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Publication date

2014

Document Version

Final published version

Published in

Journal of Information Policy

[Link to publication](#)

Citation for published version (APA):

van der Meer, T. G. L. A., Gelders, D., & Rotthier, S. (2014). E-democracy: exploring the current stage of e-government. *Journal of Information Policy*, 4, 489-506.
<http://jip.vmhost.psu.edu/ojs/index.php/jip/article/view/204>

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E-DEMOCRACY: EXPLORING THE CURRENT STAGE OF E-GOVERNMENT

BY TONI G.L.A. VAN DER MEER,* DAVE GELDERS,† AND SABINE ROTTHIER‡

Governments around the world have been pressured to implement e-Government programs in order to improve the government-citizen dialogue. The authors of this article review prior literature on such efforts to find if they lead to increased democratic participation (“e-Democracy”) for the affected citizens, with a focus on the key concepts of transparency, openness, and engagement. The authors find that such efforts are a starting point toward e-Democracy, but the journey is far from complete.

INTRODUCTION

Numerous authors have emphasized the Internet’s potential to improve the government-citizen relationship.¹ In particular, the advent of participatory Internet practices via Web 2.0 and social media has created a new government-citizen interface² that could radically change the traditional nature of government.³ Under pressure to enhance the ways in which bureaucracies relate to citizens, governments worldwide are implementing e-Government programs.⁴ e-Government can be defined as “the major initiatives of management and delivery of information and public services taken by all levels of government [...] on behalf of citizens, business, involving using multi-ways of internet, website, system integration, and interoperability, to enhance the services (information, communication, policy making), quality and security, and as a new key (main, important) strategy or approach.”⁵

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¹ Helmut Drüke, “Can e-Government Make Public Governance More Accountable?” in *Performance Accountability and Combating Corruption*, ed. Anwar Shah (Washington, DC: The World Bank, 2007), 59-87; Todd la Porte, Chris Demchak, and Martin de Jong, “Democracy and Bureaucracy in the Age of the Web: Empirical Findings and Theoretical Speculations,” *Administration & Society* 34 (2002): 411-446.

² Wilson Wong and Eric Welch, “Does E-Government Promote Accountability? A Comparative Analysis of Website Openness and Government Accountability,” *Governance* 17 (2004): 275-297.

³ Christopher G. Reddick, “Citizen Interaction with e-Government: From the Streets to Servers?” *Government Information Quarterly* 22 (2005): 38-57.

⁴ Enrique Bonsón, Lourdes Torres, Sonia Royo, and Francisco Flores, “Local E-Government 2.0: Social Media and Corporate Transparency in Municipalities,” *Government Information Quarterly* 29 (2012): 123-132.

⁵ Guanwei Hu, Wenwen Pan, Mingxin Lu, and Jie Wang, “The Widely Shared Definition of E-Government. An Exploratory Study,” *The Electronic Library* 27 (2009): 979.

The general aim of worldwide adoption of e-Government is to counter the distance between citizens and government.⁶ Although the possibilities seem to be great, some authors remain skeptical of the real potential of e-Government in terms of public involvement. For example, critics have charged that the Internet may only reinforce the current influence of dominant actors in policy processes,⁷ that only heavy Internet users are represented,⁸ and that governments may use web-based technologies to control information access and to monitor citizen behavior.⁹ Based on these contradictory perspectives, the question is raised as to whether or not e-Government will lead to a better government-citizen relationship.

Good relationships are characterized by equal two-way communication,¹⁰ which the Internet facilitates in terms of web-based dialogue between government and citizens.¹¹ Several dialogue-related concepts have been acknowledged as key elements of good public e-Government.¹² Therefore, this article asks to what extent government-citizen dialogue advances e-Democracy as the final developmental stage of e-Government. In other words, the aim of this study is to evaluate and understand the development of e-Government by means of exploring its contribution to government-citizen dialogue, and hence to identify the current developmental stage of e-Government. The central research question is: To what extent do current e-Government practices contribute to government-citizen dialogue and support e-Democracy?

This article introduces a system of classifying the literature to clarify e-Government's potential for government-citizen dialogue and to examine the utilization of this potential. As such, the findings will be discussed in terms of three key concepts: transparency, openness, and engagement. The identification of these key concepts is based on the review of the current literature concerning e-Government. *Transparency* and *openness* both refer to a government's actions related to e-Government. On the other hand, *engagement* refers to citizens' involvement regarding e-Government. Consequently, the research question specifically focuses on what is known from the current literature about e-Government's potential contributions to the government-citizen relationship in terms of the three key concepts and their connections to the current developmental stage of e-Government.

⁶ Vicente Pina, Lourdes Torres, and Sonia Royo, "Are ICTs Improving Transparency and Accountability in the EU Regional and Local Governments? An Empirical Study," *Public Administration* 85 (2007): 449-472; Vicente Pina, Lourdes Torres, and Sonia Royo, "E-Government Evolution in EU Local Governments: A Comparative Perspective," *Online Information Review* 36 (2009): 1137-1168.

⁷ Michael Margolis and David Resnick, *Politics as Usual: The Cyberspace "Revolution"* (Thousand Oaks, CA: Sage Publications, 2000).

⁸ James K. Scott, "E' the People: Do U.S. Municipal Government Web Sites Support Public Involvement?" *Public Administration Review* 66 (2006): 341-353.

⁹ Eric Welch and Wilson Wong, "Public Administration in a Global Context: Bridging the Gaps of Theory and Practice between Western and Non-Western Nations," *Public Administration Review* 58 (1998): 40-49.

¹⁰ Bonsón, Torres, Royo, and Flores.

¹¹ Trent Seltzer and Michael Mitrook, "The Dialogic Potential of Weblogs in Relationship Building," *Public Relations Review* 33 (2007): 227-229; Enrique Bonsón and Francisco Flores, "Social Media and Corporate Dialogue: The Response of Global Financial Institutions," *Online Information Review* 35 (2011): 34-49.

¹² Pan Suk Kim, John Halligan, Namshin Cho, Cheol H. Oh, and Angela M. Eikenberry, "Toward Participatory and Transparent Governance: Report on the Sixth Global Forum on Reinventing Government," *Public Administration Review* 65 (2005): 646-654.

This article first positions e-Democracy within the existing growth models in order to provide a context for assessing the current developmental stage of e-Government. After the methodology section, it explores the three key concepts. The last section links these concepts with the positioning of e-Democracy in the existing e-Government growth models and reflects on the limitations of the current study.

