

# Social Media and Citizen Engagement in a City-State: A Study of Singapore

**Marko M. Skoric**

Nanyang Technological University  
Singapore  
Marko@ntu.edu.sg

**Ji Pan**

Nanyang Technological University  
Singapore  
Pan\_Ji@ntu.edu.sg

**Nathaniel D. Poor**

Independent Scholar  
New York, USA  
natpoor@gmail.com

## Abstract

Social media plays an important role in the process of political engagement, especially in societies where significant constraints over traditional media and participation still exist. Little is known about how social media use is related to these constraints. This study examines how citizens' perceptions of government control predict social media use and how this use is related to offline participation in the context of a city-state, Singapore. Based on a national survey of 2000 respondents, we found that perceptions of control over traditional media and political activity increase content production on social media and that perceived control of the mass media motivates citizens to consume political content on social media. Interestingly, perceptions of government control over the Internet reduced rather than increased social media production. More importantly, we find that social media use is related to a greater likelihood of offline citizen participation, namely attendance of political rallies. The findings suggest that social media alters the balance of power in the dependency relationships that exist between the government, media organizations and citizens, creating new venues for online political discourse which in turn help promote real-world political participation.

## Introduction

Facebook and Twitter have been portrayed as democratic forces playing a key role in political upheavals in Egypt and Iran (Grossman 2009; Shane 2011). Interaction using social media, along with face to face contact, helped motivate people to attend the protests in Tahrir Square (Tufekci & Wilson, 2012). While these events speak to the potential of social media as an agent of real-world political action in the times of crisis, these new communication tools are also utilized in more traditional political processes such as electoral campaigns. Social media have been widely deployed as campaign tools in many liberal democracies (Lenhart 2008; Stirland 2008). During the

2010 US Congressional elections, political campaigns utilized Twitter for political mobilization, with many tweets encouraging citizens to vote (Pew Research Center 2011). Indeed, while online political participation has been shown to predict real-world political participation (Vitak, Zube, Smock, Carr, Ellison and Lampe 2011), traditional media also plays a role in offline political activity (Gil de Zúñiga, Puig and Rojas 2009).

Given that communication is community, interaction between the two has been a focus of researchers, from small city spaces (Whyte 2001) to empires (Innis 1950). National-scale media may even create the sense of nationality (Anderson 1983). The potential of online civic networks for cities has been explored (e.g., Tsagarousianou, Tambini & Bryan 1998), as modern cities and telecommunications go hand in hand (Graham & Marvin 1996; Moss 1987). The information flows of cities are found not just in the evolving online world, but occupy and overlap both online and real-world spaces simultaneously (Castells 1996), and give cities a local and global presence (Rutherford 2004).

The literature on the use of social media during elections in countries with weaker democratic traditions is still sparse. Still, the importance of social media in such contexts is arguably greater, as significant restrictions on real-world speech and participation are usually present. Although it is too early to evaluate the long-term impact of social media on political systems, it is vital to examine what motivates citizens to use social media, and how social media and real-world political participation interact.

In recent years, researchers and journalists have focused on citizens' use of social and mobile media during periods of social unrest, including the recent Arab Spring. Social media was easily available to the citizenry, while more traditional media was not (Van Nierkerk, Pillay, and Maharaj 2011). These new media outlets were a space for "otherwise marginalized voices" (Newsom, Lengel, and Cassara 2011) which were not allowed to be heard in the traditional media. The new media are thus a "balancing

force” (Lin, Bagrow, and Lazer 2011) to the traditional media, to which activists and the underprivileged can turn or must turn in order to have their voices heard.

To understand this shift better, we turn to Media System Dependency Theory (MDS). According to MDS, individuals use media for understanding, orientation or play; media draw audience to survive and prosper (DeFleur and Ball-Rokeach 1989), while political structures crave media and popular support for legitimacy. The exclusivity of resources one level has for the goal of another determines dependency intensity (Ball-Rokeach 1998). The introduction of social media disrupts the dependency equilibrium between social-political institutions, media organization, and citizens, especially during political events like elections.

This study proposes to use individual perceptions of structural constraints to reconnect the micro to the meso and macro in inquiries of individual behavior as perceptions of control reflect structural constraints. We investigate both the seeking and production of social media content as dependency indicators, as both information and political expression become resources. Lastly, strict political controls on traditional media and political activities aggravate resource inequalities and thereby dependency intensity across different levels. Structural constraints may push citizens to the relatively less-controlled social media for information access or self-expression.

