voluntary association membership and increased political participation (see also Wellman et al., 2003).

Rather than dealing with a specific medium, an accumulating body of empirical research suggests that the positive or negative outcomes of media use are contingent on the specific content sought by the user (Katz, Blumler, & Gurevitch, 1973). For the most part, research has shown that informational uses of media tend to be related to increased civic engagement, while entertainment and diversion uses are related to its decline (Shah, McLeod, & Yoon, 2001).

While some feared that news in the online environment might result in societal fragmentation and displacement of community concerns, research shows that online news use supplements rather than supplants traditional news consumption (Althaus & Tewksbury, 2000). Dutta-Bergman (2005; 2006) has proposed the notion of channel complementarity to emphasize that consumption of one channel in a particular content area supplements the consumption of other channels in that area.

While gaps in access are important, inequalities in use are also critical (Cho, Gil de Zuñiga, Rojas, & Shah, 2003; Lazarus & Mora, 2000; Norris, 2001) because patterns of use have been related to differential outcomes. Therefore, in addition to levels of access, it is important to understand how uses, and the predictors of specific

uses, evolve over time. In addition to demographic characteristics, it is plausible that related offline behaviors affect the ways in which the Internet is ultimately used (Althaus & Tewksbury, 2000; Dutta-Bergman, 2006, 2005). Given that we are mostly interested in political outcomes of certain Internet and mobile phone uses for this study, we seek to provide models that explain the factors that foster these political uses. Hence, the following research questions are posed:

Regarding ICT informational uses:

RQ2a: What are some of the antecedents of online news consumption?

RQ2b: What are some of the antecedents of blog use?

RQ2c: What are some of the antecedents of cellular phone news use?

If informational uses of media are related to civic integration, it is not surprising that informational uses of new media have been positively related with group membership, community involvement, and political activity (Kwak, Poor, & Skoric, 2006; Taveesin & Brown, 2006). Furthermore, online information seeking has been linked to increases in online interactive civic messaging that ultimately results in higher levels of civic participation (Shah et al., 2005). Kavanaugh, Reese, Carroll, and Rosson (2005) provide evidence that this happens through an interaction effect with weak ties (Granovetter, 1973) and results in increased face-to-face contact and political participation. From a theoretical perspective, what these studies suggest is that certain Internet uses emphasizing information result in increased political engagement (Polat, 2005).

In addition to the news format from traditional media and the private interactions among citizens that the Internet has enhanced, new communication technologies have also made possible the emergence of a networked arena of public opinion in the form of interactive online journals, which facilitate information exchange between users called weblogs or blogs.

Scholars studying blogs suggest that they are primarily used for expression, affiliation, and surveillance of social and political information (Kaye, 2005; Kaye & Johnson, 2004; Papacharissi, 2004). Studies of blogs designed to mobilize certain groups, such as Howard Dean's Blog for America during the 2004 election, suggest that the use of this tool was associated with increased political discussion, a sense of community, and political action (Kerbel & Bloom, 2005; Meraz, 2007).

Despite characteristics that differentiate blogs from traditional news sources online, more evidence suggests that the informational use of blogs is related to increased online expressive participation (Puig-i-Abril, & Rojas, 2007), online political participation (Gil de Zuñiga, et al., 2009), and offline participation (Rojas et al., 2007).

Expressive political participation
In this study, we are initially concerned with expressive political participation; i.e. a form of political participation that entails the public expression of political

orientations. From this perspective, not all political conversations entail participatory behavior. It is clear to us that all forms of political conversation have important political consequences, but distinguishing between background conversations and the public expression of our views makes sense theoretically and has been supported empirically. According to Puig-i-Abril, & Rojas (2007) "expressive political participation is a subset of political participation–political participation with a dimension of public expressiveness" (p. 29).

In previous literature, expressive political participation has sometimes been conceptualized as political expression, political attitude expression, political participation involving public expression, and opinion expression. Endersby and Towle (1996), for example, referred to the notion of *political expression* as the public display of your opinion or support for a candidate or policy through bumper stickers, t-shirts, or yard signs. Stanyer (2005), on the other hand, included these behaviors under the broader notion of campaigning and used the label of *political attitude expression*.

However, certain strands of the literature blur the distinction between political conversation and expressive political participation. For example, Boyle et al. (2006), coin the term "expressive action" to include talking to friends and family about politics, sending letters to the editor, contacting public officials, and attending rallies. Moreover, Verba et al. (1995) disagree and do not consider political discussion among friends, letters to the editor, or calls to a live show as forms of political participation since "the target audience is not a public official" (p. 40).

These controversies are tied intimately to the definition of participation under which one operates. Verba et al. (1995) narrowly define political participation as "an activity that has the intent or effect of influencing government action–either directly by affecting the making or implementation of public policy or indirectly by influencing the selection of people who make those policies" (p. 38). Others adopt an expanded concept of political activity that goes beyond actions directed at influencing the government (e.g., voting or campaign work) to include communal activities, such as attending local discussion forums or working on behalf of community groups (McLeod, Scheufele, & Moy, 1999; Putnam, 1995). This expanded conception of participation, sometimes referred to as civic participation, not only increases its scope to include communal forms of engagement, but also privileges a view of the community, rather than elected office, as the central locus of political mobilization and action.

