An Intra-City Comparative Analysis of Social Media

Use and Deliberative Democracy in Portland, Oregon

by

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ABSTRACT

The City of Portland has 21 distinct agencies/bureaus with Facebook pages. Of these 21 Facebook pages, three were selected for in-depth case study analysis. Qualitative methods including descriptive coding (Saldana, 2009; Saldaña, 2003; Wolcott, 1994) and content analysis were the primary methodological tools used while the individual SMS post was the unit of analysis. Basic quantitative methods were used to generate tabular values for general post/agency comparison.

This research identifies SMS usage patterns, differences, and policy implications within a large city government where multiple agencies have independent control over their own SMS sites/pages. It examines how each agency/bureau uses SMS and to determine if such use fits within Iris Marion Young's deliberative democracy model. This research contributes to voids in the academic literature in the topics of governmental SMS usage, intra-city SMS usage, and SMS as a mechanism for promoting deliberative democracy.

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I dedicate this work to my wife Julie, daughter Katelyn, and son Tyler. Their sacrifice and understanding of this journey has allowed me to accomplish one of the greatest goals of my life. For that I am and will be forever grateful.

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Introduction and Overview

Social media adoption by government agencies is a significant and growing trend (Mergel, 2012). In order to keep pace with citizen demands of transparency, engagement, immediate access to information, and desires to be heard, governments at all levels are entering the social media arena; sometimes well prepared and other times not so much. While there exists significant research on descriptive social media use in government agencies, very little currently exists that merges descriptive analysis within the theoretical lens of deliberative democracy. This study is an attempt to merge these disparate topics in order to determine whether social media is-or-can-be used as a platform for deliberative democracy.

Social media use by government agencies and bureaus has been ever increasing in recent years (Trenkner, 2010). The Government 2.0 movement championed by Tim O'Reilly (2005) promotes, "the use of technology – especially the collaborative technologies at the heart of Web 2.0 – to better solve collective problems at a city, state, national, and international level" (p. 12). Social media sites (SMS) and technologies are a critical part of this. As government agencies big and small learn to navigate the popular yet sometimes tumultuous seas of social media in hope of opening new channels of communication, transparency, and collaborative civic engagement, many struggle with exactly how best to do that.

Previously published exploratory research by a colleague and myself (Hand & Ching, 2011) has explored SMS use through the context of civic engagement and power relations within the Phoenix, Arizona metropolitan area. Facebook usage from multiple Phoenix-area cities were analyzed for post content, public/civic response, communication

mode, and levels of engagement. The findings were that government agencies are still using SMS in a speaking-from-power context and that instances of genuine civic engagement were rare.

This dissertation builds upon and expands that previous research. The City of Portland has 21 distinct agencies/bureaus with Facebook pages. Of these 21 Facebook pages, three were selected for in-depth case study analysis. Qualitative methods including descriptive coding (Saldana, 2009; Saldaña, 2003; Wolcott, 1994) and content analysis will be the primary methodological tools used while the individual SMS post will be the unit of analysis. Basic quantitative methods will be used to generate tabular values for general post/agency comparison.

This research identifies SMS usage patterns, differences, and policy implications within a large city government where multiple agencies have independent control over their own SMS sites/pages. It also examines how each agency/bureau uses SMS to determine if such use fits within Iris Marion Young's deliberative democracy model. This research will contribute to voids in the academic literature in the topics of governmental SMS usage, intra-city SMS usage, and SMS as a mechanism for facilitating deliberative democracy.

Background of the Problem

At its base, deliberative democracy attempts to promote democratic decision-making beyond simple voting, suggesting deeper discussions between equal and largely uninfluenced affected citizens. It involves the deliberate communicative practice in which "participants exchange arguments and counter-arguments and thereby become informed of the views of one another" (Wiklund, 2005, p. 705). In the Habermasian tradition,

deliberative democracy is a combination of liberal and republican political thought where democracy is seen, "…as a process of social learning through rational argumentation…in which common interests are constructed, rather than discovered" (Wiklund, 2005, p. 705).

Having sat largely in the theoretical realm, deliberative democracy in practice requires a variety of conditions that are oftentimes difficult if not impossible to obtain (Parkinson, 2006). Dhalberg (2001) identifies six such requirements: exchange and critique of reasoned moral-practical validity claims, reflexivity, ideal role taking, sincerity, discursive inclusion and equality, and autonomy from state and economic power. Young (2000) identifies only four: inclusion, political equality, reasonableness, and publicity. Wiklund (2005), building upon Habermas's structure of discourse (1990), identifies four conditions as well: generality, autonomy, power neutrality, and ideal role-taking. Such conditions are largely prescriptive prerequisites for constructive and meaningful deliberative discourse.

However, within the digital realm, such conditions are particularly difficult due to the nature of communication. Tim O'Reilly's foundational work, *What is Web 2.0*, outlines the paradigm shift of communication methodology with the maturation of the World Wide Web (2005). In it, he proclaims that the future of the web involves a user-centered and collaborative design where web content is no longer processed and disseminated by singular web site owners but is generated collaboratively by web users themselves. This idea takes a "Web as a platform" approach that shifts the power of the Web away from site owners and into the hands of site users. With no clear "guiding hand" in Web 2.0 platforms, the success or failure of web ventures relies on the

platform's extensibility within the context of the users creative processes (Shuen, 2008).

Examples of this paradigm can be seen in the popularity of Web 2.0 platforms and

services like blogs (Wordpress, Blogger), social-networking platforms (Facebook,

Google+), and content sharing and collaborative services (Wikipedia, Flickr, & Yelp).

All of this technological growth is dependent on the open access to user-generated

information. As Gehl (2011) points out, the Von Neumann Architecture as applied to

social media and Web 2.0 is dependent on the effective recycling of content through the

store/process/store cycle. This cycle relies on a continuous stream of new and accessible

information provided by users. The only way users will continue to create new content is

if they can easily access other user's content.

The past decade has seen incredible increases in the use of social media and user-

generated content. Facebook alone has gone from nearly one million users at the end of

2004 to over 1.3 billion today (StatisticBrain, 2014a). Combine that with niche social

media platforms like Instagram, LinkedIn, YouTube, Twitter, and Pinterest and you have

billion of users engaging in countless instances of social interactions.

Such rapid growth and adoption of new online services is not surprising in this

media-driven and connected age. What is surprising, however, is how much time is spent

not only online, but on social media applications specifically. According to Nielsen

research, in 2012 Americans spent 121.1 billion hours on social media compared to just

88.4 billion hours in 2011. Of those 121.1 billion hours, 20% of their online computer

time and 30% of their mobile device time was spent on social media. Facebook alone

accounted for 17% of the average consumer's desktop computer time. Other Internet

activities include gaming, email, reading news, shopping, and research (products, reviews, etc.) (Nielsen, 2010, 2012).

Compounding this social media craze is the parallel craze for smartphones and mobile devices like tablets. A 2012 survey of Internet and social media use showed a 20% increase in time spent on social media over the previous year, with mobile application/device use seeing an increase of 76%. Over this same time period, desktop social media use was down 5% suggesting that more people are moving to mobile devices for social media engagement (Nielsen, 2012).

Technological revolutions may not necessarily be scientific ones but much like a Kuhnian paradigm shift, once a new technology takes hold, it can be very difficult to get by without adoption. Just in the past few decades we have seen old technologies give way to new ones, often at the reluctance of large portions of the population who are comfortable and see little reason to make such a change. Technology trends in music are a quite noticeable reflection of this as within only the past few decades we have gone from physical media (records) to magnetic media (tapes) to optical (CDs) to an almost purely digital one (MP3s and downloadable music).

So it is with the Internet and social media. Certain age groups not withstanding, if someone were to say that they do not have an email account (or even worse, do not know how to use email), you would likely wonder how it is that they can even operate in the world today. Indeed, social media appears to be at that border of optional and necessary where a lack of adoption could hinder one's ability to successfully operate in the modern world, particularly in educational institutions and in the professional world.

Social media sites like Linkedin.com (220+ million members (LinkedIn, n.d.)), a professional social network, are fast becoming avenues of job promotion, recommendation, searching, and headhunting. Meetup.com, consisting of regional and special interest groups, is being used more and more to organize real world events. Then of course there is Google+, Facebook and Twitter, quickly becoming the de facto method of communicating and keeping up to date with family, friends, and acquaintances. Even the highest levels of government are using Internet and social media applications to conduct citizen outreach (Mergel, 2012).

With so many avenues of connection, is it even practical to not be at least somewhat connected to this virtual social web? Will there come a time when people wanting to connect with each other will have little choice but to use applications like Facebook? E-mail, once the "new" technology standard, is beginning to show its age with a significant decline in use by younger generations (Lorenz, n.d.). Many websites are now beginning to use shared authentication sources like Facebook to register and control access to their sites (Melanson, 2010). This means that if you want to participate on some websites, you must have a Facebook account.

Given the impact (and by many accounts, significant importance) social media participation has in our business and personal lives, it would seem natural that people would also expect to be able to connect with their governments in the same way. Indeed, over the past many years, a great number of government agencies at all levels have begun taking to social media to not only broadcast information but to use it as a means of transparency, engagement, and information gathering. One would be hard pressed to find

a moderately large government entity that did not have some sort of official social media presence.

Thus the problem presents itself as one of a contest with the forces of technological advancement and adoption juxtaposed against the ideals of discursive or deliberative democracy. With so much private involvement in various social media platforms and the demands that governments do the same, government agencies are faced with the problems of policy, implementation, and use. While a number of studies have looked at descriptive characteristics of governmental social media use, I was unable to find any that assess such use within the context of deliberative democracy.

This Research

This research builds off my previous study in the Phoenix Metro area, but this time will cover three select Facebook pages operated by the City of Portland and will be framed around deliberative democratic principles vs. power dynamics of use. The agency pages I have examined are those of The Portland Police Bureau, The Portland Parks & Recreation Department, and The Portland Bureau of Transportation. These agencies/pages were selected due to the large number of posts within the collection timeframe and also because of their importance and impact to city government. Portland, Oregon has a reputation as being a model for promoting civic engagement and community building (Ozawa, 2004; Putnam & Feldstein, 2004). I am interested in determining if this legacy of civic participation extends to the city's social media presence as well.

This study used a mixed methods approach to answer the research questions. The majority of the analysis (posts) were qualitatively coded according to the descriptive

coding method (Miles & Huberman, 1994; Saldana, 2009; Wolcott, 1994). These codes categorize the posts for quantitative metrics such as cross tabulations and for further content analysis of instances of engagement between citizens and government as well as between citizens and other citizens.

Research Implications

There are three primary implications of this research. First, is that it provides a deeper understanding of SMS use in the Portland area and thus further informs best practices within the context of SMS use for local government agencies. Second, it can serve as a model for future researchers and governments interested in analyzing their own Facebook usage. Finally, it addresses the applicability of SMSs like Facebook as avenues for deliberative democratic practices specifically within the third-generation of deliberative democracy theories regarding institutional implementation.

Agencies Overview

The Portland Police Bureau (PPB) was initially formed as the Portland Metropolitan Police Force in 1870 by order of the City Council. As a progressive agency, the PPB was an early leader in a number of firsts including hiring America's first female police officer (1908), being the first police agency to use a police radio in the US (1919) and to install a radio transmitter (1932), and the first major police department in the US to have a female Chief of Police (1985) (Police Bureau, 2013a).

The PPB has three precincts: North, East, and Central covering 140 square miles and a population of 583,738 and employing over 1000 patrol officers (Police Bureau, 2013b). Adopting the Community Oriented Policing model, the PPB believes that strong

community involvement and ties are central to effective policing (Potter, 2012). The PPB has adopted technology including GIS crime mapping, social media, and an extensive website all for crime and information sharing. Of the three agencies I studied, the PPB had the highest number of posts with 1,541 and the highest number of user "likes" at 8,666.

The Portland Bureau of Transportation (PBoT) is responsible for planning, building, managing, and maintaining the transportation systems in the City of Portland. This includes everything from streets, sidewalks, bridges, traffic signals, and road signs to parking/metering and bike routes. The agency maintains $8.4 billion in infrastructure investments (Bureau of Transportation, 2013a).

High on the list of priorities for the PBoT is the design of pedestrian-centric traffic ways that improve and promote community-centric engineering. Building standards and permits are based on maximizing connectivity of vehicle, pedestrian, and bicycle ways:

> Connections should create short blocks, particularly in mixed-use areas of planned high-density development. Streets and pedestrian/bicycle accessways (where streets are not feasible) should connect to transit routes, schools, parks, and between and within residential neighborhoods and other activity centers (Bureau of Transportation, 2013b, para. 6).

The PBoT maintains an extensive website similar to that of the PPB in that there are a large number of resources available covering a myriad of related topics. While the majority of their Twitter and Facebook posts are traffic/alert related, there are also a number of images and videos (YouTube) of construction projects, status updates, and meetings/press videos. Out of the three agencies studied, the PBoT had the third highest number of Facebook posts with 165 and 207 user "likes."

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Finally, the Portland Parks & Recreation Department (PP&R) is responsible for all public parks and recreation facilities in the city. This includes 11,415 acres of recreational area covering 203 parks (parks, playgrounds, sports fields/facilities, golf courses, aquatic centers, etc.) 7,762 acres of natural areas (trails, gardens, and river beaches), and 221 acres of undeveloped land. They employ over 3,000 full and seasonal/part-time employees and manage over 474,709 hours contributed by volunteers (Parks & Recreation, 2013a).

Given the great interest in outdoor activities in the Portland area, the PP&R is one of the most visible agencies in the Portland area. Their organizational values and stated mission are on the promotion of safe parks and natural areas with a heavy emphasis on community building and involvement (Parks & Recreation, 2013b). Of the three agencies studies, PPR had the second highest number posts (756) and 4,202 user "likes."

Literature Review

This study is about deliberative democracy through social media. Traditionally, aggregative models of democratic theory focused on the decision or outcome of particular contests. This narrowing of the process of democracy down to a game of numbers whereby the minority must simply accept the will of the majority populates the early literature. From Wollheim (1962, p. 76) who suggests that the democratic process is a machine, "fed, at fixed intervals, the choices of individual citizens" to Riker (1982) who sees the process as a summing of preferences; it wasn't until the late 1980's when deliberative democracy shifted into focus (Dryzek, 2000). As Flynn (2011) puts it, "the focus of democratic theory has shifted from the 'what' question of decision making, to the 'why'" (p. 13).

At its base, deliberative democracy attempts to place democratic decision-making beyond simple voting and necessitates true deliberation and discussion between equal and largely uninfluenced affected citizens. It involves the deliberate communicative practice in which, "participants exchange arguments and counter-arguments and thereby become informed of the views of one another" (Wiklund, 2005, p. 705).

Bachtiger, et al (2010) , Elstub (2010), and Mansbridge et al (2010) describe three generations of deliberative democratic thought. The first generation includes scholars like Habermas (1990; 1994; 1985, 1995), Rawls (1997, 2005), and Cohen (1996, 1997) who set the normative justifications and interpretations for the theory. Second-generation theorists include Bohman (2000), Dryzek, (2000), Guttmann & Thompson (2004) and Young (2001; 2000) and extend upon the normative theory laid down by first-generation scholars by trying to account for the social complexity of a pluralistic society. Finally,

third-generation theorists including Bachtiger, et al. (2010), Baber & Bartlett (2005), O'Flynn (2006), Goodin (2000), and Parkinson (2006) have attempted to "...establish the nature of the institutions required to achieve this reconciliation in practice" (Elstub, 2010, p. 292).

Habermas (1990; 1994; 1985, 1995) suggested a new discourse-driven framework based on the principles of liberal and republican traditions of democracy. In it, he attempts to take the better features of the liberal and republican traditions and merge them into a political process that is, "public in nature and, at least partly, instrumental in purpose" (Wiklund, 2005, p. 704). Borrowing more heavily from the republican model, Habermas states that the republican tradition, "as compared to the liberal one, has the advantage that it preserves the original meaning of democracy in terms of the institutionalization of a public use of reason jointly exercised by autonomous citizens" (Habermas, 1994, p. 3). Unlike the liberal tradition that sees politics as private in nature and is based on negative liberties (citizens and their self interests should be free from government intervention), the republican tradition pursues positive liberties including political participation and communication. Habermas also takes the leap in suggesting that not only should discourse be between free and equal participants, but that those participants are, "required to take the perspective of everyone else, and thus project [themselves] into the understandings of self and world of all others" (p. 117).

However, Habermas also points out that the communitarian ("ethical constriction of political discourse [1994, p. 4]") slant that contemporary republicans tend to hold is ill-fitted due to it's basis in a shared ethical ideal, suggesting rather that the deliberative process should involve discourse to identify private self interests and values. "Such

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discourses are meant to allow one to discuss value orientations and interpretations of needs and wants, and then to change these in an insightful way" (1994, p. 4). Successful public deliberations result from objective legitimation and consensus through communicative rationality.

Rawls (1997, 2005), alternatively, takes the view that citizens private interests should be "eradicated from the process altogether" (Elstub, 2010, p. 293) such that it enables rational and reasonable action. To Rawls, successful public deliberation is based more on justice than it is on legitimacy. "Justice is achieved when people unanimously and voluntarily consent, in fair circumstances, to bind themselves to the application of certain principles of a political order, which are then bound in a constitution" (Elstub, 2010, p. 293).

To both Rawls and Cohen (2009), it is the strict definition of public reason through procedure that enables fair deliberative agreement centered around the notion of a public good:

> When properly conducted, then, democratic politics involves *public deliberation focused on the common good*, requires some form of *manifest equality* among citizens, and *shapes the identity and interests* of citizens in ways that contribute to the formation of a public conception of common good [emphasis in the original] (Cohen, 2009, p. 18).

Notions of justice and fairness in typically formal political institutions are central to the positions of Rawls and Cohen.

Second-generation theorists build off the foundation laid by the previous generation but attempt to account for the complexities of pluralistic societies and to address deficiencies in questions of inclusion and scale of participation. "In the second-generational view reasons are public and successful if citizens are willing to accept the

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resulting majority decisions, or if these decisions are at least sufficiently acceptable that citizens continue to participate in deliberation" (Elstub, 2010, p. 294). Bohman (2000) terms this "plural agreement" (p. 34) while Gutmann and Thompson call it "deliberative disagreement" (p. 73).

Young's (2001) primary concern with first generation theorists is the limiting of inclusivity dictated by narrow definitions of not only what constitutes discourse but also the forums and forms through which they take place. Drawing upon the juxtaposition of public deliberative institutions against that of the dissatisfied and action-prone activist, Young suggests an alternative take on existing deliberative models. While activist actions are both interest based and unreasonable (by definition), they are still essential to a well-functioning democratic society (Platt, 2008). Such positions, when recast within the terms of deliberative democratic theory, become simply alternate means of participation:

> We can conceive the exchange of ideas and processes of communication taking place in a vibrant democracy as far more rowdy, disorderly, and decentered, to use Habermas's term. In this alternative conceptualization, processes of engaged and responsible democratic communication include street demonstrations and sit-ins, musical works, and cartoons, as much as parliamentary speeches and letters to the editor (I. M. Young, 2001, p. 688).

Next to inclusion is the matter of scale in deliberative democratic practice. Idealized institutional forums for deliberative democratic practice present an obvious issue in terms of practicality of scale. Habermas and Rawls seem to view necessary participation through large forums where all participants are gathered and engaged (though Rawls suggests such levels of participation are only necessary for constitutional issues of "basic justice" [2005]).

Dryzek (2005) states that this approach is impossible and offers three alternatives: 1) that deliberative democratic practices be limited in scope and topic; 2) that the number of participants be limited in some way (primarily through representation); and 3) an idea suggested by Robert Goodin (2000) in which members who do participate keep in mind the interests of those who do not.

Goodin also proposes another solution to the issues of "time, numbers, and distance" (p. 83) whereby participating members, "alter…focus from the 'external-collective' to the 'internal-reflective' mode, shifting much of the work of democratic deliberation back inside the head of each individual" (p. 83). However, Goodin realizes that internal-reflective deliberations lacks democratic legitimacy and suggests that it be used as a supplement to external-collective measures and validation.

Finally, third generation theorists attempt to institutionalize the deliberative process through micro and macro frames:

> Micro deliberative democracy focuses on ideal deliberative procedures, in small-scale structured arenas within the state, orientated to decision making, with impartial participants deliberating together in one place and at one time. Alternatively, macro deliberative democracy favours informal, unstructured and spontaneous discursive communication, which occurs across space and time, aimed at opinion formation, within civil society, outside and often against the formal decision-making institutions of the state, with partisan deliberators (Elstub, 2010, p. 299).

Each third-generation author frames their approach differently yet presents macro and micro approaches to the institutionalization of deliberative democracy. Be it in micro structures like citizen juries, consensus conferences (Baber & Bartlett, 2005; Parkinson, 2006) and consociational decision making (O'Flynn, 2006) to macro structures like the deliberative interplay of social, media, and government organizations.

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Macro approaches primarily focus on resolving matters of scale through subsets of deliberative forums. Such forums include parallel deliberation (Flynn, 2011), ersatz deliberation (Goodin, 2000), or disjointed/distributed deliberation (Goodin, 2005) and all rely, in one form or another, on reducing the number of people participating in a deliberative forum at any given time. Parallel deliberation dictates that all individuals participate in smaller subsets in order to increase deliberative quality. These subsets then participate in a subset aggregation method such as voting. Ersatz deliberation uses paid elected deliberators who represent larger bodies of individuals. Disjoined deliberation builds off parallel deliberation but allows for subgroups to be linked so that preferences and perspectives can be transmitted between groups. Similar to disjoined deliberation, distributed deliberation takes disjoined groups and divides the deliberative labor amongst the disjoined groups so that each group becomes responsible for a particular phase or topic in a sequenced deliberative process (Flynn, 2011; Goodin, 2005).