E-DEMOCRACY AS THE FINAL STAGE IN E-GOVERNMENT GROWTH MODELS

In general, the literature discusses the development of e-Government in terms of growth models. Most of the e-Government stage models refer to stages/concepts such as “information,” “interaction,” and “transaction.” These stages may be seen as traditional “e-service” development. Additionally, numerous growth models acknowledge e-Democracy (or e-Participation) as the final step of e-Government.¹³ This final phase implies a thorough change in the norms for thinking of government and the rise of more involved citizens.

Many of the existing growth models include democratic processes in terms of political participation,¹⁴ digital democracy,¹⁵ e-Participation,¹⁶ possible democracy,¹⁷ interactive democracy,¹⁸ and e-Democracy.¹⁹ These terms all refer to the democratic process (i.e. transformation of the relationships between government and citizens). In these models, e-Democracy is included as the final step of the growth model. Linear logic suggests that e-Democracy may only be reached if governments complete the prior stages of information, interaction, and transaction/integration.

However, these growth models may be criticized as they include both descriptive and prescriptive stages.²⁰ The first stages are mainly accomplished by government practices and are thus descriptive. The later stages may be considered of theoretical nature. The further along the growth model continuum, the more likely it is that the stages will show a normative idealized picture rather than represent reality. The models cover the years after 2000; based on evolution over time and progression in reality, one may expect prescriptive stages to become the reality while descriptive stages expand. Therefore, this article attempts to answer the following questions: To what extent does the

¹³ Jungwoo Lee, “10 Year Retrospect on Stage Models of e-Government: A Qualitative Meta-Synthesis,” *Government Information Quarterly* 27 (2010): 220-230.

¹⁴ Janine S. Hiller and France Bélanger, “Privacy Strategies for Electronic Government,” in *E-Government 2001*, ed. Mark A. Abramson and Grady E. Means (Oxford: Rowman & Littlefield, 2001), 162-198.

¹⁵ Clay G. Wescott, “E-Government in the Asia-Pacific Region,” white paper, Asian Development Bank (2001), accessed Oct. 1, 2014. <http://www.adb.org/sites/default/files/egovernment-asia-pacific.pdf>.

¹⁶ United Nations, *UN E-Government Survey 2008: From E-Government to Connected Governance* (New York: United Nations, 2008).

¹⁷ Irina Netchaeva, “E-Government and E-Democracy. A Comparison of Opportunities in the North and South,” *International Communication Gazette* 64 (2002): 467-477.

¹⁸ Darrell M. West, “E-Government and the Transformation of Service Delivery and Citizen Attitudes,” *Public Administration Review* 64 (2004): 15-27.

¹⁹ Keng Siau and Yuan Long, “Synthesizing E-Government Stage Models. A Meta-Synthesis Based on Meta-Ethnography Approach,” *Industrial Management & Data Systems* 105 (2005): 443-458.

²⁰ Arre Zuurmond, *De infocratie: een theoretische en empirische heroriëntatie op Weber's ideaaltype in het informatietijdperk* (The Hague: Phaedrus, 1994).

government-citizen dialogue facilitated by e-Government initiatives contribute to e-Democracy? To what extent may e-Democracy be labeled as the final stage of e-Government?

METHOD

The current literature is explored here to provide insights into the research question. An exploratory literature review has been conducted of scientific articles that discuss citizen and government utilization of e-Government. The focus is on scientific articles discussing empirical research in peer-reviewed journals addressing the utilization of e-Government. Prior to 2002, Web 2.0 was not well-known, so therefore articles published after that year are explored here.

In general, numerous studies about e-Government, discussing the general theme, are available but those focusing on the government-citizen dialogue are limited. As a result, this study cannot be seen as a thorough and complete literature review of current e-Democracy literature. Therefore, this study should be assessed as merely a current assessment of e-Government's potential to facilitate online government-citizen dialogue.

In order to form a constructed approach to search for relevant academic sources, this article adopts Webster and Watson's suggestions in writing a literature review paper.²¹ Accordingly, three general steps were adopted to select articles based on Webster and Watson's approach, forming a constructed approach to search for relevant academic sources and articles. First, as the major contributions are likely to be in leading journals it is recommended that one start by reviewing the articles published in these journals. Therefore, the literature review was begun by searching the related e-Government journals (e.g. *Information Polity*, *Government Information Quarterly*, *International Journal of Electronic Government Research*, and *International Journal of Electronic Governance*).

In order to gain a complete understanding of the utilization of e-Government, general databases were also used to identify useful studies from related disciplines. As such, the databases Academic Search Premier, PiCarta, Web of Science, ScienceDirect, and Google Scholar were searched via the following search strings: e-Government, e-Governance in combination with dialogue, transparency, openness, engagement, participation, Web 2.0, and e-Democracy to identify relevant literature. The selected keywords all relate to the government-citizen dialogue. Second, relevant author names were used to determine if these authors published additional relevant literature. Third, the snowball method was employed – i.e. the citations, paraphrases, and reference lists of the applied articles are searched for more relevant articles. Finally, the Social Sciences Citation Index was used to search for articles citing the key references identified in the first steps. The articles were only included in the literature review when they reported an empirical study of which the outcome would help to answer this study's

²¹ Jane Webster and Richard Watson, "Analyzing the Past to Prepare for the Future: Writing a Literature Review," *Management Information Systems Quarterly* 26 (2002): xiii-xxiii.

research question. This selection resulted in 16 articles in English, all of which were empirical studies based on content analysis or surveys. The relevant studies are listed in Table 1 later in this article.

The articles in the current selection are categorized in terms of how they conceptualized the role and position of government-citizen dialogue in their growth models. Based on this iterative approach the concepts of transparency, openness, and engagement emerged from the empirical findings and theoretical argumentation as suitable concepts for categorization of the literature. All of the studies centered on at least one of these three key concepts, making them a valid categorization tool for the articles in the literature review. Several studies explicitly distinguish the concepts of transparency and openness.²² *Transparency* refers to the extent of online information regarding internal government work, decision-making processes, and procedures.²³ *Openness* reflects a government's online responsiveness and immediate feedback to the demands of its citizens.²⁴ *Engagement* generally refers to citizens' online processes with the purpose of contributing to public decisions and obtaining the citizens' goals regarding government-citizen interaction.²⁵ Below, each concept is discussed in terms of current research findings, the utilization of e-Government tools, and their potential contribution to the government-citizen dialogue. The findings are summarized in Table 1 later in this article.