In this work, we adopt this expanded view of political participation and contend that expressive political participation constitutes a subdimension of political participation, one that is particularly critical for societies in which democratic institutions are not fully established. Furthermore, we contend that expressive political participation in the online domain for such societies may operate as a precursor to other forms of participation, including voting, donation activities, and community volunteering in the offline domain. The bulk of the literature on political participation does not always explicitly make the distinction considered here

and tends to regard political participation as a whole, including expressive political participation (Hardy & Scheufele, 2005; Krueger, 2005).

Bearing in mind that (a) online information seeking (Kwak et al., 2006; Taveesin & Brown, 2006) and blog use (Gil de Zuñiga, et al., 2009; Puig-i-Abril, & Rojas, 2007; Rojas et al., 2007) have been positively related with further political activity; (b) online information channels seem to complement rather that supplement; and (c) that these effects are more use dependent and not medium dependent, we hypothesize that:

The amount of ICT informational use will be positively related to expressive participation in the online domain such that:

H1a: Online news use will be positively related to expressive participation.

H1b: The use of blogs will be positively related to expressive participation.

H1c: Cellular phone news use will be positively related to expressive participation.

Persuasion and mobilization

So far, our logic suggests that a series of demographic characteristics, as well as informational uses of traditional media, may result in informational uses of new communication technologies (i.e. Internet and mobile phones) and that these informational uses of ICTs will result in expressive forms of participation in the online domain.

The second stage of our argument focuses in the mechanisms by which online expressive participation can "spill" into the offline domain. We expect that expressive participation in the online domain will be a direct precursor of other, more material, forms of participation in the offline domain. Recognizing that these expressive behaviors imply processes of cognition and reflection that have been found to precede civic engagement, we are convinced that these expressive behaviors can initiate a "cascade" of behavioral outcomes that can be considered a form of "sender effect" (Pingree, 2007).

We expect that greater expressive participation in the ICT domain will be positively and directly related to offline civic participation. Thus we pose the following hypothesis:

H2: Increased ICT expressive participation will be positively related to offline civic participation.

Yet, in our expanded view of communication mediation as a chain of behaviors that is ignited by an informational stimulus in which the initial response leads to subsequent responses, we also contend that expressive behaviors also affect civic participation indirectly, through our mobilization efforts.

According to one of the basic rules of persuasion, commitment to an action or idea is very persuasive (see for example Cialdini, 2008). Now, expressed commitment

might not persuade those around us, but it has a powerful impact on ourselves. Therefore, when persuading others, the persuader is persuading him or herself at the least. Following this logic, an act of expressive participation, for consistency's sake, should be followed by efforts to mobilize those around us in support of the advocated position.

If nothing else, these mobilizing efforts should persuade the ''persuader'' that further action is required, becoming a powerful route that converts expressive behaviors into other more tangible behaviors such as voting, campaigning, or volunteering. New ICTs offer new mechanisms to mobilize our social networks (for social networking sites see Boyd & Ellison, 2007; Ellison, Steinfield, & Lampe, 2007; Hargittai, 2007; for mobile phones see Humphreys, 2007; Miyata, Boase, Wellmann, & Ikeda, 2006), and we contend that through these mobilization efforts the mobilizer is ultimately mobilized. Thus we pose the following hypotheses:

H3a: Increased ICT expressive participation will be positively related to mobilization efforts involving social networking sites and subsequently to offline civic participation.

H3b: Increased ICT expressive participation will be positively related to mobilization efforts involving cellular phones and subsequently to offline civic participation.

Our full model is summarized in figure 1.

This study will examine these ideas in a society where the online and mobile domains can potentially provide new pathways to democratic political participation by engaging individuals with different skill sets (Kruger, 2002) and providing a new arena in which ideas can be discussed.

Context of this Study

For most of its independent life, Colombia has been a country where violence has played a critical role as conflict resolution mechanism. Internal wars between liberals
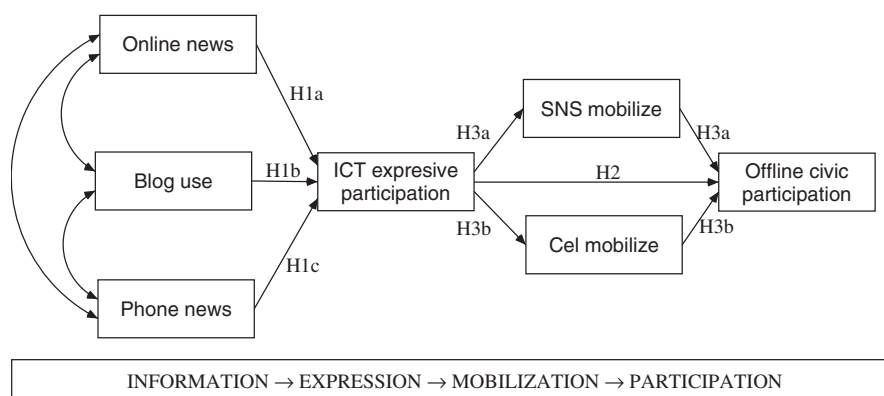

