Internet, Trust in Government and Citizen Compliance

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Abstract

The decline of trust in government contributes to a climate of "political malaise," and leads to great challenges for any government concerned with meeting the public's demands and expectations. Starting from the premise that e-government and e-participation are desirable developments initiated by governments via a top-down approach, this paper explores the opportunities, if any, available to citizens to utilize the internet to initiate bottom-up channels of participation and communication. We explore the extent to which the time that people spend on the internet affects the public's trust in the government and/or the degree of compliance with government policies, as compared to the influence of the traditional, off-line, mass media modalities, such as newspapers. The results of the analyses suggest that the more time individuals spend on the internet, the lower their degree of trust in government and lower level of citizen compliance.

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Introduction

During the past several decades, there has been a continual erosion of public trust in government (Abramson & Inglehart 1995; Dalton 2002; Nevitte 2002), and the changes in the media environment became a contributing to the reshaping of the citizen-state relations. Forced to adapt to the decline in the public trust, a situation that is said to cause a climate of "political malaise," the governments' efforts to satisfy the public's demands and expectations (Hetherington 1998, Welch et al, 2004), are now likely to be met with skepticism or worse. Because increased levels of government mistrust lead to challenges related to government legitimacy and an increased lack of public compliance with the government policies, there is a need to address this issue (Gamson 1968; Muller et al. 1982; Betz & Immerfall 1998; Braithwaite & Makkai 1994).

Factors that can influence public trust negatively, as explored in many previous studies, include various elements of the socio-political atmosphere, such as the media, the economic climate, the participatory culture, and the public's perceptions and expectations of their government (Abramson & Primack, 1983; Mishler & Rose, 1997; Sullivan, 1965; Nye 1997; Peters 1999), while other studies found the public's degree of satisfaction with e-government to be positively associated with trust in government (Welch et al, 2004). In the current climate of the rapid developments in information and communications technology (ICT), which have been going on over the course of the past two decades or more, a notable, growing void has appeared between the causes of public mistrust that previous studies had

shown to affect governance that are traditionally attributable to the 'old world media': the internet usage impacts the public's trust in government and has become a factor of rapidly growing importance in our progressively digital world.

The internet's power to inform, as well as to misinform, and the average citizen's perception of government being increasingly influenced by information coming from non-government websites, have created an imbalance and potential bias: given the advancement of the internet and society's increased dependence upon it as a means of self-expression and information procurement, the internet's relevance to the government must also dramatically increase, because traditional forms of mass media are no longer the only tools of political communication with the public. As governments around the globe are now working to incorporate the internet and ICT[1] into their repertoire of tools used for governance, it is necessary to explore in greater detail the question of the internet's influence on public opinion. Accordingly, this article attempts to answer the question of how the use of time on the internet can affect the public's trust in government, when compared to traditional mass media outlets, in particular the newspapers, and explores the eventual impact on citizen compliance brought about by the new media.

Internet as Communication Tool: The Korean Context Significance

It is not surprising that the government of South Korea, a nation well known for its advanced and diffuse IT infrastructure, has aggressively pursued a greater on-line presence, to the extent that it now ranks first in e-government development, as well as in e-participation (Macintosh, 2004). The ultimate goal of the Korea's e-government program was to "realize the World's best open government," and that strategy has begun to pay off,

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[1] The term e-participation is used here to describe succinctly the public's use of ICT, (or IT), in government-driven processes, from administration and public service, to policy-making and implementation.

as shown in Table 1 and Table 2.

Table 1 E-Government Development Index from United Nations

Country	2005		2008		2010	
	Score	Rank	Score	Rank	Score	Rank
Korea	0.8727	5	0.8317	6	0.8785	1
US	0.9062	1	0.8644	4	0.851	2
Canada	0.8425	8	0.8175	7	0.8448	3
UK	0.8777	4	0.7872	10	0.8147	4
Netherlands	0.8021	12	0.8631	5	0.8097	5

Table 2 E-Participation Index from United Nations

Country	2005		2008		2010	
	Score	Rank	Score	Rank	Score	Rank
Korea	0.8730	4	0.9773	2	1.0000	1
Australia	0.7143	9	0.8864	5	0.9143	2
Spain	0.0794	74	0.3636	34	0.8286	3
New Zealand	0.7937	6	0.7955	6	0.7714	4
UK	1.0000	1	0.4318	25	0.7714	5

It must be pointed out that, despite the rapidly expanding on-line presence of governments around the world, only a limited number of citizens actually use government websites. Even though the vast majority of citizens in developed nations use the internet regularly throughout the course of their daily life for many other purposes, this modern concept, with great potential to positively affect the public trust, is largely underused in the public administration areas. For the nations where information technology is well developed and diffused deeply, such as Korea, the impact of the internet on the trust in government or citizen compliance can be expected to be particularly significant.