In contrast to a number of studies in the field focusing on social media use during the times of crisis, our study examines more gradual shifts occurring in political and media landscapes in a city-state that is yet to become a full democracy. Singapore, with its rather unique mix of efficient and non-corrupt governance (Transparency International 2011), tight political controls (Freedom House 2011), highly developed communication infrastructure and an educated populace, represents an appropriate research site for studying the relationships between political structure, social media and real world political action.

## **Elections and Media in Singapore**

Singapore is classified as a “partly free” society, in which the parliamentary elections are held periodically, free of irregularities and fraud, but in which the ruling People’s Action Party (PAP) still dominates the political process (Freedom House 2011). As a critical aspect of political control, the traditional media in Singapore operate in an environment highly structured and controlled by the state, in terms of ownership, regulation, degree of liberalization, and ideology. The Newspapers and Printing Press Act and the Undesirable Publications Ordinance allow the

government to refuse the annual renewal of license to practice journalism and to censor or ban publications that are “likely to cause ill will or misunderstanding between the government and the people of Singapore” (Borkhurst-Heng 2002, p. 566). Moreover, the government has attempted to re-define the goals of news media so that they act in support of the nation-building cause, rather than to play a “watchdog” role over politics.

The government has applied a “soft touch” approach to regulating the Internet, which has lead to the proliferation of political websites, blogs, news aggregators and social media pages. Online media are allowed to adopt an adversarial position towards the ruling party and the government (George and Raman 2008). This “soft touch” can shape the trajectory of political democratization in authoritarian societies, as social media elevate political efficacy, knowledge, participation and social capital (Kim and Geidner 2008; Utz 2009; Valenzuela, Park and Kee 2009). In Singapore the popularity of online spaces has lead to an increase in visibility of political opinions, fostering online participation, as well as offline participation, which was further boosted by easing of restrictions on political gatherings and protests in 2008 (Skoric, Poor, Liao and Teng 2011).

The 2011 General Election has been hailed as the most competitive parliamentary election in the history of Singapore, with social media quickly becoming prime political battlegrounds. While Singaporeans were criticized in the past for being politically apathetic, the 2011 election saw the “political awakening of average Singaporeans” (Hoe 2011; Tsang 2011), manifested as widespread expression of dissatisfaction over government policies online.

## **Hypotheses**

Based on the literature, we propose the following hypotheses:

- H1. Greater production and consumption of social media content during the elections is related to a higher likelihood of attending political rallies.*
- H2a. Greater perceived government control over political participation is related to an increased likelihood of production and consumption of social media content during the elections.*
- H2b. Greater perceived government control over mass media is related to an increased likelihood of production and consumption of social media content during the elections.*
- H2c. Greater perceived government control of the Internet is related to a reduced likelihood of production and consumption of social media content during the*

*elections.*

In addition to the above hypotheses, we also explored the importance of political interest, efficacy, age, other demographic variables, as well as the interactions between the perceptions of government control and age.

## Method

### Participants

A post-election computer-assisted telephone interviewing (CATI) survey, utilizing random-digit dialing (RDD) technique, was conducted with 2000 respondents by a commercial market research firm. Respondents were able to choose from English, Mandarin, or Malay, the three most commonly used languages in Singapore. The fieldwork was conducted from 24 May to 17 July 2011. Only eligible voters (Singaporean citizens at least 21 years old) were selected to participate. On average, interview lasted about 35 minutes and the final response rate was 19%.

### Measurement

The survey contained a range of questions assessing the citizens' use of social media and their perception of government control of mass media, the Internet, and of political participation. 46.7% of survey respondents reported having a Facebook profile, and 3.9% reported using Twitter.

*Social media consumption* assessed the time respondents spend on reading contents from social media with four items. The survey asked respondents questions such as, "How many minutes do you usually spend daily to learn about the election on Facebook," and "How many minutes do you usually spend daily to read Internet-only Singaporean blogs or news websites about the election." ( $M = 7.52$ ,  $SD = 17.55$ ,  $\alpha = .74$ ).

*Social media production* measures the frequency that respondents produce content on social media. Respondents were asked to rate their agreement with four statements on a five-point scale (1 = Never, 5 = Ten times or more), including "I wrote on my blog, my Facebook page or Twitter account about the election or matters related to the election" or "I wrote or commented on other people's blog, Facebook pages, or responded to a tweet on the election or matters related to it" ( $M = 1.18$ ,  $SD = .52$ ,  $\alpha = .80$ ).