Figure 1 Hypothetical model for the influence of ICT informational uses on civic engagement.

and conservatives characterized the 19th and roughly the first half of the 20th century, and evolved into a confrontation with communist guerillas in the context of the cold war. This yet unresolved conflict was fueled in the late 20th century with money from illegal drugs. Traditional land owners found in drug barons an ally against communist guerillas that led to the creation of private armies, known as paramilitary groups, that were supposed to fight the communist guerrillas and that ultimately evolved into a new actor in conflict.

However, urban elites facing the challenge of drug lords trying to assert national political power, as well as international pressure, initiated a large scale offensive against drug cartels. A failed peace process with FARC, Colombia's oldest and most important guerrilla group, at the turn of the century, led to the election in 2002 of Alvaro Uribe as president, under the promise that guerrillas would be defeated through the use of force. While president, Uribe escalated a governmental offensive against the leftist rebels, he has negotiated a peace process with paramilitary groups. As part of this peace agreement some members of these organizations are currently in jail, while others have reorganized themselves into emerging outlaw groups.

In the midst of this political turmoil, urban regions, led by Bogotá, Colombia's capital, have emerged as a political alternative to Colombia's violence cycles. A series of local governments that have emphasized political accountability, cultural innovations on citizenship, and the physical transformation of urban space, have significantly altered the political landscape (see for example: Muñoz, Arturo, Bromberg, & Moncada, 2003; Pizano, 2003).

With decreasing violence and the increasing importance of civil society, cities have become testing grounds for a new Colombia—one that chooses to resolve its political conflicts through inclusion rather than exclusion, through dialogue, rather than through force and imposition. As Internet penetration and use develops, citizens have new communication mechanisms at their disposal that can become alternatives to traditional political participation that may ultimately enhance the quality of political life.

Methods

Data

This study relied on national survey data collected between August 5 and August 31, 2008 in 10 cities in Colombia. The sample was designed to represent Colombia's adult urban population–76% of Colombia's 44.5 million inhabitants live in urban areas (DANE, 2008).

Survey respondents were selected using a multistep stratified random sample procedure that selected households randomly, based in city size and census data. Once the number of households was allocated for a given city, a number of city blocks were selected randomly according to housing district and strata. Then, individual households were randomly selected within each block. Finally, the study used the "adult in the household who most recently celebrated their birthday" technique to

identify an individual respondent at random. Up to three visits to each household were made (if needed) to increase participation in the survey. The data were collected by a local professional polling firm Deproyectos Limitada and 1,033 face-to-face completed responses were obtained for a response rate of 83%[1].

Measurement[2]
Exogenous variables. *Online news media use* was estimated by asking respondents how frequently, on average, they followed the news online on a 6-point scale ranging from "never" (1) to "every hour or less" (7), ($M = 2.4$, $SD = 1.3$). *Blog use* was measured by averaging two items that asked participants whether they visited political blogs, as well as more general blogs from friends and acquaintances, on a scale from "never" (0) to "frequently" (5), ($M = 1.0$, $SD = 1.2$; Pearson's $r = .31$). Finally, *phone news use* was assessed by asking respondents whether they used their cellular phones to access news and information or not ($M = 0.3$ $SD = 0.4$).

Endogenous variables. *ICT expressive participation* was measured by averaging seven items that tapped into an individual's behavior. The items judged participation through the use of a 6-point scale that asked respondents how frequently they engaged in activities, such as sending messages with political information, commenting news online, participating in online forums, posting comments to political blogs and using social networking sites to express their opinion on current affairs, on a scale from "never" (0) to "frequently" (5), ($M = .7$, $SD = .9$; Cronbach's $\alpha = .81$). *Social network sites mobilization was established* by asking respondents how often they mobilized their online social network contacts for social or political causes, on scale from "never" (0) to "frequently" (5), ($M = 1.4$, $SD = 1.7$). *Cellular phone mobilization* was gauged by asking respondents whether they used their cellular phones to mobilize their contacts for social or political causes. ($M = 0.1$, $SD = 0.3$). *Offline civic participation w*as measured adding 17 dichotomous items that identified individuals' participatory behaviors in the offline political realm. A wide range of activities including voting, attending rallies, volunteering, working for community projects, and donating money to civic and political causes were considered ($M = 4.15$, $SD = 3.15$; Cronbach's $\alpha = .79$).

