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**Liberating Technologies?
Perceptions of Government Control and Citizens' Use of
Social Media during the Elections**

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Abstract

Social media may liberate citizens in societies with stringent media controls and accelerate political democratization. Yet, little is known about the relation between social media use and perceived constraints in a semi-authoritarian system. This study draws on Media System Dependency theory to examine this relation in the context of the 2011 Singapore General Election. Our findings, based on national survey data, suggest that perceived control of traditional media and political activity is positively related to content production on social media as well as the visits to opposition party websites and Facebook pages. Additionally, perceived control of mass media is associated with increased consumption of political content on social media. Perceived control of the Internet reduces rather than increases content production on social media. We argue that social media alters the balance of dependency relationships between the government, media organizations and citizens. They create new, meso level networked avenues for information gathering and participation during the elections.

Keywords: Democracy, Social Media, Elections, Government Control

1 Introduction

The power of new media to influence political processes in democratizing states cannot be underestimated. During the impeachment trial of Philippine President Joseph Estrada in 2001, about seven million text messages were sent to mobilize a million Filipinos to hit the streets of

Manila and protest. This became the first time that new, peer-to-peer media helped force out a national leader. In China, public opinion in the blogosphere convinced Beijing that going ahead with a city-wide dog cull would create great social tension, as many bloggers likened the policy to abortion. Lei (2011) observed that the "Internet has contributed to a more critical and politicized citizenry" with citizens no longer being merely compliant receivers of official discourse in China.

In recent years, the open and participatory nature of social media has fuelled new aspirations for democracy. Though not without controversies (Gladwell, 2010; Morozov, 2011), social media's potential as an agent of social change has been established both during crises and during regular elections. Facebook and Twitter, as democratic forces, played a critical role in political upheavals in Egypt and Iran (e.g., Grossman 2009; Shane 2011). During the recent Arab Spring, social media was a weapon easily available to the citizenry, while more traditional media was not (Van Nierkerk, Pillay, & Maharaj, 2011). Social media are also deployed as campaign tools in liberal democracies. In the 2008 Presidential elections in the United States, Barack Obama's campaign was praised for its new media effectiveness (Lenhart, 2008; Stirland, 2008). During the 2010 Congressional elections, political campaigns utilized Twitter for political mobilization, with many tweets encouraging citizens to vote (Pew Research Center, 2011). In South Korea, citizens used Twitter during the 2010 elections for political information, entertainment, and/or social utility (Kim, 2011).

However, little is known about social media use during elections in countries with weak democratic traditions. This issue is critical. Social media offer a space for "otherwise marginalized voices" (Newsom, Lengel, & Cassara, 2011) banned in the traditional media. They become a "balancing force" (Lin, Bagrow, & Lazer, 2011), and activists or the underprivileged often turn to social media for political expression. The pattern and motives for social media use change in societies where traditional means of free speech are constrained. This is especially evident during elections. Citizens' perceptions of political control over traditional media, the Internet, and political participation may affect how they use social media. Furthermore, in many democratizing societies the younger and newly-enfranchised cohorts of digital natives are seizing centre-stage in public life. Their means to leverage social media for political expression, participation, or mobilization affect the prospect for democracy where it is most needed. Accordingly, we conducted a nationally representative survey to probe how perceived political control over the Internet, traditional media and political participation motivates Singaporeans to consume and produce social media content or visit opposition party websites, and whether this motivational effect varies across age cohorts.

Unlike studies of social media use during crises, our inquiry examines gradual shifts in political and media landscapes in a country 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 educated populace, represents an excellent site for studying the role of social media in political changes. Moreover, we argue that, within the media system dependency framework (MSD), social media alters dependency relationships between the government, media organizations and citizens. They create new, meso level networked avenues for information gathering and participation during the elections.