RESULTS

Transparency

A common definition of *transparency* defines the term as the ability to look through the windows of an institution.²⁶ Since the current practices of transparency are generally mediated by the Internet and social networking sites,²⁷ this article focuses on computer-mediated transparency. As such, transparency refers to the extent of a government's online information provision regarding internal work, decision-making processes, and procedures.²⁸ The concept of *transparency* is considered a critical tool but it is also an end in itself.²⁹ Transparency through information dissemination is perceived as a

²² Wilson and Welch; Pina, Torres, and Royo, "Are ICTs Improving Transparency and Accountability in the EU Regional and Local Governments? An Empirical Study;" Pina, Torres, and Royo, "E-Government Evolution in EU Local Governments: A Comparative Perspective."

²³ Pina, Torres, and Royo, "Are ICTs Improving Transparency and Accountability in the EU Regional and Local Governments? An Empirical Study."

²⁴ Ibid.

²⁵ Maria C. Powell and Mathilde Colin, "Meaningful Citizen Engagement in Science and Technology: What Would It Take?" *Science Communication* 30 (2008): 126-136.

²⁶ Monica den Boer, "Steamy Windows: Transparency and Openness in Justice and Home Affairs," in *Openness and Transparency in the European Union*, ed. Veerle Deckmyn and Ian Thomson (Maastricht, Netherlands: European Institute of Public Administration, 1998), 91-105; Albert Meijer, "Understanding Modern Transparency," *International Review of Administrative Sciences* 75 (2009): 255-269.

²⁷ Christopher Hood and David Heald, *Transparency: The Key to Better Governance?* (Oxford: Oxford University Press, 2006).

²⁸ Pina, Torres, and Royo, "Are ICTs Improving Transparency and Accountability in the EU Regional and Local Governments? An Empirical Study."

²⁹ Jonathan GS Koppell, "Pathologies of Accountability: ICANN and the Challenge of 'Multiple Accountabilities Disorder'," *Public Administration Review* 65 (2005): 94-108.

major instrument for improving democracy.³⁰ It can be seen as a necessary precondition for ensuring accountability. An accountable government needs to explain or account for all its actions.³¹

Governments should use online transparency features in their e-government practices to enhance their legitimacy and citizens' trust.³² As transparency generates accountability, transparency relates to the notion of power (i.e. "information is power"). The transparency of a government can empower efforts to change or influence the behavior of powerful institutions by holding them accountable for their actions in the glare of the public eye.³³ As such, political actors and the public sphere have broadly adapted the twin principles of transparency and accountability. In particular, transparency through computerized systems is supposed to improve governments all over the world not only by enhancing accountability to citizens but also by reducing certain forms of corruption. However, a debate about the benefits of transparency exists.³⁴ Not everyone believes that transparency will open up governments to ensure that they act adequately. Some believe that transparency is a hoax that promises numerous benefits but delivers opposite effects. As such, Meijer concludes that online transparency brings certain trade-offs between more openness and less trust and between better information processing and lesser value orientation.³⁵

Empirical studies show that government websites include online facilities that enable transparency. In general, website content analyses reflect the idea that governments have greatly expanded their Internet presence and that their transparency has thus increased over time: between 1997 and 2000 (6.21 improvement in transparency measured by the amount of data available on agency websites, measured on a scale of 1 to 10 as selected by the content coders),³⁶ and between 2004 and 2007 (43.7% improvement based on the content coding of the extent to which governments make information about internal work, decision-making processes, and procedures available, and if the Internet is used for bringing government activities closer to citizens).³⁷ Through a survey instrument measuring the presence of information/communication services, Scott concluded that the websites offered a wide array of services for interested users (average 11.07, referring to the presence of more than 100 information or communication services provided at the sites as indicated by content coders on a scale of 1 to 21).³⁸ Only a small number of websites have features that allow citizen involvement in policymaking.

³⁰ Cornelia Moser, "How Open Is 'Open as Possible'? Three Different Approaches to Transparency and Openness in Regulating Access to EU Documents," *Reihe Politikwissenschaft, Political Science Series paper no. 80* (2001), accessed Oct. 1, 2014, https://www.ihs.ac.at/publications/pol/pw_80.pdf.

³¹ Pina, Torres, and Royo, "Are ICTs Improving Transparency and Accountability in the EU Regional and Local Governments? An Empirical Study."

³² Diana Gant, Jon Gant, and Craig L. Johnson, "State Web Portals: Delivering and Financing E-Service," white paper, The PricewaterhouseCoopers Endowment for the Business of Government, Jan. 2002, accessed Oct. 1, 2014, http://classes.maxwell.syr.edu/PSC300_103/GantReport.pdf.

³³ Jonathan Fox, "The Uncertain Relationship between Transparency and Accountability," *Development in Practice* 17 (2007): 663-671.

³⁴ Meijer.

³⁵ Ibid.

³⁶ Wong and Welch.

³⁷ Pina, Torres, and Royo, "E-Government Evolution in EU Local Governments: A Comparative Perspective."

³⁸ Scott.

A content analysis of government websites found that most official government websites include tools (77% RSS feeds, 57% blogs, 47% videos) to enhance transparency in terms of up-to-date information.³⁹ Simultaneously, webcasts (8%), podcasts (20%), and widgets (7%) were used at a much lower rate. Additionally, videos never allowed feedback and half of the governments did not have any presence on external social media sites. Also, Torres, Pina, and Acerete concluded that websites offer predominantly non-interactive transparency tools through e-Services (e.g. 85.7% offer municipal tax payment).⁴⁰ Only a few sites provided online public dialogue tools; 33.3% included forums or democratic engagement/participation initiatives. Interestingly, these studies simply investigated the provision of transparency tools. Pina, Torres, and Royo emphasized the content of websites and found that the majority were primarily used for dissemination of information in terms of contact information (75.7%) and citizen information – e.g. mission statements (44.5%), indexes for reports (81.8%), agency requirements (67.1%), and privacy policies (33.2%).⁴¹

The studies discussed here approach transparency in terms of website indices of currently-used tools with subjective weightings. Via an Internet user survey, Welch, Hinnant, and Moon extended this approach and concluded that citizens are generally satisfied with government transparency regarding online information (2.72, scale 1-5).⁴²

In sum, governments utilize e-Government tools to provide information that brings citizens closer to public sector activities. Information dissemination may provide an important basis for dialogue but not all interactive tools that are currently deployed effectively facilitate it.

Openness

The *transparency* and *openness* concepts are closely related in terms of the discussion regarding a lack of democratic legitimacy and an information deficit.⁴³ Additionally, just like transparency, different degrees of online openness can also expose governments' tendencies toward accountability.⁴⁴ As such, the common denominator of transparency and openness is their linkage to governments' legitimacy and accountability.⁴⁵ Hence, some scholars define openness as a function of transparency. However, openness is also considered to be a function of interactivity.⁴⁶ Therefore, openness is considered to be more than the extent to which a government provides online information. Governmental openness is defined as the measure of a government's interactive responsiveness to demands for information

³⁹ Bonsón, Torres, Royo, and Flores.