Unfortunately, while these methods do make advances in dealing with the issue of scale, they introduce information/participative transmission issues into the mix. While each step builds off the previous in attempting to mitigate practical and participative issues, it has been noted that in order to do so, some ideal deliberative criteria may not necessarily have to be completely satisfied (Goodin, 2005; J. Mansbridge, 1999).

Social Media in Government

For the purpose of this study, a discussion of deliberative democratic practices through social media would be void without also identifying how social media is currently being used by government agencies. While the literature on this topic is quite rich, included here are the pieces deemed most relevant to this research.

With such a wealth of interactivity occurring in the social media realm, government agencies have, to varying degrees, integrated social media strategies into their e-government initiatives. Citizens want to interact with their governments online and in the social arena but governments must not only be present and competent with such technologies; they also need to address digital service design, measure of effectiveness, and digital service efficiency concerns (Chang & Kannan, 2008).

As Bertot, et.al. (2010) states:

> …social media has four major potential strengths: collaboration, participation, empowerment, and time. Social media is collaborative and participatory by its very nature as it is defined by social interaction. It provides the ability for users to connect with each and form communities to socialize, share information, or to achieve a common goal or interest. Social media can be empowering to its users as it gives them a platform to speak. It allows anyone with access to the Internet the ability to inexpensively publish or broadcast information, effectively democratizing media (p. 266).

These four attributes make social media platforms a potential avenue for deep collaborative and participatory interactions between governments and citizens, often under the umbrella term of e-participation. Leadbeater and Cottam (2009) suggest that a 'user-generated state' driven by social media sites can fundamentally change the relationships between citizens and their governments.

Unfortunately, some of the existing literature shows that the majority of local governments perform poorly when measured against using digital technologies for anything beyond one-way communication with citizens (Holzer, Manoharan, Shick, & Stowers, 2009; Scott, 2006). There doesn't appear to be a cohesive strategy in which government agencies are using social media. Many appear to be applying social media strategies in an ad hoc manner and the issues of adaptation of a new technology have

presented institutional and organizational culture dilemmas (Criado, Sandoval-Almazan, & Gil-Garcia, 2013; Fountain, 2004, 2013; Gil-Garcia, 2012).

Yet despite the challenges, there exists significant literature on the goals and topics of social media use in agencies. At the federal level, and often cited as one of the initial sparks that injected social media use into government agencies nationwide, was President Obama's transparency and open government goals of increased participation, collaboration, and transparency (Lee & Kwak, 2012).

The rise of social media in government and political spheres has been an ongoing and ever increasing phenomenon for close to a decade now (John Carlo Bertot, Jaeger, & Hansen, 2012). From local, state and national government agencies, all types of government and political entities have realized the advantages (and sometimes embarrassing disadvantages) of social media as a publicity, transparency, and outreach tool. As we might expect, the same social media platforms that are popular with personal use are also the most predominant in use by government agencies (Bridges, Appel, & Grossklags, 2012; Kavanaugh et al., 2011; Landsbergen, 2010; Snead, 2013).

Framed within the academic realm of information and communication technologies (ICTs), social media in government has frequently been assessed within the context of transparency initiatives (John C. Bertot et al., 2010; John Carlo Bertot, Jaeger, & Grimes, 2012; Bonsón, Torres, Royo, & Flores, 2012; Jaeger & Bertot, 2010; Mergel, 2012; O'Reilly, 2010b), digital policy adaptation and formulation (John Carlo Bertot, Jaeger, & Hansen, 2012; Klang & Nolin, 2011) and e-participation initiatives (Dolson & Young, 2012; Effing, Hillegersberg, & Huibers, 2011; A. Macintosh & Whyte, 2008).

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Transparency

Transparency initiatives are one of the predominant factors for government

adoption of social media. With significant encouragement by the Obama administration,

federal, state, and local governments have used social media as a virtual window (albeit a

somewhat frosted one) into the working of their agencies.

Bertot, Jaeger & Grime (2010) assessed the social and cultural impact of using

ICTs as anti-corruption measures and identified five long-term strategies for governments

(p. 269):

1.   Develop measures of transparency.
2.   Develop transparency "readiness" criteria.
3.   Evaluate existing systems for portability and expansion.
4.   Reuse rather than reinvent.
5.   Create and invest in collaborative pilot projects.

The authors point out that even with these transparency strategies, there always must

exist a culture of transparency within the governance system to facilitate these strategies.

Jaeger & Bertot (2010) assessed the Obama administration's push to use

technology as a means of transparency and found that technology changes and policies

have outpaced the human dimensions of transparency. Issues of technological access,

information overload, and information competition continue to present problems. They

suggest that government transparency policies (of which social media often falls into)

take into consideration the basics of access and understanding:

> In the case of the United States, the technological changes that can be used to
> promote transparency seem to be outpacing not only the ability of many members
> of the public to interact with government information through technology, but
> also the awareness of and commitment to transparency in some government
> agencies (p. 375).

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Akin to Jaeger & Bertot's analysis of the Obama Administration open

government policies, Harrison, et al. (2012) also took on this key initiative. However,

they suggest that the open government movement:

> …reconciles the divergent paths of e-democracy and e-government…by creating shared understandings of current performance and generating pressure to improve, increasing the pool of applicable ideas, tapping into new sources of expertise, and building civic capacity" (p. 95).

Along with this suggestion, they created a public value assessment tool consisting of six

steps designed to help assess the open government initiatives of an agency in terms of

mission and public value.

Bertot, et al. (2012) subsequently conducted an ICT study assessing how websites

and social media affect government transparency and corruption and found that

governmental use of social media can (p. 86):

1. Promote democratic participation and engagement.
2. Facilitate co-production of materials between governments and members of the public.
3. Crowdsource solutions and innovations

The authors stress that these new technologies should largely be seen as tools for

transparency in the arsenal of governments and not as solutions to corruption in-and-of

themselves.

Bonson et al. (2012) looked at social media and Web 2.0 use in the EU to

determine if local governments are using the technologies to increase transparency and e-

participation. They found that not only are governments adopting and using Web 2.0 and

social media heterogeneously, but also that most are using them to enhance transparency.

Bonson, et al. also found that these same governments are not using the technologies to

enhance e-participation.

Mergel (2012) assesses transparency within the context of big data availability and web & mobile apps. Building off O'Reilly's (2010a) government as a platform typology, she identifies ten drivers of reusing public information as well as ten barriers. The key challenge in harnessing big data for transparency is making that data accessible and digestible:

> Government agencies collect vast amounts of data in many areas. The government is now making these raw datasets accessible so that people and organizations, *civic hackers*, can reuse these data to create purposeful applications that are of value to the public (pp. 211-212).

Policy

While many governments have adopted social media as a means of transparency and greater communication, such adoption has outpaced many policy changes necessary for governing their adoption and use. Bertot et al. (2012) have identified a number of federal level policy gaps that fall into three categories: access and social inclusion; privacy, security, accuracy, and archiving; and governing and governance. Within these categories exist a myriad of policy questions and gaps that go unanswered by existing information policies.

In slight contention with social media as a transparency initiative, Klang & Nolan (2011) suggest that many governments are using social media constrained within the context of traditional regulatory frameworks emphasizing openness and transparency instead of citizen interaction:

> … the focus of these policies has been to discipline social media based on an analog world view where the basis for control is enacted through a system of command–and–control type regulation. This approach has led to a hobbled social media where many of the main advantages are lost (110).

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Yet despite the somewhat lagging policy formulation for regulating social media use, a number of authors (Bailey, C. & Singleton, 2010; John Carlo Bertot, Jaeger, & Hansen, 2012; Hrdinová, Helbig, & Peters, 2010) have identified a significant number of policy goals that public agencies have including: "openness, transparency, citizen participation, policy effectiveness, managerial efficiency, cost savings, good governance, and public employee and citizen satisfaction" (Criado et al., 2013, p. 321).

The National Survey of Social Media Use in State Government provides some particularly interesting insights into state government social media use (Bailey, C. & Singleton, 2010, p. 5):

- Social media adoption rates are broad across state governments, whether controller CIO offices or not.
- Two-thirds of survey respondents lack enterprise policies addressing social media.
- One-third of the states responding do have enterprise policy frameworks, guidance, and standards, and a sizable number of states are in the process of developing these.
- Business drivers have most commonly been communications, citizen engagement, and outreach, along with low-cost of entry – 98% of use is of free social media tools.
- Social media pose challenges to states in the areas of:
  - o Security
  - o Legal issues associated with terms of service
  - o Privacy
  - o Records management
  - o Acceptable use
- Thirty-five percent of responding states are not currently encouraging broader use of social media.

Social media is being used and actively adopted across the country, but unfortunately most states do not have set policy guidelines for its use. Legal and security issues abound and are causing a number of states to progress slowly or even stop further social media penetration.

e-Participation

Finally, e-participation is a significant area in which much academic research has been conducted. Effing, et al (2011) conducted an extensive literature review of social media in government and found that the majority of papers focused on citizen participation, followed by use and behavior, and finally on community, politics and democracy. In defining social media and participation, Effing, et al. suggests that, "participation seems to be the key concept that explains the difference between 'old' web and 'new' Social Media, although basic tools for interaction such as chat and forum where available in the early days of the World Wide Web" (p. 28).

In a departure from the classic participation ladder outlined by Arnstein (1969), Macintosh (2004) outlines her own levels of e-participation as: e-enabling, e-engaging, and e-empowering. E-enabling describes the provisioning and accessibility of a multitude of technologies that span the broad range of citizen technological and communicative skills. E-engaging utilizes the technologies from e-enabling to facilitate deliberative discussion and dialogue between government and citizens through technology. Finally, e-empowering supports, "active participation and facilitating bottom-up ideas to influence the political agenda…its idea should lead to the transformation of the communities which are involved" (Khasawneh, Abu-Shama, & Rabayah, 2014, p. 16).

Phang & Kankanhalli (2008) describe four general objectives of citizen participation: information exchange, education and support-building, decision-making supplement, and input probing. They find that there is no single ICT that satisfies all four objectives and that a combination of technologies can be implemented to complement each other in order to achieve the desired objectives.

However, Magro (2012) has identified key themes that have emerged over the past recent years in the academic literature (p. 150):

- 2007-2008: Digital divide as a barrier, citizen trust, case studies (experimentation)
- 2009: Identifying key issues, need for strategy/policy.
- 2010: Participation/digital divide, prescriptions for success, case studies (success).
- 2011: Tools of change, disaster management, prescription for strategy & policy

The evolution of social media's emergence in the literature seems to consistently be focused around a "best" or "ideal" means of using the technology. Magro suggests that there is no one best way to "do" social media. Rather, it is dependent upon the agency's policies, politics, openness, and culture.

Deliberative Democracy in Social Media

While there is extensive research in government use of social media in general, the literature on deliberative democracy and social media is quite sparse. In fact, I was only able to find a single paper, a theoretical analysis by Rishel (2011) that specifically assessed deliberative democracy and social media. However, there are some works on deliberative democracy and Internet communication technologies (ICT). Such works are broader in scope than strictly social media technologies but they have been included below.

Rishel (2011) conducted a theoretical analysis on normative concerns of social media in the deliberative process also using Young's (2000) model and suggests that social media, "reif[ies] existing systems of dominance while continuing to silence marginalized perspectives through implicit structures of technologies..." (Rishel, 2011, p.

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428). Rishel seemed particularly concerned about the "intrinsic values of difference and the other" (p. 428), stressing that not only might social media hide the social complexities (for the sake of efficiency and consensus) identified by second-generation theorists, but also runs the risk of devaluing the intrinsic value in the deliberative process.

Wiklund (2005) looked at all 289 Swedish municipal websites and qualitatively assessed them for support of deliberative democratic ideals (specifically from a Habermasian perspective) and found that:

> The ICT-enabled services existing today can be viewed only as marginal supplements to the established institutions. The services are found typically in the preparative stage of the policy process and they have no decision-making power. And even though ICT-enabled services have a democratic potential, the services available today support the realization of deliberative democratic ideals only to a limited extent (Wiklund, 2005, p. 718).

Dahlberg (2001), while using Habermas' public sphere as his theoretical lens, conducted a case study of Minnesota E-Democracy, an online public interaction system. In it, he identifies the challenges of online deliberation juxtaposed against the ideal of Habermas' discursive democracy. He seems particularly concerned about the influence of corporate entities in the online world as well as the lack of reflexivity, role taking, sincerity, inclusion/equality, and autonomy. Despite the challenges he identifies, he goes on to detail substantively how the Minnesota E-Democracy initiative has addressed those issues:

> It has done this through the use of e-mail lists, the formalization of rules and guidelines, the careful management of the forum, the development of self-moderation, and the focus on issues located within a geographically bounded political jurisdiction (Dahlberg, 2001, p. 624).

Adoption

Ines Mergel (2010) has identified three types of adoption: push strategy, pull strategy, and networking strategy. The push strategy is simply an extension of traditional static one-way modes of communication. Broadcast in nature, the goal largely is "to get the message out" (Mergel, 2010, para. 9). The pull strategy takes active steps to include audiences in some form of interaction to elicit feedback and engagement. Finally, the networking strategy involves a high degree of participation, strategy, and engagement on the part of the agency. The goal of the networking strategy is a deep connection and understanding of followers and their issues, concerns, and feedback.

While a number of social media platforms exist, there are definite niches and major players in the social media market. By far the most popular platform is Facebook, which boasts 1.3 billion active monthly users (StatisticBrain, 2014a). Facebook provides many levels of online social interaction and services including "friend" networking, posting multiple forms of content, photo libraries and storage, third-party application integration, advertising platforms and tools, and much more.

Other popular social networks like Twitter are also frequently used by government agencies and political figures. Twitter has roughly 650 million active users (StatisticBrain, 2014b) and unlike Facebook, only allows users 140 characters per post/tweet. Twitter's popularity can be seen in its extensive use by the Obama administration and by a wide variety of politicians and government agencies (Metzgar, Ph, & Maruggi, 2009; Straus, Glassman, Shogan, & Smelcer, 2013).

While there are many popular social media networks, this research focuses on the use of Facebook because of its near-universal adoption by government agencies active

within the social media sphere. The popularity and breadth of Facebook as a social media platform by the general public and business is fairly obvious and needs little introduction. However, government adoption of the medium is not quite as clear-cut. While there is little doubt that countless government entities have adopted social media, the question of how and why continues to be researched.

Conceptual Framework

The conceptual framework for this research is based on Iris Marion Young's (Young, 2000) model for deliberative democracy. Young approaches her analysis from a critical theory perspective that "articulates and defends principles which … best express ideals of democratic politics in which citizens try to solve shared problems justly" (p. 10) through the identification of dissatisfaction and frustrations of normative democratic practice.

To that end, Young outlines four basic normative ideals for any deliberative democracy process: inclusion, political equality, reasonableness, and publicity. These criteria suggest that an ideal democracy will consist of "a process of communication among citizens and public officials, where they make proposals and criticize one another, and aim to persuade one another for the best solution to collective problems" (p 52). Using this ideal as a framework, I will be using Young's model to juxtapose agency Facebook usage to determine if each either is-or-can-be used in a deliberative democratic manner.

The primary underlying premise of Young's model of deliberative democracy is that the four ideals all facilitate discourse as a function of decision-making. Because it is unknown if any of the agencies in this study actually take social media contributions as

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inputs to actual decision-making, this study will assess social media communication against the ideal that such communication *can* be used as inputs for decision-making, not necessarily that they are being used as such.

Inclusion

Young recognizes a democratic decision as being "normatively legitimate" (p. 23) when all who are affected by the decision are included in the discussion and decision-making process. She details the meaning of "affected" by saying that decisions and policies should "significantly condition a person's options for action" (p. 23). Inclusion is a necessary prerequisite for a deliberative democratic process that necessarily, "requires openness to a plurality of modes of communication" (p. 12).

The primary goal of any large-scale social media network, Facebook included, is to have as many active users as possible. It is the user activity that gives the network its value and thus barriers to inclusion are, by design, extremely low. Users simply need a computer or mobile device, Internet access, and an email address. Once registered the user can generally follow or like any page they wish. While page owners do have the right to remove user content and ban certain users from participating in posts and comments on their pages, this limiting behavior does not appear to be happening in the pages studied here. As such, in terms of public inclusiveness on Facebook, I feel that in so far as Young defines it, this criterion is meet by the very architecture of popular social media sites in general and on Facebook in particular.

Political Equality

"Not only should all those affected be nominally included in decision-making, but they should be included on equal terms" (p23). Here, Young explains attributes of political equality to mean that each person should have the same opportunities to question and be questioned, to criticize and be criticized, and have equal opportunity to speak and be heard. She stresses that these conditions can be met when participants are free from domination, coercion, and threats.

While no online social network can guarantee an open forum free from threats or coercion, thread moderation and rules can describe permissible behavior and outline what kinds of speech are threatening and coercive. However, given the context of online communications, threats made over social media sites are often not as direct and immediate as those made between people of close physical proximity. As such, there is a layer of abstraction inherent in using digital communications to facilitate deliberative discourse that serves as a form of protection against coercion and threats. Combine this with the immediate administrative effects of banning users or deleting threatening comments/posts, and social media facilitated discourse becomes a very viable means of protecting political equality when not abused by those with administrative powers.

Reasonableness

In Young's model, reasonableness speaks more to participants' dispositions rather than to the quality of their ideas. "To be reasonable is to be willing to change our opinions or preferences because others persuade us that our initial opinions or preferences...are incorrect or inappropriate" (p. 25). In short, reasonable participants must

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come to deliberation with an open mind and eschew clinging to predetermined ideology or norms.

This criterion is, perhaps most obviously, the biggest challenge facing social media sites as engines of deliberative discourse. Reasonableness is not a criterion that is supported or suppressed by social networks. Rather it is a criterion that is inherent in the users of the system. The network itself is agnostic in terms of the content that comprises it. As such, to determine if this criterion is being met, we have to look deeply at the discourse occurring between users and agency administrators. Whether reasonableness is found or not, the social network simply serves as the medium through which discourse is facilitated.

Publicity

When disparate participants of a polity come together for deliberative decision-making, they form a public to which each is held accountable. The process of expressing ideas, histories, interests, and backgrounds to the public should encourage cohesive narratives for the purposes of persuasion and understanding with the public. It should at least be understandable and acceptable in terms of claims and reasons regardless of public agreement. The point being that within a person's stance or perspective on an issue, they must be able to make a public case for allowing others to understand not only their position but also why they hold that position. The combined understanding of multiple perspectives forms a plurality of the public through which every participant is subject.

Here we can see that social media sites like Facebook provide beneficial assistance in bolstering publicity of individual's perspectives and histories. Each user has

their own Facebook page that not only outlines their affiliations and interests but also maintains a history of posts, comments, likes, and other behaviors. Such a history is not easily possible in real-world deliberative discussions and provides a unique tool for participants to gain a better understanding of a person and their position on a particular issue.

Applying Young's Model

Young's deliberative democracy model provides a useful framework for assessing social media pages and their conduciveness to facilitating at least a moderate demonstration of deliberative democracy principles. While most SMS platforms like Facebook are not designed as deliberative democracy frameworks, claims about their possibilities to foster the deliberative democratic process have been made (Bertot et al., 2012; Panagiotopoulos, Sams, Elliman, & Fitzgerald, 2011; Rishel, 2011).

In this research, I addressed agency posts and user comments to ascertain if Young's criteria are being meet and to what extent. My analysis was between agency and user as well as user-to-user interactions. While the majority of communicative interactions in my data are one-way (agency-to-user) and thus not significantly valid for analysis, there are a number of relevant interactions that do warrant analysis. A number of substantive interactions were selected and qualitatively assessed to determine if the overall interaction qualifies as meeting any of Young's criteria. Once all significant interactions were assessed, an analysis was conducted in an attempt to identify change factors that might enhance future interactions.

Personal Interest

I have been a web application developer/software engineer for roughly ten years now. I have worked for a number of well-known companies large and small and have been involved in numerous software and development technologies. My background includes certifications and training in UNIX/Linux system administration, computer security and forensics, virtualization technologies, and web development. I am currently employed as the Director of Development for a marketing and promotions company called Pop2Life.

My technical history is reflective of my interest in technology, but my academic history shows my passion for the study of government, society, and equality. Throughout my academic career, I have focused on the interplay of technology and government with particular interest in how governments adopt and use technologies. Early on, this interest was in issues of adoption and acquisition, particularly surrounding open-source software and web technologies (portals, e-government, SMS, etc.). However, as my academic career progressed, my focus shifted to matters of equality through technology. I began to take a more critical look at how governments were using the technology they adopted with a particular eye towards actual vs. "suggested" uses.

Methods

Klang and Nolin (2011) have demonstrated that many local government agencies

formulate SMS policy based on traditional regulatory frameworks instead of policies

designed to increase interaction and engagement:

> The general tendency in all material is that routines of command and control are
> established in order to create clear goals and practices for individual social media
> activities and thereafter to discipline social media activities to remain firmly
> within the intentions of the blueprint (¶ 1).

This finding is not dissimilar to my own previous research findings where

government SMS use in the Phoenix, Arizona metro area was found to maintain an

authoritative "speaking from power" position. My research on the Phoenix case was

exploratory in nature and assessed not only post content but also attempted to determine

if any type of active engagement was occurring. In that research, "engagement" was

defined as any instance where a post from a public user was addressed by an agency

representative. The results of this analysis were framed against David Farmer's (2003)

three layers of public administration reality to determine power relations of Facebook

usage[1].

Building on that previous study in the Phoenix Metro area, this research covers

three select Facebook pages operated by three agencies within the City of Portland,

Oregon: the Police Bureau, the Bureau of Transportation, and the Parks & Recreation

Department. These agencies/pages were selected due to the large number of posts within

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[1] Farmer describes three layers of public administration (PA) reality in which speaking-from-
power is dominant: the transparent, disciplinary symbolic, and cloacal. The transparent layer represents the
"visible" elements of PA including language, building architecture, and organizational structures. The
disciplinary symbolic layer represents the symbols of PA including language and discourse. The cloacal
layer represents the cleansing of society through the definition (and thus acceptability and normality) of
truth as defined by those who speak from power.

the collection timeframe and also because of their importance and impact to city government. Portland, Oregon has a reputation as a model for promoting civic engagement and community building (Ozawa, 2004; Putnam & Feldstein, 2004). The City of Portland was also ranked highly in levels of digital interactivity with citizens (Mossberger, Wu, & Crawford, 2013). I was interested in determining if this legacy of civic participation extends to the city's social media presence as well.

Research Questions

My primary research questions are centered on the use of SMS by agencies and bureaus within the City of Portland. I paid particular attention to differences and commonalities among the pages of these agencies. These results were assessed within the deliberative democracy model put forth by Young. In this context, I explored three research questions:

1. How are the three agencies using SMS in terms of post content and frequency?

2. What is the impact of post content and frequency on the type of feedback received through SMS?

3. Do the SMS sites operated by the agencies fit within Young's deliberative democracy model (model criteria) and if so, are the agencies using the sites in a manner consistent with Young's model (application criteria)?

Methods

This study used a mixed methods approach to answer the research questions. The majority of the analysis (posts) was qualitatively coded according to the descriptive

coding method (Miles & Huberman, 1994; Saldana, 2009; Wolcott, 1994). These codes helped to categorize the posts for quantitative metrics such as cross tabulations and for further content analysis of instances of engagement.

Data Collection

Data collection was facilitated through a custom web application that used the Facebook Graph application programming interface (API) provided by Facebook to automatically collect content for all targeted sites beginning June 1, 2012 and ending May 31, 2013. The application took all posts, likes, and comments and entered them into a MySQL relational database.

The script was written in the PHP programming language and used Facebook's official PHP software development kit (SDK). Each agency Facebook page has a unique uniform resource locator (URL) that was passed into the initialization of the SDK. With each request made to the API through the SDK, relevant JavaScript object notation (JSON) objects were returned. This returned data was parsed and used to insert data into the relational database for this research.

The very first API request made by the script was to gather information on each agency page itself. Some of the returned information includes the page name, organization information, contact information, and general statistics like check-ins and like counts. Next, a loop cycled through each agency page and pulled post information fitting the data criteria specified above. For every post returned, more API requests were made to gather comment and like information. These sub-requests returned actual user account information and thus were programmatically filtered to only store the unique Facebook ID and no name or contact information.

After every API request made, data relevant to this research was stored in appropriate relational tables with keys set on profile and post IDs thus ensuring relational integrity of the data and making subsequent analysis easier. Verification of data is implicit in the collection method since the official Facebook Graph API was used though periodic manual verifications were made.

Analysis

Analysis of the data was done through a custom web interface that allowed for easy viewing, searching, categorizing and coding of the collected data. Each individual post was given a first-order descriptive code based on the content of the post. During the coding phase, all posts and comments were read and assessed for descriptive codes as well as for significant interactions between agencies and users. The custom web interface also allows for the flagging of interactions of interest. This allowed me to know what interactions contain interesting dynamics or content for further analysis against Young's model.

After first-order coding was complete, database queries were run that broke up each agency/bureau's Facebook page into statistics based on code and agency as well as comment and post counts. From here, a cross-agency analysis was conducted to compare codes and general metrics. This analysis gave insight into how each agency uses Facebook and helped to inform later analysis of flagged interactions.

Finally, I applied Young's deliberative democracy model to each agency's overall post and comment analysis to determine how each is using their Facebook page within the context of Young's model.

Coding

The application of qualitative codes to each post was done according to the descriptive coding methods described by Saldana (2009). Each post was given a single code based on the descriptive qualities of the post. Codes used in previous research (Hand & Ching, 2011) were used as the starting point for codes used in this research. Throughout the coding process, numerous codes were added and some previous codes were never used.

After all coding was complete, nineteen distinct post types were found:

Code	Description
Alert/Caution	A post with a sense of urgency or immediacy typically involving a dangerous situation or hazard.
Art/Entertainment	Activities and events related to art and professional entertainment.
Call to Action	A specific request asking followers to perform some kind of action or participate in some kind of activity. Input requests are not included in this category.
Community Event	A generic event category for all other events not related to other event categories. Park/building grand openings, health clinics, holiday celebrations, and so on.
Contest	A post that advertises or seeks involvement in a contest operated by the primary account holder.
Economic Development	Business and commerce related posts. New business openings, for-profit events exclusive of other categories, promotion of commerce, and so on.
Educational	Events, classes, or programs that teach a skill or are of particular educational value. History classes/events, gardening classes, swimming lesson programs, and so on. The impetus was on something learned vs. simply participating for entertainment.
Employment	A post that announces government employment.
Input Request	Specific requests for public input either directly through Facebook or other channels.

Meeting/Gathering	A post that announces a public meeting or gathering where the primary purpose is public dialogue and discussion. Distinct from educational and community event posts. These events typically involve topics of discussion in a moderated or controlled environment.
Public Announcement	Generic category for all other announcements. Road closures, activity suggestions, general publicity statements, and so on.
Public Help	A request for public help but not a specific request for input. Help is of a non-economic or volunteer nature.
Public Recognition	A post that specifically thanks or recognizes civic involvement and participation by members of the public.
Public Response	A post that is a direct response to a question or comment posted on the primary account page from a user.
Public Safety	Relating to police, fire and general public safety. Generic public safety category for posts that do not fit in other categories.
Public Support	A post that appeals to the public for support. Specifically financial or volunteer/time based.
Selfie	A post that highlights the agency or agency-related functions. Typically pointing out a positive experience, event, or accomplishment that seeks to augment the public's perception of the agency.
Tragedy/Loss	Posts related to tragedy or loss from criminal, accidental or terrorist events. Includes memorial and solidarity posts.
User Generated	A top-level post generated by a user other than the account administrator. Some cities allow users to post at this level.

Table 1 - Codes & Descriptions

It is important to note that there were a significant number of posts that could have been coded into multiple categories. While many posts were quite brief and to the point, a number of posts were highly dynamic in content and spoke to a multitude of descriptive codes. Such complex posts were coded according to what was deemed to be the most significant purpose of the text. Consider, for instance, this post:

> Tweet about it! The FREE annual Festival of the Birds is flying our way! Come to PP&R's Sellwood Park and Oaks Bottom Wildlife Refuge this Saturday, May 11, to celebrate our wonderful winged friends. Thanks to generous donations from from SMILE (Sellwood Moreland Improvement League), US Fish & Wildlife, Teragon Associates, and a few private individuals, there will be PP&R Environmental Education staff to run FREE activities for kids, adults, and

families focusing on birds. Please join us for a day of bird walks, bird music, bird dancing, bird crafts, and bird fun. Contact [name removed] at [number removed] for more information (Post ID# 3359).

This post has elements of Educational, Public Recognition, and Community Event codes. However, the primary purpose and focus of the post is to announce a community event.

Additionally, there were some posts that were very generic in content and description and thus didn't clearly fit within any shared or meaningful code. These posts were coded as the generic "Public Announcement" type. An example was the post "Part of Eastbank Esplanade closes for 14 months | News | The City of Portland, Oregon" (Post ID 4497). While this post was of a shared story type, coding it as something like "Road Closure" would not have provided any meaningful insight into these post types as a whole.

Validity

Threats to validity include three issues: Incorrect coding of posts, narrow scope of analysis, and programmatic failure.

Incorrect Coding of Posts

As demonstrated previously (Hand & Ching, 2011), by keeping the unit of analysis at the post level, it is likely that a post can fall into more than one descriptive code/category. Proper discretion and coding rules have likely mitigated most conflicts but the possibility still exists that some posts were miscoded thus leading to incorrect quantitative metrics and conclusions. I followed a standard set of coding criteria for all posts.

Narrow Scope of Analysis

While coding of posts is critical in determining agency use and intention, comment coding would also provide significant insight into citizen-to-citizen and citizen-to-agency social media use. Such analysis could include indicators of deliberative democracy as outlined by Young. While this research does analyze comments for content, it does not apply a standard coding criteria to all comments and thus could have missed significant themes in agency post comments and interactions.

Programmatic Failure

Because I used a custom built and designed application to collect, organize, code, and store all collected data, the possibility exists that coding errors may have caused incorrect results or even data loss. A mitigating factor for this threat is my years as a web application developer. I have built and worked on a large number of critical applications in my career and thus am confident in my abilities to code, error check, organize, and store collected data securely and accurately.

Case Study 1: The Portland Police Bureau

The PPB had a relatively large number of posts (1,541). Likewise, they had by far the largest number of comments at 5,754. Their Facebook page itself, at the time of data collection, had 151 check-ins, 8,666 likes, and did not allow members of the public to post on their wall.

Post Frequency and Timing

Taking a deeper look at the posts by PPB by hour of the day, day of the week, and month, we can gain an insight into posting behavior and frequency.

Number of Posts by Hour of the Day - PPB
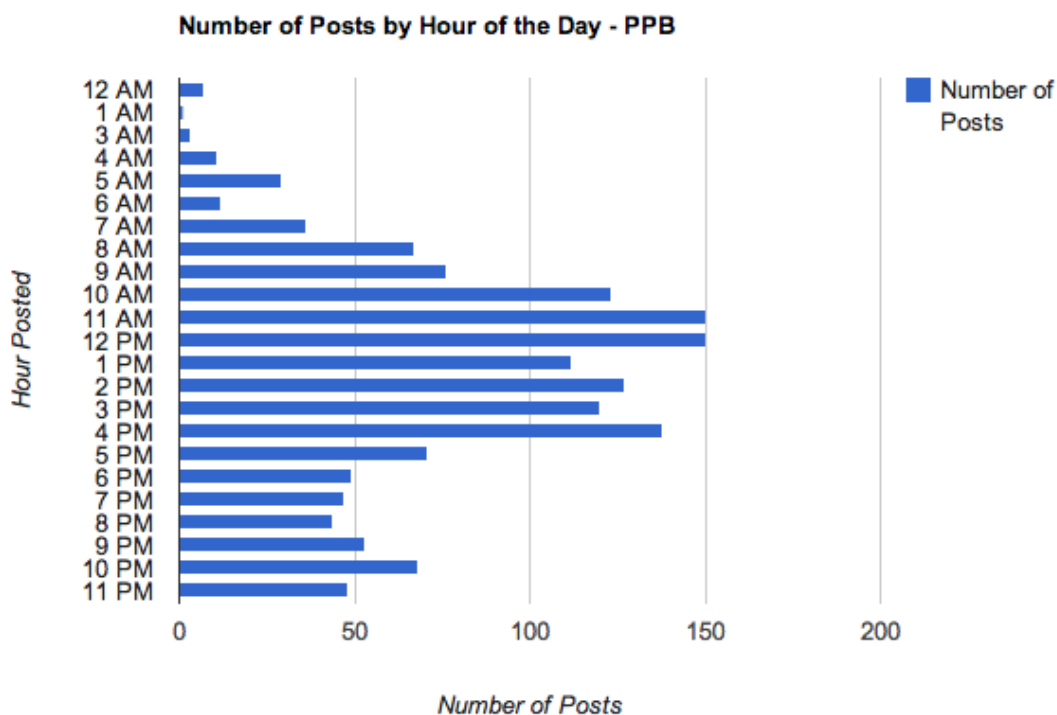
Figure 1 - Posts by hour of the day – PPB

As we can see in Figure 1, the vast majority of posts are posted between 10:00 AM and 5:00 PM with some moderate activity into the late evening and activity all but tapering off in the early morning hours. Of the three agencies, the PPB had the greatest

number of posts in the evening hours. This would be consistent with the 24/7 nature of police work. It would also suggest that more than one person is in control of posting Facebook content.

Number of Posts by Day of the Week   - PPB

Sunday - 120 (7.8%)
Monday - 213 (13.8%)
Tuesday - 264 (17.1%)
Wednesday - 284 (18.4%)
Thursday - 292 (18.9%)
Friday - 244 (15.8%)
Saturday - 125 (8.1%)
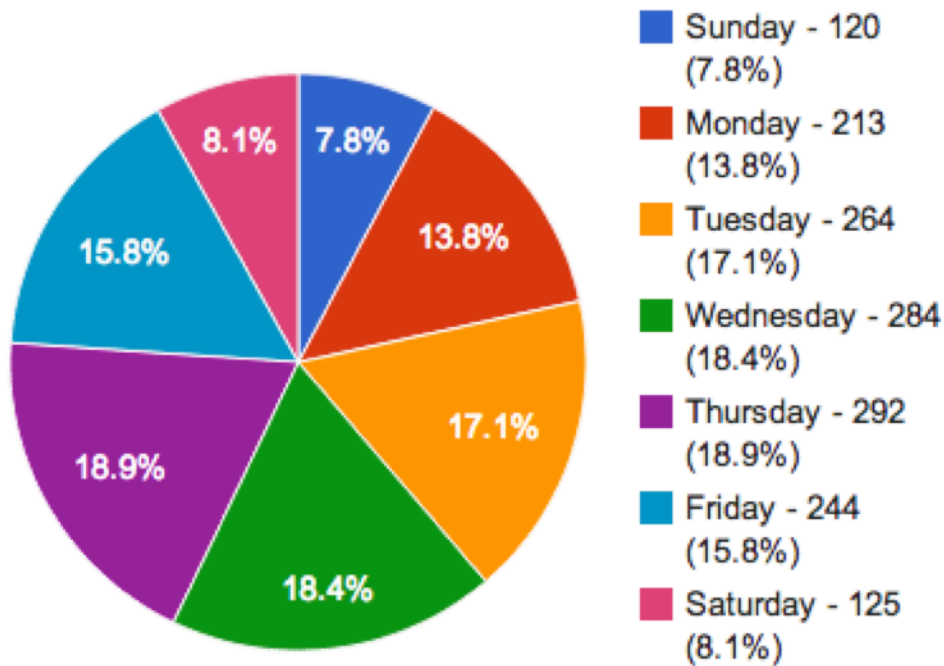
Figure 2 - Posts by day of the week – PPB

Figure 2 shows that Wednesday and Thursday are the most frequently posted days with the weekend showing significantly less posting activity yet still relatively high when compared to the PP&R and PBoT.
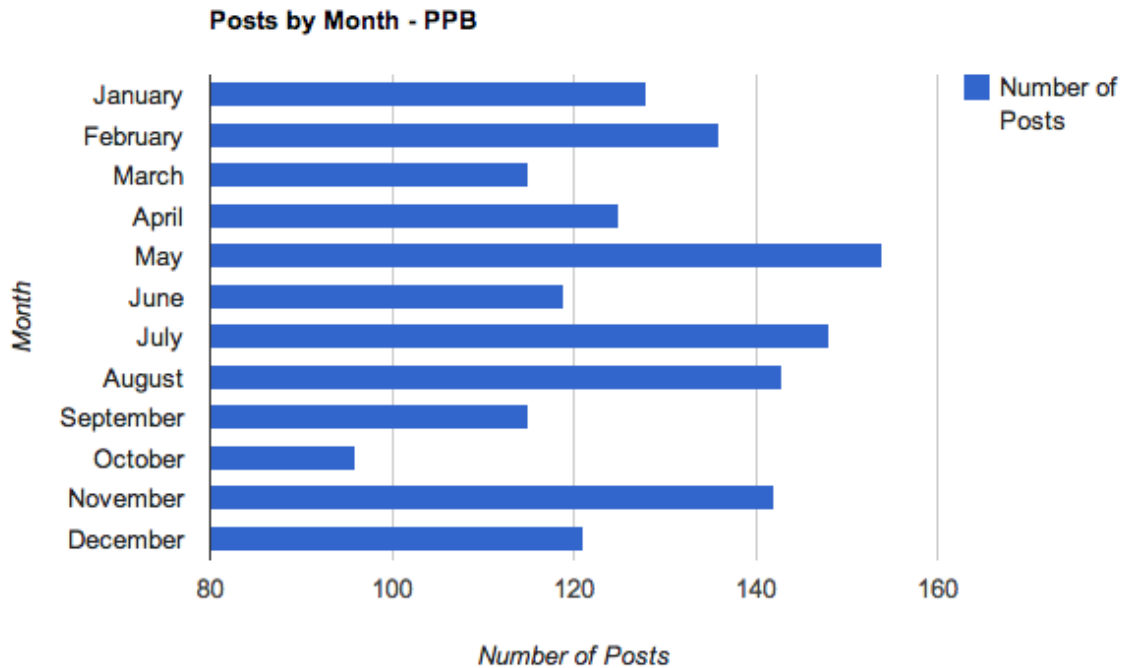
Posts by Month - PPB

Figure 3 - Posts by month – PPB

There doesn't appear to be any consistency in posts per month with the notable exception of October. Analysis of post contents shows nothing significant at to why October has so few posts. Further study assessing post frequency and behavior over time would be beneficial in determining seasonal trends. When looking at May, the month with the highest number of posts, there were a number of posts regarding multiple shootings, a police memorial, and a number of vehicle accidents and missing persons. Previous studies have suggested that warmer weather may lead to higher crime rates and with May in Portland marking the transition from the winter gloom and rain to a warmer and dryer Spring and Summer, this rise in police activity may be expected (Cohn, 1990).

Post Content

Using the tag cloud generator and text analyzer at http://www.tagul.com, I created a tag cloud of PPB posts. This cloud gives a unique graphical insight into the words most

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frequently used by the PPB and gives an abbreviated in vivo glimpse into the PPB's

Facebook timeline.

Because of the repetitive nature of some common words that do not lend

analytical significance, I have removed the following words from the analysis: police,

Portland, and bureau. I also removed common English words like, "a", "the", and "as."

The following are the top ten most frequently used words in PPB's post contents:

Word	Frequency
Precinct	78
responded	73
southeast	64
April	64
Report	63
investigating	55
approximately	54
North	52
neighborhood	51
Crash	50

Table 2 - Most commonly used words in posts - PPB

As we can see from the tag cloud, the nature of PPB posts is largely technical, factual, and seemingly void of emotion, connection, or engagement. There seems to be little ground upon which a public dialog can be built.

This is, to a certain extent, to be expected from a police agency. The PPB's post are overwhelmingly factual. The vast majority are of the Public Safety code and involve the reporting of recent or ongoing crimes or updates to those crimes. Some examples include:

Post Title	Post Content
Portland Police Investigating an Armed Robbery in the Cully Neighborhood	This afternoon, Thursday May 23, 2013, at 1:46 p.m., North Precinct officers responded to the Layu Cateca Store, located at 4620 Northeast Cully Boulevard, on the report of an armed robbery. Officers a...
Portland Police Investigate Multiple Hit and Run Crashes on I-5 Southbound	This morning, Monday May 13, 2013, at approximately 9:00 a.m., North Precinct officers responded to the report of multiple hit and run crashes on I-5 southbound, near the Killingsworth Street overpass...
CORRECTION: Portland Police Investigate Three Overnight Shootings - Possibly Gang Related	The second shooting occurred in the 2700 block of Southeast 111th Avenue, not 11th as previously released.###PPB######ORIGINAL

	MESSAGE BELOW###Since 11:00 p.m. on Friday May 10, 2013, the Portland Pol...
UPDATE: Portland Police SERT Activated for a Barricaded Subject in a House in Southeast Portland	Media briefing will be at 7:00 p.m. at Foster Market, SE Foster Road and Holgate.###PPB######ORIGINAL MESSAGE BELOW###The Portland Police Special Emergency Reaction Team (SERT) has been activated for ...

Table 3 - Common Public Safety posts – PPB

Yet despite the abundance of Public Safety posts, the PPB also had a relatively high number of Selfie posts which in turn resulted in higher than average comment rates. Each Selfie post resulted in an average of 9.9 comments. The next highest average comment rate per post type was Tragedy/Loss with almost half as many comments.

Taking a look at posts with the highest comment counts, eight out of the top ten were Selfies and nearly all had attached photos or video:

Post	Comments	Likes Count	Code
It is with a sad heart that the Portland Police Bureau announces the sudden death of one of our K9 partners, Roscoe. Roscoe was a German Shepherd and the long-time canine partner of Officer Shawn Gore. Officer Gore noticed Roscoe was not feeling well and took him to a veterinarian on March 21, 2013. Roscoe was diagnosed with an aggressive form of cancer that had spread all throughout his body and died 6 days later on March 26, 2013. Roscoe was almost 7 years old; he was born on May 22, 2006. His original name was "Isco Jipo-Me," and was born in the former Czechoslovakia and imported to Canada. He was purchased by the Poilce Bureau in 2008 from a vendor in Washington. Roscoe had 134 captures, with his last capture being on February 14, 2013. Roscoe was also 1 of our three SERT K9's RIP, Roscoe.	369	1288	Selfie

'Look who we and Portland Fire & Rescue found on I-84 at I-205 today. The Portland Audobon Society responded and took this majestic bird for treatment. Hope for a speedy recovery!'	101	980	Public Announcement
'Thanks to Darin Molnar for sending us this great photo.'	64	169	Selfie
'Police Horse Diesel made his debut on the streets today. Please say hi to him when you see him! (pictured with his partner, Ofc. Weinberger)'	58	336	Selfie
'Officers Elwood and Hughes -- making some new friends.'	51	709	Selfie

'The Portland Police Bureau hired 6 new officers today.'	48	287	Selfie
'Booting Up!'	46	109	Selfie
'Have a happy and safe Labor Day! Slow down and drive sober!'	45	268	Selfie
(No text. Video post about Occupy Portland/austerity protests in November 2012. Video has since been taken down.)	44	10	Selfie
"Beards for Breasts" Photo Shoot Lands Two Men in Jail - Rifle and Body Armor Seized as Evidence http://bit.ly/PC6k8r'	43	14	Public Announcement

Table 4 - Ten highest commented posts - PPB

To summarize, we know that the PPB posts primarily during the week between the hours of 10:00 AM and 4:00 PM. They predominantly post Public Safety issues and Selfies, though the Selfie posts do generate the highest comment rate. Posts have a general tendency to be factual and authoritative in nature and don't attempt to foster deliberative discussion. However, while most were serious or informational, some were controversial (Occupy Portland, protests/marches, etc.), some were educational/historical (vintage photos, stories, etc.), while others were downright funny (officers doing the Harlem Shake). The variety of PPB's posts was surprising and likely a significant factor in their popularity and comment ratings. The PPB's posts did generate a significant number of comments, many of which included spirited and sometimes insightful dialog between citizens. A deeper comment analysis follows.

Comments and Engagement

While post analysis can tell us something about how and why an agency uses social media, comment analysis gives us insight into how agencies, and members of the public, are using social media to interact with each other. As with social media comment threads in general, it is possible to find a wide variety of attitudes, perspectives, and themes within post comments.

While the majority of comments for the average post were relatively unexceptional, I did see a number of very passionate exchanges and expressions of opinion and debate on the policies and practices of the PPB. While these exchanges occurred almost exclusively between members of the public and not with PPB representatives themselves, it does show that discourse of government policy and behavior can be found in social media sites.

The controversial role of policing in society is clearly expressed in many comments. In fact it would seem that posts of controversial topics tended to generate the most engaging dialog between members of the public with many comments pointing to either police techniques or procedures or the type and nature of information contained in the original post (criminal actions, inclusion or exclusion of certain information, etc.). One of the most interesting characteristics of the PPB was that there was noticeable partisanship in many of the comment threads. Even during seemingly insignificant and non-controversial posts, most commenters tended to either categorically support or be highly critical of the PPB.

Figure 5 - Post comments tag cloud – PPB

The tag cloud in Figure 5 shows the most commonly used words in all comments from PPB posts. As we can see, the general feel from PPB comments is a positive one. We see words like, "good", "love", "thank", and "great" occurring frequently. Interestingly, the name Roscoe had a strong appearance as the post announcing Roscoe the police dog's passing was the highest commented post with 369 comments. From this

snapshot we can gather that, at least in the social media realm, the PPB garners an

overwhelmingly positive response to the content that they post. Table 5 shows the ten

most frequently used words in all comment threads for the PPB.

Word	Frequency
officer	62
thank	59
good	49
police	45
roscoe	43
one	39
job	38
love	34
great	33
out	32

Table 5 – Most commonly used words in comments - PPB

The following post/comment threads reflect some of the typical and also unique

interactions I encountered during my analysis. These examples speak to a variety of

conditions central to the context of deliberative democracy and set the stage for the

overall study findings in chapter 7.

Post Title	Inside the Portland Police Bureau
Post Content	Supportive community member Scott Ford sent this to us after he ran into the Central Precinct Neighborhood Respose Team in Downtown Portland. Email us your favorite police photos and we'll post some of them!
Post Comments	User A: Love it! User B: yeah, go guys! User C: Gotta love it the sgt. has her coffee, true leader right there, lol. Keep up the great work PPB! User D: You guys are #1 thank you for giving your all for us

everyday.
User E: PPB RULES
User F: You can tell a vet officer from a rookie by the amount of items on their duty belt.
User G: good looking bunch of heros!
User H: where's Tony?
User I: Good looking group! Thanks for your work. Gotta say, I really dislike the tac vests though!
User J: We love our PPD. Looking good
User K: I like that PPB has neighborhood response teams. Community policing at it's finest!

Table 6 - Post ID# 1214, 2012-09-04 11:37:15

Table 6 illustrates a common Selfie comment thread. We can see that all comments are quite supportive of the post and the PPB in general with some even suggesting that the commenters have personal knowledge or relationships with some of the officers in the post (Users C and H). Posts of this type were quite common and can be considered one of the primary drivers as to why the PPB demonstrated such high comment rates.

Post Title	Portland Police Arrest Man Who Hit Officer With a Vehicle
Post Content	(External link to PPB News website describing a hit and run against an officer)
Post Comments	**User A**: no. arrest? really? way to think outside the box
	User A: btw, thanks for unnecessarily kicking my door in the other day.
	User A: I'll send you the bill.
	User B: Should we arrest you when you foolishly almost run over a woman and child. Many of us witnessed your unaware officers drive over the grass that afternoon on the WATERFRONT PARK, quite carelessly...2 weeks ago. Only a few feet away from them. Ohhh....hmmmm yes.....your attention was to arrest a man with a weee bit of herb on a bike. Think again. breathe again. Think about Community. Weed doesn't Kill~ Judgement does~ Find out what is truly needed~ What is your focus~ Not 5 cop cars for one old man on a bike. For what reward do you receive. New training begins now.
	User C: You people are funny.... Glad the officer wasn't hurt bad and keep up the good work police!
	User D: percy should plead

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User D: lollin at all the haters
User D: Joseph Brown, do you have a link or details about what happened? I'm interested in learning more.
User E: Hi Dax...;) 0 My opinion..if the Occupy folks were given the role of policing Portland for a year they would end up being some of the most violent mother Fers out there. Glad the cop is okay and I have to agree weed should be legal.
User D: PPB facebook, are you in a position to comment on this?
Portland Police Bureau (Portland, Oregon): Joseph Brown is completely wrong in his assertions. The investigation started immediately and it wasn't until a few days ago that an anonymous tip came in to police with the identities of the driver and passenger. Until then, the only information investigators had was a vehicle description (a license plate was never given) and a vague suspect description. There were no eyewitnesses to the hit and run death to Nancy Schoeffler. All of this information has been widely publicized. Chavez is currently a fugitive and we will find her and arrest her.
User D: Thank you for your response, and I hope to see more of these responses directly from our police department in the future.
User D: on fb
User F: Joseph is obviously not a fan of PPB...if he feels he can do the job better then maybe he should apply , take the test and if he passes all the required tests then he can make all the comments he wants.
User D: nope he has the right to free speech

Table 7 - Post ID# 1632, 2012-06-01 12:35:05

Table 7 is one of the few comment threads where the PPB responds to a user's

request (User D) for information. The response seems to be based on a previous comment

by a user named "Joseph Brown" who must have removed his comment as it was not

found in the thread at the time of collection.

In PPB's comment, we can see a direct and authoritative response. Their language

is emotional and direct. Phrases like, "…completely wrong…" and, "…we will find her

and arrest her" seem to suggest both a mild offense taken at Brown's comments and a

finality of justice that they themselves will see to. There is no room for ambiguity in the

discourse here.

This comment thread also highlights what has been seen throughout some other comment threads where members of the public use previous police behaviors or interactions to critique a perceived injustice or police policy. User B describes seeing officers nearly hitting a mother and child in their pursuit to enforce contentious marijuana policies. User B uses the current issue of a hit-and-run against an officer to juxtapose a scenario where she witnessed an officer almost hit a pedestrian. This comment received no response by the PPB.

Post Title	**World Naked Bike Ride This Saturday in Portland** **http://bit.ly/NthrFB**
Post Content	(External link to PPB News website describing the event)
Post Comments	**User A**: "This is a permitted event". So exposure and indecency is now "permitted"? **User B**: Glad i'm leaving town. ;-) **User C**: Nothing wrong with nudity **User D**: Oregon law allows nudity. The human body is not indecent. What folks do with it sometimes is, but there are laws for that. :) **User E**: They are not protesting corporations and a corrupt government so they will be safe. I wonder if once the permit runs out if the bike riders will get arrested for indecency. Oh wait I know the answer to that, never mind. **User F**: PPB, you're so cool. **User G**: Why is it the ppl you would like to see naked, never are? But the others... Well, I've been to a nude beach and that will remain my first and last one. Yikes. **User H**: Gross. I'll be avoiding the area **User I**: cool ! **User J**: Wow, because this is what I want my kids to see right! Stupid. **User K**: There's no permit needed for being naked in Oregon as long as it is not with the intent of arousal, and bicycles are legal street vehicles anyway. Everyone relax, this event happens EVERY freaking year. Crawl out from under your rock. PS - VAGINA! **User L**: we were all born naked, no shame! **User M**: If your kids are awake in downtown Portland at midnight, you've got bigger concerns than naked people. **User J**: It starts at 10 and isn't only downtown.. read the event details, it goes in southeast area also.

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User N: American society is so conservative. Lets go to Europe :)
User O: No fig leaf? Hmm...might have to check that out :-)
User P: Only in Portland. Love this town.
User Q: Yikes! Thanks for the warning!
User R: Just to clarify... the officers will not be naked right? ;)
User S: How can they arrest one person for being nude in Portland but then turn around and allow a group to go nude?
User T: Lets do it babe.
User U: I don't know about anyone else but I'm not riding my bike without some padding.

Table 8 - Post ID# 1565, 2012-06-15 14:18:44

In Table 8, we see an interesting and somewhat humorous post and comment thread regarding the announcement of a naked nighttime bike ride through Portland. The post drew a number of comments including a number of questions by the public regarding the legality of such activity. Interestingly, despite direct questions and concerns by the public (User A and User S), there was no response by the PPB. We can also see jabs at the Occupy Portland police response that made significant news a few months prior (User E). This was common in post comments during this time period. Such comments never garnered a PPB response.

Post Title	**Portland Police Bureau (Portland, Oregon) shared a link.**
Post Content	http://www.youtube.com/watch?v=7bCimcsVAoQ&feature=youtu.be (YouTube video showcasing LGBT PPB officers encouraging young LGBT kids that things will get better).
Post Comments	User A: Thank you PPB for making and posting this video! User B: Thank you to all the courageous officers who made this video! User C: Wow, that was great. Good job PPD. User D: Thank you for this video. Good to know we have authority figures that are willing to share their stories. Very Moving. User E: <3!! User F: WOW. Someone in the video saved a life today. Thank you for sharing your personal stories. Your willingness to be vulnerable is so appreciated and respected. User G: This is the most amazing outreach effort I have ever seen by a law enforcement agency (and I teach university-level policing

courses)....my goodness, it gives me goose-bumps...good work with your effort to make a significant connection with your community (Straight and LGBTQ). Just brilliant......and humanizing (an important component of community-police relations).

User H: This is a FABULOUS video! So proud of PPB for addressing this and sending such an amazing message to people.

Table 9 - Post ID# 1562 - 2012-06-15 16:12:14

Table 9 is the comment thread for a rather interesting and unique post by the PPB. It is a video post to a YouTube video that shows a number of lesbian, gay, bisexual, or transgendered (LGBT) PPB officers describing some of the difficult times they experienced in their younger years. The message is a public outreach to young LGBT individuals with a message that things will get better. The positive response in the comment thread, while not plentiful in number/popularity (in fact, the post only received 32 likes and eight comments) suggests the existence of an overwhelmingly supportive public. Words like, "courageous", "moving", "respected", "vulnerable" and "humanizing" are used in comments to describe the video. This is the only such outreach effort in the threads under study that received such a moving and powerful response.

Unfortunately, despite the powerful words of the public's comments, there was no response from the PPB. While a response was not necessarily requested, I do feel that this was a very unique opportunity for the PPB to engage with not only the public but also any LGBT community members who might be in need of assistance or additional support, even if only to provide links to other support programs.

Post Title	Portland Police SERT Serves a Search Warrant in Old Town http://bit.ly/NOvd1v

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Post Content	
Post Comments	**Portland Police Bureau (Portland, Oregon)**: Actually George it's not a tank, it's called a B.E.A.R., made by Lenco. B.E.A.R. stands for Ballistic Engineered Armored Response, and it provides life-saving protection for officers in high-risk situations, hostage rescue, and emergency evacuations. It's used by our Special Emergency Reaction Team (SERT) in a variety of situations, including today's high-risk search warrant on a building where people were believed to be dealing methamphetamine and potentially armed. It's a tremendous tool in our ongoing and continuing effort to protect and serve in this great city. We really appreciate your support! **User A**: George its people like you that cause this weak community with the poor attitudes. PPB stay stafe and continue doing suck a commendable job. Thank you to tall your brave officers. **User B**: http://bikeportland.org/2012/07/12/18-stolen-bikes-seized-during-old-town-drug-bust-74628 **User C**: Wow, I've never seen PPB comment on any post of theirs, ever. You guys must be reeeeaallly happy about your big boy car!

Table 10 - Post ID# 1456 - 2012-07-12 07:36:25

Table 10 shows us an interesting and quite rare occurrence within the PPB data. In response to a user's critical comment that was later removed, the PPB writes one of the most detailed responses I saw in the data (aside from specific details of a crime). As User C's anecdotal, yet largely accurate, comment points out, the PPB seem to be genuinely happy to go into descriptive and practical detail on the vehicle. Even going so far as to express an almost sarcastic closing sentence. This comment thread would seem to demonstrate and reinforce the "them vs. us" divide that is common in policing. While I think the comment is largely a good and descriptive one, that last sentence seemingly quells any idea that the effort and detail involved was done for the betterment of public discourse and understanding.

Post Title	May Day 2012 Favorites
Post Content	
Post Comments	**User A**: Love it! **User B**: Police: if you smile at us, we'll smile back. Promise! Sincerely, an Occupier **User C**: Barnum :-) **User D**: Occupiers suck they just destroyed peoples parks and other stuff us tax payers have to pay for. **User E**: @monica- really? All occupies? **User F**: Détente :-) **User G**: Monica, if YOU smile at police, they'll smile back. That's what you tend not to understand, police internalize so much societal abuse, from bleeding heart liberals, that they often shut down. Sometimes, its the folks out there on the street, who have to make the first move. Like YOU. Does that make sense? **User H**: How funny. **User E**: I agree, Theresa! They don't always have that first smile because they ate focused on so many things all at once and last but not least, they are providing US with a service that we cannot afford to be without. **User F**: Everything about this photo is great. Thanks **User G**: You caught one! I hope you released it, they are good for the environment! **User H**: As a former manager for a govt subcontracted Disaster Relief agency, I can tell you that Occupy Portland (alone) provided the equivalent of approximately $700,000 in food services to the homeless, not to mention the tireless work offered by Occupy Portland medics, because the City of Portland does not/cannot offer these essential services. Stick that in your taxpayer doldrum. **User I**: Well, I agree...the police in Portland are more than tolerate...We are a lucky city.....thanks for all your work...Hey by the way what are we going to do with all the RATS that are left in Portland from the Occupiers? HMMMMMM **User H**: If you doubt my numbers, I can provide a breakdown of what these agencies charge the US govt for food services. **User G**: Wow Greg,(if it's true) that's awesome! Now if they only could have done that in ways that didn't cost the City considerably more! If they could have done it without desecrating monuments to our veterans alive and dead! To bad they couldn't do that while getting permits, that would have made it easier for the city to only

bring in the officers needed. If only they could have done that without the crime, vandalism, and violence (attempted violence). Wow, then you would have much more of my support.

User J: Wow. Such small minds stuck on insignificant details and past issues that have been talked to death. Great job at a derailing a thread about a mostly positive picture after someone posted something coyly humorous.

User H: As a resident of the City of Salem, I cannot speak to the violence and desecration that you speak of. But I can tell you, that, when providing basic services to the people they did, it was doomed to happen. Bill, if you've ever studied Constitutional Law, I would have you look up Gitlow vs NY (1925) as a reasoning for a group/movement/etc. to "occupy" a public space to request/demand a redress of grievances of our Govt. And, sorry, but the Constitution trumps local law.

User H: My number was a conservative estimate, simply for fear of overstating numbers to which I didn't directly contribute to.

User H: Bill, I hate to antagonize this conversation, but, does the preservation of a park mean more to you than the preservation of your Country?

User H: The US govt contracted the agency i mentioned above the following rates: $13/meal (breakfast), $18/meal (lunch) and $23/meal (dinner). I'll let you do the math yourself. Why are peoples hearts so hard and callous? When did compassion become "wrong"? Why is it illegal in some spots to help those who need it most? Where is your humanity? Why aren't you up in arms over unjust wars that have directly led to Millions of innocents> DEAD. Tens of thousands of troops killing themselves. For what? The benefit of a select few. You can choose to be ignorant of the truth, but that's on you, not me.

User K: We CAN stop fighting and work together. Go arrest some bankers, quit throwing people out of their homes, and quit attacking homeless encampments like OPDX. Right now all I see are a bunch of roid-raging jack-booted thugs macing old ladies and shooting war heroes in the head.

User G: Greg, this is a false dichotomy, save the park or save the country. Let me be clear, I need not agree with the occupiers, (though I agree with a couple point I've heard them make) to fully support their right to express themselves. What I do challenge, is when their expression begins to erode the rights of others. I was at the occupy camp, with my teenage daughter. It was a public health hazard. There is much a movement can do to redress their grievances, without using coercion. When traffic is intentionally obstructed and business vandalized they are more like terrorists than protesters.

User G: On the photo, I love it! Didn't realize it was an occupier, hats off to both for their sense of humor and good nature.

User H: Bill, please don't take anything I've said as attempts to fight with you. I'd rather try & understand where you're coming from. I'd love to continue this conversation further, but, alas, lunch is over.

User G: Greg, I wish I would have run into you with my daughter, I was hoping to find some intelligent representative of the occupy group for some civilized conversation. I wanted my daughter to be exposed to different points of view.

User G: Bang Tango, I can't say I disagree that we need more, many more prosecutions of the people who caused this mess.

User L: You guys act like they have a choice in the matter. They are only doing what they've been told to do. Why is it always occupiers vs police?

User G: Jeremy I tried to engage several people but as with any group, liberal, or conservatives, there are some nutty types. The day we were there was the last day before the City had announced it was going to clear the parks. I have been told many of the more articulate and educated occupiers had already left. One great exchange I had, was when I asked one occupier, why did they march on a credit union? Why protest a not for profit organization that has had little or nothing to do with the mortgage mess? Her answer was very telling, she went on to tell me how they are not innocent, in fact it was a credit union that had repossessed her car! I asked her, "did you make your payments?" "no, I couldn't" "did you contact them to work something out?" "no , there was a lot of chaos in my life at the time" well there you go! Clearly credit unions are evil! There was a guy standing on the veterans memorial repeatedly shouting "F the police" he had no idea that the only reason I wasn't yanking his filthy butt off that memorial by his ear, was those police standing there quietly taking his abuse.

User M: Debate aside, thank you so much for sharing my photo :) -

User M: (Myer)

User N: That has to be a VooDoo Doughnut.

User M: It is/was! :D

User O: A good start would be to stop hitting people wantonly, and in clear violation of the constitution you swore to protect. Lets build from there.

User O: History looks more kindly on those being hit with sticks than those who wield them. You feel the tension growing all around you just like the rest of us, how will you be remembered when the dust has cleared?

User H: I will 2nd every word of Nathan's last 2 comments.

User P: voodoo donuts

Table 11 - Post ID# 1447 - 2012-07-13 09:24:19

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Table 11 is the first comment thread that shows some resemblance to a discursive exchange between members of the public. User G and User H both disagree on the matter of the Occupy Portland protests and make their grievances and concerns known. Each presents their take on the matter and after going back and forth a few times, we see closing comments on the matter:

> **User H**: Bill, please don't take anything I've said as attempts to fight with you. I'd rather try & understand where you're coming from. I'd love to continue this conversation further, but, alas, lunch is over.
> **User G**: Greg, I wish I would have run into you with my daughter, I was hoping to find some intelligent representative of the occupy group for some civilized conversation. I wanted my daughter to be exposed to different points of view.

This discussion clearly showed each user's reasonableness and desire to understand the other's viewpoint. User G even regrets that he did not encounter User H in person so that his daughter could see and experience an opinion on the matter different from his own. This exchange fits the very definition of Young's model of a deliberative democratic exchange.

On the opposite side of the coin, on November 3rd, 2012 Occupy Portland and other groups protesting austerity measures conducted a march across Northeast Portland (Hamilton, 2012). The march route was diverted by the PPB and resulted in the PPB pepper spraying a number of marchers including a significant number of unarmed high school students. On November 3rd, there was one post by the PPB titled, "Portland Police Monitoring Unpermitted Demonstration March." This post received 31 comments, the majority of which were highly critical of the PPB's handling of what many commenters have stated was a lawful and peaceful march. The PPB did not reply or contribute a comment to this post.

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One day later on November 4th, the PPB posted the following Selfie (a large

number of comments have been removed for brevity's sake):

Post Title	**Thanks to User X for sending us this great photo**
Post Content	
Post Comments	**User A**: WTF~~ **User B**: RIOT POLICE ARE SO MUCH FUN … **User C**: Was this before, or after you pepper sprayed high school kids and an 80 year old? … **User D**: Glad they have so much fun pepperspraying kids. **User E**: You might as well pepper spray him too. **User F**: Uh..your "show of force" outfits aren't real citizen-friendly, you know, guys. Why don't you switch to your non-wartime uniforms when you're doing PR pictures? … **User G**: Show respect for them. You may need them and im sure every single person saying negative probably talking crap. thank u for all u do. **User H**: Oh Portland liberals. It's not even worth saying anything to you. :(**User H**: God Bless the PPB. :) And stay away from my banks Occupy. How do you find so much time? that's right, you are a jobless hippster DB! … **User I**: To keep track of police propaganda like the carefully-crafted, attempt at humanizing picture of our hyper-militarized police force above. You know, like citizens in a democracy. **User J**: Is that Elvis! Nice! **User C**: High school kids. They pepper sprayed high school kids who were protesting education funding cuts. … **User D**: I have ZERO. Do you hear me? ZERO respect for bullies in stormtrooper gear who laugh and smile and joke about spraying peaceful protesters with pepper spray. This is the face of American fascism and you are sitting here celebrating them like they are heroes. They aren't. They are THUGS and gangsters.

User C: They were also openly laughing at and mocking those kids who were in severe pain and crying out from the pepper spray.

…

User D: Some people are just unquestioning authoritarians who believe in using violence against all who oppose their viewpoints, plain and simple. You'll listen to anything anyone in a position of power tells you to do with out considering the ethical consequences of your actions. Those on here voicing their support for pepper spraying kids, the real issue isn't the message the kids were expressing, it's that you think it's OK to use violence against peaceful protesters. I doubt you've ever spent a day in your life questioning authority. You grew up mindlessly following your parents' orders, and now you'll mindlessly follow the orders of police and politicians. Try thinking for yourself for a change, and realizing we all have a right to voice our opinions free of threats of intimidation from the jackbooted thugs in the Portland Police Department.

…

User K: Hawt move to another country if you don't like it. Jesus tired of these negative comments from people. These are the men and women who protect and serve us.

User L: Seriously? Classless.

…

User D: The bottom line is this should be only used if the officers are seriously under threat of physical harm, and/or protecting someone else from physical harm. Instead, they seemed to delight in doing it like it was the funniest thing in the world.

…

User M: Haha all those smiles they have are probably because they just abused school children.

..

User N: HAHA! You guys are awesome! Stay safe boys!

User N: I will have to save and post this photo rather than just share so all of these idiotic comments aren't attached..

…

User D: Glad to hear you like it when adults in riot gear spray pepper spray at high school students, Danielle. I guess morality really is subjective.

User O: If PPB is so good why did the DOJ investigators rule against them. Hell why did DOJ investigate them in the first place. Before I moved to Portland I liked and respected cops now I fear them.

User P: Cool!!

User Q: Killer boots, man!

…

User R: Right after you pepper sprayed high school kids and older folks. Glad you all had a good time as we wiped pepper spray out of kids/ eyes. Your just as fake as Elvis here. After what you did to those high school kids and the old lady in the walker, how do you look at your own children and parents/grandparents? It may be your job, but you make the choice in how you do your job. How can you look at yourselves in the mirror knowing that you are deliberately putting citizens in danger to protect banks? Who do you serve? Who do you protect? What side of history do you want to be on?

User R: This is not an acceptable response and it should be to you either! "Its not about our moral beliefs, its what were told to do." If they told you to point blank shoot at us, would you? when do your moral beliefs take precedence to blind obedience?

User S: This is an ill-advised photograph. Surely now is not the time for such Tomfoolery.

…

User T: When the cops experience pleasure and pride in harming citizens, we are in a bad place...

Table 12 - Post ID# 993 - 2012-11-04 18:00:44

This post generated 76 comments. It was the 4th highest commented post by the PPB and by far one of the most contentious comment threads in my research. The vast majority of comments are highly critical of not only the timing of this Selfie but also of the nature of the image itself, with many comments questioning the glorification and celebration of a seemingly "militarized" police unit. Interestingly, the PPB did not comment on this post despite the heated discussion thread and numerous critiques to its policy and behavior.

Two days later, the PPB made another post of a video detailing the November 3rd march. Unfortunately, at the time of data collection, the video had been removed. The post, however, garnered 44 comments and was the ninth most commented post by the PPB. Again, most comments were critical of the PPB's handling of the march and again, no PPB comments were made. There were a few other follow-up posts that all reflect similar dynamics to the above examples and will be skipped as they provide little additional analytical value.

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With such heated discussions occurring in these posts, we find again that the PPB is silent when surrounded with questions, comments, and critiques. A lively dialogue is undoubtedly occurring between citizens but unlike the post described in Table 11, there seems to be little desire for people to come to a shared understanding or much less agreement. While the PPB could have facilitated guidance or order in the discussions, they chose not to, whether by policy or otherwise. This is unfortunate as again, this could have been a significant opportunity to engage in constructive deliberation on a variety of topics of central concern to the PPB and the public.

As a final example and analysis, we have one of the few significant comment threads that not only attempts to engage and convince the PPB on post behavior but one of the few post where the PPB actually responds to clarify concerns raised by other comments:

Post Title	Portland Police Arrest Singer "Beth Ditto" for Disorderly Conduct on North Mississippi Avenue
Post Content	On Saturday March 16, 2013, just before 1:00 a.m., Portland Police officers assigned to North Precinct were dispatched on a welfare check of a woman in the street shouting and blocking traffic outside...
Post Comments	**User A**: Who? Never heard of her. **User B**: Lol. I think every hipster on Mississippi has done that at one time or another. **User C**: Is every person who is arrested for disorderly conduct on this feed or are you using her celebrity to garner attention for yourselves PPB? Famewhoring is unprofessional and it is certainly distaseful from our police bureau. shame shame. **User D**: And this is being shared why? Do you post all disorderly conducts (if memory serves-not so much), or just the ones who have some name recognition? I follow the PPB on Facebook because I want to be able to share important information-please don't go down the sensationalist' road. Thanks. **User E**: You can easily look up your criminal record online, it's nothing about being confidential, it's a manner belonging to the state unless she is a juvenile the public has a right to know about the case.

User F: iTunes awhile back offered one of her songs as the free single of the week. It wasn't too bad but I haven't heard any of her other songs.

User G: Was she using her DITTO in public again?

User H: How could I ever enjoy the music of a person that did something so vile? Those cars were wasting gasoline! Guess I'm gonna go and listen to some Lostprophets and watch Chinatown again.

User I: hummmmm

User J: @Nico and Debra, did you actually read the news release? The last line clearly states: "This information is being released due to numerous media requests, reference Portland Police Bureau Case #13-21155."

User K: No Erik people don't read the ENTIRE article...they are speedy to talk crap though.

User L: Really?? This is newsworthy? Come on

User M: Hipes, is it wrong to talk crap about idiots? :)

User N: Huh. Wonder if alcohol was involved.

Portland Police Bureau (Portland, Oregon): To answer a few questions above, no not all arrests of this nature are shared publicly. In this case, we received numerous requests from both local and national media about this case, and the person arrested, as it appears that she is (at least in some circles) a celebrity of sorts. With that in mind, we don't decide what is in the public interest...the public does (and media does by proxy). Everyone should realize though that any arrest and/or booking photo is a public record, readily available and as such, could be the subject of public interest.

User O: Released a short time later.... druck enough 2 stop traffic... but ok enough 2 get released.... n I get stopped in south east for walking home on a side road... because the dirt side walk was making me walk a parking lane..... great job ppb

User O: Great.... I get it she was a portland low life celebrity... let those people out

User L: Come now PPB---We know that the PPB does what is in the best interests of the PPB---furthermore----Public demand has pushed for many things in the past with regard to PPB actions---- whereas the PPB (of course) acted in its own self interest. (must protect 'brotherhood')

User C: Yes I read it...and I still say "Famewhoring" because if it walks like a duck, quacks like a duck and looks like a duck...

Portland Police Bureau (Portland, Oregon): We didn't know who she was before the arrest, and we still don't know who she is but clearly there are a lot of people that do know her, hence the numerous media requests for public information.

User P: Dear Portland Police, Something I would like you to

consider... is how the role of social media might actually differ from public record. If you haven't figured it out already, public record is actually still somewhat of a private matter considering how the process of information is obtained. Social media is more than public record, and while there seems to be little discourse on this differentiation, for the purposes of justice, best practices and/or departmental ethics you need to consider the greater socio--cultural- and political effects the mass dissemination of such information has on public consciousness. I really hope you are willing (at some point in the near future) to engage in a meaningful public dialogue on the subject of "public information and the role of social media".
User Q: To all those offended by PPB posting this singer's arrest information, please keep in mind that her band is named "Gossip!" :)
User P: ...might there be a way to balance the need for public information with the humanization of people?
User R: I don't see how she was "dehumanized." She drank too much. She acted silly. Very human.
User P: Dehumanization comes in many different forms. The first question to ask is why does the public have an obsession over other people's lives? The second question is why does the police department feel social media is a good place for these sorts of "alerts". Can the subject of public safety be discussed without the far reaching arms of social media? Posting photos of people and allowing people to degrade them, and shame them is not only an immature response to crime in general, but it does absolutely nothing to make communities meaningfully safer.

Table 13 - Post ID# 407 - 2013-03-18 18:12:42

In this comment thread, we can see that initially, there are a number of comments regarding why this particular person's arrest record was posted on social media. Some suggest that it is "Famewhoring" (User C) but the PPB responds and clarifies the reason for the post. As was pointed out in the PPB response, all arrest records are public and open to access by anyone. However, User L points out that,

Come now PPB---We know that the PPB does what is in the best interests of the PPB---furthermore----Public demand has pushed for many things in the past with regard to PPB actions----whereas the PPB (of course) acted in its own self interest. (must protect 'brotherhood').

The PPB does respond to this by stating that given the number of inquiries, they chose to post the report on social media. These two responses are rather unique in that we have two direct responses to public inquiries within a relatively low-popularity post (only five likes and 25 comments two of which were from the PPB).

Adding to the uniqueness of this comment thread, we see two comments by User P. These comments are quite interesting in that they are not typical of the vast majority of comment topics or language. User P is actually instigating a high-level critical dialog with the distinction of "public record" vs. "social media" as it relates to public information release and the dehumanization of such an action. User P continues, in another comment, to suggest that the posting of such information does not further the public safety concerns of the public and simply serves as a means of public ridicule and degradation of the subject. Such language and choice of topics was unique in all comments in this research. User P likely has a significant level of education or understanding of social issues and as such, it may not be surprising that no other user, including the PPB, made a significant attempt at continuing the dialog started. Despite this, it should be noted that this is exactly the kind of dialog and insight that Young suggests participants make in deliberative dialogues.

Case Study 2: The Portland Parks & Recreation

The PP&R had the second highest number of posts with 890 and a comment count of 757. At the time of data collection, the PP&R Facebook page had 0 check-ins, 4,202 likes, and did allow members of the public to post on their wall.

Post Frequency and Timing

Figures 6-8 show the post timing for the PP&R across the year of data collected.

Number of Posts by Hour of the Day - PP&R
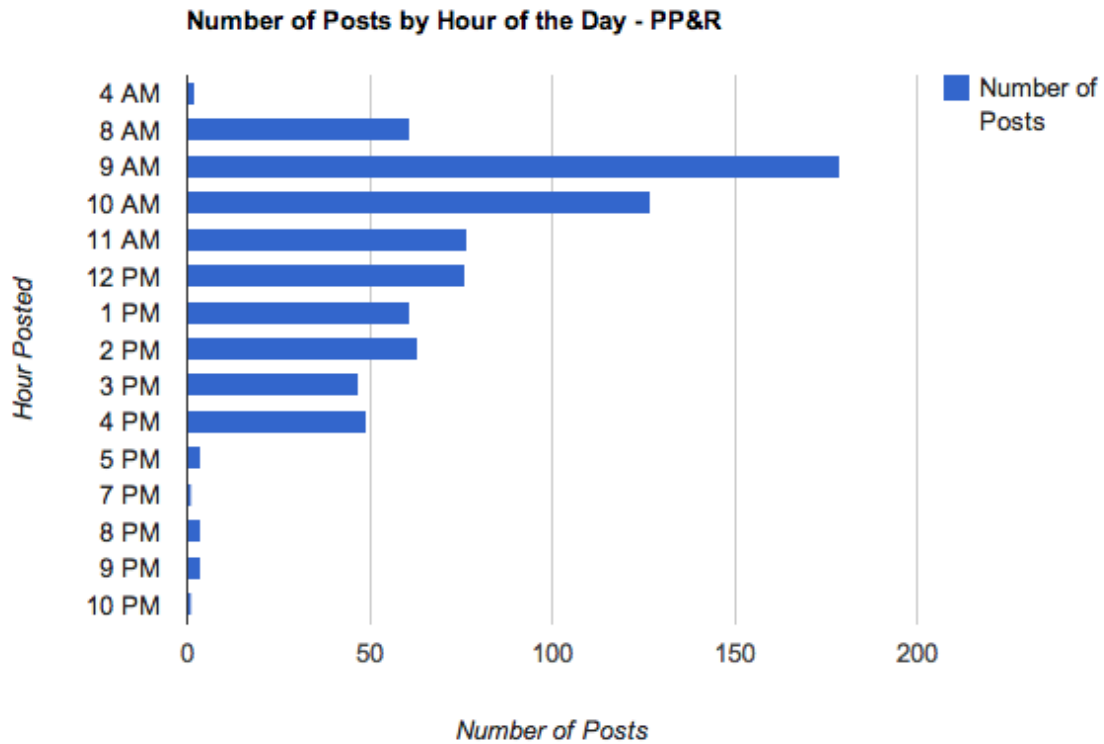
Figure 6 - Posts by hour of the day - PP&R

As we can see in Figure 6, the majority of posts were made in the early morning
hours of the day. It would seem consistent with a daily morning ritual of posting
augmented by limited posts through the day until close of business at roughly 5pm.

Number of Posts by Day of the Week   - PP&R

Legend:
- Sunday - 16 (2.1%)
- Monday - 174 (23%)
- Tuesday - 142 (18.8%)
- Wednesday - 139 (18.4%)
- Thursday - 123 (16.3%)
- Friday - 154 (20.4%)
- Saturday - 8 (1.1%)

Pie chart values: 20.4%, 23%, 18.8%, 18.4%, 16.3%
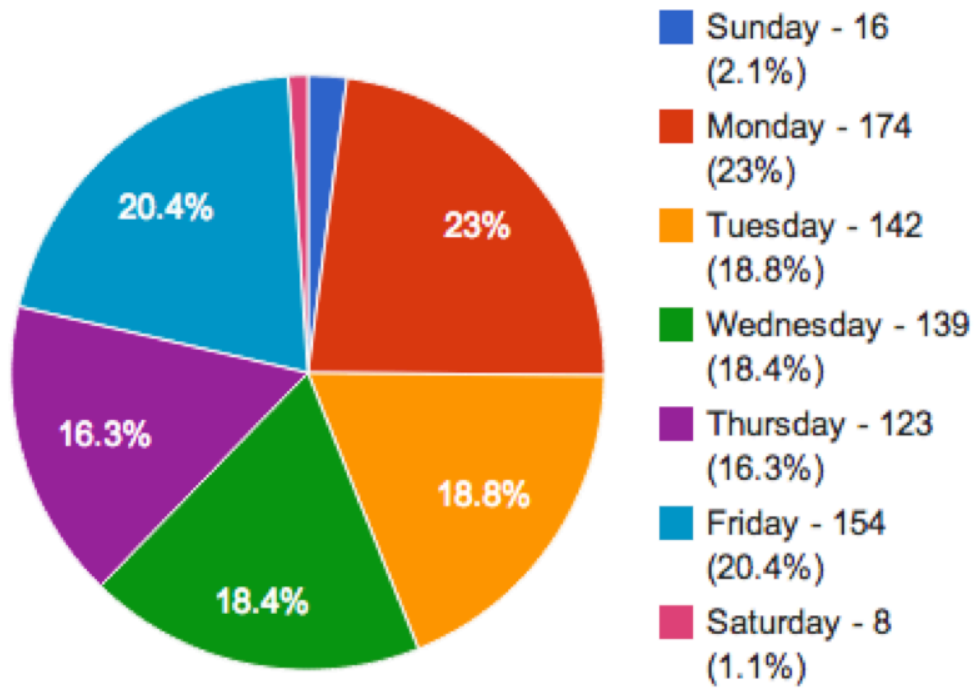
Figure 7 - Posts by day of the week - PP&R

In Figure 7 we can see a slightly higher percentage of posts occurring on Mondays and Fridays with significant downtime occurring over the weekend. Given the recreational nature of the PP&R, higher post frequency before and after the weekend would make sense. This is a slight departure from the PPB who still had mild post activity on Saturday's and Sunday's.
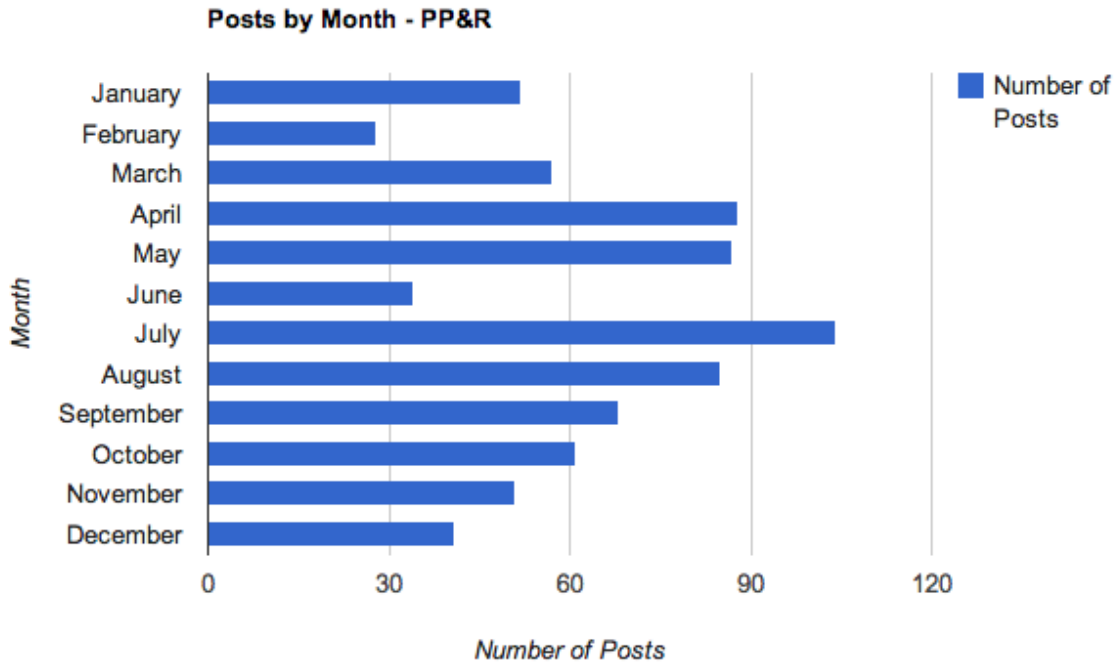
Posts by Month - PP&R

Figure 8 - Post by month - PP&R

In Figure 8 we can again see the recreational nature of the PP&R as posts frequency seems to rise in the more active Summer and Fall months and hits relative lows during months with less favorable weather. However, we can see a significant dip in June postings, which is seemingly inconsistent with the overall trend. There is no obvious explanation for this in the data.

Post Content

In Figure 9 below, we can see the tag cloud of all posts for the PP&R. This cloud represents the most common words used in post contents. As with other post tag clouds, common language words have been removed. Additionally, in the case of PP&R I chose to remove the following frequently used words because of their frequent use and lack of analytical value: parks, city, recreation, photos, and timeline. The words, "parks", "city", and "recreation" are part of the official name of the PP&R and were used in many posts.

However it should be noted that the vast majority of posts were regarding city parks and spaces and as such, "parks" is of course expected to be a very common and central word in post contents. Additionally, the words "photo" and "timeline" were almost always used together to reflect a photo timeline in Facebook. Since we already track photo post types in the below general analysis, those words have been removed here.

Figure 9 - Post content tag cloud – PP&R

From the post tag cloud we can see a significant difference in post content and demeanor between the recreationally based PP&R vs. the more administrative and factual PPB and PBoT. We see words such as "community", "play", "arts", "great", "work", "live", and "healthy" all making prominent appearances. Given the stated mission of the PP&R, the use of these words makes sense and going through the posts, there certainly is a feeling of fun and even pride in the public spaces and facilities that comprise the PP&R's administrative domain.

