A framework for interpreting social media interactions in the public sector ☆

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ABSTRACT

Social media applications are extending the information and communication technology landscape in the public sector and are used to increase government transparency, participation and collaboration in the U.S. federal government. The success, impact and performance of these new forms of bi-directional and networked interactions can provide insights to understand compliance with the mandate of the Open Government Initiative. Many government agencies are experimenting with the use of social media, however very few actively measure the impact of their digital interactions. This article builds on insights from social media directors in the U.S. federal government highlighting their current lack of measurement practices for social media interactions. Based on their articulated needs for measurement, existing rules regulating the extent of measurement practices and technological features of the main social media platforms, a framework is presented that traces online interactions to mission support and the resulting social media tactics. Implications for both researchers and practitioners are discussed.

1. Introduction

Social media use has become an accepted practice in the U.S. federal government and around the world. Following the Open Government Directive agencies are investing resources into working with third party platform providers to harness new technologies to increase citizen participation, collaboration, and transparency (The White House, 2009a,b).

These new forms of digital interaction between government and its stakeholders create the potential to increase democratic engagement and reach online audiences who were not previously involved in policy making activities (Bertot, Jaeger, & Grimes, 2010). At the same time, government opens additional channels for the influx of large amounts of data about digital interactions, content, and expressed online sentiments that need to be analyzed and interpreted to understand to what extent they support government's mission (Lazer et al., 2009).

Many agencies are however reluctant to measure their online interactions, or are even prevented by their interpretation of existing laws and regulations. Investing human and social capital into the use of social media creates on the one hand the potential for government to access innovative knowledge from stakeholders that can help make governmental processes more effective and efficient. On the other hand, merely opening additional channels to broadcast information in order to inform the public, but not reacting to the public's sentiments and feedback loops that are accessible via social media might harm government's reputation. An important step in using the appropriate metrics therefore includes a deeper understanding of the social and behavioral challenges associated with the interpretation of social media data by public managers as well as social media professionals in government.

Drawing on the existing literature of social media use in government, broader e-Government discussions, as well as empirical evidence from in-depth, qualitative interviews with public managers in the U.S. Government, this article provides a developmental framework for measuring social media impact in the public sector. First, the article outlines the existing and accepted measurement techniques for e-Government services and contrasts them with social media use for online interactions with government stakeholders. The existing rules and regulations that are guiding social media use in the public sector are outlined as the basis for future measurement tactics. Based on the lack of limited measurement attempts by social media directors, a framework for including metrics, procedures, and outcomes is presented that aims to help both researchers and policy makers to measure and interpret social media use in the public sector.

2. Social media in the public sector

Over the past four years agencies and departments in the U.S. government's executive branch have started to use social media applications, such as Facebook fan pages, Twitter updates, YouTube videos, blogs and RSS feeds. As of May 2012, the 698 departments, agencies, and initiatives of the U.S. federal government have created 2956 Facebook pages, 1016 Twitter accounts, 695 YouTube channels, and 498 Flickr pages to promote their online content and connect to

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their stakeholders and audiences (Mergel, 2012a). Some innovators have also ventured into newer platforms, such as the Transportation Security Administration's recent use of the social picture-sharing platform Pinterest to publicize confiscated weapons from airplane travelers, or the National Archives and Records Administration's use of the geo-location and gaming platform Foursquare to connect citizens with library artifacts and government records.

This development is based on President Obama's "Transparency and Open Government" (OGI) memo in which he highlights three distinct areas of open government (2009): Executive departments and agencies have to increase participation, collaboration and transparency. The OGI specifically urges executive departments and agencies to "harness new technologies" to fulfill the requirements of this mandate.

The use of social media applications by government organizations can be called an extension of the current digitization efforts of government services as a new wave of the e-Government era (Bretschneider & Mergel, 2010). However, it needs to be distinguished from the previous wave of e-Government which is still focused on service or program delivery that constitute the core mission of government organizations (Lindgren & Jansson, 2013). Social media applications are used to create additional channels for governments' interactions with its stakeholders (Mergel, 2013). The current tactics do not include individual service delivery, such as e-tax filing systems. Instead, government agencies mostly use social media channels to represent artifacts of their core mission, engage the public, or participate in issue conversations and network with stakeholders.