2 Media System Dependency Theory

This study draws on MSD to frame how people use social media in a society where free expression via other channels, including traditional media, are checked by the government. MSD first emerged to explain why media have varying cognitive, affective and behavioural effects on different people (Ball-Rokeach & DeFleur, 1976). It evolved into a complex theory that deals with micro links between media and individuals, and macro links between media and social institutions. MSD explains how social-political structures (macro), media organizations (meso) and individuals (micro) depend on resources from each other to achieve goals (Matsaganis & Payne, 2005). It captures dynamic interactions between institutionalized constraints in democratizing states, media under varying level of control and individual citizens.

At the micro level, MSD assumes that individuals are goal-oriented and active in the selection and use of media. They depend on media for social or solitary play, self- or social understanding, and orientations for action or interactions. Different media meets different goals for different people (Lacy, 2000). This is the case with citizens during general elections. Elections elevate citizens' political interest, their desire to know, talk about, and participate in what is happening politically, especially when political information is controlled and incomplete.

At the macro level, audiences are linked in a dependency relationship with social and media institutions and this relationship varies according to the stability of social institutions and the centrality of media information (Lowrey, 2004). It accentuates social structural determinants of media influence (Grant & Guthrie, 1991). Audiences have to rely on information from media to achieve their goals (Loges & Ball-Rokeach, 1993). Media draw audiences to survive and prosper (DeFleur & Ball-Rokeach 1989), while social-political structures crave media and popular support to legitimize their hold on power. Achieving these goals takes resources, whose inequality creates dependency. A dependency relationship in MSD is "a relationship in which the satisfaction of needs or the attainment of goals by one party is contingent on the resources of another party" (Ball-Rokeach, 1985). The extent to which media need resources from social-political structures versus the resources these structures require from media determines media dependency. Meanwhile, an individual's need for information from media, relative to media's desire for individual's time, attention or purse, creates a micro level dependency (Ball-Rokeach 1998). The intensity of dependency stems from the perceived helpfulness and exclusivity of resources of one party to meet the goals of another (DeFleur and Ball-Rokeach 1982, 1989).

Viewed via the MSD framework, social media are a new resource which introduce new sources of dependency (Riffe, Lacy, & Varouhakis, 2008). Ball-Rokeach (1998) wrote that, "The Internet thus intrudes on traditional relations by being integrated into an expanded media system that expands the reach of understanding, orientation, and play goals individuals, groups, and organizations attain through media dependency relations." In semi-authoritarian societies, social media challenge the monopoly of government-controlled media as venues for information and expression. Access to the Internet decreases individuals' dependency on government-controlled media in China (Sun, Chang, & Yu, 2001). Halpern (1994) explored the role of alternatives to the government controlled press in Chile and found that access to new media relates to an individual's personal access to political information.

However, efforts to relate social media, traditional media, and political controls in a non-democratic society with a MSD framework are rare. Furthermore, issues in existing studies undermine MSD's explanatory power.

First, most studies examine media-individual dependency, reducing MSD to a functionalist media effect theory. Structural factors are lost in studies of individual behaviour or effects. As a remedy, we propose to use individual perceptions of structural constraints to reconnect the micro with the meso and macro levels. This reconnection enhances MSD's power in the prediction of individual behaviours. Second, users have flocked to participate in and express themselves through social media. Against this backdrop, MSD needs to recognize participation and content production as resources. Accordingly, we investigate the searching for and production of social media content as dependency indicators, particularly as traditional media increasingly depend on input from social media. Lastly, resource inequality and exclusivity between different parties are more intense in authoritarian regimes, as power is more concentrated and constraints on organizations and individuals more pronounced. Yet most MSD studies have been conducted in Western democracies. We explore the effect of perceived government control over mass media, political participation, and the Internet in Singapore, a country with high information technology use, but less experience with political democracy.

3 The 2011 Singapore General Election

Freedom House (2011) classifies Singapore 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. As a critical aspect of political control, the traditional media in Singapore operate in a highly structured environment 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 licenses 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 largely redefined the goals of news media so that they act in support of the nation-building cause, rather than to play a "watchdog" role.