Illustrating this point well are the widespread protests that took place in Seoul in 2008, which were provoked by largely erroneous information regarding a beef import clause in the recently signed agreement between South Korea and the United States: essentially, spurred by reports that Mad Cow disease was prevalent in American cattle, Koreans took to the streets in protest, for more than forty days, with police estimates of 100,000 protesters

during peak nights in downtown Seoul (New York Times, 2008). The protest participants not only showed that there was widespread discontent with Korean President Lee's administration, but more importantly, the events demonstrated the ability for an extremely stratified and large segment of the Korean society to effectively mobilize and communicate. Did this indicate similar patterns in website use, extremely widespread diffusion of similar information over the internet, or was it simply the old media 'hitting a hot button? '

Perhaps even more surprising than the ability of such diverse crowds to coordinate protests was the rapid proliferation of "misleading information" related to American beef and to the Mad Cow disease via blogs, chat-rooms in online communities, and internet bulletin boards. This viral spread of misinformation ultimately prompted President Lee to warn Parliament on July 11, 2008, that actions must be taken to prevent against such types of "infodemics" in the future, a Korean government action that led to the creation of the controversial Cyber Defamation Law, the new government post of chief advisor of communication, and a new government unit for on-line communications.

This Korean experience illustrates how, in nations where the government lacks strong support from its citizens, unproven information circulated via the internet is likely to negatively influence the citizens' perceptions about specific government decisions and institutions, and indeed, of the whole political regime (Mishler & Rose 2005). Such behavior is to be expected when inherent circumspective tendencies are activated by certain policies in certain contexts and the public does not agree with the direction in which they are being led (Bouckaert & Van de Walle, 2003): as citizens lose faith in the direction into which they are "steered" by their government, their willingness to accept third party decisions is negatively affected, which results in lower levels of citizen compliance (Murphy, 2002).

Taking a more pessimistic view on this argument, Lee (2003) asserts that the younger and better educated Korean public are being "socialized," a climate that results in the creation of strong libertarian values, which in turn fosters enhanced levels of political cynicism, and as a result, the level of citizen compliance is steadily decreasing in Korea. Lee (2003) then goes on to argue that the situation in Korea is not unlike other advanced industrialized nations where the noncompliant attitudes are widespread among younger and better educated hold meaning that they can exhibit a greater potential to involve themselves in protest activities. However, it is also interesting to note that the current Korean generation, which exhibits lower levels of trust in government and citizen compliance while having heightened willingness to protest, is also the richest generation Korea has seen in its entire long history.

Internet Journalism: Is It different from Traditional Journalism?

The proliferation of online media outlets has caused a paradigm shift in journalism and it effectively altered the information environment in which political elites and interested citizens function (Woodly, 2007). Indeed, the role of the media has been altered in many respects and was forced to adjust to the enhanced importance of informal on-line media outlets, such as the contributors to the on-line media, or on line web loggers (hereafter bloggers), which have emerged as an important influence on agenda setting for both the media and the government (Wallsten 2007; Farrel & Drezner 2008). In fact, if the tone of political information dissemination by the media can be characterized as a top-down, elite-driven process that is closely correlated to the societal status quo and democratic obligations (Midich 1998; Richards 2005; Woodly 2007), it appears that the intent of the blogging community is to do nothing other than to shake things up a bit.

Addressing what these authors believe to be the root of the constraints placed upon traditional forms of mass media, Woodly (2007) argues that news is biased towards an elite opinion due to the rigid parameters which journalists must follow. Establishing a basis for this point, Entman (2004) draws on a cascading network activation model of political communication that emphasizes the importance of sequence and hierarchy, with decisions related to what is worth talking about being made by the top of the "cascade" (elites), in order to establish a framework from which the lower tiers of the "cascade" can work within.

The blogging community is not much different from Entman's (2004) cascade model: despite the existence of numerous blogs, only a fraction of them actually make any impact, which is to say that the blog community too, is elite driven. However, the obvious difference is the way in which the elite bloggers' agendas are established: unlike the elites in the traditional media cascade, who actually determine issues to transmit publicly themselves, elites within the blogging community tend to rely on the traditional media when obtaining their information (Wallsten, 2007). Given this distinction, the role of the blogs is not necessarily to provide new information, but rather to serve as a means to assess the public interest in certain issues (Wallsten 2007; Farrell & Drezner 2007). Unlike other means, such as the polls and surveys, the blogs provide real-time updates as to what issues on the political media agenda are of public interest or not, thereby improving the upward channels of (political) communication.