This important distinction between social media use and e-Government services hosted on an agency's webserver is also portrayed in the fact that social media applications are provided by third parties, where technological features are hosted outside the direct control of government organizations. The difference to other e-Government applications (such as static websites as publishing mechanisms for agency information) is a higher degree of interactivity as well as content production by both government and citizens (Cormode & Krishanmurthy, 2008; O'Reilly, 2007). Social media applications allow for multiple authors and authorship rights are distributed to outsiders, including citizens, who are allowed to post blog comments, leave messages, create content on government-owned Facebook fan pages, reuse content tweeted by a government agency or forward the content to their own followers. Social media applications are used both internally and externally to reach citizens who are not using the traditional ways of interacting with government. In most cases, social media applications have not replaced existing offline or even e-Government services — on the contrary all social media applications are used to complement the existing communication mechanisms in government. They allow for two-way interaction — both within government as intra-organizational information sharing mechanisms for example in the form of wikis, as well as inter-organizational information sharing tools that allow new forms of interactions with citizens.

Adoption of social media applications is similar to previous waves of e-Government applications highly market-driven and citizen-centric (Lee, Chang, & Stokes Berry, 2011; Mergel, 2012b, 2013). Many agencies are exploring the value of social media to help them fulfill the mission of their own organization and information about the innovative value is slowly spreading throughout the overall government system (see for example Mergel & Bretschneider, 2013; Vonk, Geertman, & Schot, 2007). Informal experimentation enhances the formal top-down mandates, but the degrees of innovativeness and extent of adoption vary widely. Generally, social media applications are seen as a new format to respond to citizen- or market-initiated contacts. So far most initiatives are however of educational and informational values with a very low degree of interaction (replicating what Thomas & Streib, 2003 found when they observed citizen-initiated contacts in the era of e-Government). This study therefore takes the different levels of maturity of social media solutions into account, but then applies the Open Government mandate to understand the development of different

stages of social media interaction efforts and their potential for interpretation in government.

3. Steps toward institutionalizing social media

The more government agencies use social media, the clearer it became that the existing 2002 E-Government Act was limited to email interactions and relative static government website content (United States Congress, 2002). As an example, tracking website traffic or using persistent cookie technology in general is highly regulated in the federal government. A memorandum published in the year 2000 prohibits federal agencies to use persistent cookies to track citizens' visits to a government website (The White House, 2003). Cookies were only allowed with explicit approval. The policy was generally perceived as too constraining and as a barrier (McCarthy & Yates, 2010). An updated policy now states that cookies can be used to help websites deliver personalized versions to their visitors by remembering parts of the customized entries voluntarily contributed by citizens. The OMB M-10-22 guidance on web measurement and customization technologies allows agencies to remember a user's online interactions across a single- or multi-session in cases when citizens explicitly opt-in (The White House, 2010c). Cookies are text files that a website places on a visitor's computer so that it can remember the visitor's preferences at future visits. The guidance distinguishes between these tier 1 and tier 2 cookies, which do not collect personal user information. Tier 3 cookies collect users' personal information and require a more extensive review and public comment process, before an agency is allowed to identify individual users. Data retention and access are usually limited to one year or less.

In extension to the existing cookie policy, a recent OMB Memorandum-10-23 provides guidance for government agency's use of third-party-websites and applications to also include social media and Web 2.0 applications (The White House, 2010a). It directs agencies in their information collection process from third-party website: "If information is collected through an agency's use of a third-party website or application, the agency should collect only the information necessary for the proper performance of agency functions and which has practical utility. If personally identifiable information (PII) is collected, the agency should collect only the minimum necessary to accomplish a purpose required by statute, regulation, or executive order." Especially the following expression: "information for the proper performance of agency functions" leaves room for interpretation. A newer document issued by the General Service Administration's Citizen Engagement office offers an overview of "Digital metrics for Federal Agencies" (The White House, 2012). This new guidance focuses on government-owned websites and allows agencies to measure the number and duration of visits, referrals, as well as basic demographic data including network/ISP/organization, country, state/local, or city.

Many federal departments and agencies are therefore still in the middle of navigating the uncertainties of using social media as an extension of the use of their online presence. The initial memo and the subsequent use of social media applications by many early innovators initiated follow-up instructions to clarify several aspects of necessary changes. As an example, the U.S. General Services Administration (GSA) developed Terms of Service Agreements with social network services to ensure that the agreements comply with existing government regulations (Aitoro, 2009), NARA provided insights into social media records keeping (Franks, 2010; The White House, 2010d), and the Library of Congress acquired the archive of all tweets ever sent (Library of Congress, 2010).

As the Open Government Initiative evolves and more agencies follow the mandate to "harness new technologies", it is clear that the executive order requires a set of measures to promote the commitments of transparency, participation, and collaboration. In 2012, the White House therefore released a new Digital Government Strategy that specifically states the need for a coherent set of performance metrics: