Social Media and Trust in Government

Phase 1

Executive Report

prepared for:
InterPARES Trust
by the members of the
Social Media & Trust in Government
Project Committee
December 5, 2016

Table of Contents

Background

InterPARES Trust

This research project was conducted under the research agenda of InterPARES Trust (ITrust 2013-2018), a multi-national, interdisciplinary research project exploring issues concerning digital records and data entrusted to the Internet. Its goal is to generate theoretical and methodological frameworks to develop local, national and international policies, procedures, regulations, standards and legislation in order to ensure public trust grounded on evidence of good governance, a strong digital economy, and a persistent digital memory.

InterPARES Trust, directed by Dr. Luciana Duranti, is based at the Centre for the International Study of Contemporary Records and Archives of the School of Library, Archival and Information Studies at the University of British Columbia, in Vancouver, British Columbia, Canada. Major funding for The InterPARES Trust Project is provided by a Social Sciences and Humanities Research Council of Canada partnership grant.

Social Media and Trust in Local Government

This research project includes two phases designed to investigate the influence of social media on the government-citizen trust relationship. The first phase of the study (described in this report) examines the administration of social media programs in 20 local governments in the United States and Canada using data collected from online sources, interviews, and documentation. A bridging study featuring sentiment analysis of Twitter data was completed during the first phase and is also described in this report. During the second phase (to be completed in 2017) researchers will conduct an online survey in four cities to explore citizen perspectives.

Four theories inform our model, which aims to support the transition of local governments from e-government based on the provision of online services to open government facilitating increased accountability, transparency, and openness: Social Capital Theory, Behavioral Trust Theory, Social Network Theory, and Resource-based Theory. These four theories provide perspectives on the sociological and behavioural components of government-citizen relationships and lead to a deeper consideration of how and why citizens trust their governments.

With over 19,000 villages, cities, and municipalities in the US (National League of Cities 2014) and 3,600 local governments in Canada (Federation of Canadian Municipalities 2007), the researchers are optimistic that the experiences of the 20 cities contributing to this project will have wide-ranging impact on the administration of social media by government at the local level.

Project Participants

Lead Researcher:

Dr. Patricia Franks	San José State University

Research Team:

Dr. Michelle Chen	San José State University
Lois Evans	University of British Columbia

Collaborator

Tamara Becker	City of San José, CA

Project Purpose and Scope

Social media is used by local governments to communicate with citizens and other parties. Central to communication is trust, defined as the "confidence of one party in another, based on alignment of value systems with respect to specific actions and benefits…" (InterPARES Trust 2016). With trust in government falling by 14% between 2013-2014 and the trust in social media increasing by 47% (Edelman Borlund 2014), the research committee posed two questions:

- Question one: Can social media be used by government to increase citizen trust?
- Question two: Is there a significant relationship between trust in government and social media initiatives, and can government administration of social media result in increased citizen trust?

In phase 1, the focus was on the government side of the trust relationship. Insight was gained into how the social media programs of 10 US and 10 Canadian local governments facilitated interactions with citizens.

During phase 2, the researchers will focus on the citizen side of the trust relationship by partnering with two US and two Canadian cities to conduct online citizen surveys.

Methodology

Introduction

The multi-faceted research design for this project combines both qualitative and quantitative methods. During phase 1 the methods of data collection and analysis included: city profiles, sentiment analysis of social media content, semi-structured interviews, and content analysis of websites, policy documents and reports.

Sample Selection

The sample selection included 10 US and 10 Canadian cities that had transitioned from experimenting with social media to day-to-day use based on a minimum set of requirements including: a city Facebook account; Twitter accounts for the city, mayor, and police; and use of at least one other social media

platform (e.g., YouTube, Instagram, Pinterest). An effort was made to ensure geographic and demographic diversity by selecting cities from across each nation that ranged in size from large metropolitan centres to smaller cities and municipalities.