*Political interest* is measured by asking respondents to indicate agreement on a five-point Likert scale (1 = Strongly disagree, 5 = Strongly agree) to the statement, "I am interested in political issues" ( $M = 3.16$ ,  $SD = 1.04$ ).

*Efficacy for free discussion* (discussion efficacy) was measured by asking respondents if they agree (1 = Strongly

disagree, 5 = Strongly agree) with the statement, "When I discuss politics with others, I am able to raise questions freely" ( $M = 3.59$ ,  $SD = .87$ ).

*Perceived government control of traditional media* (traditional media control) was measured by asking respondents if they agree (1 = Strongly disagree, 5 = Strongly agree) with the statement that "There is too much government control of newspapers and television" ( $M = 3.42$ ,  $SD = .98$ ).

*Perceived government control over political participation* (participation control) was measured by asking respondents if they agree (1 = Strongly disagree, 5 = Strongly agree) to the statement, "There are too many rules against participating in political activities in Singapore" ( $M = 3.40$ ,  $SD = .88$ ).

*Perceived government control of the Internet* (Internet control) was measured by asking respondents if they agree (1 = Strongly disagree, 5 = Strongly agree) to the statement, "There are too many restrictions on what people can write about politics and government online, including on the blogs, Facebook and Twitter" ( $M = 3.19$ ,  $SD = .91$ ).

*Political rally attendance* was gauged by asking respondents to report agreement on the claim that "In the recent election, I attended one or more political rallies." (1=Yes, 0= No). About 1528 (76.4%) respondents said "No", while 472 (23.6%) answered "Yes" to the claim.

Demographic factors, including age, gender, education and race, were measured and analyzed as control variables. In order to examine the mediating role of age and avoid multi-collinearity, both age and perceived government control (on Internet, traditional media or political participation) were centered before being built into the interaction items.

## Findings

For our analysis, a logistic regression model (Table 1) was built to predict political rally attendance with the production and consumption of content on social media. Demographic factors including age, race or education entered the equation as the first block; efficacy and political interest became the second block, while social media content consumption and production entered the model as the third block in the equation. Second, OLS linear hierarchical regression models were used to predict social media production, and social media consumption. The first block was composed of demographic variables, the second block was composed of efficacy and political interest, the third block was composed of traditional media control, Internet control and participation control, and the final block was composed of interaction items between centered age and the three perceived control variables. Results of the linear regressions are presented in Table 2.

*H1* is supported. Greater content consumption ( $B = .01$ ,  $p < .05$ ) and greater content production ( $B = .32$ ,  $p < .01$ ) on social media are positively associated with the probability that respondents attended political rallies during the election. For each unit increase in social media content production, the odds for respondents to attend political rallies (against not attending) increase by 37%, a substantive shift in participation. For each unit increase in the consumption of social media content, however, the odds for political rally attendance rise by only 1%. *H2a* is partially supported. Greater perceived government control over political participation in Singapore is positively related to the production of social media content during the elections ( $\beta = .06$ ,  $p < .01$ ). However, perceived control over political participation does not affect the consumption of social media content ( $\beta = .03$ ,  $p = .23$ ).

Table 1. Predictors of political rally attendance

Variable	Political rally attendance	
	$B(SE)$	$Exp(B)$
Age	.00(.00)	1.00
Race	.14(.14)	1.14
Education	.07(.03)	1.07*
<i>Chi-square</i>	38.64** ( $df=3$ )	
Discussion efficacy	.16(.07)	1.17*
Political interest	.37(.06)	1.45**
<i>Chi-square</i>	75.70 ** ( $df=2$ )	
Social media production	.32(.11)	1.37**
Social media consumption	.01(.00)	1.01*
<i>Chi-square</i>	21.62** ( $df=2$ )	
Cox & Snell $R^2$	.07	

Note. \* $p < .05$ , \*\*  $p < .01$

*H2b* is supported, as greater perceived government control over traditional media is related to greater production ( $\beta = .16$ ,  $p < .01$ ) and more consumption ( $\beta = .10$ ,  $p < .01$ ) of social media content during the elections.

*H2c* is partially supported. Greater perceived government control of the Internet is negatively related to the production of social media content during the elections ( $\beta = -.06$ ,  $p < .01$ ). Nevertheless, perceived control of the Internet does not affect the consumption of social media content ( $\beta = -.04$ ,  $p = .33$ ).

The interaction between age and participation control ( $\beta = -.07$ ,  $p < .01$ ) and between age and traditional media control ( $\beta = -.14$ ,  $p < .01$ ) predict the production of social media content (Table 1). Findings suggest that the older people are, the less perceived government control over political participation and over traditional media motivates them to produce social media content. However, this trend is reversed when the interaction between age and perceived

government control of the Internet is concerned ( $\beta = .05$ ,  $p < .05$ ). Though greater perceived control of the Internet discourages production of social media content, this trend is attenuated among the older section of the population.

The interaction between age and perceived control over traditional media ( $\beta = -.08$ ,  $p < .01$ ) predicts the consumption of social media content. Perceived government control over newspapers and TV motivates people to read more content from social media as an alternative source. This relation is weakened among older people. However, neither the interaction between age and participation control ( $\beta = -.05$ ,  $p = .13$ ) nor that between age and perceived Internet control ( $\beta = .02$ ,  $p = .10$ ) predicts the consumption of social media content.

Table 2. Predictors of social media use during the elections

Variable	Social media production	Social media consumption
	$\beta(SE)$	$\beta(SE)$
Gender	-.03 (.02)	-.04 (.75)
Age	-.17(.00)**	-.15 (.03)**
Race	.02 (.03)	-.03 (.90)
Education	.09(.01)**	.11 (.22)**
$\Delta R^2$	.09	.09
Discussion efficacy	.11(.01)**	.10 (.44)**
Political interest	.14 (.01)**	.17 (.38)**
$\Delta R^2$	.05	.05
Participation control	.06 (.01)**	.03(.48)
Traditional media control	.16(.01)**	.09 (.44)**
Internet control	-.06 (.01)*	-.04 (.45)
$\Delta R^2$	.03	.01
Age x Participation control	-.07(.00)**	-.05 (.03)
Age x Traditional media control	-.14(.00)**	-.08 (.03)**
Age x Internet control	.05(.00)*	.02 (.03)
$\Delta R^2$	.03	.01
$R^2$	.20	.16

Note. \* $p < .05$ , \*\*  $p < .01$

## Discussion and Conclusion

The small effect of social media content consumption on political rally attendance is consistent with the established association between information, political knowledge and political participation. By implication, social media content may keep citizens informed about current affairs and align their perception of political agenda with the mainstream, thereby enabling them to participate in political activities such as political rallies.

More importantly, citizens who produce online content are significantly more likely to take part in real-life political action. The results imply that the more citizens generate political content on social media, the stronger

their political efficacy and self-confidence. Such political attitudes and skills acquired online can later translate into active real-life participation in political activities, such as election rallies. This is in line with previous research, indicating that social media provide useful tools for reaching, mobilizing, and organizing citizens for political purposes in Singapore (Skoric et al. 2011).

The findings also provide solid evidence that social media can be viewed as a “balancing force” to the traditional media (Lin, Bagrow, and Lazer 2011), as perceived government control of the traditional media drives citizens to produce and consume more social media content. This relationship is stronger for younger citizens, who are more likely to contribute and consume content as they perceive government control over traditional media. We also find that the more Singaporeans see political participation as controlled, the more likely they are to produce social media content. This motivating effect of perceived restrictions on political participation is stronger with younger citizens. By implication, if the “soft touch” policy of internet control is to stay, social media could provide an ideal environment for grassroots political expression and voicing of dissenting opinions. However, our findings also suggest that this trend could be reversed if the government tightens its grip on the internet; indeed, we observe a weak but significant negative relationship between perceptions of government control of the Internet and content production on social media.

The dynamics of media dependencies are altered by the introduction of social media into the socio-political landscape (Riffe, Lacy and Varouhakis 2008). When opportunities for political participation and self-expression are viewed as resources, the perceptions that political participation is restricted by the government indicate that participatory resources from daily interactions are scarce. Citizens’ needs to participate in the political process are not satisfied by the existing means. However, the relatively free domain of social media creates new opportunities for citizens to participate. Accordingly, the more stringent perceived control over political participation is, the more exclusive opportunities to produce content and access opposition party information on social media become. Consequently, citizens use social media more, which in turn increases their dependency on this new networked citizen infrastructure. Along a similar line, perceived control on traditional media reduces the information and participatory resources people think they can obtain. Given the interactivity of social media and their relative freedom in Singapore, exclusivity of these resources on social media is high and citizens are motivated to use social media for political purposes. Likewise, perceived control over the Internet could tarnish the lure of social media, and reduce people’s dependency on social media for political expression.