While the government has retained tight control over traditional media, it has applied a "soft touch" approach to regulating the Internet, which has led to the proliferation of Singaporean political websites, blogs, news aggregators and social media pages. While national newspapers are subject to political controls, online media are allowed to adopt an adversarial position towards the ruling party and the government (George & Raman, 2008). The popularity of blogs, forums, Facebook and Tweeter has led to an increase in the visibility of political opinions, fostering both online and offline participation, which was further boosted by easing of restrictions on political gatherings and protests in 2008 (Skoric, Poor, Liao & Teng, 2011).

The 2011 General Election was by most accounts the most competitive parliamentary election in the history of Singapore. In this increasingly competitive political environment, social media platforms quickly became 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 in cyberspace as widespread expression of dissatisfaction over government policies. This rise in online activism is also partly

due to the amendments and the Parliamentary and Presidential Elections Act introduced in 2010. As a consequence of these changes, political parties and candidates were able to use a broader range of online platforms in their electoral campaigns (Hoe, 2011). On the nomination day (April 27, 2011), seven political parties (including the ruling PAP) registered their candidates with the Elections Department.

3.1 Hypotheses

Based on the literature, we propose the following hypotheses:

H1a. Perception of government control over political participation is positively related to production and consumption of social media content during the elections.

H1b. Perception of government control over traditional media is positively related to production and consumption of social media content during the elections.

H1c. Perception of government control over the Internet is negatively related to production and consumption of social media content during the elections.

H2a. Perception of government control over political participation is positively related to visiting the websites and Facebook pages of opposition parties.

H2b. Perception of government control over traditional media is related to a greater likelihood of visiting the websites and Facebook pages of opposition parties.

H2c. Perception of government control over the Internet is related to a decreased likelihood of visiting the websites and Facebook pages of opposition parties.

In addition, we are also interested in the importance of political interest, efficacy, age, and other demographic variables, and the interactions between the perceptions of government control and age, in regard to these questions.

4 Method

4.1 Participants

A post-election computer-assisted telephone interviewing (CATI) survey was conducted by a commercial market research firm, with 2,000 respondents. Respondents were able to choose from English, Mandarin, or Malay, the three most commonly used languages in Singapore. Most calls were made on weekday evenings and on weekends. 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, interviews lasted about 35 minutes. The response rate was 19%, which is in line with similar studies conducted in the United States (Ansolabehere and Schaffner 2011). The average age of respondents in the sample was 44.6 years of age. 47.3% of respondents were males, 77.50% were ethnic Chinese, and 59.30% had junior college education or greater. As such, the sample is demographically representative of the population in Singapore when compared to the latest census data.

4.2 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. All multi-item scales were averaged into indices for analyses. 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, "How many minutes do you usually spend daily to learn about the election on Facebook," "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 measured the frequency that respondents produced 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" ($M = 1.18$, $SD = .52$, $\alpha = .80$).

Visits to opposition party websites or Facebook pages measured the number of times respondents visited websites or Facebook pages of opposition parties. Respondents answered seven questions, including "During the election, how many times did you visit websites or Facebook pages of the Singapore Democratic Party?" or "During the election, how many times did you visit websites or Facebook pages of the Socialist Front?" ($M = 1.14$, $SD = .43$, $\alpha = .89$).

Political interest was 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 agreed (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 agreed (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 agreed (1 = Strongly disagree, 5 = Strongly agree) with 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" ($M = 3.19$, $SD = .91$).

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 multicollinearity, both age and perceived government control (on Internet, traditional media or political participation) were centred before being built into the interaction items.

5 Findings

For our analysis, three OLS linear hierarchical regression models were used to predict social media production, social media consumption and visits to opposition party websites or Facebook pages. The first block was composed of demographic variables, the second block includes efficacy and political interest, the third block includes traditional media control, Internet control and participation control, and the final block consists of interaction items between age (centered) and the three perceived control variables (Table 1).

H1a 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 ($\beta = .03, p = .23$).

H1b is supported, as perceived government control over traditional media is positively related to greater production ($\beta = .16, p < .01$) and more consumption ($\beta = .10, p < .01$) of social media content during the elections.