The cities that met these criteria were all within the top 100 cities in each country based on population. Selected US cities include Atlanta, Georgia; Austin, Texas; Boston, Massachusetts; Honolulu, Hawaii; Kansas City, Missouri; Mesa, Arizona; New York City, New York; Raleigh, North Carolina; Riverside, California; and Seattle, Washington. Selected Canadian cities include Calgary, Alberta; Edmonton, Alberta; Fredericton, New Brunswick; Halifax Regional Municipality, Nova Scotia; Ottawa, Ontario; Regina, Saskatchewan; Surrey, British Columbia; Toronto, Ontario; Vancouver, British Columbia; and Winnipeg, Manitoba.

City Profiles

A profile was developed for each city using publicly available information including census data, encyclopaedias, wikipedias, and "about us" website information. Profiles included data on the social media platforms in use, the number of social media accounts, the types of government activities, and social media metrics (e.g., followers, friends, subscribers).

Sentiment Analysis

Sentiment analysis is a technique that uses natural language processing, statistics, or machine learning methods to extract, identify, or characterize the sentiment content of a specific text, in terms of feelings, attitudes, emotions, and opinions. To help understand citizen engagement and trust through government uses of social media, we conducted a sentiment analysis of citizens' responses to government-posted messages on Twitter. For each of the 20 municipalities, 20 months of content was gathered from three Twitter accounts (i.e., city, mayor, police). Sentiment analysis tools were then applied to gauge citizens' attitudes.

Since sentiment analysis application to social media is relatively recent, we used three popular, well-established sentiment analysis techniques, including a lexicon-based approach, a machine learning-based approach, and a hybrid approach called SentiStrength[1] in order to provide a more robust and rigorous analysis result. To understand the overall picture of sentiment analysis and to statistically examine the distribution of the sentiments, the sentiment means and standard deviations from the three techniques, were calculated. An ANOVA was further conducted to compare these techniques.

Interviews and Content Analysis

The interview form used to gather data from government officials consisted of 27 questions pre-approved by the San José State University's Institutional Review Board. The questions were based on the City Profile research and covered six areas of investigation: online presence, social media context, social

[1] Thelwall, M., Buckley, K., Paltoglou, G., Cai, D., & Kappas, A. (2010). Sentiment strength detection in short informal text. *Journal of the American Society for Information Science and Technology*, 61(12), 2544-2558.

media and records policies, social media resources, social media results, and legal challenges. The questions allowed a range of responses and revealed the participants' knowledge, behaviors, opinions and values. Participants received the questionnaire in advance and were invited to comment on and correct transcripts. The data from the interviews was anonymized and presented in the aggregate so that cities and individuals were not identified or identifiable. In all, seven US and ten Canadian interviews were completed over a nine-month period.

In addition to the interview transcripts, content was collected from a range of sources, including city websites and social media accounts and policy documents and reports (i.e., social media policies and terms of use, records management policies, and social media strategy documents and reports). Combined with the city profiles, sentiment analysis, and transcripts, the content analysis provided data triangulation and supported the validity of findings.

Findings

City Profiles

While an effort was made to identify an array of cities, selection was slanted towards cities that had well-developed social media programs in place. In the end, of the 20 cities, one was a national capital, over half were state or provincial capitals, and two were the largest cities of each nation. These cities undoubtedly experienced several advantages over other local governments, particularly with regards to economic benefits. Despite this, the participants consistently identified challenges around resourcing and their organizational capacity for supporting social media programs, and their solutions are expected to be of interest to other local governments.

With respect to the form of government, five of the 10 US cities represented the Council-Manager form, where the Councils hold both legislative and executive powers, and a City Manager is selected and appointed by Council as the head of administration. Five represented the Council-Mayor or "Strong Mayor" form where Council holds legislative powers and the Mayor holds executive responsibility (Moulder 2008). While all five of the Council-Manager cities participated in the interview process, only two of the Strong-Mayor cities did so; the under-representation of Strong-Mayor governments in research studies has been previously noted (Graham 2014; Norris and Reddick 2013). All 10 Canadian cities were Council-Manager governments, with Councils elected on a direct-representation basis with legislative and executive powers, and a City Manager selected and appointed as the head of administration (Bish and Clemens 2008). All 10 Canadian cities participated in the interview process. In most cases, the interview participant was a member of the Communications team who was responsible for social media, but in a few cases, a Communications manager joined or led the conversation.

Both the US and Canadian cities were organized into departments and offices that administered a number of functions, depending on the size of the city and the range of services provided. In terms of

social media, local governments in both countries were subject to federal and provincial or state laws, which included Constitutional or Charter assurances around human rights and freedom of speech and legislation around freedom of information and protection of privacy.

Sentiment Analysis

Based on the analysis of 60 sets of Twitter data (i.e., city, mayor, and police accounts for 20 cities), the results showed that the sentiment predictions from the lexicon-based approach and the machine learning-based approach were not statistically different. There were slight differences in the sentiment predictions between SentiStrength and the other two approaches, but this appears largely due to the wider scale (-4 to +4) of the SentiStrength reports as compared with the binary classifications of the other two tools.

Beyond proving the validity of the tools, the results indicated that while most of Twitter sentiments were considered neutral (55-58%), positive sentiments outnumbered negative ones. For example, for the Canadian cities, the Mayors' accounts received the highest number of tweets on average (57,243 over the 20 months) and had the highest positive ratings (34.1%) and lowest negative ratings (10.7%) on average. While the Canadian police accounts had the next highest average number of tweets (37,065), they also had the lowest positive rating (25.3%) and highest negative rating (18.7%). The city's corporate accounts (i.e., @cityname) received lower numbers of tweets (32,627) but had a higher positive rating (29.8%) and lower negative rating (11.7%) than the police.

The sentiment analysis tools also included visual analytics that could be used to identify significant events for each city using word clouds, the number of tweets per day, and statistical trends showing positive-negative responses. The research team plans to use these tools in phase 2.

Content Analysis

The Local Government Context

Most of the US cities adopted Facebook and Twitter in 2009 or 2010 in the regular course of business, either at the request of Council or as resources were made available. The Canadian cities adopted Facebook and Twitter in 2008 or 2009 either because of an emergency or in support of a major initiative. In the five-plus ensuing years, the cities' social media efforts had expanded to include a wide range of platforms, accounts, and business unit participation.

The 20 cities all supported an array of social media platforms, including Facebook, Twitter, YouTube (with one exception), and LinkedIn, as well as platforms devoted to photo sharing (e.g. Flickr, Pinterest, Instagram) and newsletter-style services (e.g. blogs, email subscriptions, RSS feeds). The number of social media accounts supported by each city ranged from 15 to 130 accounts.

The official voices of the cities were the corporate accounts that carried the city's name (e.g. facebook.com/cityname or @cityname) and were considered the premier or "go-to" social media accounts. (Other accounts were referred to by more specific names, for example the "Mayors' accounts" or the "police accounts"). In both countries, the corporate/city accounts were managed by the Communications department, led by a Director who reported to the Mayor's Office or the City Manager. The corporate/city accounts usually had the largest audiences, with a few exceptions such as cities where the mayors had used social media successfully during election campaigns or where police forces had dealt with large-scale incidents and/or crowds.

Overall, the social media platforms and accounts were considered secondary and complementary to the cities' existing websites. All the cities had extensive websites featuring advanced systems supporting e-government services, with varying degrees of integration. In most cases, the cities' websites were launched in the mid- to late 1990s, and most had undergone a series of updates or even overhauls in the ensuing period. The cities in both countries were in the process of adapting their web sites for mobile access, and most had produced or co-produced mobile applications. All cities featured social media icons on their home page, and most had web "hub" pages with introductory information and lists of social media with hyperlinks to the accounts.

Administration

The social media administration model for the 20 local governments was described as "hub-and-spoke," with the Communications department as the hub and the business units the spokes. The Communications departments retained tight controls over the choices of social media platforms in use as well as account and administrative approvals. Social media teams within the Communications department managed the content posted on the corporate accounts, approved business unit accounts with individuals as administrators, and monitored content.

Communications directed the activities of business units and employees via social media policies, with the support of the social media teams or co-ordinators. These administrative policies were not reviewed by Council or the senior executive teams but rather signed off and distributed by the Communications Director or department. The employee social media policies included directives regarding account and user approvals, appropriate use, city reputation, consistent messaging, confidential and private information, conditions for removing audience content, requirements for legal compliance, and/or consequences for employee non-compliance. About half of the social media policies included general comments and/or instructions around social media as records, with the US policies typically including more precise directions around how social media records should be retained and managed.

In addition to the employee policies, most cities developed "terms of use" for citizens that defined the types of audience contributions considered acceptable as well as consequences for inappropriate content. The terms of use were posted on the social media "hubs" on the cities' websites, and most of the cities posted either a condensed statement or a link to the terms of use on their Facebook pages. Beyond this, few of the other social media platforms and accounts featured this information.

Additionally, only about half of the cities that had employee policies made them available online, so audiences seldom had a full picture of the city controls in place for employees and audiences.

All of the cities monitored the social media accounts to ensure the appropriateness of employee and citizen content and to make sure that citizen requests and issues were responded to. The interview participants were clear that they followed their cities' guidelines in terms of hiding, blocking, or removing citizen content and emphasized the role of the audiences in "policing" conversations. Overall, the participants did not express high concerns about the risks associated with social media, despite reporting numerous technical and content issues. These ranged from hacked accounts, parody accounts, viruses, false representation, and threats against employees to employee posts that included misinformation, confidential information, and negative comments causing reputational damage, and audience posts including sharing out of context, rumours and misinformation, and derogatory posts. Most cities had responded to public information requests or had provided social media content to their legal departments, including claims for damage. Despite this, the cities felt that the controls they had implemented provided sufficient protection from these risks.

Use and Impact

The cities primarily used social media to inform citizens of their activities, following the form of traditional news releases where newsworthy content is delivered as an announcement. Social media was largely used as a one-way communication tool where the cities provided information, created awareness, and marketed and promoted city initiatives and activities. Two-way communication was largely reserved for providing one-to-one responses to service requests and issue management. In one or two cities, there was a degree of integration with the 3-1-1 service team (i.e., the non-emergency number for accessing government services). Participants also differentiated between social media platforms and use, noting for example that Twitter was for "real-time," Facebook for "announcements and links," and Instagram for "historic and scenic photos."

Despite the scope of the social media programs, there was little concrete information available regarding results. Overall, measurement was sporadic and primarily intended for operational use by Communications, with metrics focused on audience growth, content performance, impression and reach, and sentiment. The US cities were interested in patterns of use (i.e. high and low points of engagement over the course of a day and week) while the Canadian cities focused on conversion rates (i.e. click-throughs to websites). There was little or no information available about the demographics or other audience characteristics.

Very few cities produced regular reports, and most mechanisms for reporting on audience feedback appeared sporadic. Only one of the US cities and about half of the Canadian cities produced regular reports relating to social media, although several cities said they produced ad hoc reports relating to campaigns or included social media metrics in Communications reports where appropriate. Several participants expressed concerns around measurement, noting the lack of staff resources, funding for tools, and lack of expertise as barriers, as well as the larger question of what constituted "success" for

social media campaigns. This lack of capacity for measuring and reporting on social media extended to managing social media as records.

Anecdotally, participants believed that social media increased citizen awareness and their own ability to be responsive to citizens. A few noted that social media amplified important messages or that they had learned of issues that might have otherwise gone unnoticed. At the same time, the increase in audience numbers and posted content appeared to support the growing importance of social media as a channel of communication, and the participants were upbeat about the relevance of social media and its role in larger Communication strategies.

Recommendations

Considering the rapid expansion of social media over the last five or so years, the cities in this study have demonstrated both ingenuity and persistence in providing support for a wide array of platforms and accounts using the minimum of resources. Looking ahead, and considering the similar arc of expansion seen in the development of the cities' websites, there are a number of areas that might be further developed in the interest of increasing citizen trust and advancing open government initiatives.

First, the cities can increase transparency by posting their employee policies and citizen terms of use on their social media hubs, and including links to these resources on all social media accounts. While citizen terms of use advise audiences of the conditions of participation, employee policies illuminate some of the constraints that cities operate within and their responses. For example, some cities do not "like" or "follow" other entities in order to avoid charges of partisanship—these types of underlying behaviours are seldom spelled out but may have an impact on the general tenor of the social media conversations. In the larger sense, Communications departments may want to consider what transparency means within their local government context. Transparency may mean the same information is made available to more people over more channels, or it may imply an examination of what information is made available to begin with and what channels are used for specific types of messages.

Second, the cities can increase accountability by ensuring that city agencies and representatives not covered by the employee policies and terms of use meet compliance requirements. For example, social media conversations involving public officials may be subject to additional requirements under states' *Open Meeting Acts* or other legislation relating to public meetings. Cities may wish to address the use of social media by elected officials during elections, as well as general responsibilities for comments made by elected officials. In another area, police departments typically publish their own social media policies to cover criminal investigations, police communications, and emergencies, yet cities remain responsible for legal actions and so need to have a good understanding of the policies and controls in place. With regards to their existing social media accounts, cities may need to more closely examine their responses to incidents and the need to collect city content, especially from high-profile accounts.

Third, cities likely need to do more to capture and act on social media where it represents civic participation, that is, where they are actively seeking to involve citizens in decision-making processes. Where traditional mechanisms such as voting, public hearings, citizen advisory committees, citizen panels, focus groups, and public consultations require in-person attendance, social media is not bound by time or place. While the lack of measurement, collection, and reporting present challenges for cities, they need to build capacity in this area. Encouragingly, the cities in this study were experimenting with various ad hoc initiatives around civic participation, including engagement portals, live-streamed events, and transcripts for online town halls

Finally, while participants in this study believed that social media was readily available on social media platforms, was available as content in other formats, or was not worth the effort of managing, we believe that managing some social media content as records will support open government aims such as accountability, transparency, and civic participation. There are at three scenarios where managing social media as records provides clear value: incident documentation, on-going collection of city content from high-profile accounts, and on-demand collection of audience content where cities have requested input on a topic or an issue.

Additionally, we suggest greater integration of city open government initiatives. A simple first step would involve creating an open government web hub that introduces and links open information pages, open data portals, and open dialogue venues including engagement portals and social media hubs to the open government context.

Acknowledgements

The researchers would like to thank the cities, Communication directors and managers, and social media co-ordinators who made this study possible. Their breadth of knowledge and dedication was inspiring, and we trust that other cities will benefit from their participation and partnership in this study.

We would also like to acknowledge the contributions of the Graduate Research Assistants from San José State University and the University of British Columbia who worked on the project over the past two years.

Bibliography

Bish, Robert L, and Eric G Clemens. 2008. *Local Government in British Columbia.* 4thed. Richmond, B.C.: Union of British Columbia Municipalities.

Edelman Borlund. 2014. “Edelman Trust Barometer 2014: Annual Global Study.”

Graham, Melissa. 2014. “Government Communication in the Digital Age: Social Media’s Effect on Local Government Public Relations.” *Public Relations Inquiry* 3 (3): 361–376.

InterPARES Trust. 2016. “InterPARES Trust Terminology Database.” InterPARES Trust. Accessed July 14. http://arstweb.clayton.edu/interlex/term.php?term=trust.

Norris, Donald F., and Christopher G. Reddick. 2013. “Local E-Government in the United States: Transformation or Incremental Change?” *Public Administration Review* 73 (1): 165–175.