⁴⁰ Lourdes Torres, Vicente Pina, and Basilio Acerete, "E-Governance Developments in European Union Cities: Reshaping Government's Relationship with Citizens," *Governance* 19 (2006): 277-302.

⁴¹ Pina, Torres, and Royo, "Are ICTs Improving Transparency and Accountability in the EU Regional and Local Governments? An Empirical Study."

⁴² Eric W. Welch, Charles C. Hinnant and M. Jae Moon, "Linking Citizen Satisfaction with E-Government and Trust in Government," *Journal of Public Administration Research and Theory* 15 (2004): 371-391.

⁴³ Juliet Lodge, "Transparency and Democratic Legitimacy," *Journal of Common Market Studies* 32 (1994): 330-342; Moser.

⁴⁴ Eric Welch and Wilson Wong, "Global Information Technology Pressure and Government Accountability: The Mediating Effect of the Domestic Context on Website Openness," *Journal of Public Administration Theory and Research* 11 (2001): 509-538; Welch and Wong, "Public Administration in a Global Context: Bridging the Gaps of Theory and Practice between Western and Non-Western Nations."

⁴⁵ Moser; Wong and Welch.

⁴⁶ Wong and Welch.

and services, and the immediacy of the feedback provided for citizen demands.⁴⁷ Openness also relates to the question of governmental power. In order to secure their own power and maintain political control, governments might tend to limit their openness as their informative responsiveness can be seen as an important source of power.⁴⁸

Research indicates that most governments do not predominantly use the web interactively. For example, Bonsón et al. found a lack of governmental presence in the common social networks Twitter (32%), Facebook (16%), LinkedIn (12%), and YouTube (29.3%).⁴⁹ Moreover, openness is the most underdeveloped dimension of government websites;⁵⁰ interactive content (contact and reachability) was significantly less present when compared to general organizational information. However, just like with transparency, Wong and Welch and Pina, Torres, and Royo found that openness significantly increased over time based on website content analyses (5.61 improvement in 1997-2000, scale 1-10; 58.72% improvement in 2004-2007).⁵¹ Nevertheless, few websites showed clear signs of responsiveness. Additionally, Welch, Hinnant, and Moon found that citizen dissatisfaction plagues interactive tools. Citizens indicated that they were dissatisfied with the following on government websites: citizen communication ($M=.28$, $SD=.45$, scale 0-1), problem response ($M=5.17$, $SD=3.04$, scale 1-10), and the impersonal nature of government ($M=5.16$, $SD=3.15$, scale 1-10).⁵²

Soon and Soh are more optimistic in their examination of the structural features and textual content of two online platforms.⁵³ They illustrate how use of Facebook and Reach by the Singapore government can enhance mutuality, propinquity, and empathy in government-citizen communication. Furthermore, in a United Kingdom case study regarding online petitions, Virkar concludes that ICT-based citizen communication and governments' responsiveness can definitely be used to complement in-person methods of government-citizen interaction, but may not wholly replace it. Additionally, Virkar emphasizes that government officials are often apprehensive about using unfamiliar or innovative technology.⁵⁴

Despite useful tools for opening dialogue with citizens, few websites provide total openness or citizen interaction.⁵⁵ Research regarding governments' behavior in social media services that provide two-way conversations (i.e. Twitter) shows comparable results. Twitter is mainly used as an information-sharing resource. Government agencies primarily use it to disseminate information about themselves – i.e.

⁴⁷ Pina, Torres, and Royo, "Are ICTs Improving Transparency and Accountability in the EU Regional and Local Governments? An Empirical Study."

⁴⁸ Wong and Welch.

⁴⁹ Bonsón, Torres, Royo, and Flores.

⁵⁰ Pina, Torres, and Royo, "Are ICTs Improving Transparency and Accountability in the EU Regional and Local Governments? An Empirical Study."

⁵¹ Wong and Welch; Pina, Torres, and Royo, "E-Government Evolution in EU Local Governments: A Comparative Perspective."

⁵² Welch, Hinnant, and Moon.

⁵³ Carol Soon and Yi Da Soh, "Engagement@Web 2.0 between the Government and Citizens in Singapore: Dialogic Communication on Facebook?" *Asian Journal of Communication* 24 (2014): 42-59.

⁵⁴ Shefali Virkar, "Consulting the British Public in the Digital Age: Emerging Synergies and Tensions in the Government 2.0 Landscape," in *Government e-Strategic Planning and Management: Practices, Planning, and Roadmaps*, ed. Leonidas G. Anthopoulos and Christopher G. Reddick (London: Springer Verlag, 2014), 185-203.

⁵⁵ Bonsón, Torres, Royo, and Flores.

news and updates (62%) and external information (13%). In their genre analysis of tweets, Alam and Lucas found little evidence of dialogue as few questions were asked of citizens in order to generate a response; 11% of tweets were retweeted/reposted, 9% of tweets were utilized for citizen response, and only in 1% were questions asked.⁵⁶ Additionally, comparable results were found in a study about the response time and quality of e-mail responses in the Danish government.⁵⁷ It was determined that one-third of the Danish central government agencies did not respond at all, and close to 80% of the ministries provided incomplete answers or no answers at all.

On the other hand, Waters and Williams found that nearly one half of government tweets involved some form of symmetry.⁵⁸ However, what these authors operationalized as *symmetry* was often an indirect conversation or reference in which, for example, citizens were asked to read certain documents. In this regard, Twitter was still used as a one-way communication channel. A survey among government agencies indicated that the primary reason for utilizing Twitter was to respond to expectations of providing information and interacting with citizens.⁵⁹ However, self-reported survey answers may not be a truthful representation of actual government-citizen interaction, as agencies might provide a normative answer relating to their notion of best practices rather than actual practices. Moreover, only 23% of the respondents supported aggressively implementing social media. The majority (74%) reported that their use was cautious to experimental.

In conclusion, despite the ability of e-Government tools to provide a platform for openness to citizens, they are primarily used as a method of one-way updates and information dissemination by governments. Thus, it appears that governments remain challenged in adopting Web 2.0 for effective two-way communication. However, this conclusion is primarily descriptive since it is based on the results of content analyses. Perhaps the low level of responsiveness indicates the lack of substantive citizen engagement. To address the demand-side of e-Government, the following sub-section addresses citizen online engagement.