Trust in Government Is at Stake

When evaluating the efficiency with which a government implements its policies, trust in government represents a factor of great importance due to the fact that democratic systems rely on the citizen compliance to operate effectively, as well as to stave off political apathy.

In this context, trust is widely considered to be a form of social capital, which occupies a key role in making a political system operate correctly (Fukuyama, 1995).

However, trust is not an easily defined concept that all scholars can readily agree upon. As Uslaner (2002, 2008) explains, trust is a term that means several different things, with different contexts helping to create different types of trust. The studies on trust in government tend to support this assertion by relating notions of trust in government to issues ranging from civic engagement (Putnam, 1995; Uslaner, 2005), to government performance (Vigoda-Gadot and Yuval 2003; Yang and Holzer, 2006), to government public relations and e-government (Park and Cho 2009; Welch et al. 2005, Tolbert & Mossberger 2006). The factors associated with why we trust, whom we trust, and consequences of trust mentioned in these works are all necessarily inconsistent due to, as previously mentioned, the very contextual nature of trust. For this reason, many scholars tend to group trust in government into various categories, but typically agree that the citizens' trust in government is a function of their policy expectations and/or preferences being satisfied.

Yet, despite little agreement among authors pertaining to definitions of citizen trust in government or to how trust is gained and lost, most writers agree that it is an important component of public action and cooperation (Ruscio 1996; Thomas 1998). Nye (1997) flags four factors in particular which he argues are "more immediate" and "affect views toward government": the public's appraisal of government performance, the public's ideological views on certain policies, the public's assessment of ethics and integrity of people and processes of government, and the denunciation of government by political leaders and by the press. Similarly, Orren (1997) found that the citizens' degree of trust in government is influenced by the level of satisfaction with the government performance, which serves as a logical extension of the factors that were laid out by Nye (1997). Thus one concludes that a

decline of trust in government may be, at least in part, tied to lower levels of citizen satisfaction (Bouckaert, 2003; Orren, 1997), and that lower levels of satisfaction are related to poor government performance (Nye 1997, Van Ryzin 2007, Welch et al. 2005). The fact that citizen satisfaction and government performance appear to heavily influence public trust in government is also discussed by Vigoda-Gadot and Yuval (2003), who make the argument that strong government performance causes higher levels of public trust. They go on to explain that reforms such as New Public Management are effective in building trust because they directly address performance related organizational features, which in turn serve to enhance efficiency and effectiveness; according to them, higher performance causes higher trust.

However, a critical evaluation of the existing arguments finds that the important factor of the public's perception of the government performance, which interplays with the actual performance and trust in government (Van de Walle & Bouckaert, 2003), is not addressed sufficiently. The distinction between the perception of performance and actual performance can clearly be attributed to subjectivity and is important because quite often the perceptions do not reflect reality accurately. This point is given credence by Rainey (1997), which revealed that public perceptions of government are often based on incorrect information. Taking these ideas together, we are able to establish an understanding of how incorrect or misleading information can serve to reinforce pre-existing biased perceptions of a government's performance. Thus, in addition to performance, an additional government trust-related variable of information must be identified.

When looking at the actual information base, the idea of fiduciary trust from Thomas (1998) is of interest because it brings forth the argument that information concerning citizens largely flows in one direction, which is from the citizens to the government

(Thomas, 1998), presumably along government established channels of communication. Based on such an asymmetric information relationship (Welch et al 2005), the people's trust in government is based more on varying degrees of opinion than on facts or data (Bouckaert & Van de Walle, 2003). The internet has been touted by many as a potential solution to issues of asymmetry, due to its potential to enhance the citizens' political participation and consequently to reduce, if not to eliminate the asymmetric information relationship that exists. In an effort to assess the effectiveness of this revolutionary new tool, researchers tend to primarily examine the attempts made by governments to harness the uncertain power of the internet, focusing on e-government initiatives. A growing number of studies have begun to question the effectiveness, as well as the utility of e-government (Tolbert and Mossberger 2006; Goldfinch et al. 2009), but the studies that follow such an approach tend to tacitly assume that citizens will remain passive until their governments give them an opportunity to behave otherwise through means such as e-government.