Control variables. Four demographic variables were used in the analyses. *Gender*, in which females were coded as 1 and males as 0, (57% female); *age* in years ($M = 40$, $SD = 14$); *education*, on a scale from "incomplete basic schooling" (1) to "graduate degree" (8), ($M = 5.1$, $SD = 1.5$); and *income*, measured using the proxy house stratum, which ranges from "lowest" (1) to "highest" (6), ($M = 2.9$, $SD = 1.1$).

In addition to demographics, the study controlled for a host of other variables. *Current events talk*, that is, face-to-face interpersonal conversation, was measured using four items asking participants how often they engaged in conversation about current events and politics with family, friends, neighbors, and colleagues or fellow students, on a scale from "never" (0) to "frequently" (5), ($M = 2$, $SD = 1.3$; Cronbach's $\alpha = .76$). *News media use*, which was gauged averaging nine indicators that inquired about newspaper reading, news TV watching, radio news listening

and news magazine consumption, on a scale from "never" (0) to "frequently" (5), ($M = 2$, $SD = 1$; Cronbach's $\alpha = .72$). *Political interest* was measured averaging three items that asked the respondent how interested they were in local, national and international politics, on a scale from "not at all interested" (0) to "very interested" (5), ($M = 1.9$, $SD = 1.5$; Cronbach's $\alpha = .88$). *General Internet use* was established using e-mail as a proxy for Internet activity. Respondents were asked how often they checked their e-mail on a 7-point scale ranging from "never" (1) to "every hour or less" (7), ($M = 3.9$ $SD = 1.5$). Finally, *years of Internet access* was measured by asking respondents for how many years they had been Internet users ($M = 2.9$, $SD = 1.3$).

All variables in this study were tested for skew and one variable (Cellular phone mobilization) was found to be beyond the 1.5 threshold (Garson, 2009). Thus, in our analyses to estimate structure we do not adopt maximum likelihood estimation as will be discussed below.

Analytical procedures

In our sample 56.6% of respondents had Internet access, while 83% had a cellular phone. Logistic regressions were used to establish the relative contribution of demographic variables and other control variables on ICT access levels; Hierarchical regressions were employed to examine the antecedents of informational uses of ICTs; Finally, a path analysis model was used to test the potential contribution of ICT information seeking on expressive behaviors, and how these behaviors can spill over, in turn, to the offline world as civic participation, in part though our own mobilization efforts.

To conduct the latter, and before testing our model, a residualized covariance matrix was created by regressing all measures on a set of control variables that included age, gender, education, income, traditional media use, political talk, political interest, years of Internet use and general Internet use. We controlled for these variables by using the residualized covariance matrix as input in the model. The model is a path analysis in which residualized values for online news use, blog use, and cellular phone news use predicted residualized values of expressive participation, which ultimately predict residualized offline civic participation, mediated through the residualized values of people's own efforts to mobilize others using ICTs.

Results

To answer our initial set of research questions regarding the relative contributions of gender, education, income, age, and traditional communication patterns to differences in access, we ran two logistic regression models in which Internet access and Cellular phone were placed as criterion variables, and demographic variables, traditional media use, and conversations of current events as independent ones. The model that explained Internet access worked quite well: Access was predicted by education ($b = .69$, $p < .001$), income ($b = .57$, $p < .001$), news media use

$(b = .59, \text{p} < .001)$, age $(b = -.08, \text{p} < .001)$, and gender $(b = -.08, \text{p} < .001)$. That is, those who were more educated, with higher income, younger, male, and those using traditional media for surveillance purposes, were more likely to have Internet access. These variables alone explained 42% of the variance in this model (see Table 1).

With respect to cellular phone penetration our model explained 13% of variance, with income $(b = .49, \text{p} < .001)$, age $(b = -.04, \text{p} < .001)$, and education $(b = .23, \text{p} < .001)$ as significant predictors. In other words, those who have higher levels of education and income, and are younger are more likely to have adopted cellular phones (see Table 1).

Regarding our overall access questions, while inequalities in terms of gender and income are still present, the most important factors in predicting access are education level and age, with those who are younger, but particularly those with higher levels of education, accessing the Web at higher rates. With respect to Cellular phones, there are still some differences based on age, income, and education.

In order to explore our second set of research questions regarding informational uses of ICTs use, we ran a series of descriptive analysis among Internet uses to contrast these uses with other online activities (see Figure 2).

As is the case in other countries, e-mail is the most common activity (87%), followed by entertainment (72%) and chat (71%), but informational uses (news 67%, and blog 51%) are also substantial and on the rise−a 2006 survey fielded in Colombia (Puig-i-Abril, & Rojas, 2007), reported, 53.5% news use and 22% blog use. Another important facet of the online world is the adoption of social networking platforms as part of the online experience, with 51% of our sample being affiliated to at least one social networking site.