Engagement

Contrary to transparency and openness, *engagement* refers to the demand-side of e-Government. The demand side defines the public's or citizen's view of and interaction with government via the Internet. To be successful, e-Government needs to provide more than online transparency and openness for governments. Although theoretically the e-Government practices are well positioned to enhance e-Democracy by providing new forms of dialogue between citizens and governments, it is unlikely to

⁵⁶ Lubna Alam and Richard Lucas, "Tweeting Government: A Case of Australian Government Use of Twitter," paper presented at the International Conference on Dependable, Autonomic and Secure Computing, Sydney, Australia, Dec. 2011, accessed Oct. 2, 2014, <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6118872>.

⁵⁷ Kim Normann Andersen, Rony Medaglia, Ravi Vatrapu, Helle Zinner Henriksen, and Robin Gauld, "The Forgotten Promise of E-Government Maturity: Assessing Responsiveness in the Digital Public Sector," *Government Information Quarterly* 28 (2011): 439-445.

⁵⁸ Richard D. Waters and Jensen M. Williams, "Squawking, Tweeting, Cooing, and Hooting: Analyzing the Communication Patterns of Government Agencies on Twitter," *Journal of Public Affairs* 11 (2011): 353-363.

⁵⁹ F. Dianne Lux Wigand, "Tweets and Retweets: Twitter Takes Wing in Government," *Information Polity* 16 (2011): 215-224.

do so if it is based upon the over-simplified assumption that governments merely need to provide online information.⁶⁰

It cannot be assumed that once the correct e-Government technology is developed and in place, and once citizens are given access, benefits will be automatically delivered.⁶¹ e-Democracy practices fail, even if successful in technical terms and online supply, if citizens (the intended recipients) simply do not use them. Also the citizen's needs and demands for e-Government practices play an important role in reaching the desired level of e-Democracy. Citizens do not simply adopt technology related to transparency as it becomes available; they may adopt it in different and unexpected ways, or actively resist its use and undermine its purported benefits.⁶² For example, citizens prefer to use e-Government services only in terms of transactional services rather than the more complex, engaged, and dialogical interactions. Thus, the question is whether citizens support e-Government initiatives in the first place, and whether this support also translates into actual usage of e-Government facilities and active engagement of citizens as equals in democratic debate. Therefore, *engagement* refers to online processes used by citizens for the purpose of contributing to public decisions and realizing their goals regarding government-citizen interaction.⁶³

Survey studies indicate that citizens are commonly supportive of general e-Government initiatives,⁶⁴ they evaluate governments' websites positively,⁶⁵ and they appreciate these initiatives⁶⁶ in terms of user-personalization, user-friendliness, information access, and communication facilitation. Additionally, citizens' intensive e-Government use is positively correlated with support for e-Government initiatives.⁶⁷ Thomas and Streib found that 38% of respondents indicated that in the last twelve months, they initiated contact with the government by visiting such websites.⁶⁸ However, the majority of these Web contacts lacked interactive processes – 64% of responses indicated that they were looking for some kind of information and 47% searched for contact information. This seems to be a common finding in e-Government literature – Gauld, Goldfinch, and Horsburgh and Kolsaker and Lee-Kelley⁶⁹ found that respondents report using government websites significantly more often to look for information than to use it as a portal to engage in democratic decision-making. Reasons to

⁶⁰ Ailsa Kolsaker and Liz Lee-Kelley, "Citizens' Attitudes towards E-Government and E-Governance: A UK Study," *International Journal of Public Sector Management* 21 (2008): 723-738.

⁶¹ Anni Dugdale, Anne Daly, Franco Papandrea, and Maria Maley, "Accessing E-Government: Challenges for Citizens and Organizations," *International Review of Administrative Sciences* 71 (2005): 109-118; Pippa Norris, *Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide* (Cambridge, UK: Cambridge University Press, 2001); Suzanne Willis and Bruce Tranter, "Beyond the 'Digital Divide': Internet Diffusion and Inequality in Australia," *Journal of Sociology* 42 (2006): 43-59.

⁶² Jane Fountain, *Building the Virtual State: Information Technology and Institutional Change* (Washington: Brookings Institution Press, 2001); Robin Gauld, Shaun Goldfinch, and Simon Horsburgh, "Do They Want It? Do They Use It? The 'Demand-Side' of e-Government in Australia and New Zealand," *Government Information Quarterly* 27 (2010): 177-186.

⁶³ Powell and Colin.

⁶⁴ Gauld, Goldfinch, and Horsburgh.

⁶⁵ John Clayton Thomas and Gregory Streib, "The New Face of Government: Citizen-Initiated Contacts in the Era of E-Government," *Journal of Public Administration Research and Theory* 13 (2003): 83-102.

⁶⁶ Kolsaker and Lee-Kelley.

⁶⁷ Gauld, Goldfinch and Horsburgh; Kolsaker and Lee-Kelley.

⁶⁸ Thomas and Streib.

⁶⁹ Gauld, Goldfinch and Horsburgh; Kolsaker and Lee-Kelley.

visit governmental websites included obtaining forms, reading reports, getting directions, and looking for a job.⁷⁰

Markedly, all of these reflect some form of information gathering. Even frequent users of e-Government did not agree that websites make it easier for people to communicate their views.⁷¹ This may indicate that the general support for e-Government is purely based on the provision of online information rather than facilitation of government-citizen interaction. Additionally, Kolsaker and Lee-Kelley conclude that interest in e-Government is low overall, based on a response rate of 10%,⁷² and 70% still prefer to deal with government via non-digital (offline) means.⁷³ Research concerning the media platforms with high possibilities for general interaction (i.e. Twitter) shows similar results. Wigand found that only 2% of social media users reported following a government official or agency on Twitter.⁷⁴ When Twitter was used by citizens, it was mainly for the purpose of gathering government-related information. In a content analysis of citizen-generated government-related tweets, Alam and Lucas found that citizen use of Twitter is mostly in the form of one-way communication in terms of feedback; 38.9% are complaints and 23% are positive feedback. A smaller percentage indicated a need for dialogue, with 11.6% asking a question and 8.5% making a suggestion.⁷⁵ A significant problem with content analysis of tweets is that it considers only a short timeframe. Moreover, the non-user should not be forgotten, because for this group e-Government can be assumed to have limited perceived value.

Table 1: Overview of articles and results.

Concept	Study	Research	Sample	N	Findings
Transparency	Wong & Welch (2004)	Content analysis of website	Governments	14	Increased transparency
	Pina et al. (2009)	Content analysis of website	Governments	15	Increased transparency
	Scott (2006)	Survey websites	Governments	100	Large offer of tools
	Bonsón et al. (2012)	Content analysis of website and social media platform	Governments	75	Large offer of tools
	Torres et al. (2006)	Content analysis of website	Governments	35	Service only
	Pina et al. (2007)	Content analysis of website	Governments	318	Frequent dissemination of information
	Welch et al. (2005)	Survey	Internet users	806	Dissatisfaction with interactive tools

⁷⁰ Thomas and Streib.