In a society where the authorities maintain control over political participation and traditional media yet offer leeway to social media, exclusivity of participatory opportunities on social media is bound to grow. As a result, citizens reduce their dependency on the traditional media and increase their dependency on social media. As social media need to distinguish themselves from the muffled voices of traditional media, they require participation and content production from citizens. Social media’s direct, close links with individuals and grassroots movements provides a unique advantage in the marketplace.

In contrast, the traditional media have to satisfy both the authorities and the market. Facing competition from social media, the traditional media have to depend more on citizens to remain relevant and profitable. The appearance of social media attenuates traditional media’s dependency on political authorities, and diversifies their sources of information. The emergence of this new form of alternative, networked media cuts the exclusivity of resources from traditional media, reducing also the government’s dependency on them. These movements imply that social media acts as a disruptive technology, altering the dependencies between the political structure, mass media and individual citizens.

The age differences observed have implications for the process of political change in Singapore and elsewhere. Compared to older citizens, younger citizens’ stronger reaction to perceived political control may be explained by better knowledge, stronger interest and a higher sense of self-efficacy when using social media technologies. There is also an indication of heightened political interest and increased activism among the younger, more civically-minded generation of Singaporeans (Lee 2002). Easy access to social media infrastructure, elevated expectations, and better understanding of new technologies make younger people more active social media users. In contrast, the older strata of the population are less motivated by perceptions of political control to seek alternative channels of political information and engagement.

Our study suggests a critical change in the dependency system following the appearance of social media and predicts further chain effects in the system. It demonstrates that during significant political events such as elections, citizens tend to flock to less regulated media platforms in an attempt to compensate for restrictions in other domains. Future studies should test these changes directly in similar contexts, preferably employing more sophisticated measures of political controls as well as direct observation of social media behaviors during the elections.