Table 1 Logistic Regressions: Antecedents of ICT adoption

	Internet Access	Cellular phone
Gender (male = 0)	−.38* (.18)	−.10(.19)
Income	.57* * * (.09)	.49* * * (.11)
Education	.69* * * (.08)	.23* * * (.07)
Age	−.08* * * (.01)	−.04* * * (.01)
Talk (Current events)	.03 (.07)	.04 (.08)
News media use	.59* * * (.11)	.19 (.12)
Constant	−1.99* * * (.56)	.39 (.61)
Correctly classified	80%	84%
Goodness-of-fit (H&L)	X^2 11.9 $p = .16$	$X^2 6.8p = .55$
Cox & Snell R^2	.42	.13

[1]Cell entries are unstandarized Betas with standard error in parenthesis
[2]Dependent variable Access = 1.
[3]P-Values with 2-tailed significance: $^*p < .05$ $^{**}p < .01$ $^{***}p < .001$.
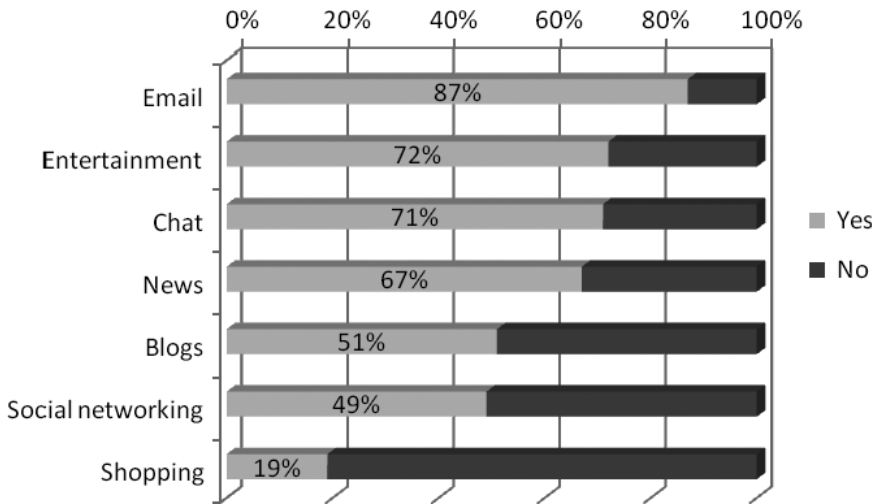[4]N = 1033

Figure 2 Online uses.

To explore the antecedents of informational uses of ICTs, we ran hierarchical regression models in which different ICT uses were placed as criterion variables, and demographic variables were introduced as an initial block, followed by a block containing offline indicators of analogous behaviors, and general political interest. For the Internet models, we also included general measures of Internet use and years online.

Our models predicting online news and blog use (see Table 2) worked quite well with 42.3% and 30.7% of variance explained respectively. With regards to online news, our initial model explained 16.7% of the variance with gender ($\beta = -.11$, p < .01), income ($\beta = .15$, p < .001), education ($\beta = .30$, p < .001), and age ($\beta = -.09, p < .05$) all appearing as significant predictors with a very similar pattern to the model predicting access. When the second block was introduced, the model gained in variance explained with current events talk ($\beta = .12$, p < .001), traditional news media use ($\beta = .16$, p < .001), and general Internet use ($\beta = .46$, p < .001) appearing as significant. Offline news use and conversation about current events appeared as predictors of online news consumption, which makes sense within the notion of channel complementarity (Dutta-Bergman, 2006), and remained significant after essentially controlling for years online and general Internet use. Finally, as one would expect, those that use the Internet more also tend to use it more for news.

With regards to blog use (see Table 2), our initial model only explained 16% of the variance with only education ($\beta = .18$, p < .001) and age ($\beta = -.36$, p < .001) appearing as significant predictors. For this particular use, age was the prevalent factor with younger people of both genders using blogs disproportionately. When the second block was introduced, this model also gained in variance explained with current events talk ($\beta = .13$, p < .01), traditional news media use ($\beta = .17$,

Table 2 Hierarchical regression models: Antecedents of online informational uses

	Online news		Blogs	
	Model 1	Model 2	Model 1	Model 2
Gender (male = 0)	−.11**	−.06	−.02	.02
Income	.15***	.07*	−.03	−.08
Education	.30***	.07	.18***	.02
Age	−.09*	.01	−.36***	−.31***
Talk (Current events)		.12***		.13**
News media use		.16***		.17***
Political Interest		.05		.01
Years Internet		.05		.00
General Internet use		.46***		.31***
Total R2	16.7%	42.3%	16.0%	30.7%

[1]Cell entries are standarized Betas.
[2]P-Values with 2-tailed significance: *$p < .05$ **$p < .01$ ***$p < .001$.
[3]N = 585

Table 3 Hierarchical regression models: Antecedents of Cell phone informational uses

	Model 1	Model 2
Gender (male = 0)	−.05	−.03
Income	−.04	−.04
Education	.22***	.17**
Age	−.15***	−.17***
Talk (Current events)		.08*
News media use		.10**
Political Interest		−.01
Total R2	8.8%	10.6%

[1]Cell entries are standarized Betas.
[2]P-Values with 2-tailed significance: *$p < .05$ **$p < .01$ ***$p < .001$.
[3]N = 857

$p < .001$), and general Internet use ($\beta = .31$, $p < .001$) appearing as significant predictors. Age continued to be significant in the final model ($\beta = −.31$, $p < .001$), which suggests that not all of the effects of age are mediated though general Internet use and traditional media consumption. Offline news use and conversation about current events behaved in the same fashion as they did in the online news model.

With respect to informational uses of cellular phones, our model only explained 10.6% of the variance with education ($\beta = .17$, $p < .01$), age ($\beta = −.17$, $p < .001$), talk ($\beta = .08$, $p < .05$), and traditional media use ($\beta = .10$, $p < .01$) being significant predictors in the final model. That is, younger users with higher levels of education, who talk more about current events and use traditional media with informational purposes, are more likely to also use their cell phones to find information.

Overall, regarding our second set of research questions, we could generalize that the younger, more educated people, who used traditional media for news, and who

were more frequently talking about current events were the ones who used ICTs more for informational purposes.

Hypotheses 1, 2, and 3 suggested a hypothetical model (see Figure 1), according to which informational uses of ICT would result in increased expressive participation in the online domain. This increase in participation would ultimately influence general participation levels in the offline domain both directly and indirectly though our efforts in mobilizing social networks using new communication technologies. To test these hypotheses, a path analysis model using AMOS 16.0 was performed. For this analysis, we controlled for demographics, traditional media use, political talk, political interest, years on Internet, and general Internet use. Bearing in mind that one of the variables in the model (Cellular phone mobilization) violated normality assumptions, we used bootstrap estimates (Garson, 2009). Results are illustrated in Figure 3.

Path analysis for the influence of ICT informational uses on civic engagement, controlling for demographics, traditional media use, current events talk, political interest, general Internet use, and years of Internet use. Coefficients are standardized. All lines are significant at the $p < .01$ or better. R^2 values reported above endogenous variables. Model $\chi^2 = 36.9$, df $= 11$, p $= .01$, Comparative Fit Index (CFI) $= .96$, Normed Fit Index (NFI) $= .94$, Tucker-Lewis Index (TLI) $= .92$; Root Mean Square Error of Approximation (RMSEA) $= .04$

As hypothesized, we found positive relationships between online news seeking ($\gamma = .26$, $p < .001$), blog use, ($\gamma = .43$, $p < .001$), and cellular phone informational uses ($\gamma = .08$, $p < .01$). They all significantly contributed to increased expressive participation in the online domain and thus supported hypotheses 1a, 1b and 1c. Furthermore, the more someone embraced expressive participation in the online domain, the more likely they were to use social networking sites ($\beta = .32$, $p < .001$) and their cellular phones ($\beta = .15$, $p < .001$) to mobilize their social networks for social and political causes. The efforts to mobilize their social networks through social networking sites and cell phones ultimately resulted in their own political
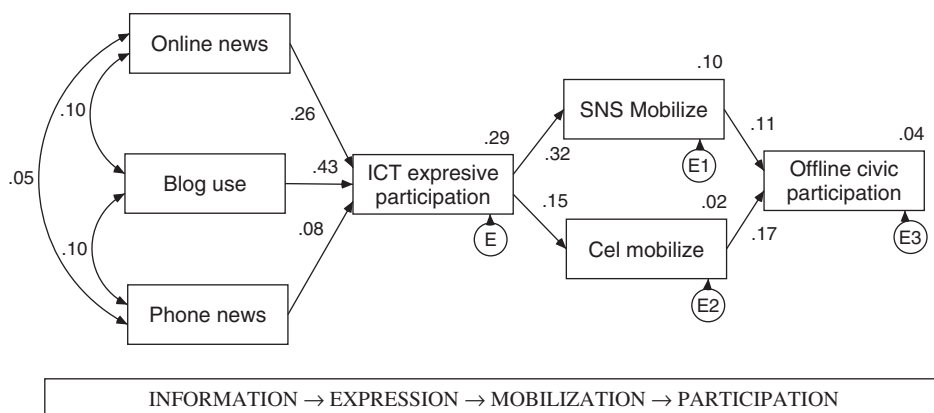

INFORMATION → EXPRESSION → MOBILIZATION → PARTICIPATION

Figure 3 Path analysis for the influence of ICT informational uses on civic engagement.

mobilization in the offline domain, with their use of social networking sites ($\beta = .11$, $p < .01$) and cell phones ($\beta = .17$, $p < .001$) significantly affecting offline civic engagement. These results did not provide support for hypothesis 2. While we were expecting that online expressive participation would be related both directly and indirectly to general offline participation, this was not the case. In this data set, the direct path between online expressive participation and offline general participation was not significant and was removed from the model.

However, support for hypotheses 3a and 3b was attained. In this study, increases in offline political participation were fully mediated by one's own mobilization efforts via social networking sites and cell phones.