⁷¹ Gauld, Goldfinch, and Horsburgh.

⁷² Kolsaker and Lee-Kelley.

⁷³ Gauld, Goldfinch, and Horsburgh.

⁷⁴ Wigand.

⁷⁵ Alam and Lucas.

Concept	Study	Research	Sample	N	Findings
Openness	Bonsón et al. (2012)	Content analysis of website and social media platform	Local governments	75	Lack of active presence
	Pina et al. (2007)	Content analysis of website	Sub-national governments	318	Underdeveloped tools
	Wong & Welch (2004)	Content analysis of website	National governments	14	Increased openness
	Pina et al. (2009)	Content analysis of website	Local governments	15	Increased openness
	Alam & Lucas (2011)	Content analysis of tweets (305)	Government agencies	6	Twitter as information sharing
	Andersen et al. (2011)	Survey	Local and central governments	175	Twitter as information sharing
	Waters & Williams (2011)	Content analysis of tweets (1800)	Government agencies	60	Twitter as one-way communication
	Wigand (2011)	Survey	Government agencies	607	Twitter for information gathering
	Soon & Soh (2014)	Content analysis	Elected individuals' political parties	87	Facebook and REACH enhance government-citizen communication
	Virkar (2014)	Case study	National government		Online communication can complement but not replace personalized communication
Engagement	Gauld et al. (2010)	Telephone interviews	Citizens who use Internet	435	Citizens supportive of e-government and use it for one-way communication
	Kolsaker & Lee-Kelley (2008)	Survey	Citizens	302	Citizens supportive of e-government and use it for one-way communication
	Thomas & Streib (2003)	Telephone survey	Citizens who use Internet	827	Citizens evaluate government websites positively and use them for one-way communication
	Wigand (2011)	Survey and content analysis	Citizens and tweets	607 and 6000	Twitter as information gathering media
	Alam & Lucas (2011)	Content analysis	Tweets	414	Twitter as information gathering media

In conclusion, empirical studies suggest that citizens mainly utilize e-Government options in terms of one-way communication. The dialogue options offered by e-Government are applied in a limited fashion and non-digital communication is still preferred. Table 1 above summarizes the results found and details of the individual studies.

CONCLUSION AND DISCUSSION

This exploratory study was conducted in response to the omnipresence of e-Government and the question of to what extent e-Democracy is reached in terms of the development of e-Government along the line of existing growth models. The purpose of the study was twofold. First, to fill a gap in the literature concerning e-Government's potential for contributing to the government-citizen dialogue;⁷⁶ and second, to confront the conclusions of the existing growth models.

The first question was: To what extent does the government-citizen dialogue facilitated by e-Government initiatives contribute to e-Democracy? In general, based on the review of this classification, it may be concluded that governments predominantly utilize the Web to disseminate information. They seem to lack responsiveness, openness, and interactivity, indicating one-way communication or simple interaction despite the Web-based opportunities to facilitate active two-way communication. Since *dialogue* is characterized as two-way communication beyond simple interaction, one may conclude that governments do not utilize e-Government to its fullest potential in terms of facilitating and utilizing all dialogue possibilities. Perhaps governments still view citizens from a passive perspective, as not all citizens are willing to participate in policymaking processes. This is in accordance with e-Government-related citizen behaviors as they use e-Government facilities mainly to obtain information rather than as a portal to engage in democratic decision-making.

As such, what citizens actually want from e-Government is debatable. The lack of citizen engagement might imply the absence of citizens' desire for actual government-citizen dialogue. Arguably, they simply want the government to function properly and respond efficiently and effectively in terms of redress when something goes wrong. In conclusion, the current scientific literature shows that the potential of e-Government to contribute to the government-citizen dialogue is minimal. While Web 2.0 offers opportunities to enhance two-way communication, it does not seem that e-Government will revolutionize the government-citizen relationship through extended dialogue due to the narrow focus on information and service delivery (government) and demand (citizens). Thus, one may conclude that e-Democracy is still partly a prescriptive stage in e-Government growth models. A gap remains between the potential advantages of e-Government (e.g. cultivating relationships with stakeholders)⁷⁷ and those that have actually been realized.

To exploit these benefits and to avoid simply acting as an online extension of traditional communication, e-Government should become more citizen-centric. Currently, governments build relationships not through interaction but by simply creating an online social presence. Being citizen-centric may automatically result in more citizen interest and engagement.⁷⁸

The second question was: To what extent may e-Democracy be labeled as the final stage of e-Government? Although e-Services are still developing, there is movement towards e-Democracy.

⁷⁶ Bonsón, Torres, Royo, and Flores.

⁷⁷ See for example Charlene Li and Josh Bernoff, *Groundswell: Winning in a World Transformed by Social Technologies* (Boston: Harvard Business Press, 2011); Brian Solis and Deidre Breakenridge, *Putting the Public Back in Public Relations: How Social Media is Reinventing the Aging Business of PR* (Upper Saddle River, NJ: FT Press, 2009).

⁷⁸ Bonsón, Torres, Royo, and Flores.

These trends indicate that e-Democracy is not a final step but a continuation of previous e-Services development. This implies that both developments (e-Services and e-Democracy) proceed in parallel and that the proposed linearity in the growth models is wrong. The three concepts of transparency, openness, and engagement as presented in this article demonstrate that the development of e-Democracy is a step-by-step evolution. None of the existing growth models, as described by Lee, refer to this point.⁷⁹ Based on the conclusions regarding the three key concepts, it would appear useful to redesign the existing e-Government growth models. The development of e-Democracy is parallel to the development of e-Services, and different stages can be distinguished within e-Democracy.

In sum, it may be concluded that the development of e-Government is not a linear process of growth. General growth models assume that after the first stages, which mainly relate to one-way information provision in terms of a transactional stage of e-Services, e-Government automatically develops towards the final stage in terms of increased two-way communication and mutual participation. However, governments occasionally try to engage in more e-Participation practices when the transactional stage is not yet fully developed. Hence, while forms of e-Democracy may be observed in practice, these practices mainly relate to the information stage. In this sense, it may be argued that e-Government is characterized by two separate and parallel paths of growth: e-Services and e-Democracy (see Figure 1 below).