Word	Frequency
fields	38
grand	36
opening	35
community	33
summer	32
Oregon	30
work	29
great	28
center	27
healthy	27

Table 14 - Most commonly used words in posts – PP&R

The most common type of post was the Public Announcement. The majority of these were announcements of park openings/closures/construction news, new programs and classes, photos/timelines, and similar types of posts. Some typical announcements were:

Post Title	Post Content
	More E205 Initiative improvements are here, this time at Lynchwood Park at SE 170th Ave & Haig St! The pathway excavation work is complete and the soft surface trail is being installed. A new drinking fountain will be installed soon. Soon, PP&R crews will fence off the off-leash dog area,

	and put in park benches. It's another successful E205 Initiative project to improve parks east of I-205! Way to go, PP&R team.
	There is no stopping...dum dum dum...the MOUNTAIN BEAVER! Actually, the harmless, rare little Boomers are rodents, making a documented appearance in PP&R's Forest Park for the first time since anyone can remember! Mountain beavers are one of the most primitive of all rodents - certain physical adaptations appear to have changed little over thousands and thousands of years. They live only in Oregon, Washington, and British Columbia. In typical Oregon-weird fashion, mountain beavers happen to also harbor the world's largest flea! Don't worry about getting the world's largest flea bite; though the world's largest flea circus might be a sight to see!
Portland Dog Parks	The off-leash area at Delta Park is now closed for the rainy season...but the off-leash area at Portland International Raceway is open again!
(No title)	PP&R's Teen Environmental Adventures! Trips for Teens (ages 11-17). Register Early and Reserve your spot today! Registration deadline is 5 days before all trips. Snowshoe Adventure December 8, 9:00 AM-5:00 PM $39/Course #383285 Instructors: Cole Robinson & Nicole Gaines Enjoy the beauty and snow of Mt Hood with new friends. No experience necessary. All equipment and expert instruction provided! Scholarships available. Meet at Matt Dishman Community Center, 77 NE Knott.

Table 15 – Common Public Announcement Posts – PP&R

The majority of PP&R's posts were informational and highly community oriented. Often they were specific to an event or location, typically a park. Unlike other agencies in this study, the PP&R had a significant number of input requests where they actively sought public dialog and input.

Post	Comments	Likes Count	Code
RAIN is back! Stoked or bummed?	27	29	Input Request
Know which PP&R pool is in this photo? Take a guess and post below... Get fit and have fun at Portland Parks & Recreation's pools! Our 12th Annual Water Warrior Club begins January 2, 2013 for both lap swim and water exercise participants. Swimmers who complete at least 16 workouts in the month of January will receive not only great health benefits but a snazzy, stylish and envy-inducing Water Warrior t-shirt. Swimmers will chart their progress at their neighborhood pool. Contact your local pool, and happy swimming! Buckman Pool (503) 823-3668 320 SE 16th Columbia Pool (503) 823-3669 7701 N Chautauqua Blvd Matt Dishman Pool (503) 823-3673 77 NE Knott East Portland Pool (503) 823-3450 740 SE 106th Mt. Scott Pool (503) 823-3183 5530 SE 72nd Southwest Pool (503) 823-2840 6820 SW 45th Ave	14	7	Input Request
A pod of mermaids at PP&R's Pier Pool! Also see: http://www.katu.com/news/local/Avast-There-be-mermaids-at-the-local-pool-166780566.html	13	28	Public Announcement

It is a testament to the character and values of Portlanders that many of you have asked about Portland Parks & Recreation's bridge project in Pier and Chimney Parks. Building the bridge will be a wonderful and exciting amenity for Portland's green infrastructure! It is a necessary part of the North Portland Greenway Trail project, which is an ongoing endeavor, part of a larger vision: a 10.4 mile trail to connect PP&R's Kelley Point Park to the Eastbank Esplanade. Another plus is that it will also benefit people and dogs in St Johns with an easy way to get to Chimney Park's dog off-leash area. Planning this project meant that we have had to balance a lot of desires, regulations, the way the topography/land is laid out…the bridge has to go over railroad tracks, for one, so it has to clear train height and there are railroad height requirements in that regards, plus bicycle safety standards, ADA access regulations, etc. The plan as it stands has the least impact to trees while accommodating all other requirements. That means if we didn't pursue the current plan, we would have had to consider an option that required removing A CLUSTER of trees, instead of just one. If there was way of doing the project that didn't involve removing this tree, we would have certainly pursued it. But the tree will continue to contribute to the well-being of Portlanders! It will be repurposed to become PP&R's first Nature Play area at Westmoreland Park. It will help kids connect with nature, and provide a sustainable, natural playground in the first such endeavor across our system. Further, we will mitigate the loss of the sequoia by planting seven giant sequoias in neighboring Chimney Park, where there are much fewer trees, plus four Douglas firs, four Western Red Cedars in Chimney Park, and about TWO DOZEN OTHER TREES! We have worked with our Friends groups and neighbors about this project; there was an open house in December 2011 where plans were presented, we've had very consistent messaging about the project and the fact that we planned to install the bridge at the place where there is the least impact to all trees. Why do it now? We must	13	8	Public Announcement

remove the tree before March 1 to avoid issues with migratory birds – per the Migratory Bird Act; before birds start nesting or the project would have to wait until after nesting season. The city has 1.4 million trees total -- 1.2 million in parks and 240,000 on city streets. In 2004, the City set a goal of 33 percent of Portland's surface area covered in urban forest; currently it's at 30 percent, meaning our tree cover has INCREASED 2.6% during the past nine years. Thank you for the chance to provide this information, and for caring about our parks and trees.

Last year I was in my neighborhood park, Mt Scott, on the day that the crew was spraying Roundup around all the trees. Since I have dogs and I want to help them stay healthy, I'm wondering if you are spraying again this year?	12	0	User Generated
TODAY'S THE DAY! We are proud to open The Fields Park, Portland's newest park, at NW 10th & Overton at NOON today! The Fields has transformed an industrial wasteland into a neighborhood gathering place, complete with the first dog off-leash area designed as such from the ground up. It also has a huge green lawn in it's 3-plus acres, a gorgeous modern playground, and lots of seating with killer views. What a great day for a great new park. Enjoy and let us know what you think!	11	75	Public Announcement
Something we're always curious about: What's your favorite PP&R park and why?	11	1	Input Request
Banter with Brits prompts changes at world's smallest park in Portland	10	8	Public Announcement

| Did you get MARRIED at the Rose Garden? Leach Botanical Garden? Any Portland Parks & Recreation site? What was it like? | 8 | 10 | Input Request |
| It's gorgeous out! How are you going to enjoy the sunshine in a Portland park, on a trail or at a playground today? | 8 | 12 | Input Request |

Table 16 - Ten highest commented posts – PP&R

As we can see from Table 16, half of the top ten highest commented posts are requests for input from the public. While the comment and likes counts are nowhere near those of the PPB, these posts are certainly of a different nature and by most accounts, far less contentious.

While the PP&R has posts of almost every type, what sets it apart from others in this study are high numbers of User Generated and Public Response post types (134 and 109 respectively). User Generated posts are posts that a member of the public has posted on the PP&R's Facebook page. The PP&R is the only agency in this study that allowed public posts and this post type was second only to Public Announcements. These user-generated posts varied in their content from questions to topics of concern. It should also be noted that all of the top five User Generated posts did garner responses from the PP&R. The top five commented User Generated posts are below:

User Post	Comments	Likes
Last year I was in my neighborhood park, Mt Scott, on the day that the crew was spraying Roundup around all the trees. Since I have dogs	12	0

and I want to help them stay healthy, I'm wondering if you are spraying again this year?		
I am new to the area and the weather. I was wondering how many parks are indoor or covered so that I can take my 3 year old to the park in the never ending rain! We live near St. Vincent's Hospital. Any close by? Thanks for the help!	7	0
Fishermen have become a part of the waterfront landscape in downtown Portland. One by one, they're learning it's illegal. (Posted link to story about a fishing ban on the Waterfront in Downtown Portland).	7	4
So protesters can occupy city parks for weeks on end and the city pays millions of dollars in police, bathrooms etc. and someone can't even fish?	6	10
Do any parks in SW Portland (not including downtown) have splash pads or water play features. Seems like one has to go downtown, Beaverton, or Wilsonville to find a fountain to play in…	5	0

Table 17 - Top five commented User Generated posts - PP&R

The PP&R is also unique in that it had the highest number of Public Response posts, almost double that of the PPB. This shows that the PP&R is actively responding to user posts, questions, and inquiries. These types of responses included content such as providing additional information/clarification to requests and questions, liking photos/posts, paying compliments to users, and other connection-making activities.

Comments and Engagement

Comments to PP&R posts were generally positive and contained very few debates or discussions. The vast majority were either contributory in response to an input request or provided questions and answers. With an engagement percentage of 9.3, PP&R had a very high self-comment rate (where they commented within their own post), the majority of which were answering users' questions or providing clarification or suggestions. This

kind of engagement was unique in the three agencies studied and gave an inclusive and

engaged feeling to PP&R posts.

Figure 10 shows the most commonly used words in post comments for the PP&R.

As we can see, there is certainly a more community-oriented and appreciative feel to the

comments. Words like, "community", "more", "great", "love", "time", and "thanks"

feature prominently.

Word	Frequency
parks	114
Portland	90
community	40
more	38
out	38
great	36
thanks	35
center	34
recreation	34
love	31

Table 18 – Most commonly used words in comments – PP&R

A sampling of interesting post/comment threads shows a heavy involvement by the PP&R in responding to public comments. Unlike the PPB, there did not appear to be a shying away from comment involvement even on issues of some contention.

Post Title	No Title
Post Content	The Waud Bluff Trail Project is rocking on! Check it out, the bridge is now in place. It's not yet open for use but that is coming soon… The Waud Bluff Trail will dramatically shorten the time it takes to get from North Portland to Swan Island, for thousands of bike and foot commuters and visitors!
Post Comments	**User A**: It's just too bad that people with bikes will have to carry them down all those stairs. Oh well. **User B**: Glad it's progressing... It is weird that in a city with such an obesession for bicycles, that was not integrated into the plan. **User C**: I don't think carrying your bike down the stairs is that bad. It's carrying it UP that's going to be a pain. **User D**: please add wheel gutters to the stairs at the very least! **User E**: Amanda: check it out! **User F**: Woot Woot!!!!!!! **User G**: The only reason I go to swan island is UPS, which means my heavy cargo bike and no way I can carry that up those stairs! **Portland Parks & Recreation**: I believe there is a bike gutter to allow bikes to be rolled up and down much more easily than being carried. Enjoy and have a happy new year!

Table 19 - Post ID #3692 – 2012-12-11 11:59:19

Table 19 is a fairly common example of a problem/response post from the PP&R. We can see the concern for easy bike access up/down the stairs of the Waud Bluff Trail bridge by a number of users and that the PP&R responded with an informative response and even an end-of-year wish.

Post Title	No Title
Post Content	Your Good Samaritan/excellent karma post of the day: A guy emailed our Portland Int'l Raceway manager that he had found a camera in Yosemite Nation Park, looked through the images and found a bunch from PIR. He sent one of a car that had been photographed several times. So PIR posted it on Facebook, and a few hours later we reconnected the owner, his camera, and the Good Samaritan! Yay good vibes!
Post Comments	**User A**: Karma from your Parks & Rec...:v) **User B**: Very cool! **Portland Parks & Recreation**: Neat huh! What kind of good karma have YOU come across lately? **Use C**: awesome! really, it's so easy to help out one another.

Table 20 - Post ID #3989 - 2012-08-07 08:54:49

The brief yet interesting comment thread in Table 20 is a good example of how the PP&R took a user's comment and turned it around to elicit more comments and feedback. User A brings up the notion of karma after multiple agencies work together to help a citizen reconnect with their missing property. The PP&R continues the positive momentum yet turns it around and asks the public to contribute their karma stories. While there may have been no response to that request, it still shows a rather unique usage of comments and a public input request. This type of cultivation of discussion, even if only to further a "good feeling" thread, is central in demonstrating how government agencies can foster discourse simply by continuing the conversation and taking it in new and constructive directions.

Post Title	No Title
Post Content	It is a testament to the character and values of Portlanders that many of you have asked about Portland Parks & Recreation's bridge project in Pier and Chimney Parks. Building the bridge will be a wonderful and exciting amenity for Portland's green infrastructure! It is a necessary part of the North Portland Greenway Trail project, which is an ongoing endeavor, part of a larger vision: a 10.4 mile trail to connect PP&R's Kelley Point Park to the Eastbank Esplanade. Another plus is that it will also benefit people and dogs in St Johns with an easy way to get to Chimney Park's dog off-leash

area. Planning this project meant that we have had to balance a lot of desires, regulations, the way the topography/land is laid out…the bridge has to go over railroad tracks, for one, so it has to clear train height and there are railroad height requirements in that regards, plus bicycle safety standards, ADA access regulations, etc. The plan as it stands has the least impact to trees while accommodating all other requirements. That means if we didn't pursue the current plan, we would have had to consider an option that required removing A CLUSTER of trees, instead of just one. If there was way of doing the project that didn't involve removing this tree, we would have certainly pursued it. But the tree will continue to contribute to the well-being of Portlanders! It will be repurposed to become PP&R's first Nature Play area at Westmoreland Park. It will help kids connect with nature, and provide a sustainable, natural playground in the first such endeavor across our system. Further, we will mitigate the loss of the sequoia by planting seven giant sequoias in neighboring Chimney Park, where there are much fewer trees, plus four Douglas firs, four Western Red Cedars in Chimney Park, and about TWO DOZEN OTHER TREES! We have worked with our Friends groups and neighbors about this project; there was an open house in December 2011 where plans were presented, we've had very consistent messaging about the project and the fact that we planned to install the bridge at the place where there is the least impact to all trees. Why do it now? We must remove the tree before March 1 to avoid issues with migratory birds – per the Migratory Bird Act; before birds start nesting or the project would have to wait until after nesting season. The city has 1.4 million trees total -- 1.2 million in parks and 240,000 on city streets. In 2004, the City set a goal of 33 percent of Portland's surface area covered in urban forest; currently it's at 30 percent, meaning our tree cover has INCREASED 2.6% during the past nine years. Thank you for the chance to provide this information, and for caring about our parks and trees.

| Post Comments | **User A**: How old is the three that will be removed?
User B: A park is trees not bridges
User C: Save the tree! This PR is BS.
User D: I'm sorry to see that you deleted my previous post. I find it very hard to believe that PP&R's design for the bike/pedestrian trail runs right through an old growth stand of sequoia and involves cutting down one of the members of that circle of stately old trees. In particular, I find it unbelievable that yet-another trail is being carved through Pier Park when there is already a perfectly good trail that runs the perimeter of the park and many others that zig zag through the park already. If the new bridge's purpose is truly for bikes and pedestrians, I don't think another trail carved through the |

middle of that grove is necessary. The bridge will be accessible from the perimeter trail that runs just north of the grove of sequoia. Please consider altering this design and saving that tree. It is a member of a circle of gorgeous trees and the plan as it is will ruin the sacredness and serenity of that grove and needlessly destroy a tree which took hundreds of years to grow the size it is.l
User E: "It will help kids connect with nature" Joni Mitchell's song Big Yellow Taxi is never more appropriate "They took all the trees And put them in a tree museum"
User F: Please join this page to learn more about how to get involved in order to save the Giant Sequoia in Pier Park.
User F: http://www.facebook.com/SaveTheGiantSequoia
User G: The phrase "Epic Failure" doesn't even do this justice. What happened to that Portland ingenuity that I love so much? Like...I don't know...GO AROUND THE FREAKIN' TREE?????
Portland Parks & Recreation: Impossible due to required factors for engineering and seismic standards. Bridge must be able to accommodate emergency vehicles - ambulance and or fire trucks
User G: Thanks for that PPR...unfortunately still shaking head in very sad fashion.
User H: "Portland Parks & Recreation Impossible due to required factors for engineering and seismic standards. Bridge must be able to accommodate emergency vehicles - ambulance and or fire trucks" good point an ambulance and a fire truck would have a hard time getting to that back far corner of the park THERE IS AN ENTRANCE ON COLUMBIA TO THAT AREA OF THE PARK.
User H: no joke I've Had an ambulance com to that exact spot, no problem My friend broke his collar bone on "moon hill" or "dead mans jump" just depends on when YOU GREW UP THERE on what you call it.
User I: Old growth trees are 250 years+. This grove is about 70 years old.

Table 21 - Post ID# 3575 - 2013-02-20 08:35:15

The post/comment thread in Table 21 is one of the more controversial posts by the PP&R yet also one of interest for analysis. In it, the PP&R addresses recent public concerns regarding the building of a pedestrian bridge that would require the removal of a single Giant Sequoia tree.

The post itself is a proactive attempt by the PP&R to publically address, and open for discussion, the matter of the tree's removal. It is detailed with the plan, reasons,

alternatives, costs, benefits, and measures to offset the loss of the tree. It is a clearly

purposeful and well thought-out post that was designed to identify as many aspects of the

issue as possible. The tone is educational yet appreciative of the public's interest.

From the comments, we can see that most people are not quite happy about the

decision. User D seems to suggest that the PP&R deleted one of his/her previous posts

yet they allowed his/her second one to stand. User D and a number of other commenters

make arguments regarding alternatives to the tree's removal, some of which are mildly

sarcastic. Yet the PP&R commented back on their own post to inform a user as to why

their suggestion was not possible. Simply posting content that directly addresses a

contentious issue is constructive in the context of deliberative discourse and marks a

distinct departure from how the other agencies in this study address such matters.

Post Title	No Title
Post Content	Last year I was in my neighborhood park, Mt Scott, on the day that the crew was spraying Roundup around all the trees. Since I have dogs and I want to help them stay healthy, I'm wondering if you are spraying again this year?
Post Comments	**Portland Parks & Recreation**: I can tell you that small portions of the park, such as tree circles, are treated with herbicides, once or twice a year. This may include the use of a glyphosate-based herbicide somewhat similar to Roundup, but it not exactly the same as the homeowner product. Other areas such as the turf, shrubs, and trees are not treated with pesticides. Also, any herbicide use is only allowed within the direct oversight of our Integrated Pest Management Program which has led to reductions in reliance on pesticides, with only minimal, targeted use of low toxicity non-persistent materials in parks such as Mt. Scott. Any application of herbicides at any site will always be accompanied by notification signage to inform park visitors of the work being carried out. None of the products we use at Mt. Scott should put either the public, or their pets at any undue risk. **User A**: The American Veterinary Assn has linked Roundup and other glyphosphate herbicides with increased lymphoma in animals and with similar health risks for children. Dogs, in particular are drawn to sniff those trees. Thank you for your honesty. We won't

be visiting our neighborhood park this summer and we will be spreading the word to others!

User B: They could save themselves lots of money if they would just use white vinegar undiluted,,,it's Mother Earth friendly and safe for animals. I use it on the ranch.

User A: Chris, it's what I use, too, but Monsanto doesn't profit from white vinegar!

User C: Glyphosphate based herbicides DO NOT disintegrate like they once thought they did (less than 3% in 28 days!). AND THEY. ARE. NOT. SAFE. in ANY dosage to ANYONE, including pets and children! More lies.......

Portland Parks & Recreation: We appreciate your concerns. Health and safety are our top priorities. None of the products we use at Mt. Scott should put either the public, or pets at any undue risk. For further information about PP&R's nationally lauded Integrated Pest Management (IPM) program, please contact John Reed, the program coordinator, at 503-823-1991.

User B: SERIOUSLY?????? Read the precautions printed on the labels. ALL Monsanto products are toxic to humans and animals. Good grief,,,who runs your department.

Portland Parks & Recreation: Our Integrated Pest Management system has been nationally recognized for innovative techniques that are effective and act with safety in mind. Perhaps you can look into the program via the information we provided and learn more. You might have a better understanding of things then.

User C: I think YOU need to look into this deeper, these products ARE TOXIC! Read the labels and see if they don't have a whole list of precautions. Monsanto is famous for saying their products are safe as well.....hmmmmmm, Agent Orange ring a bell????? And how about ethoxyquin???? And this list goes on! People like you put others health at risk (adults, children, pets and wildlife), serious risk, but what do you care as long as your weeds are under control and the park 'looks' pretty!

Portland Parks & Recreation: Will check on what our IPM director says. Thank you for your passionate comments

Portland Parks & Recreation: According to our Integrated Pest Management (IPM), there is a large presence of misinformation about Roundup on the web which is repeatedly passed around by concerned people. We base our IPM decision-making regarding product choice on a wide range of sources, but they are all science-based, and include independent and governmental assessments. A review of the available scientific literature shows that the glyphosate based herbicides we use have not been associated with an increase in lymphoma in dogs. White vinegar, and other horticultural based herbicides are rated as more acutely toxic than the diluted

glyphosate based products we use. Vinegars are also ineffective for the kind of weed control we need for our park targets. The glyphosate based herbicides we use are of low toxicity, both acute and chronic, and these products are shown to break down completely over time by microbial action in the soil and are not bioaccumulative. We use similar or the same kinds of glyphosate based herbicides in our parks as do other regional land managers, such as our Bureau of Environmental Services, The Nature Conservancy, and so on.

User A: Thank you. I spent some time reading the IPM information on the Portland Parks web site and became even more concerned when I read that your pest control may extend to the wood mulch that covers most of the playground areas and all of the off leash dog areas. I have begun to talk with mothers of the small children who play at the parks. BUT, I note that Portland has created some pesticide free parks and has added to that list in the past few years.

Table 22 - Post ID# 3365 - 2013-05-07 21:25:03

In Table 22 we have a User Generated post that asks PP&R a questions regarding the safety of weed killer user at a local park. The PP&R responds with a rather detailed explanation of what, when, and why herbicides are used and stresses that public safety is always the priority. After that initial answer, we can see a number of comments questioning the safety of the herbicides used. While all comments are obviously impassioned, User C in particular becomes mildly belligerent in response to the PP&R's assurance that the products used are safe for pets and the public.