To clarify and categorize the means by which governments attempt to involve the citizens further into the democratic decision making process through the use of ICT, Macintosh (2004) identifies a sequence of three factors: first of them is e-enabling, which means facilitating internet access for those who would otherwise not access the internet in order for them to experience the large amount of information available; second one is e-engaging which refers expanding the breadth of citizen involvement with regards to policy issues; the last one is e-empowering which implies facilitating bottom-up ideas to influence the political agenda.Measures such as those laid out by Macintosh (2004) can be referred to as a top-down, government-initiated, approach to enhanced political participation, an approach that in fact neglects to assess how the internet provides citizens with an opportunity to pursue enhanced participation in government affairs based on their own

initiative, a de facto bottom-up approach to enhanced political participation which is neither impeded nor facilitated by the government.

All in all, the increased diffusion of ICT in society can certainly be seen as having the potential to enhance the political participation of the citizens, as the internet provides citizens with dramatically more mobility when it comes to generating and transmitting messages of interest to them. On the other hand, more extreme cases, such as "infodemics" are made possible simply due to the enhanced degree of connectivity which the internet provides society with/without any of the traditional socio-economic or cultural boundaries.

So What? Does Trust Drive Compliance, or Is the Public Inherently Compliant and Trusting?

While a comprehensive definition of trust appears to be elusive, many of the implications of trust or lack thereof are not. In particular, a great deal of research tying levels of trust to compliance appears to agree that citizen compliance is largely related to the citizens' trust in government. Scholz (1998), for example, argues that trust is a practically important factor influencing citizen compliance.

Exploring the idea of compliance, Braithwaite and Makkai (1994) divide compliance into the two categories of self interestedness and citizenship. Based on the idea of self interested compliance[2], which is perhaps better known as rational choice, maximizing personal gains while minimizing personal losses is citizens' motivation and citizens will thereby respond to rules and authorities based on this perspective (Murphy, 2002). However, the inconsistencies of this explanation are best brought to light when asking why citizens do not cheat more often on their taxes, given that the benefits in doing so are moderate and the

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[2] Scholz (1998) refers to this as a collective action problem and argues along similar grounds except for the fact that he goes into more depth regarding the "free riding problem".

risks are low. In response to this, the competing,, or perhaps complementary explanation for citizen compliance, as proposed by Braithwaite and Makkai (1994), is the notion of citizenship. Following their account, the citizen is someone who respects norms of trust as an obligation of citizenship in situations where he may or may not be rationally self-interested to do so (Braithwait & Makkai 1994). Thus, a critical element to this conceptualization of citizen based compliance is the notion that the citizen is someone who is willing to maintain his duty towards society, in so far as they trust the direction in which society is moving (Scholz, 1998).

Who Cares?! Is a Reality Check of Citizenry Even Possible in the Internet Era?

The idea of the citizens themselves serving as a means of information transmission is a topic of great interest in the field of marketing. In particular, the concept of viral marketing has been praised for being an extremely effective and efficient method of disseminating product based information via, among other factors, word of mouth. De Bruyn and Lilien (2008) explain that word of mouth is a critical component of viral marketing for the reason that it employs the use of interpersonal networks to promote messages of interest. Serving as a catalyst in the promulgation of messages of interest via interpersonal channels, the internet enhances dramatically the degree of interconnectivity among the channel nodes and facilitates the dissemination of both negative and positive information (2008). Another concept they identified as being critical to the spread of messages of interest was the social network theory, according to which demographic similarity facilitates the flow of information. Expanding upon this definition, they explain that the transmission of messages via word of mouth is likely to occur among people who share similar demographic features such as age, sex, and social status.

Thus, while those surfing the internet and/or reading and giving feedback on blogs or online communities may not serve as a representative sample of society as a whole, it could help explain how, despite the over-representation of certain demographic groups within the blogging community, information of all kinds does, in fact, spread diffusely and very rapidly over the new media channels.

Figure 1 Conceptual Model of Internet, Trust in Government and Citizen Compliance
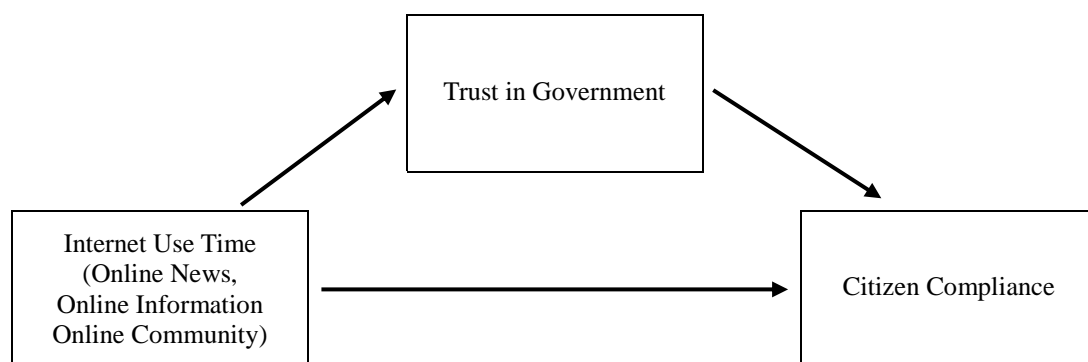
As all research indicates that the case can be made for the existence of a causal relationship between information availability, trust in government, and public policy compliance as depicted in Figure 1, the research hypotheses to be tested were:

H1: Individuals who spend more time on the internet will demonstrate lower levels of trust in government.