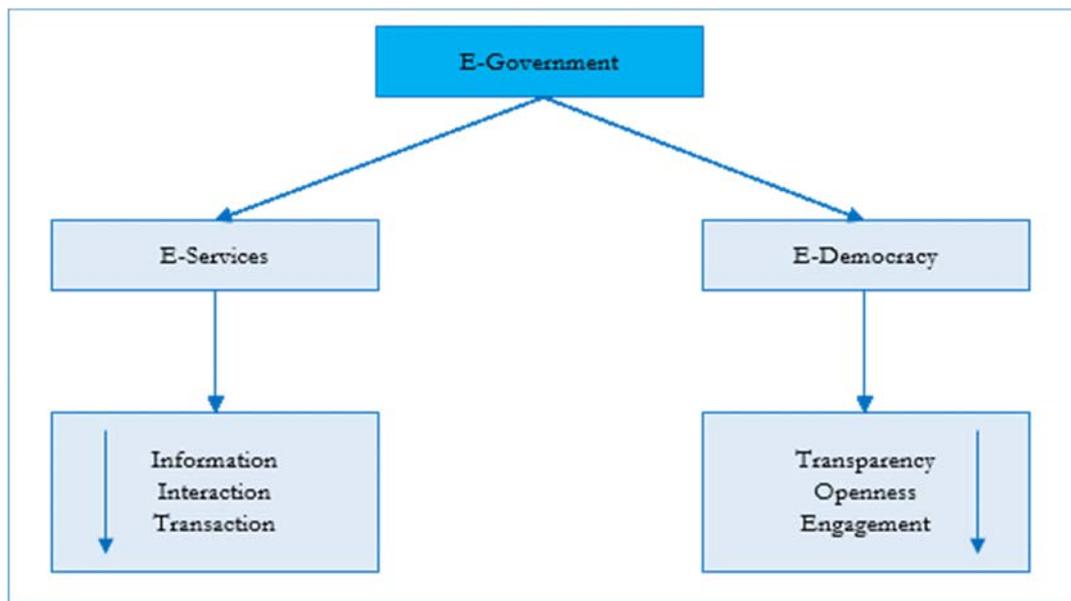


Figure 1: e-Services and e-Democracy – two parallel developments towards e-Government.

⁷⁹ Lee.

This study found that most governments start on the path and process of e-Services, resulting in faster development of the e-Services path. Based on the existing growth models, the three stages of the e-Services path are clear: information, interaction, and transaction. In general, these stages are reached by most governments practicing e-Government. However, the e-Democracy path is often started but to no extent completed. The contribution of this study is the differentiation of the three stages in the e-Democracy path, namely transparency, openness, and engagement. Rather than seeing e-Democracy as one stage, it can be argued that it should be interpreted as a path characterized by three separate stages. In this sense, e-Services mainly summarize the current practices of e-Government, and e-Democracy is the future potential of e-Government.

Certain limitations of this study need to be acknowledged. First, no distinction was made between the empirical studies regarding the country or state where the research was conducted, and this would have nuanced the results and offered more contextual information. Second, the Internet and social media are continually evolving, thus the results of these studies may not be fully comparable as they were conducted in different years. Despite these limitations, a high level of homogeneity was observed in citizen and government behavior among the separate studies. Third, this study mainly focuses on previous studies dealing with the tools used in e-Government dialogue but not on the quality of the information or communication. Fourth, integration of insights from public administration literature on the willingness of citizens to participate in policymaking processes will shed a more interdisciplinary light on this issue. Offering interactive tools will only lead to successful e-Government when citizens are actually willing to participate.

BIBLIOGRAPHY

- Alam, Lubna and Richard Lucas. "Tweeting Government: A Case of Australian Government Use of Twitter." Paper presented at the International Conference on Dependable, Autonomic and Secure Computing, Sydney, Australia, Dec. 2011. Accessed Oct. 2, 2014, <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6118872>.
- Andersen, Kim Normann, Rony Medaglia, Ravi Vatrappu, Helle Zinner Henriksen, and Robin Gauld. "The Forgotten Promise of E-Government Maturity: Assessing Responsiveness in the Digital Public Sector." *Government Information Quarterly* 28 (2011): 439-445.
- Bonsón, Enrique and Francisco Flores. "Social Media and Corporate Dialogue: The Response of Global Financial Institutions." *Online Information Review* 35 (2011): 34-49.
- Bonsón, Enrique, Lourdes Torres, Sonia Royo, and Francisco Flores. "Local E-Government 2.0: Social Media and Corporate Transparency in Municipalities." *Government Information Quarterly* 29 (2012): 123-132.
- den Boer, Monica. "Steamy Windows: Transparency and Openness in Justice and Home Affairs." In *Openness and Transparency in the European Union*, edited by Veerle Deckmyn and Ian Thomson, 91-105. Maastricht, Netherlands: European Institute of Public Administration, 1998.
- Drüke, Helmut. "Can e-Government Make Public Governance More Accountable?" In *Performance Accountability and Combating Corruption*, edited by Anwar Shah, 59-87. Washington, DC: The World Bank, 2007.
- Dugdale, Anni, Anne Daly, Franco Papandrea, and Maria Maley. "Accessing E-Government: Challenges for Citizens and Organizations." *International Review of Administrative Sciences* 71 (2005): 109-118.
- Fountain, Jane. *Building the Virtual State: Information Technology and Institutional Change*. Washington: Brookings Institution Press, 2001.
- Fox, Jonathan. "The Uncertain Relationship between Transparency and Accountability." *Development in Practice* 17 (2007): 663-671.
- Gant, Diana, Jon Gant, and Craig L. Johnson. "State Web Portals: Delivering and Financing E-Service." White paper, The PricewaterhouseCoopers Endowment for the Business of Government, Jan. 2002. Accessed Oct. 1, 2014, http://classes.maxwell.syr.edu/PSC300_103/GantReport.pdf.
- Gauld, Robin, Shaun Goldfinch, and Simon Horsburgh. "Do They Want It? Do They Use It? The 'Demand-Side' of e-Government in Australia and New Zealand." *Government Information Quarterly* 27 (2010): 177-186.
- Hiller, Janine S. and France Bélanger. "Privacy Strategies for Electronic Government." In *E-Government 2001*, edited by Mark A. Abramson and Grady E. Means, 162-198. Oxford: Rowman & Littlefield, 2001.
- Hood, Christopher and David Heald. *Transparency: The Key to Better Governance?* Oxford: Oxford University Press, 2006.
- Hu, Guanwei, Wenwen Pan, Mingxin Lu, and Jie Wang. "The Widely Shared Definition of E-Government. An Exploratory Study." *The Electronic Library* 27 (2009): 968-985.
- Kim, Pan Suk, John Halligan, Namshin Cho, Cheol H. Oh, and Angela M. Eikenberry. "Toward Participatory and Transparent Governance: Report on the Sixth Global Forum on Reinventing Government." *Public Administration Review* 65 (2005): 646-654.
- Kolsaker, Ailsa and Liz Lee-Kelley. "Citizens' Attitudes towards E-Government and E-Governance: A UK Study." *International Journal of Public Sector Management* 21 (2008): 723-738.

- Koppell, Jonathan GS. "Pathologies of Accountability: ICANN and the Challenge of 'Multiple Accountabilities Disorder'." *Public Administration Review* 65 (2005): 94-108.
- la Porte, Todd, Chris Demchak, and Martin de Jong. "Democracy and Bureaucracy in the Age of the Web: Empirical Findings and Theoretical Speculations." *Administration & Society* 34 (2002): 411-446.
- Lee, Jungwoo. "10 Year Retrospect on Stage Models of e-Government: A Qualitative Meta-Synthesis." *Government Information Quarterly* 27 (2010): 220-230.
- Li, Charlene and Josh Bernoff. *Groundswell: Winning in a World Transformed by Social Technologies*. Boston: Harvard Business Press, 2011.
- Lodge, Juliet. "Transparency and Democratic Legitimacy." *Journal of Common Market Studies* 32 (1994): 330-342.
- Margolis, Michael and David Resnick. *Politics as Usual: The Cyberspace "Revolution"*. Thousand Oaks, CA: Sage Publications, 2000.
- Meijer, Albert. "Understanding Modern Transparency." *International Review of Administrative Sciences* 75 (2009): 255-269.
- Moser, Cornelia. "How Open Is 'Open as Possible'? Three Different Approaches to Transparency and Openness in Regulating Access to EU Documents." Reihe Politikwissenschaft, Political Science Series paper no. 80 (2001). Accessed Oct. 1, 2014, https://www.ihs.ac.at/publications/pol/pw_80.pdf.
- Netchaeva, Irina. "E-Government and E-Democracy. A Comparison of Opportunities in the North and South." *International Communication Gazette* 64 (2002): 467-477.
- Norris, Pippa. *Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide*. Cambridge, UK: Cambridge University Press, 2001.
- Pina, Vincente, Lourdes Torres, and Sonia Royo. "Are ICTs Improving Transparency and Accountability in the EU Regional and Local Governments? An Empirical Study." *Public Administration* 85 (2007): 449-472
- . "E-Government Evolution in EU Local Governments: A Comparative Perspective." *Online Information Review* 36 (2009): 1137-1168.
- Powell, Maria C. and Mathilde Colin. "Meaningful Citizen Engagement in Science and Technology: What Would It Take?" *Science Communication* 30 (2008): 126-136.
- Reddick, Christopher G. "Citizen Interaction with e-Government: From the Streets to Servers?" *Government Information Quarterly* 22 (2005): 38-57.
- Scott, James K. "E' the People: Do U.S. Municipal Government Web Sites Support Public Involvement?" *Public Administration Review* 66 (2006): 341-353.
- Seltzer, Trent and Michael Mitrook. "The Dialogic Potential of Weblogs in Relationship Building." *Public Relations Review* 33 (2007): 227-229.
- Siau, Keng and Yuan Long. "Synthesizing E-Government Stage Models. A Meta-Synthesis Based on Meta-Ethnography Approach." *Industrial Management & Data Systems* 105 (2005): 443-458.
- Solis, Brian and Deidre Breakenridge. *Putting the Public Back in Public Relations: How Social Media is Reinventing the Aging Business of PR*. Upper Saddle River, NJ: FT Press, 2009.
- Soon, Carol and Yi Da Soh. "Engagement@Web 2.0 between the Government and Citizens in Singapore: Dialogic Communication on Facebook?" *Asian Journal of Communication* 24 (2014): 42-59.
- Thomas, John Clayton and Gregory Streib. "The New Face of Government: Citizen-Initiated Contacts in the Era of E-Government." *Journal of Public Administration Research and Theory* 13 (2003): 83-102.

- Torres, Lourdes, Vicente Pina, and Basilio Acerete. "E-Governance Developments in European Union Cities: Reshaping Government's Relationship with Citizens." *Governance* 19 (2006): 277-302.
- United Nations. *UN E-Government Survey 2008: From E-Government to Connected Governance*. New York: United Nations, 2008.
- Virkar, Shefali. "Consulting the British Public in the Digital Age: Emerging Synergies and Tensions in the Government 2.0 Landscape." In *Government e-Strategic Planning and Management: Practices, Planning, and Roadmaps*, edited by Leonidas G. Anthopoulos and Christopher G. Reddick, 185-203. London: Springer Verlag, 2014.
- Webster, Jane and Richard Watson. "Analyzing the Past to Prepare for the Future: Writing a Literature Review." *Management Information Systems Quarterly* 26 (2002): xiii-xxiii.
- Welch, Eric W., Charles C. Hinnant, and M. Jae Moon. "Linking Citizen Satisfaction with E-Government and Trust in Government." *Journal of Public Administration Research and Theory* 15 (2004): 371-391.
- Welch, Eric and Wilson Wong. "Global Information Technology Pressure and Government Accountability: The Mediating Effect of the Domestic Context on Website Openness." *Journal of Public Administration Theory and Research* 11 (2001): 509-538.
- . "Public Administration in a Global Context: Bridging the Gaps of Theory and Practice between Western and Non-Western Nations." *Public Administration Review* 58 (1998): 40-49.
- Wescott, Clay G. "E-Government in the Asia-Pacific Region." White paper, Asian Development Bank (2001). Accessed Oct. 1, 2014. <http://www.adb.org/sites/default/files/egovernment-asia-pacific.pdf>.
- West, Darrell M. "E-Government and the Transformation of Service Delivery and Citizen Attitudes." *Public Administration Review* 64 (2004): 15-27.
- Wigand, F. Dianne Lux. "Tweets and Retweets: Twitter Takes Wing in Government." *Information Polity* 16 (2011): 215-224.
- Willis, Suzanne and Bruce Tranter. "Beyond the 'Digital Divide': Internet Diffusion and Inequality in Australia." *Journal of Sociology* 42 (2006): 43-59.
- Wong, Wilson and Eric Welch. "Does E-Government Promote Accountability? A Comparative Analysis of Website Openness and Government Accountability." *Governance* 17 (2004): 275-297.
- Zuurmond, Arre. *De infocratie: een theoretische en empirische heroriëntatie op Weber's ideaaltype in het informatietijdperk*. The Hague: Phaedrus, 1994.