Mapping government social media research and moving it forward: A framework and a research agenda

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ABSTRACT

The growing phenomenon of government social media requires better informed and more complex studies, but all beginning with a clearer understanding of the current research. Drawing on a comprehensive review of government social media literature in the e-government, the Information Systems (IS), and the public administration (PA) research fields, we mapped government social media research into the six focus categories of context, user characteristics, user behavior, platform properties, management, and effects. Findings show that 1) research focuses on government, rather than on users; 2) studies focusing on context, management, and users mostly focus on quantitative aspects; 3) the properties of social media platforms are under-investigated; and 4) research on the relationship between constructs of the government social media phenomenon is under-investigated.

Based on our analysis, we propose a framework to frame relationships between the six focus categories. We also identify a four-point research agenda to move government social media research forward, from description to complex impact analysis.

1. Introduction

In the public sector, social media initiatives are booming, with increasing agreement among managers on the importance of using social media platforms to interact with citizens. Such initiatives are taken in response to demands from citizens who, as experienced social media users, have increased and matured expectations towards public agencies in terms of responsiveness, information delivery, and service provision.

The profusion of government presence on social media platforms represents not only a quantitative increase in the array of digital channels of interaction that governments have at their disposal. Social media, defined as "a group of Internet-based technologies that allows users to easily create, edit, evaluate and/or link to content or other creators of content" (Kaplan & Haenlein, 2010, p. 61), feature the key potential for interactivity, collaboration, and government-citizen co-creation, and therefore represent also a potential paradigm shift in the relationship between governments, citizens as users, and commercial organizations (Knox, 2016; Mergel, 2016). Social media enable two-way interactions, transforming the role of the citizens from passive consumer of government services to active co-creator (Bertot, Jaeger, & Hansen, 2012), increasing the smartness of public action (Gil-

Garcia, Zhang, & Puron-Cid, 2016), and reshaping the relationships between public agencies and technology platform providers (Mergel, 2014).

Research on social media in the public sector has tried to keep up with such developments, with all the challenges associated with trying to capture the essence of a rapidly moving target (Criado, Sandoval-Almazan, & Gil-Garcia, 2013). The body of empirical literature drawing on cases of social media adoption by government tackles an array of different aspects of the phenomenon, resulting in diverse and shifting research foci.

However, there is currently a lack of comprehensive efforts to map and systematize research on government social media. The very few existing reviews of research focusing on social media in the public sector are either of limited scope (Boulianne, 2015; Wang, Medaglia, & Sæbø, 2016), or provide non-systematic, time-based accounts (Magro, 2012). The rapidly growing and disparate body of literature on government social media needs to be systematized for several reasons. First, there is a growing need for the e-government research field to ground its theoretical development on an expanding empirical basis (Bannister & Connolly, 2015). Developing an overview of the research foci on government social media can help conceptualize its key processes in a more systematic fashion. Second, research on

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government social media should reflect the novelty of the social media phenomenon, with its richness and complexity. While there are generic literature reviews in the e-government field (Meijer & Bekkers, 2015), they fall short of focusing specifically on the novel and complex changes that social media brings to the relationships between government, citizens, and platform providers. Third, from a practitioner perspective, mapping knowledge of government social media will enable public managers to draw on the research findings to improve practices and offer better services, especially now that public agencies are beginning to progressively embed the affordances of social media in policy and standards (Bretschneider & Parker, 2016; Chen, Xu, Cao, & Zhang, 2016).

This study provides an analysis of research on social media in the public sector, and derives a framework to provide a basis for developing a future research agenda. The study specifically tackles three research questions:

> RQ1: *What are the current foci and gaps in government social media research?*
> RQ2: *How can we frame relationships between constructs of government social media research?*
> RQ3: *What aspects of government social media should future research focus on?*

The mapping of the government social media domain is important for two main reasons: 1) to identify current and past coverage, gaps, and salient issues and impact areas; and 2) to observe the longitudinal change of themes so that the thematic evolution of a field can be observed, and future directions and research agenda can be projected.

The next section discusses the relevance of the government social media phenomenon and argues for the importance of mapping the research scenario. Section 3 presents the methods adopted for selecting and reviewing studies on social media in the public sector in the Information Systems (IS), in the public administration (PA), and in the e-government literature. Section 4 tackles RQ1 by mapping research in the six focus categories of context, management, user characteristics, user behavior, platform properties, and effects. Section 5 tackles RQ2 by identifying the relationships between constructs of government social media and presenting a framework of government social media research. Section 6 tackles RQ3 by presenting a four-point research agenda for studying government social media, and discussing its implications for both research and practice. The conclusion section summarizes our study's contributions, highlights its limitations, and poses related avenues for future research.

2. Background

While government social media can be considered partly as an extension of a long wave of digitization efforts (Bretschneider & Mergel, 2010), there are many strong arguments that support its uniqueness. Besides being another channel of government-citizen communication, social media has been defined as social interaction by its very nature, with its key strengths in the areas of collaboration, participation, empowerment, and real-time interaction (Bertot, Jaeger, & Grimes, 2010). As opposed to other web-based applications, where information provision and service delivery are at the core of the government activities afforded by the technology, social media provides the possibility for content co-production by both citizens and governments (Cormode & Krishnamurthy, 2008; O'Reilly, 2007), citizen-to-citizen interaction, and community building. These key aspects grant a privileged research focus on interactivity and engagement between governments and citizens as "prosumers".

Another important distinction between traditional e-government services and governments' presence on social media platforms, is that the former are usually hosted on an agency's server, while the latter are mostly owned and controlled by commercial third parties, outside the

direct reach of governments (Mergel, 2013a). This aspect can also be expected to radically change the scenario of interactions, power balance, and negotiations between government and private owners of the social media platforms in defining objectives, strategies, and features of social media management.

As a result, research on government social media can be expected to focus on a number of key aspects of the phenomenon, such as the changes in the role of citizens and the affordances of social media platforms controlled by third parties.

In recent years, there have been a number of efforts to frame the emerging government social media phenomenon. As in the early days of e-government research – when research and practice mostly concerned traditional informatization of the public sector, such as the implementation of intranets, and presentational websites (Hiller & Bélanger, 2001; Layne & Lee, 2001; Moon, 2002) – a number of maturity models have been proposed to conceptualize government social media. A model proposed by Lee and Kwak (2012) focuses on open government policies through social media; it includes five evolutionary levels, from "initial conditions" to "ubiquitous engagement" that public agencies have to progress through in order to increase transparency and openness using social media (Lee & Kwak, 2012). Mergel and Bretschneider (2013) propose a 3-stage model of how government agencies adopt social media over time: a first stage in which agencies experiment; a second stage where they recognize the need for social media policies and regulations; and a third stage where they formalize social media strategies and policies (Mergel & Bretschneider, 2013).

An attempt at categorizing indicators of social media use by governments has also been made. Mergel (2013a) proposes a framework consisting of social media interaction measures – such as the number of likes, and re-tweets – and categorizes them according to the mission they facilitate (e.g., transparency, participation) (Mergel, 2013a).

These attempts at providing an overview of the government social media phenomenon have begun to systematize the complexity of the phenomenon. However, they fall short on two aspects. First, they do not mainly focus on identifying future focus areas for research. The maturity model proposed in Lee and Kwak (2012) and the social media interaction measures proposed in Mergel (2013a) suggest best practices for public managers, but do not directly identify an agenda for the research community; Mergel and Bretschneider (2013) propose a set of testable propositions as a by-product of their adoption stage model, but these propositions focus on the process of adoption of government social media from the perspective of public agencies, leaving other dimensions of the government social media phenomenon, such as the role of users and of platform providers, outside its scope. Second, extant attempts at providing an overview of the government social media phenomenon do not draw on a systematic analysis of existing empirical research. While there is a substantial number of reviews of general e-government research literature at different levels of abstraction (Meijer & Bekkers, 2015), to the best of our knowledge no systematic review of government social media research has been carried out so far. The few exceptions either feature a non-systematic, time-based approach (Magro, 2012), or serve a limited scope, such as providing a quantitative comparison between research disciplines (Wang et al., 2016), or focusing on a very narrow aspect of social media use, such as the relationship between social media use and political participation (Boulianne, 2015). Moreover, there is no existing review of government social media literature that aims at developing a framework for mapping existing research and framing future research efforts.

In order to fill these gaps, and to complement existing efforts for systematizing knowledge on the government social media phenomenon, we carry out a comprehensive review of the research literature, and propose a framework to drive a new research agenda.