H2: Individuals who spend more time on the internet will demonstrate lower levels of citizen compliance.

H3: Individuals who show lower levels of trust in government will demonstrate lower levels of citizen compliance.

Data and Methods

This study uses data from the 2009 Knowledge Center for Public Administration and Policy (KCPAP) Survey, which was conducted by the Korea Gallup. This survey was administered to 1,213 Korean citizens, using both the proportional stratified sampling and the multistage cluster sampling methods to ensure representativeness; the sample was stratified by eight geographic areas and then the multistage cluster method was used within the eight areas. The data was collected from March 12th to 31st, 2009 by face-to-face interviews, using structured questionnaires. To ensure reliability, a verification procedure was implemented based on telephone calls to a randomly sampled pool of 30 percent of survey respondents, who were then asked again about several questions to which they had previously responded. Table 3 provides the description of the sample sorted by various group classifications: the sample is consistent with the key demographics of the entire Korean population.

Table 3 Representativeness of the Sample

Classification		Responses (%)	Classification		Responses (%)
Income (USD/a Month)	Below 836	6	Gender	Female	48
	837-2950	63		Male	52
	2951 more	30	Region	*Seoul*	23
	No response	1		*Gyunggi*	27
Education (graduation)	Elementary school	5		*Gyungnam*	16
	Middle school	7		*Gyungbuk*	10
	High school	49		*Jeolla*	10
	College	38		*Chungcheong*	9
Age	19-29	23		*Kangwon*	3
	30-39	26		*Jeju*	1
	40-49	24	Metropolitan Status	Central	49
	50 more	27		Suburban	42

The Models and Measures

The hypotheses we tested evaluate the likeliness of the impact of media on the trust in the government. The hypothesized equation models trust in government and citizen compliance as a function of not only the media variables, but also of the political, socio-economic, and the demographic variables as control factors as shown in table 4, and the selection of these variables was based on previous theoretical and empirical studies.

Internet Use $= f$ (political variables, socio-economic variables, demographic variables)

Trust in Government $= f$ (media variables, political variables, socio-economic variables, demographic variables)

Citizen Compliance $= f$ (media variables, trust in government, political variables, socio-economic variables, demographic variables)

The public's trust in government, which is the dependent variable, was calculated based on the standardized questionnaires developed by the Institute for Social Research (ISR) at the University of Michigan, which have been used by most research on the subject of trust in government and have been shown to ensure the consistency and stability of the results, thus allowing comparison with the existing empirical discussions found in the literature. We asked four questions, each with possible responses ranging from 1, 'not at all', to 5, 'very much'. The questions are as follows: 1. Do you think that you can trust the government to do what is right?; 2. Do you think that people in government waste a lot of the money we

pay in taxes?; 3. Would you say that the government is pretty much run by a few big interests looking out for themselves, as opposed to being run for the benefit of all the people?; 4. Do you think that quite a few of the people running the government are crooked?

Table 4 Factors, Variables, and Measures

Factor	Variable	Indicator	Scale
Media	Internet	Time spent on the Internet	Hour Minutes (per day, on average)
	Newspaper	time spent reading newspaper	Hour _ Minutes (per day, on average)
Political	Conservative	Conservative vs. progressive ideology preference	5 scale (Very progressive = 1, to Very conservative = 5)
	Government performance	Average assessment of government performance in each policy category[3]	5 scale (Very unsuccessful = 1, Very successful = 5)
	NGO	Participation in NGO	5 scale (Never joined = 1, Joined and participated actively = 5)
Socio economic	Income	Monthly income level	10 scale (0~990 USD = 1, more than 5000 USD = 10)
Demo Graphic	Gender	Respondent's gender	Male = 0, Female = 1
	Age	Respondent's age	Age(numerical value)
	professional	Respondent's job as a professional	Non-professional=0, Professional = 1
	White Collar	Respondent's job as a White Collar	Blue=0 white=1
	marriage	Respondent's marital status	Unmarried=0 Married=1

We also included responses to questions related to what survey participants are using most on the internet, in order to interpret the result of the impact of time on the internet. We allowed multiple responses to items such as searching for information, online news, online shopping, online community, online game, searching for information about entertainment, and searching for information about sports.

We measured the citizen compliance variable with questions as follows, using the following five scale Likert method ranging from 1, 'not at all', to 5, 'very much': 1. I am willing to comply with government policies even if those policies conflict with my own interest; 2. I tend to follow what government wants me to do; 3. I will not oppose

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3 Policy categories include economic inequality, regional conflict, law & order, employment opportunity, labor-management relations, corporation regulations, North Korea policies, taxation, employment of women, fighting corruption

government decisions to build some unpleasant facilities such as incinerating plant or crematories in my neighborhood.

In order to test the hypotheses outlined earlier, we used ordinary least squares (OLS) regression. When we tested internally for the consistency and the reliability of the trust questions, the Cronbach alpha value was found to be 0.834, which is conventionally regarded as highly consistent. We also tested internally for the consistency and the reliability of the government performance variable used in multiple measures, and the Cronbach alpha value was also found to be highly consistent, with a value of 0.829. The internal consistency of citizen compliance questions was found to be not high, with the Cronbach alpha value of 0.432 although there is no agreement on the acceptable level of data consistency. We used these citizen compliance questions above to calculate the compliance variable, because there is lack of better measures.

Findings

Table 5 shows the descriptive statistics for the dependent and explanatory variables, respectively.

Table 5 Summary Statistics

Variable	Mean	Std Dev	Min	Max
Citizen Compliance	3.004	0.602	1.000	4.670
Trust in Government	2.570	0.686	1.000	4.800
Performance	2.367	0.549	1.000	4.000
Conservativeness	3.018	0.789	1.000	5.000
Newspaper time	0.738	0.843	0.000	6.000
Age	40.603	12.509	19.000	77.000
Gender	0.480	0.500	0.000	1.000
Education	3.772	1.147	1.000	5.000
Income	5.593	2.530	1.000	10.000
Professional	0.012	0.111	0.000	1.000
White Collar	0.362	0.481	0.000	1.000

Marriage	0.280	0.449	0.000	1.000
City/Rural	2.405	0.649	1.000	3.000
Internet time	1.598	1.881	0.000	16.000

The respondents' mean time on internet is 1.598 hours, while that reading newspapers is 0.738 hours[4]. Given our (large) sample of 1,213 respondents, the finding indicates a very high probability that Korean citizens in general spend much more time on the Internet than they do reading newspapers.

Table 6 shows the results of the ordinary least squares (OLS), model that tests the relationship between variables.

Table 6 OLS Results

	Model 1 Internet Use (Time)		Model 2 Trust in Government		Model 3 Citizen Compliance	
	coef	beta	coef	beta	coef	beta
Trust in Government					0.277**** (0.027)	0.315
Media Variables						
Internet Time			-0.026** (0.012)	-0.01261031	-0.015* (0.009)	-0.049
Newspaper Time	0.597**** (0.058)	0.267	0.004 (0.023)	0.004	-0.005 (0.020)	-0.007
Government Performance			0.557**** (0.032)	0.448	-0.062* (0.033)	-0.057
Political Conservativeness	-0.025 (0.061)	-0.010	0.030 (0.022)	0.034	-0.011 (0.020)	-0.014
Demographic Variables						
Gender	-0.251*** (0.098)	-0.066	-0.065* (0.036)	-0.047	-0.080** (0.033)	-0.048
Education	0.117** (0.056)	0.069	-0.017 (0.019)	-0.028	0.041* (0.019)	0.077
Income	0.000 (0.020)	0.000	0.009 (0.007)	0.033	0.004 (0.007)	0.020
Professional	0.898** (0.430)	0.053	0.057 (0.164)	0.009	0.182 (0.146)	0.034
City/Rural	-0.107 (0.075)	-0.036	-0.030 (0.027)	-0.029	-0.070*** (0.025)	-0.076
White Collar	0.078 (0.120)	0.020	0.163*** (0.044)	0.115	0.115*** (0.041)	0.092
Marriage	0.777**** (0.141)	0.183				

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[4] We asked citizens about their time on using this media with answer form of ___ Hour ___ Minutes (per day, on average), and then we rescaled this into hour as a unit.

Age	-0.037**** (0.005)	-0.245			
Intercept	2.440**** (0.436)	.	1.308*** (0.142)	.	2.121**** (0.162)	.
Adjusted R-Squared	0.261		0.236		0.133	
N	1185		1169		1186	

**** $p<0.001$, *** $p<0.01$, ** $p<0.05$, *$p<0.1$
Unstandadized coefficient (standard error)

The results of this modeling indicate that the internet is significantly and negatively related to trust in government ($<.05$). This means that citizens who spend more time on the internet are likely to have lower levels of trust in government, which is in agreement with the first hypothesis. On the other hand, the time spent reading newspapers does not demonstrate a significant relationship to the level of trust in government. Regarding other factors, such as performance and the white collar, they do correlate positively with the level of trust ($p<.001$ and $p<.01$ respectively). In addition, gender influences trust ($p<.1$), with males being less trusting towards the government. The remaining variables are statistically insignificant.

In the model 1, the newspaper time, gender, education, professional, marriage, and age are statistically significant. In the model 3, trust in government is positively correlated and internet time negatively associate with the citizen compliance.

Table 7 shows what the respondents use most in the course of the daily internet use.

Table 7 People Use W*hat* on the Internet

Contents Category	Number of Responses	% Respondents
Searching for information	713	28.58
Online News	584	23.41
Shopping	310	12.42
Online Community	275	11.02
Online Game	223	8.94
Entertainment Info	206	8.25
Sports Info	183	7.33

Total		2494	100.00

Note: The questionnaire allowed multiple responses, so the sum of responses is larger than the number of respondents.

We can see from table 7 that "searching for information" and "online news" comprise more than fifty percent of the total use. This means that the information related to government or government performance, possibly including biased information, can be found by internet users and spread via, for example, favorite blogs or personal websites. The "online community" category accounts for roughly eleven percent of use, and it includes several of the politically oriented groups that have demonstrated an astounding ability to coordinate protests and mobilize participants during the Mad Cow protests of 2008 in Korea.

Table 8 Logit Regression

	Online News	Searching for information	Online Community
Internet Time	0.363**** (0.051)	0.304**** (0.053)	0.166*** (0.039)
Conservativeness	-0.178** (0.084)	-0.134 (0.087)	0.139 (0.097)
Age	-0.012 (0.008)	-0.042**** (0.008)	-0.052*** (0.010)
Gender	-0.231 (0.135)	-0.127 (0.139)	0.144 (0.152)
Education	0.366*** (0.077)	0.419 (0.079)	0.217** (0.094)
Income	0.016 (0.028)	0.049*** (0.030)	0.055* (0.032)
Professional	0.706 (0.625)	-0.621 (0.579)	-0.472 (0.720)
White Collar	0.628*** (0.161)	0.533*** (0.172)	0.291 (0.184)
Marriage	-0.250 (0.195)	-0.776**** (0.208)	0.168 (0.210)
City/Rural	-0.065 (0.104)	0.097 (0.108)	-0.202* (0.116)
Intercept	-0.999 (0.601)	0.055 (0.617)	-0.897 (0.696)
N	1185	1185	1185
Pseudo R2	0.158	0.182	0.127
Prob > chi2	0.000	0.000	0.000
LR chi2(10)	260.59	291.53	163.87

Notes: **** $p<0.001$, *** $p<0.01$, ** $p<0.05$, *$p<0.1$

To further analyze the meaning of length of time on the internet, we conducted logit regressions with the contents that individual responses indicated as being the categories that individual use most frequently on the internet. As presented in table 8, the internet time variable shows statistically significant and positive relationship with the online news ($p<.001$), searching for information ($p<.001$), and online community ($p<.01$) respectively. These results mean that if individual spends more time on the internet, the individual is likely to use it for online news, searching for information, and online community, all of which can be catalysts for citizens' non-compliance with government policies.

The Effect of the Internet on Governance

Ever since the new information technology started to dominate mass communications in the late 1990s, studies on the political effects of the internet have been offering contradicting predictions (Norris, 2003). Initially, there had been widespread optimism that the internet will revolutionize the characteristics of communication in general, and will open a new window of opportunity to improve citizen participation and direct democracy (Norris, 2003; Budge, 1996, Katz et al, 2003). The argument was that, because citizens are able to freely express their views to other people inside and outside of the government, in a cyberspace without boundaries, and because of the internet's ease of use, people can easily access the information they want whenever they want. The natural implication is then that there will be many more informed citizens, and they will have a greater depth of knowledge in public policy and administrative matters. Thus the potential exists for more citizen participation in government (Johnson & Kaye, 2003), because the more informed a person becomes regarding a topic, the more likely they will be interested in taking an active stance, that is, in e-participation. This view is based on the features of the internet that distinguish it from

traditional communication methods such as newspapers, radios, and television, where a message disseminated by an individual cannot be easily censored by others, so the author is guaranteed almost complete autonomy. On the internet, the element of real-time interactive communication among people from around the world allows large amounts of data to be transmitted and shared inexpensively and almost instantaneously. As the new media modalities advanced, the information shared can also be made more attractive through various visual and audio effects, which attracts to a greater number of people, much more easily than ever before.

On the other hand, some authors cast doubt on the positive effects of internet use on citizen participation (Norris, 2003). Proponents of this view argue that only the already active citizens can take advantage of the strength of the internet because they start from a more elaborate knowledge base, and consequently the internet only offers limited potential to impact those who are politically inactive (Carlson & Djupsund, 2001; Gibson et al., 2003; Farnsworth & Owen, 2004). Additionally, they argue that communication in cyberspace can only supplement traditional mass media outlets and cannot strengthen or replace anything (Wellman et al., 2001; Norris, 2003), that is, the Internet simply offers an additional medium of communication and the Internet users are just as likely to use television news and newspapers. Norris (2003) succinctly summarized this notion with the popular catch phrase of "preaching to the converted."

In terms of the relationship between governance and the internet, Korea has already stepped through the looking glass so to speak, due to its advanced and diffuse ICT. This study, which focused on the effects of the internet use by the public, suggests that a negative causal relationship exists between the internet use, trust in the Korean government, and the Korean citizens' compliance levels with the government.

Regarding governance, the results of this study's regression analyses demonstrate a negative relationship between internet use and citizen compliance, as well as a similar, albeit strongly correlated relationship between internet use and trust in the government. Thus, what we can infer from the results of this study is that the internet may not be the blessing that many initially perceived it to be, because top-down initiatives in the field of e-government and e-participation may not serve as a necessary and sufficient means to build up or restore the public's trust in their government. If the case of Korea is to offer any lessons to the rest of the world, it may be that pursuing enhanced e-government and e-participation as an end in and of itself may not result in "moving the needle" in terms of trust and compliance.

The results of this study and many current world events support the view that the internet is affecting or transforming governance, at least to the point that it changes the public's perception about their government and tends to decrease their level of compliance with government policies and their trust in government.

Even if we accept that the impact of the new media modalities have not yet been shown to have world-shattering consequences, the Korean experience shows that, as the ICT advances, it is very likely to have a greater influence on governance, as future studies, in other parts of the world, will undoubtedly find. Without a doubt, new channels of political communication over the internet will open or are opening new windows of opportunity that stimulate citizen participation, but at this time we cannot easily judge whether the overall effects will be positive or negative, or even consistent from one country to another.

Conclusion and Policy Implications

The internet has become the principal tool used for sharing information and ideas, and as

such it already affects the political processes within any country. People express their opinion in a public e-space and, once a particular view succeeds in gaining support, it can spread rapidly, sometimes even to the point of provoking anti-government demonstrations. Internet-based methods of political expression are particularly potent during election periods, as internet use was identified as a significant factor in people's voting behaviors. For example, Kim and Yoon (2004) accurately concluded that Korean voters in the National Assembly election of 2004 were likely to be influenced politically after they explored politicized websites such as the candidates' homepages and the party homepages.

In this context, this study explored how people's use of time on the internet affects public trust in the government and citizen compliance, when compared to more traditional, off-line, means of mass media, such as the newspapers. The results of the analyses suggest that the more time Koreans spend on the internet, the lower their degree of trust in government and the lower level of citizen compliance, which is in contrast to their time spent reading newspapers, which, our study shows, has no significant relation to those. As a consequence of the lower levels of trust in government, citizen compliance with government policies is also found to suffer.

It is then important to call into question whether e-government can truly be considered as a solution when attempting to restore public trust in government: despite Korea's e-government and e-participation services steadily expanding and improving over the years, they failed to offset the public's decline of trust in their government. Since this study is rooted in Korean data, one cannot escape trying to find explanations for Korean political events in the findings of this study.

To that end, we find that the negative relationships that were found to exist between the trust in the Korean government and the time the Korean population spends on the internet

offer a statistical justification for the lower levels of citizen compliance in Korea and may provide a statistical justification for the "infodemic" situations that forced the Korean government to back out of unpopular policies. We suggest that the topic of viral spreading of anti-government policy information deserves further research.

Leaving aside any judgments as to whether such correlations are desirable or not, the results of our study reveal that the government must take into consideration this reactionary, destabilizing effect of the Internet when considering the citizen-government relationship. This should be a key strategy to be incorporated in order to successfully implement policies and to achieve the so-called good governance status.

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