The model accounted for 29% of the residual variance relating to online expressive participation, 10% in mobilizing efforts through social networking sites, 2% in mobilizing through cell phones and 4% in offline civic participation. In interpreting the magnitude of these results, one should not forget that these models are explaining residual variance. This means, for example, that the 4% of variance explained for offline participation is 4% above and beyond the variance in that construct that is already explained by all the control variables employed in our model (all the variables in our model explain 31% of offline civic participation). As indicated in Figure 3, Chi-square statistics (36.9, df = 11, p = .01) and other indices (CFI = .96, NFI = .94, TLI = .92, RMSEA = .04.) suggested a good model fit. Testing alternate models in all cases reduced the goodness of fit indicators. These alternate models included adding or eliminating paths to the existing model and testing alternative models in which causality was reversed.[3] Hence, the model presented here was superior to any other possible model as indicated by Modification Indices, and AIC and BIC criteria (for non-nested models).

Overall, these results provide support for the notion that informational uses of ICTs result in online expressive participation and that these online forms of expressive action ultimately spill over to the "real" world, mostly via our own efforts to mobilize those around us. The extent to which our mobilizing efforts on others are successful remains uncertain, but what seems clear from this data is that, at least, we mobilize ourselves.

Discussion

Taken together, our results document antecedents of Internet access and mobile phone adoption, illustrate the most common uses of the Internet in this society, show some of the antecedents of informational uses of ICTs, provide empirical evidence of the positive relationship between informational uses of ICTs and expression in the online domain, and, most importantly, suggest an alternative pathway from expressive participation to higher order participatory forms that are mediated by our own mobilization efforts. It is promising that this model is tested in the context of a society that does not have a fully developed democratic system, as it could be used to further democracy in such places around the globe.

In addition, the present study is able to integrate the use of blogs to more established predictors of civic and political participation (online news) alongside with mobile technologies. That blog use and informational uses of cellular phones are also related to expressive political engagement are important findings that bolster the importance of ICTs as democratizing forces in the political arena. Nevertheless, we have to be cautious since important inequalities in access and use that persist my hinder the democratic potential of ICTs.

Our findings represent an important development to the communication mediation model posed in our review of the literature, by integrating a behavioral "chain" to informational stimulus. We provide empirical evidence of new pathways for information in the online domain to result in behavior in the offline domain, through our mobilization efforts, and in doing so have the potential to integrate theories of self-persuasion to the communication mediation model.

That mobile technologies behave in a similar way compared to online ones in our sample is a fascinating finding in this study, particularly if one takes into account the rapid deployment of cellular phones in the developing world, which suggest that the democratic benefits of ICTs might reach many places through the phone rather than the computer.

This study finds robust support for the notion that informational uses of ICTs result in increased expressive behaviors in the online domain (hypotheses, 1a, 1b and 1c) and suggests the relative importance of blogs as a source of information that antecedes such expressive behaviors. This seems to be particularly important in countries such as Colombia, in which the availability of diverse viewpoints in traditional media is limited, and where the blogosphere as an emerging networked public sphere (Friedland, Hove, & Rojas, 2006) might offer an alternative as information provider.

Interestingly we found no support for a direct relationship between online expressive behaviors and offline participatory behaviors (hypothesis 2). It is plausible that the duress of traditional political participation in Colombia curtails this direct "spill" of online participatory behavior to the offline world, or that in the offline world the civic structures that are necessary for certain forms of engagement are not there yet, and therefore, we only see this influence through the indirect path of mobilizing efforts that subsequently lead to action (hypotheses 3a and 3b). These are questions that future research in Colombia needs to address.

Future research should also seek to extend this research to other societies in conflict and more established democracies to explore whether our findings are context dependent or rather can be generalized as a broader theory of mobilization. We are also convinced that additional measurements in terms of informational motivations as well as more robust measures of mobile activity are required. At the same time, it would appear that adopting a longitudinal design would be ideal to test the propositions made forward in this study.

Despite these limitations, we are convinced that this study provides an intriguing perspective to continue exploring the informational effects of ICTs on civic integration

as well as developing the communication mediation model overall. The positive relationship between information and expressive participation suggests that new technologies can revitalize public discourse, supplementing traditional media online, and potentially, in societies where news media do not assert their independence, even supplanting them as antecedents of political participation.

In addition, online expressive participation spills to the "real" world through processes of self-mobilization, in what we envision as an O-S-O-R-R model, that is, a model in which our behaviors (R) trigger a chain of behaviors (R) that ultimately enhance the democratic process. Future theorizing needs to fully develop this model making apparent possible feedback loops within it.

Notes

1　Response rate (1) calculated using AAPOR guidelines.
2　For a translated version of the question wording employed see Appendix 1.
3　Alternate models not shown. Available upon request.