## References

- Anderson, B. 1983. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. London, UK: Verso.
- Anderson, D. M. 2003. Cautious Optimism about Online Politics and Citizenship. In D. M. Anderson and M. Cornfield (Eds.), *The Civic Web: Online Politics and Democratic Values* (pp.19-34). Oxford, England: Rowman & Littlefield.
- Ball-Rokeach, S. J. 1998. A Theory of Media Power and a Theory of Media Use. *Mass Communication & Society* 1(1): 5-40.
- Borkhurst-Heng, W. 2002. Newspapers in Singapore: A Mass Ceremony in the Imagining of the Nation. *Media Culture and Society* 24: 559-569.
- Campbell, S., and Kwak, N. 2011. Political Involvement in "Mobilized" Society: The Interactive Relationships among Mobile Communication, Network Characteristics, and Political Participation. *Journal of Communication* 61(6): 1005-1024.
- Castells, M. 1996. *The Rise of the Network Society*. Oxford, UK: Blackwell.
- DeFleur, M., and Ball-Rokeach, S. 1989. *Theories of Mass Communication*. 5th Ed. New York, NY: Longman.
- Freedom House. 2011. Freedom in the World 2011: The Authoritarian Challenge to Democracy. Retrieved from: <http://www.freedomhouse.org/>
- George, C. and Raman, R. (2008). When Big Media Meet 'We' Media in Singapore." *Australian Journalism Review* 30(2): 61-73.
- Gil de Zúñiga, H., Puig, E., and Rojas, H. 2009. Weblogs, Traditional Sources Online & Political Participation: An Assessment of How the Internet is Changing the Political Environment. *New Media & Society* 11(4): 553-574.
- Graham, S., and Marvin, S. 1996. *Telecommunications and the City: Electronic Spaces, Urban Places*. New York, NY: Routledge.
- Grossman, L. 2009. Iran Protests: Twitter, the Medium of the Movement. *Time*. Retrieved from <http://www.time.com/time/world/article/0,8599,1905125,00.html>
- Hoe, Y. N. 2011. The Impact of New Media on GE 2011. *Channelnewsasia*. Retrieved from <http://www.channelnewsasia.com/stories/singaporelocalnews/view/1128681/1/.html>
- Innis, H. A. 1950. *Empire and Communications*. Oxford, UK: Clarendon Press.
- Kenski, K., and Stroud, N. J. 2006. Connections Between Internet Use and Political Efficacy, Knowledge and Participation. *Journal of Broadcasting & Electronic Media* 50(2): 173-192.
- Kim, Y., and Geidner, N. W. 2008. *Politics as friendship: The impact of online social networks on young voters' political behavior*. Paper presented at the annual meeting of the International Communication Association, Montreal, Quebec, Canada.
- Lee, T. 2002. The Politics of Civil Society in Singapore. *Asian Studies Review* 26(1): 97-117.
- Lenhart, A. 2008. Adults and Social Network Websites: Pew Internet Project Data Memo. *Pew Internet and American Life Project*. Retrieved from: [http://www.pewinternet.org/PFF/r/272/report\\_display.asp](http://www.pewinternet.org/PFF/r/272/report_display.asp)
- Lin, Y., Bagrow, J. P., and Lazer, D. 2011. More Voices than Ever? Quantifying Media Bias in Networks. *Fifth International AAAI Conference on Weblogs and Social Media*. Barcelona, Spain.
- Ling, R. 2008. *New Tech, New Ties: How Mobile Communication Is Reshaping Social Cohesion*. Cambridge, MA: MIT Press.
- Moss, M. 1987. Telecommunications, world cities, and urban policy. *Urban Studies* 24: 534-546.
- Newsom, V. A., Lengel, L., and Cassara, C. 2011. Local Knowledge and the Revolutions: A Framework for Social Media Information Flow. *International Journal of Communication* 5: 1303-1312.
- Pew Research Center. 2011. Internet and American Life Project, Retrieved from: <http://www.pewinternet.org/>
- Riffe, D., Lacy, S., and Varouhakis, M. 2008. Media System Dependency Theory and Using the Internet for In-Depth, Specialized Information. *Web Journal of Mass Communication Research* 11: 1-14.
- Rutherford, J. 2004. *A Tale of Two Global Cities*. Hant, England: Ashgate.
- Shane, S. 2011. Spotlight Again Falls on Web Tools and Change. *The New York Times*. Retrieved from: <http://www.nytimes.com/2011/01/30/weekinreview/30shane.html>
- Skoric, M. M., Poor, N. D., Liao, Y., and Tang, S. W. H. 2011. Online Organization of an Offline Protest. *Proceedings of the Hawaii International Conference on System Sciences*. Washington, D.C.: IEEE Computer Society.
- Stirland, S. 2008. Obama's Secret Weapons: Internet, Databases and Psychology. Retrieved from: <http://www.wired.com/threatlevel/2008/10/obamas-secret-w>
- Transparency International 2011. Corruption Perception Index. Retrieved from: <http://cpi.transparency.org/cpi2011/results/>
- Tsagarousianou, R., Tambini, D., and Bryan, C. 1998. *Cyberdemocracy: Technology, Cities and Civic Networks*. New York, NY: Routledge.
- Tsang, H. 2011. Turn of Tide: Singapore's Watershed Election 2011. Retrieved from: <http://www.asiapacificmemo.ca/turn-of-tide-singapore-watershed-election-2011>
- Tufekci, Z., and Wilson, C. 2012, forthcoming. Social media and the decision to participate in political protest: Observations from Tahrir Square. *Journal of Communication*.
- Utz, S. 2009. The potential benefits of campaigning via social network sites. *Journal of Computer Mediated Communication* 14: 221-243.
- Valenzuela, S., Park, N., and Kee, K. F. 2009. Is there social capital in a social network site? *Journal of Computer-Mediated Communication* 14: 875-901.
- Van Nierkerk, B., Pillay, K., and Maharaj, M. 2011. Analyzing the Role of ICTs in the Tunisian and Egyptian Unrest from an Information Warfare Perspective. *International Journal of Communication* 5(1): 1406-1416.
- Vitak, J., Zube, P., Smock, A., Carr, C. T., Ellison, N., and Lampe, C. 2011. It's Complicated: Facebook Users' Political Participation in the 2008 Election. *Cyberpsychology, Behavior, and Social Networking* 14(3): 107-114.
- Whyte, W. 2001. *The Social Life of Small Urban Spaces*. New York, NY: Project for Public Spaces.