H1c is partially supported. Perception of 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 is not related to the consumption of social media content ($\beta = -.04, p = .33$).

Table 1 Predictors of social media use during the elections

Variable	Social media production $\beta(SE)$	Social media consumption $\beta(SE)$	Visits to opposition party webpages $\beta(SE)$
Gender	-.03 (.02)	-.04 (.75)	-.05 (.02)*
Age	-.17(.00)**	-.15 (.03)**	-.11 (.00)**
Race	.02 (.03)	-.03 (.90)	-.01 (.02)
Education	.09(.01)**	.11 (.22)**	.06 (.01)*
ΔR^2	.09	.09	.05
Discussion efficacy	.11(.01)**	.10 (.44)**	.03 (.01)
Political interest	.14 (.01)**	.17 (.38)**	.15 (.01)**
ΔR^2	.05	.05	.02
Participation control	.06 (.01)**	.03(.48)	.06 (.01)*
Traditional media control	.16(.01)**	.09 (.44)**	.12 (.01)**
Internet control	-.06 (.01)*	-.04 (.45)	-.01 (.01)
ΔR^2	.03	.01	.02
Age x Participation control	-.07(.00)**	-.05 (.03)	-.05 (.00)*
Age x Traditional media control	-.14(.00)**	-.08 (.03)**	-.04 (.00)
Age x Internet control	.05(.00)*	.02 (.03)	.00 (.00)
ΔR^2	.03	.01	.01
R^2	.20	.16	.10

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

H2a is supported, as perception of government control over political participation is positively associated with the likelihood of visiting the opposition parties' websites and Facebook pages ($\beta = .06, p < .05$).

H2b is supported. The stricter people perceive government control over traditional media to be, the more they tend to visit opposition parties' websites and Facebook pages ($\beta = .12, p < .01$).

H2c is not supported. Perceived government control of the Internet is not related to the likelihood of visiting opposition parties' websites and Facebook pages ($\beta = -.01, p = .44$).

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). The older people are, the less perceived government control over political participation and over traditional media affects their content production on social media. However, this trend is reversed when the interaction between age and perceived government control of the Internet is concerned ($\beta = .05, p < .05$). Although 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. 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.

Among the three interaction items, the interaction between age and perceived control over political participation is related to the number of visits to opposition party websites or Facebook pages ($\beta = -.05, p < .05$), meaning, the positive relation between perceived control over political participation and visits of opposition party websites is weaker among older citizens. However, the interaction between age and perceived control over traditional media ($\beta = -.04, p = .15$) and that between age and government control of the Internet ($\beta = .00, p = .74$) were not related to the number of visits to opposition party websites or Facebook pages.

6 Discussion and Conclusion

This study finds that political interest and efficacy are related to increased production and consumption of social media content even outside Western liberal democracies. We also find that social media can be a "balancing force" to the traditional media (Lin, Bagrow, & Lazer, 2011), as perceived government control of the traditional media is associated with more production and consumption of social media content, as well as increased visits to opposition party websites and Facebook pages. This relationship is stronger for younger citizens. They are more likely to contribute to and consume content when they perceive increased government control over traditional media. We also find that Singaporeans tend to produce more social media content and increase visits to opposition party websites and Facebook pages as they see increased control over political participation. This effect is stronger with younger citizens, yet, people are less likely to create social media content when they see the Internet as a controlled space.

The impact of political interest and efficacy on social media use in Singapore echoes findings from Western societies (e.g., Anderson 2003; Kenski & Stroud, 2006). It also suggests that in a society where restrictions on political speech in social media are less stringent than on other platforms, citizens are likely to turn to Facebook, Twitter or blogs to compensate for the perceived inadequacies of the traditional media coverage during major political events, such as general elections. This prospect is encouraging for political pluralism. Despite the dominance of the ruling PAP, Singaporeans are increasingly exposed to a diversity of voices from the opposition parties via social media (Leea & Kan, 2009). By implication, if the “soft touch” policy of Internet control remains, social media can provide an ideal environment for political expression and dissenting opinions. However, our findings also suggest that this trend could be reversed if the government tightens its grip on the Internet; indeed, our findings show a weak but significant negative link between perceptions of government control over the Internet and content production on social media.