In all, the PP&R responded five times (out of the 12 comments) addressing public concerns as well as providing contact and other resource/educational information. PP&R's final comment in this post stands out for its sheer detail in addressing the commenters concerns. Not only do they address the decision-making process of herbicide selection but they also explain why vinegar (as suggested by other commenters) is not an effective treatment. The final two sentences take a proverbial deep dive into the science of herbicide safety and attempt to specifically address, from a rather technical

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perspective, the safety of the chosen treatments. Their response was quite detailed and

unique as the PP&R appears to take a great amount of time and effort in addressing

public comments and concerns. This is reflected in User A's final, "thank you" to the

PP&R for providing the additional information.

Case Study 3: The Portland Bureau of Transportation

The PBoT had the lowest number of posts with only 175 and a comment count of 23. At the time of data collection, the PBoT Facebook page had 4 check-ins, 207 likes, and did allow members of the public to post on their wall.

Post Frequency and Timing
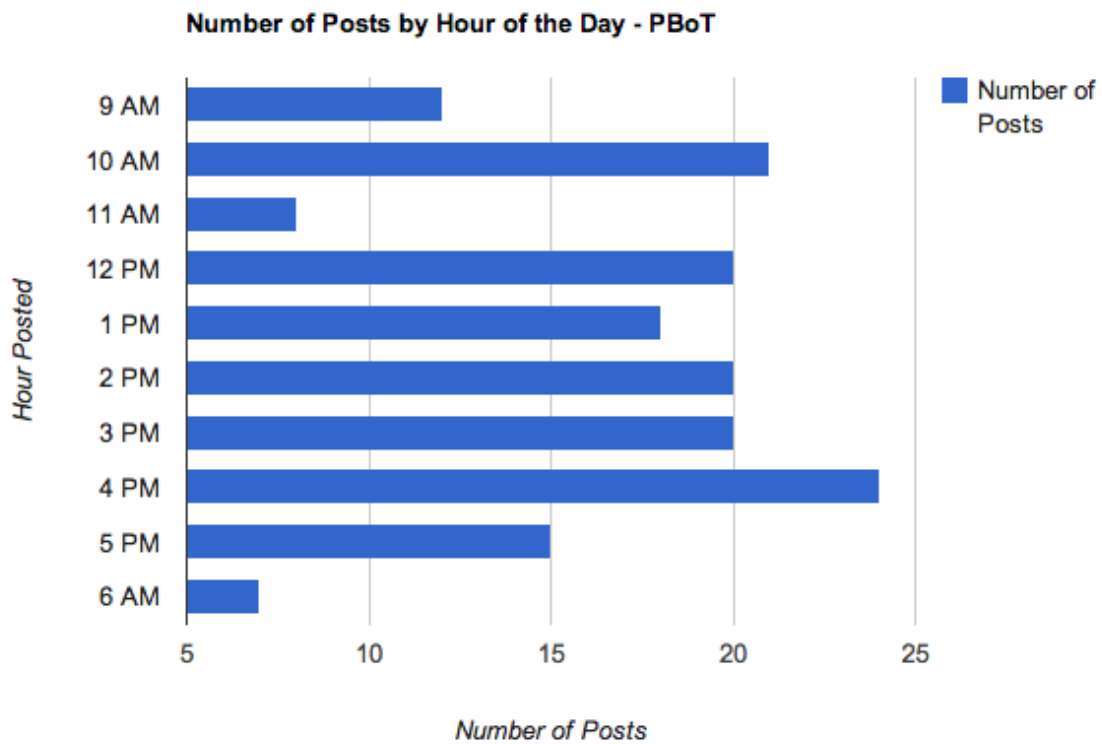
Figure 11 - Posts by hour of the day – PBoT

Number of Posts by Day of the Week - PBoT
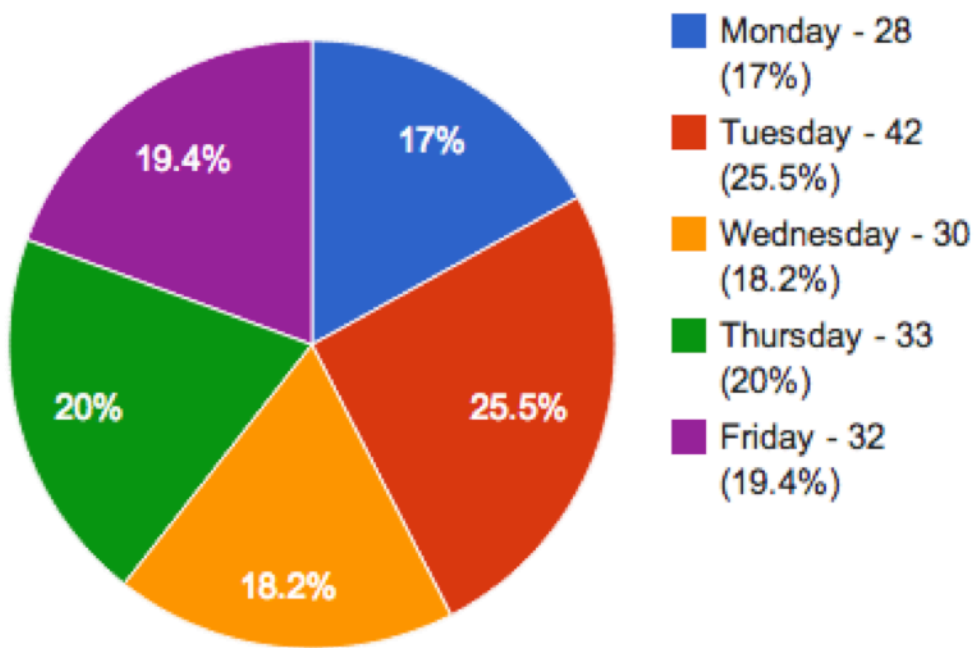
Figure 12 - Posts by day of the week – PBoT
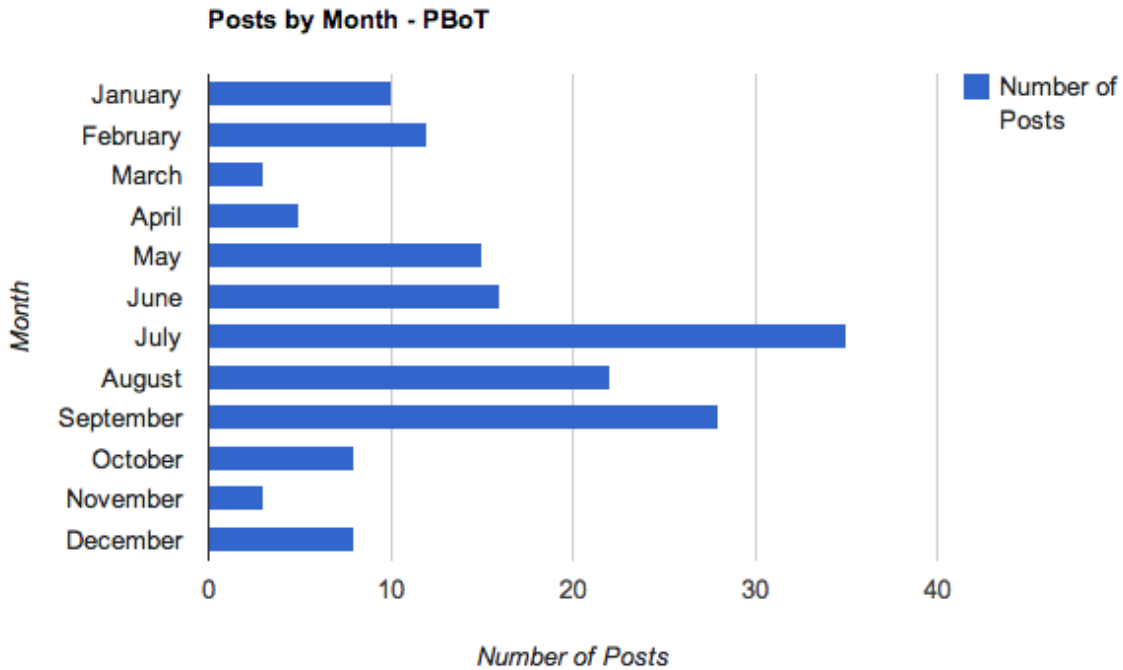
Posts by Month - PBoT

The PBoT appears to post largely during normal business hours with slight peaks during the 10AM and 4PM hours. Day of the week post distribution appears largely even with a notable exception on Tuesdays which show a 5.5% increase in frequency above the next highest day. Monthly distributions look significantly different from the other two agencies in this study with the majority of posts occurring in July and September and an almost complete drop off for the remainder of the year. Other agencies showed gradual increases or decreases in post activity but the PBoT appears to have starker frequency changes.
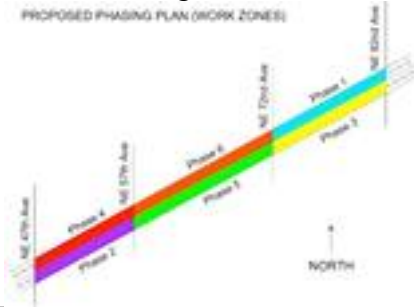
Post Content

As we can see from the tag cloud in Figure 14, posts are obviously transportation related and largely factual and information related. Because of the format of many of the PBoT's posts, the words "Oregon", "news", and "city" were removed from the cloud.

These words were automatically included in shared story posts from the PBoT when

linking stories to their website and thus were falsely overrepresented.

Figure 14 – Post content tag cloud – PBoT

Words like "street", "transportation", "traffic" and "advisory" are expected to

occur frequently given the agency's mission and unfortunately, beyond that, there are not

a lot of other descriptive words that would suggest that PBoT is using Facebook posts as

anything other than a one-way communication channel.

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Word	Frequency
street	31
transportation	22
thanks	21
advisory	20
traffic	20
streetcar	19
website	19
provide	19
top	19
page	18

Table 23 - Most commonly used words in posts – PBoT

While there are certainly posts that inform the public of news and events, there were very few posts that attempted to engage the public. Only four posts were requests for public input and none of those garnered any comments. The vast majority of posts were news related or served information broadcasting purposes.

Post Title	Post Content
Watch What Traffic Will Look Like When Cars Drive Themselves	An awesome visualization of how automated cars would traverse an intersection. Read the full story here: http://bit.ly/zQmajI
Sandy Boulevard Repaving Project | The City of Portland, Oregon	Final paving of Sandy Blvd is complete! Roadway striping will be performed July 30th - August 3rd. You may see temporary lane closures while the striping takes place.
Traffic Advisory: Sidewalks on Broadway Bridge to close one at a time beginning Monday for two weeks	Sidewalks on Broadway Bridge to close one at a time beginning Monday for two weeks.

| Paint the Street Fantastic | Paint the Street Fantastic is a short film about Intersection Repair Projects in Portland, Oregon. For more information, go to http://cityrepair.org/how-to/p... |

Table 24 – Common posts – PBoT

Table 24 shows three comments representative of the common types of posts made by the PBoT. While most PBoT post were rather mundane traffic and safety announcements, there were some attempts at generating user interaction but none actually worked. With 207 likes, we might expect some kind of interaction, especially on Input Request post types, but none appear to have worked. However, only 6 of the 175 posts were asking for input.

Post	Comments	Likes Count	Code
First Sunday Parkways in Southwest neighborhoods is this weekend: Hundreds of walkers will take to the streets, highlighting the importance of walkable communities and exercise on personal health. (Link to article on PBoT website)	3	3	Meeting/Gathering
Mayor Sam Adams, Sen. Ginny Burdick, Sen. Jackie Dingfelder unveil first 20 MPH sign on Neighborhood Greenway. Speed limits on 70 miles of Portland's neighborhood greenways are set to change from 25 miles per hour to 20 miles per hour, as the City of Portland implements historic safety legislation passed last year. Mayor Sam Adams announced the new speed limits today at a press event on a greenway in Northeast Portland flanked by state senators who supported the bill in Salem.	3	9	Public Announcement

For more great videos go to: http://www.flixxy.com To get subtitles on iPhone or iPad go to: http://youtu.be/75F3CSZcCFs Taking the bus has never been cooler... This ad was commissioned by the Danish government to promote public city buses. It is, perhaps, the best television ad ever produced about mass transit.	2	2	Public Announcement
Portland's first foray into street-side seating receives positive community feedback	2	1	Public Announcement
Mayor Charlie Hales visits with PBOT's Maintenance crews	2	2	Selfie
They're a dying breed here in Portland, but there's still a few of them lurking out there, waiting for the unwitting and the unwary. If you know of a "bike killer" grate, let the us know by calling 503-823-SAFE (7233), emailing safe@portlandoregon.gov or by downloading the	2	0	Input Request

PDX Reporter app to report the problem.

Stanford program rewards commuters who travel before or after rush hour. If you carpool, ride transit, bike or walk to work already: thank you! Your actions have helped keep Portland's air clean and its roads less congested.	1	4	Educational

Table 25 –Ten highest commented posts - PBoT

As we can see, very few posts generated much if any response or interest. While this is likely due to the tone and nature of the posts, one has to wonder what the intention of the agency was in using Facebook here. It certainly doesn't appear to be engagement or to elicit discussion or contribution from the public. As Bertot, et al (2010) have pointed out, collaboration, participation, empowerment, and time are the key benefits of governmental social media use but it appears that the PBoT is not using the medium in such a way. Indeed, it would seem that the PBoT is missing a golden opportunity to engage with the public.

Transportation issues are big for Portlanders and for a city steeped in alternative modes of transportation (Bicycling.com, 2014; TriMet, 2014) and with a nationally recognized public transportation infrastructure (Carincl, 2009), the PBoT has a ripe audience for eliciting a much more engaging and interactive social media experience.

Comments and Engagement

Unfortunately, the PBoT did not have many posts with comments that were

analytically substantive.

Figure 15 – Post comments tag cloud – PBoT

In the comment tag cloud in Figure 15, we can't see a particularly cohesive set of

words or language that might give any insight into communicative behavior of PBoT

users. In fact, the most common word, "government" was only mentioned four times.

Such low frequency of word use makes it basically impossible to gain any analytical

value from PBoT comments.

Word	Frequency
government	4
more	3
incentives	3
people	3
thank	3
writing	2
thanks	2
many	2
behavior	2

Table 26 - Most commonly used words in comments – PBoT

There were only nine posts with a total of 23 comments in all of the PBoT's

collected post history. Of these, there was only one instance of the PBoT responding to a

user's comment. Below are some of the few posts with comments.

Post Title	No Title
Post Content	First Sunday Parkways in Southwest neighborhoods is this weekend: Hundreds of walkers will take to the streets, highlighting the importance of walkable communities and exercise on personal health. (Link to article posted)
Post Comments	User A: The new site design makes it rather difficult to locate the route map, and once you find the map, it's hard to tell where exactly the route is in relation to the surrounding area. Portland Bureau of Transportation (PBOT): Hart, try this: http://www.portlandoregon.gov/transportation/article/404456 User B: PBOT, you all did a great job with the SW Sunday Parkways. It was a great event.

Table 27 - Post ID#4624 2012-07-19 13:54:43

Post Title	No Title
Post Content	Mayor Sam Adams, Sen. Ginny Burdick, Sen. Jackie Dingfelder unveil first 20 MPH sign on Neighborhood Greenway. Speed limits on 70 miles of Portland's neighborhood greenways are set to change from 25 miles per hour to 20 miles per hour, as the City of Portland implements historic safety legislation passed last year. Mayor Sam Adams announced the new speed limits today at a press event on a greenway in Northeast Portland flanked by state senators who supported the bill in Salem.
Post Comments	User A: Let's plant some trees on the n'hood greenways too! User B: Wonderful news!!!! I am anxious to see this implemented in more neighbors. Thanks PBOT. User C: how do we get on of those on our street?

Table 28 - Post ID#4588 2012-08-24 18:22:15

Post Title	No Title
Post Content	Stanford program rewards commuters who travel before or after rush hour. If you carpool, ride transit, bike or walk to work already:

	thank you! Your actions have helped keep Portland's air clean and its roads less congested.
Post Comments	**User A**: It's kind of shocking how many people speak up to reject government incentives to change behavior. Do they think that citizens' current behavior has not already been shaped, changed, and/or reinforced by government incentives, subsidies, and other interventions? Government helped put us in our current global warming dilemma/obesity crisis by designing us into a car-centric society that keeps people imprisoned by roads, parking lots, and strip malls. We've become conditioned to this norm, but it doesn't have to be so. We can enjoy a healthier, more beautiful world with less traffic and more walk/bike-ability. Government incentives that successfully discourage driving are a winner in my book.

Table 29 - Post ID#4606 2012-08-01 13:13:48

In Table 27, we see the only instance where the PBoT commented to a user request. A user complained that the posted map did not give sufficient detail and the PBoT responded with link to detailed PDF map. In Table 28, we see a question from a user regarding petitioning the government to get a speed limit sign placed in their neighborhood and there was no public response from the PBoT. Finally, in Table 29, we see a rather detailed comment from a user regarding alternative modes of transportation. Again, in another example of a missed opportunity, we see no response from the PBoT in what could have been the spark of a deeper public discourse on that matter.

Analysis

Between the dates of June 1, 2012 and May 31, 2013, a total of 2,606 posts were made. The PPB had the highest number of posts with 1,541, the PP&R came in second with 890, and the PBoT had only 175 posts. The difference in post frequency might suggest significantly different approaches to not only social media strategy but also to content relevant to the agency's mission. A significant number of posts by the PPB were crime related (Public Safety type) and thus were more a function of publicizing social misbehavior rather than attempts at public engagement or discourse. Likewise, the PBoT's low number of posts might reflect the somewhat uneventful daily responsibilities of the agency and the public's lack of relative interest in the status of road and transit repairs and improvements that tend to span long periods of time.

Descriptive Code	Police Bureau	Parks & Recreation	Bureau of Transportation	Total	% of Total
Alert/Caution	7	2	23	32	1.21%
Art/Entertainment	0	2	0	2	0.08%
Call to Action	3	10	2	15	0.57%
Community Event	1	97	9	107	4.03%
Contest	0	0	2	2	0.08%
Economic Development	0	1	1	2	0.08%
Educational	23	9	4	36	1.43%
Employment	2	2	0	4	0.15%
Input Request	1	38	6	45	1.70%
Meeting/Gathering	52	14	13	79	2.98%
Public Announcement	164	329	86	579	21.75%
Public Help	157	5	5	167	6.29%
Public Recognition	0	47	0	47	1.80%

Public Response	65	109	5	179	6.75%
Public Safety	808	0	0	808	30.46%
Public Support	0	11	0	11	0.41%
Selfie	236	79	7	322	12.14%
Tragedy/Loss	22	1	1	24	0.90%
User Generated	0	134	11	145	5.47%
Total	1541	890	175	2606	

Table 30 - Codes and post counts

The "Public Safety" code was the most frequently encountered post. This is not entirely surprising given both the predominantly broadcast-nature of government SMS use and the relatively high number of posts made by the Police Bureau. No other agency had public safety related posts though there were some shared links from the Police Bureau's timeline on other agency pages.

The generic "Public Announcement" code was the second most prevalent for all agencies, accounting for 21.75% of all posts analyzed. This is again not surprising as this was found in previous research (Hand & Ching, 2011) and continues to point to the conclusion that government SMS are still used primarily as in a broadcast nature and as a one-to-many mode of communication.

The third most popular post code was the "Selfie". This was a bit surprising as it accounted for 14% of PPB, 8% of PP&R, 4% of PBoT posts. When assessed in terms of the augmentation of the public image it may not be surprising that the PPB has a large portion of their posts dedicated to the Selfie (Yim & Schafer, 2009). Public acceptance, image, and support of the police in general have been issues of significant concern (Bellman, 1935; News, 2011; Smith & Hawkins, 1973).

Post Types

Facebook assigns specific type categories to everything that a user posts. Within the data collected, four post types were found: link, photo, status, and video. Link types are posts to other web pages, generally external to Facebook itself. Photos are posts of a specific photo or album hosted by Facebook. The status type is a simple text message written by a user. Finally, a video is a direct link to a video or short movie.

Agency	Link	Photo	Status	Video	Total
Police Bureau	682 (43%)	165 (10.4%)	595 (37.5%)	99 (6.2%)	1541 (100%)
Parks & Rec	188 (21.1%)	386 (43.4%)	287 (32.2%)	29 (3.3%)	890 (100%)
Bureau of Transportation	111 (63.4%)	41 (23.4%)	15 (8.6%)	8 (4.6%)	175 (100%)

Table 31 - Posts by Type

Table 31 outlines the post types for each agency. As you can see, each agency differs greatly in the types of posts that they do. The PPB and PBoT both posted more links than any other type; 43% and 63.4% of their total posts respectively. The PP&R had only 21.1% of their posts as links but 43.4% were photos (significantly more than any other agency). In all cases, video posts were the least frequently posted type.

While all post types can contain information or media created by the agency, many of the posts analyzed contained content created and provided by others. While the PPB did not allow the public to post on their page, the PP&R and the PBoT did and had a public post proportion of 15% and 6% respectively. The PP&R in particular had a number of photo posts that were submitted to them from members of the public. Likewise, link posts were often to links of unaffiliated sites or to blog/news sources with greater details and seemed to be for information sharing purposes only. While the analysis of content sources is beyond the scope of this research, post type statistics, in

combination with comment metrics, can inform a general use philosophy of how an agency sees Facebook. A high number of link posts might suggest a predominantly broadcast philosophy, using Facebook as simply another means to get information out to the public. Photo posts might suggest a deeper involvement in getting the public to see and understand agency work. Video posts of agency created media might suggest an even deeper commitment in integrating the public with agency goals and missions given the time necessary to make and edit such videos. Status updates can be at both ends of the spectrum. Some agency status updates were very substantive in that they elicited feedback or sparked public conversations. Others were brief and almost lacking in any specific purpose.