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About the Authors

Hernando Rojas is an assistant professor in the Life Sciences Communication department at the University of Wisconsin-Madison. His research interests are centered on the relationship between communication practices and community engagement, focusing on emerging communication technologies, interpersonal communication and motivations for civic engagement, and how perceptions of media and media-effects influence public opinion.
Address: 1545 Observatory Drive, Madison, WI, 573706, USA.
Email: hrojas@wisc.edu

Eulalia Puig-i-Abril is a doctoral candidate in the Life Sciences Communication department at the University of Wisconsin-Madison. Her research interests revolve around political communication and participation, especially looking at how journalistic routines can affect opinion expression on controversial issues. She is also interested in Internet use and its effects, and on health communication.
Address: 1545 Observatory Drive, Madison, WI, 573706, USA.
Email: epabril@wisc.edu

Appendix 1: Question Wording[4]

Offline civic participation: Now I am going to read you a list of activities that some people undertake with respect to government and politics, so that you can tell me whether you have realized any of these in the last twelve (12) months. Obviously, we know that people have a lot of things to do in their daily life so that not many people have time to do any of the activities, which I am going to read:

(a) Vote in the past elections for City Mayor.
(b) Vote in the past elections for City Council.

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[4] Translated from Spanish by the authors.

(c) Attend a political demonstration.
(d) Attend a public meeting in your city.
(e) Participate in a committee of a local organization.
(f) Sign a petition.
(g) Work for a political movement or party.
(h) Attend a meeting regarding affairs related to educational institutions.
(i) Give money or other valuables to a political party or movement.
(j) Give money or other valuables to a church or charity.
(k) Give money or other valuables to a group supporting social or environmental causes. (l) Attend a social or political protest.
(l) Do volunteer work.
(m) Work in a community project.
(n) Participated the 4th of February in the rally "Colombia soy yo."
(o) Participated the 6th of March in the rally to support victims of paramilitary groups.
(p) Participated the 20th of July in the rally against kidnapping.

ICT expressive participation: Using a scale ranging from 0 to 5 were 0 means never and 5 means frequently how often do you do the following Internet activities:

(a) Use email to comment politics or current affairs.
(b) Comment news or opinion pieces that appear in online news media.
(c) Send messages with political information.
(d) Participate in online discussion forums.
(e) Post comments to political blogs.
(f) Post comments to journalistic blogs.
(g) Express your opinions on current affairs to your online social networks.

Social Network Sites Mobilization: Using a scale ranging from 0 to 5 were 0 means never and 5 means frequently, how often do you do the following activities with your online social networks?

(a) Mobilize your contacts with respect to social or political causes.

Cellular phone Mobilization: In addition to using your cellular phone to make and receive calls, do you use it for any of the following activities?

(a) Mobilize your contacts with respect to social or political causes.

Online news media use: On average, how often do you follow the news on the Internet? Never; Less than once a week; About once a week; More than once a week; Once a day; More than once a day; Every hour or less.

Blog use: Using a scale ranging from 0 to 5 were 0 means never and 5 means frequently how often do you do the following Internet activities:

(a) Visit political blogs.
(b) Visit blogs of friends and acquaintances.

Phone news use: In addition to using your cellular phone to make and receive calls, do you use it for any of the following activities?

(a) Access news and information.

Demographics
Gender: Gender. [Male, female] *Age*: How old are you?
Education: What is the maximum education level that you have? [None, some basic schooling, basic schooling, some high school, high school, some college, college, graduate school]
Income: According to your energy utility receipt what is the stratum of this home? [1−6]

Current events talk: Using a scale from 0 to 5, in which 0 means never and 5, frequently, how often do you comment politics or current affairs with:

(a) Your family.
(b) Your neighbors.
(c) Your colleagues or fellow students.
(d) Your friends.

News Media Use: We would like to ask you some questions about the use that you make of some mass media. Using a scale from 0 to 5, in which 0 means never and 5, frequently, please, let us know the frequency with which you read, watch or listen to the following mass media.

(a) National TV news.
(b) Regional TV news.
(c) International cable TV news.
(d) Current event shows on TV.
(e) Radio news.
(f) Current event shows on radio.
(g) National newspapers.
(h) Regional or local newspapers.
(i) National news magazines.

Political interest: Using a scale from 0 to 5, in which 0 means not at all interested and 5, very interested, please, let us know how interested are you in:

(a) Local or regional politics.
(b) National politics.
(c) International politics.

Internet access: Have you used the Internet in the past 12 months? No; Yes

Years of Internet access: Approximately for how long have you been an Internet user?

Less than a year; between 1 and 2 years; between 3 and 4 years; between 5 and 6 years; over 6 years.

General Internet use: On average, how often do you check your email?
Never; Less than once a week; About once a week; More than once a week; Once a day; More than once a day; Every hour or less.

Other Internet uses: Using a scale ranging from 0 to 5 were 0 means never and 5 means frequently how often do you do the following Internet activities:

(a) Use email to keep in touch with family and friends.
(b) Search for entertainment.
(c) Chat.
(d) Shop.

Cellular phone adoption: Do you have a cellular phone? No; Yes