From the MSD perspective, the dynamics of media dependencies are altered by the introduction of social media into the socio-political landscape (Riffe, Lacy, & Varouhakis, 2008). When opportunities for political participation and self-expression are deemed resources, the perception that political participation is restricted by the government indicates that participatory resources from daily interactions are scarce. Citizens’ needs to participate in political processes are not satisfied by the existing means and modalities. However, the relatively free domain of social media creates new opportunities for citizens to become involved in politics. With MSD, resource exclusivity increases the intensity of dependency (Ball-Rokeach, 1998). Accordingly, if people perceive control over political participation as more stringent, then opportunities to produce social media content and access opposition party information become more exclusive. Consequently, citizens increase their use of social media, which in turn increases dependency on this new network. Similarly, perceived control of 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 through social media is high and citizens are motivated to use social media for political content production, consumption or for information about opposition parties. Likewise, perceived control over the Internet could tarnish the lure of social media, and reduce people’s dependency on social media for political expression.

These findings indicate a change in the dynamics of dependencies in Singapore, sparked by the boom of a social media system. In a society where the authorities maintain exact control over political participation and traditional media, yet offer leeway to social media, exclusivity of participatory opportunities on social media is bound to grow. Consequently, citizens reduce their dependency on the traditional media and increase dependency on social media. We argue that this triggers a chain of consequences for the dependency system in Singapore. As social media need to distinguish themselves from the muffled voices of traditional media, they require participation from citizens. As citizens depend more on social media, social media may in turn depend more on citizens as participants. Social media’s direct, close links with individuals and grassroots movements offer a unique market advantage.

In contrast, the traditional media are concerned with 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. For example, a

photograph showing a housemaid carrying backpack for a Singaporean serviceman sparked heated debates in most traditional media after first appearing in social media (Lim, 2011). Moreover, the political authorities are increasingly embracing social media, as many ministers and MPs have their own Facebook and Twitter accounts, trying to reach out to ordinary Singaporeans. The emergence of this new form of alternative, networked media reduces the resource exclusivity of, and government dependency on, traditional media. These movements imply that social media can act as a liberating technology, altering the dependencies between the political structure, mass media and individual citizens. Furthermore, our study shows that a two-tier system of political control over mass and social media seems to be driving citizens towards more pro-opposition content online.

We suggest that the age differences uncovered 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 new 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. While greater youth participation is definitely desirable, we also see this pattern as an indicator of a possible digital divide, where citizens lacking appropriate social media skills are likely to be excluded from certain civic and political activities.

This study is limited in several regards. First, it is conducted in Singapore, a unique city-state. Its British colonial history, ethnic diversity and wealth, combined with strict political controls definitely present an idiosyncratic setting for studying social media and politics. Future inquiries should cross-validate the theoretical statements we established in different cultures and contexts. Second, given the low cost, personalized content and circumstances of social media use, we can expect that it may enhance the meso and micro levels of MSD in forms of more participation at the individual level. The resources of social media can alter the nature of dependency relationships which are based on the assumption of scarce media resources. A more ambitious re-conceptualization of MSD may be needed for further endeavours. To conclude, our study offers a reformulation of MSD by adding social media as an alternative to traditional media at the meso level, testing the dynamics of dependency relations in a partly-free society, operationalizing socio-political structural factors as individual perceptions of political control to predict individual social media use for political information consumption and expression, and including political participation and content production as resources from the media system in the MSD framework. Our study suggests a critical change in the dependency system following the debut of social media and predicts further chain effects in the system. It demonstrates that during significant political events such as presidential 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 in different contexts, preferably employing more sophisticated measures of political controls as well as direct, behavioral measures of social media use during the elections.

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