Comments

Comments made by the public represent the core of what gives value to social media platforms like Facebook. They are the primary mode that enables many-to-many communication and in terms of this research, speaks directly to how the public views, perceives, and interacts with agency posts. Of the three agencies, there were a total of 6,534 comments made with 5,754 for PPB, 757 for PP&R, and 23 for PBoT.

Descriptive Code	Police Bureau	Parks & Recreation	Bureau of Transportation	Total	% of Total
Alert/Caution	19	0	0	19	0.2%
Art/Entertainment	0	0	0	0	0.0%
Call to Action	3	8	0	11	0.1%
Community Event	0	39	0	39	0.5%
Contest	0	0	0	0	0.0%
Economic Development	0	0	0	0	0.0%

Educational	113	3	1	117	1.5%
Employment	0	0	0	0	0.0%
Input Request	0	136	2	138	1.8%
Meeting/Gathering	64	5	3	72	0.9%
Public Announcement	564	285	9	858	10.9%
Public Help	239	1	0	240	3.0%
Public Recognition	0	34	0	34	0.4%
Public Response	0	3	0	3	0.0%
Public Safety	2290	4	0	2294	29.1%
Public Support	0	1	0	1	0.0%
Selfie	2346	81	2	2429	30.9%
Tragedy/Loss	116	5	0	121	1.5%
User Generated	0	152	6	158	2.0%
Total	5754	757	23	6534	

Table 32 – Comment count by code

As we can see in Table 32, Selfie and Public Safety coded posts generated the largest number of comments, accounting for 30% and 29% respectively. The number of Public Safety comments is not surprising given that the Public Safety code was by far the most commonly coded type of post with 808, followed distantly by the Selfie with 236. However, what is surprising is the comments-per-post for each code.

Descriptive Code	Police Bureau	Parks & Recreation	Bureau of Transportation
Alert/Caution	2.7	0.0	0.0
Art/Entertainment	0.0	0.0	0.0
Call to Action	1.0	0.8	0.0
Community Event	0.0	0.4	0.0
Contest	0.0	0.0	0.0
Economic Development	0.0	0.0	0.0

Educational	4.9	0.3	0.2
Employment	0.0	0.0	0.0
Input Request	0.0	3.6	0.3
Meeting/Gathering	1.2	0.4	0.2
Public Announcement	3.4	0.9	0.1
Public Help	1.5	0.2	0.0
Public Recognition	0.0	0.7	0.0
Public Response	0.0	0.0	0.0
Public Safety	2.8	0.0	0.0
Public Support	0.0	0.1	0.0
Selfie	9.9	1.0	0.3
Tragedy/Loss	5.3	5.0	0.0
User Generated	0.0	1.1	0.5

Table 33 – Average comments-per-post

From Table 33, we can see the average number of comments of each code at a per-post level. This analysis gives us a general feel for what types of posts generate the most comment feedback. Comments are often regarded as one of the key indicators for measuring successful social media campaigns and are of course central to discourse in a social media medium.

If it were the goal of government agencies to foster civic discussion, then it would appear that selfies, public safety issues, and input requests are the types of posts to make. The most frequent code, the Selfie, has a surprising 9.9 comments-per-post for the PPB while the PP&R has 1.0 and the PBoT has only 0.3. Input Requests for the PP&R has a 3.6 comments-per-post rate that is surprising considering that they only had 38 posts of that code. Unfortunately, the PPB and the PBoT had almost no Input Request posts (one

and six respectively) to compare to. Posts coded as Tragedy/Loss also generated a high

comments-per-post rate but of course those are not typical drivers of civic discussions.

Comment rates can also be broken down by post type. This allows us to see the

types of posts that generate the most comment feedback. As we can see in Table 34,

photo posts seem to generate the largest comment response for all agencies except the

PBoT. Numerous social media marketing blogs and marketing analytic sites have

suggested that photos drive a significantly higher comment and engagement rate

(Facebook, 2014b; Rawlinson, 2012).

Agency	Link	Photo	Status	Video	Total
Police Bureau	1464 (25.4%)	2078 (36.1%)	1759 (30.6%)	453 (7.9%)	5754 (100%)
Parks & Rec	52 (6.9%)	457 (60.4%)	227 (30%)	21 (2.8%)	757 (100%)
Bureau of Transportation	10 (43.5%)	6 (26.1%)	4 (17.4%)	3 (13%)	23 (100%)

Table 34 - Comments by post type

Agency Engagement

In this context, engagement is defined as an instance where the agency posts a

comment to another user's comment thus suggesting, however mildly, some form of

dialog with the public. This is different from Facebook's official definition of

engagement, "Engagement rate is the percentage of people who saw a post that liked,

shared, clicked or commented on it" (Facebook, 2014a). Facebook ties engagement to

metrics and measures of audience reach for the purposes of marketing. This is not very

helpful when assessing measures of discourse and deliberation. The nature of social

media platforms like Facebook only allow for cursory forms of engagement through the

post/comment cycle. However, by looking at how these agencies interact through

comments, we can gain a better picture of their intentions and use relative to fostering

engagement and discourse with the public.

Agency	Total Posts	Posts w/Engagement	Engagement %
Police Bureau	1541	74	4.8%
Parks & Rec	890	83	9.3%
Bureau of Transportation	175	1	0.6%

Table 35 - Levels of engagement

Table 35 shows us the level of engagement by each of the agencies. The PP&R

had the highest engagement percentage with engagement occurring in almost 10% of

posts. The PPB followed up with engagement occurring in almost 5% of posts whereas

the PBoT was far behind the pack with engagement occurring in less than 1% of their

posts.

These engagement levels seem to suggest that public discourse is not terribly high

on the list of priorities for agency Facebook usage. While not all posts are fodder for

agency-public engagement, the low engagement percentages do reinforce the previous

findings that social media is still used in a broadcast manner and that there is little desire,

particularly by authoritative agencies (like the PPB and PBoT), to engage in public

dialog.

Conclusions and Recommendations

The purpose of this research was to determine not only how three government

agencies in the City of Portland, Oregon used social media, but also to determine if such

use is or could be consistent with deliberative democratic practices. As we have seen with

the above three case studies, there are some genuine examples of deliberative dialog

occurring through Facebook. Unfortunately, those diamonds in the rough are certainly

rare enough to suggest that perhaps Facebook and other social media site are not the ideal playgrounds for fostering discussions within a deliberative democratic framework. However, before we simply write off the notion all together, let us take what we have learned from these three case studies to answer the research questions at hand. From there we can make some suggestions as to how Facebook might actually be a decent venue to at least begin having deliberative discussions on topics of public concern.

Research Questions Answered

How are the three agencies using SMS in terms of post content and frequency?

The PPB, with a decidedly hands off and non-participative approach to their social media strategy, is at a severe deficit here. While its post activity and comment threads were the most active and impassioned, they were also the most protective and divisive when it came to sparking and guiding public dialogue, largely through their silence. While the agency is certainly in a unique position in terms of a legal and authoritative context, there were a number of posts and comment threads where deliberative discussions could have taken place and been fostered through agency guidance without undue legal burden or risk to the agency. It simply appeared that the agency did not wish to facilitate discourse, constructive or otherwise.

Comments by the agency were typically used to clarify details of a post. Occasionally, the agency answered users' questions but these instances were rare with a number of questions going unanswered. User comments, on the other hand, were the shining star here. There were countless instances of discussions (though not all deliberative) on matters of public interest and conflict. Unfortunately, the PPB, in all

instances but two, refrained from guiding or even entering the discussion to move it along the path of deliberative discourse.

Having said that, it should also be noted that the PPB made a very concerted effort to post timely, reliable, highly variable (topic wise), and informative posts almost everyday. Indeed, there were very few days where the agency didn't post at least once. This kind of frequency and post quality likely speaks to their high "like" counts and certainly lends a significant amount of legitimacy to the idea that they are dedicated to using Facebook and other SMS to the fullest extent that they are comfortable.

The PP&R, on the other hand, took a decidedly different approach to its social media strategy. A number of users utilized their ability to post on the PP&R's page to ask questions, raise concerns, and spark discussions. Every single public post to their Facebook page garnered a response from the PP&R and nearly everyone also garnered responses and likes from other users as well.

Post frequency and quality were on par with that of the PPB though slightly less frequent. The PP&R also posted a wide variety of post types though had a significantly higher percentage of Input Requests that were frequently answered by users. While many of these Input Request post types were on matters not central to wide public interest, it does demonstrate a willingness to use the medium to gather input and information from the public and serve to spark further discussions should users request it.

On the comment front, we can clearly see the PP&R's dedication to insuring information and discussion. There were many instances where the PP&R made researched, clear, and rather detailed comment responses to user concerns and questions. Often, this would result in further comments by users and subsequently by the PP&R. As

such, the PP&R is the agency that provides more evidence that a deliberative democratic discourse could occur between user and agency. It simply takes effort on the agency's part to guide and further such discussions.

Finally, the PBoT did not seem to take as much interest in social media use as the other two agencies. While they did use the medium for announcements, their posts were not as engaging as those made by the PPB and the PP&R. They had a significantly lower post frequency rate and only once did they respond to a user's comment. Unfortunately, their inclusion in this study serves more as a lesson in how not to use social media for public engagement and dialog.

What is the impact of post content and frequency on the type of feedback received through SMS?

The above analysis has shown that, within the three agencies studied, there are significant differences in how each agency uses Facebook. Post times and frequency depend on not only the nature of the agency but also on weather and seasonal factors. With the PPB, we saw more posts in off and weekend hours than we did with the other two agencies. This reflects the 24-hour nature of policing. Within the PP&R, we saw a significant increase in post activity during the periods of the year with more favorable weather for outdoor activities (Spring and Summer).

The most frequently posted types in all agencies were, Public Safety, Public Announcement, and Selfies. This is of course skewed by the PPB as the majority of their posts were public safety related. Comment frequency appeared to depend more on the type of post and less on when it was posted. While a higher post rate would naturally increase the average comment rate, it was ultimately the post type that determined

comment rates. Selfies, Public Safety, and Input Requests types were the kinds of posts that generated the highest levels of comments and discussions. Additionally, posts that included images or video were highly commented as well.

If the goal of the agencies were to increase post comment and engagement rates, then it would appear that Selfies that include images or video would be the best kind of post to submit. This is, to a certain extent, contributory to the idea of deliberative discourse on Facebook. While the Selfie post is by definition a form of vanity (even within the context of an organization making the post), it also places the focus of the post on the agency thus opening it up to critical analysis through public comment and critique. This was evident in many PPB and in some PP&R posts although their deliberative potential was not fully realized.

Likewise, even when users attempted to start or continue a dialog through probing questions, suggestions, or ideas, often the agency did not respond or simply deferred to another authority or avenue of communication. This behavior, most predominantly seen by the PPB, reinforces our previous finding that SMS and Facebook in particular are not avenues intended, by the agencies at least, for deliberation and discourse. Yet despite the lack of sustained deliberative discourse, this research has shown that SMS--and Facebook in particular--does have the potential to at least set the stage for such discussions.

Do the SMS sites operated by the agencies fit within Young's deliberative democracy model (model criteria) and if so, are the agencies using the sites in a manner consistent with Young's model (application criteria)?

As discussed earlier, inclusion in large-scale social media platforms is not only a prerequisite of participation but it is a necessity for the very existence of the social

network. Social networks come in all sizes, but the ones with the largest user-base and thus largest potential reach for government agencies are those that have quite liberal policies on who can join and participate. While certain groups within social media sites can create private spaces and thus exclude certain individuals, this is not generally the case with larger government agencies. As has been addressed previously, governments are primarily using social media as another broadcast medium and thus inclusiveness in the form of unrestricted access to their social media pages is almost a given. Barring the occasional banning or removal of users who consistently post offensive or inflammatory content, everyone (even people outside of agency jurisdictions) is free to join and engage in discussions on public social media pages.

Young (2000) states that so long as all those affected by a given decision are able to access and be included in the medium of discussion, then the criteria of inclusion has been meet. For the purposes of this analysis, it is assumed that people with access to a computer or mobile device and the Internet are thus also inherently included in the discussions happen through social media sites like public agency Facebook pages should they choose to be.

In the United States, 83.8% of homes have at least one computer/mobile device and 74.4% of homes report having Internet access and 73.4% report having a high speed connection (Bureau, 2014). Time spent on the Internet in the United States has increased year-over-year and smart phones and tablets have aided this increase. In 2012, Americans spent over 400 million hours on the Internet (desktop, mobile Internet, and mobile/social applications). This is a 21% increase over 2011 (Nielsen, 2012). Within Oregon specifically, 88% of adults report having at least one computer at home and of those, 97%

report using the Internet on those devices. Portland is the most Internet connected city in Oregon (Public & Commission, 2012).

The only significant caveat to this assumption that presented itself in this research is the concern of voluntary disassociation. While participation in agency social media forums may always be open and inclusive, maintaining active interest may not be. This seems to be a particularly important issue for an agency like the PBoT. With as much content as there is on social media sites and the constant fight for getting people's attention, the very real danger of information overload and thus voluntary withdrawal of participation is a real threat (Davidow, 2012; Pariser, 2012). While such withdrawal may be voluntary, active participation of citizens with a stake in topics of discussion is a prerequisite for the deliberative democratic process.

As with inclusion, political equality is also largely already built into most social media platforms. Every post or comment is treated the same no matter who the originator is. There is no way to give preference to one over the other when viewing all post and comment (Facebook does some popularity filtering but this can be turned off). Though while the platform is largely neutral in terms of equality, what about the agency pages themselves?

Young spent a significant amount of time covering the concept of rhetoric in the context of inclusive political communication:

> The concept of rhetoric assumes a distinction between *what* a discourse says, its substantive content or message, and *how* it says it. The general category of 'rhetoric', as I understand it, refers to the various ways something can be said, which color and condition its substantive content (Iris Marion Young, 2000, pp. 64–65).

Given a largely equal platform, the attributes of the discourse occurring within that platform become highly significant. She identifies four attributes of rhetorical speech that are not mutually exclusive and that significantly affect collective decision making (2000, p. 65):

1. The emotional tone of the discourse, whether its content is uttered with fear, hope, anger, joy, and other expressions of passion that move through discourse.

2. The use in discourse of figures of speech, such as simile, metaphor, puns, synecdoche, etc., along with the styles or attitudes such figures produce.

3. Forms of making a point that do not only involve speech, such as visual media, signs and banners, street demonstrations, guerrilla theatre, and the use of symbols in all these contexts.

4. All these affective, embodied, and stylistic aspects of communication, finally, involve attention to the particular audiences of one's communication, and orienting one's claims and arguments to the particular assumptions, history, and idioms of that audience.

While scholars have attempted to disassociate rhetoric with political speech in search for claims of truth, Young suggests that there are important positive attributes to rhetoric that aid in collective problem solving and political communication. Such attributes include moves to get issues on an agenda, situation and public relative appeals, and motivating moves from reason to judgment/agreement.

Insofar as how Young sees rhetorical speech, we can certainly see that a significant amount of it is occurring in the posts and comments of agency pages. Within the PPB alone, we can certainly see emotional, visual media/demonstrations, and figures

of speech in comments that are both supportive and critical of PPB activities and policies. Post ID #993 shown in Table 12 above clearly illustrates nearly all of Young's rhetorical speech attributes: "WTF~~" (User A); "Hawt move to another country if you don't like it. Jesus tired of these negative comments from people. These are the men and women who protect and serve us" (User K); "Glad to hear you like it when adults in riot gear spray pepper spray at high school students, Danielle. I guess morality really is subjective" (User D); and "…Your just as fake as Elvis here…" (User R). Each comment is an attempt to persuade not only the agency but also other users into understanding the commenter's position, sometimes challenging the comments or the legitimacy of other posters.

We can see even clearer examples of appealing to shared audiences and histories within the PP&R posts and comments. In Table 21 above (Post ID# 3575), we can see appeals to the generally shared commonality of Portlanders in their care of natural spaces and the environment. Comments such as the one by User G, ('The phrase "Epic Failure" doesn't even do this justice. What happened to that Portland ingenuity that I love so much? Like...I don't know...GO AROUND THE FREAKIN' TREE?????') target the audience's "Portland ingenuity" as being creative when it comes to conservation efforts. In fact PP&R posts in general often appealed to a shared history rhetoric by pushing a very location and community-centric posting philosophy.

In each agency, while there was a significant degree of rhetoric in both posts and comments, there was very little censoring of such rhetoric. Impassioned discourse was found in many places but it is important to note that where passions flared, each commenter always had the opportunity to suggest and defend their positions. The PP&R,

by allowing users to make posts on their page, have taken this a step above the PPB and

PBoT by effectively giving users a speaker and soapbox to make their voices heard and

challenged. Thus, it can be argued that Facebook does allow for political equality as

defined by Young.

Reasonableness is probably the single most difficult obstacle in any democracy.

However, within the deliberative democratic process where the main objective is to reach

agreement and understanding, the prerequisite of participants being reasonable, insofar as

Young defines it, is particularly challenging. Within the context of social media, there is

the additional barrier of not being face-to-face, because this inhibits social cues and

pressures to come to any sort of agreement or shared understanding (Kozinets, 2009).

This challenge clearly presented itself in the case studies examined in this

research. There were many comments that participants probably would not express to

each other in face-to-face gatherings, much less to an organization like the PPB. Because

the reasonableness criterion is largely only applicable in situations where there is conflict

or difference of opinion, demonstrations of reasonableness (as well as a lack thereof)

presented themselves primarily in the comment threads of the PPB. Indeed, there were a

significant number of examples of people exhibiting what Young might describe as being

unreasonable or unwilling to being open to having their minds challenged or changed.

The following are some comment excerpts that, within the context of their post/comment

thread, might exhibit some level of possible unreasonableness:

> **Post #993 - User D to the PPB**: I have ZERO. Do you hear me? ZERO respect
>
> for bullies in stormtrooper gear who laugh and smile and joke about spraying
>
> peaceful protesters with pepperspray. This is the face of American fascism and

you are sitting here celebrating them like they are heroes. They aren't. They are THUGS and gangsters.

Post #993 – User K to another user: Hawt move to another country if you don't like it. Jesus tired of these negative comments from people. These are the men and women who protect and serve us.

Post #1447 – User D to all: Occupiers suck they just destroyed peoples parks and other stuff us tax payers have to pay for.

While it is not possible to conclusively determine user's unreasonableness to change by comment threads alone, language suggestive of a lack of civility does present itself by way of sarcastic remarks or highly improbably, unlikely, or illogical statements without regard for counter points of view or facts. However, demonstrations of reasonableness, that is, instances where people seem to either change their perspectives or at least are willing to entertain different ideas presented to them, were also present, albeit infrequently. Portland Police Bureau post #1447 as shown in Table 11 above is a striking example of this:

Post #1447 User H: Bill, please don't take anything I've said as attempts to fight with you. I'd rather try & understand where you're coming from. I'd love to continue this conversation further, but, alas, lunch is over.

Post #1447 User G: Greg, I wish I would have run into you with my daughter, I was hoping to find some intelligent representative of the occupy group for some civilized conversation. I wanted my daughter to be exposed to different points of view.

While reasonableness, as Young describes, is not something that a social network can instill within people, it is something that can be demonstrated and used within social networks. We can see from some of the comments presented here (and others within the data) that despite the issues of anonymity inherent to many online communications, people can and do use Facebook to challenge other's ideas and to have their own challenged. Unfortunately, such exchanges are rare.

Publicity is, much like inclusion, largely a given on social media sites like Facebook. Social media sites operate most effectively when people can easily find and learn about others and thus a certain level of openness and publicity is inherent in the successful use of the network itself. Each participant must have a Facebook account and while an individual's account can be set as private, in practice it would appear that most are not (Johnson, 2010). All posts and comments to public pages are public and available unless they are deleted. Additionally, any user can click on another user's profile to see their page (if public) and to learn more about them.

One distinguishing feature of social media sites that benefits Young's publicity criterion is the automatic history and quasi-permanency of user actions. Young describes publicity as an open record of a participants, "experiences, histories, commitments, ideals, interests, and goals…" (p. 25) that collectively creates a public. Each participant is held accountable to the public by these criteria in so far as they constitute the very understanding that other participants have of them.

Facebook allows the creation of pages representing people, companies, non-profits, sports groups, causes, and a variety of other interests and organization types. Participants can 'like' and follow these groups and "membership" is made publically

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available to anyone viewing the participant's public page. Combine this with the preserved history of a participant's post and comments and you have a very descriptive and public picture of the user's interests, perspectives, and history.

While this research did not include analysis of individual participants, such information is easily available to the average user and thus we can attest that Young's publicity criterion was, at least in most regards, being meet.

Conclusion

While the inclusion and publicity aspects of Young's model are inherent in social media sites in general, this research has shown that it is possible, though rare, to achieve reasonableness and political equality as well. Thus, it is possible to conclude that social media sites *can* be used as part of a deliberative democratic process. Unfortunately, it is unknown if any of the three agencies that were part of this study *are* using the discussions occurring on Facebook to make or even inform policy decisions. While Young's four criteria may be met through rare instances of deliberative discussions, if no policy decisions are being made as a result of those discussions, then the entire exercise may be fruitless.

Despite this, there is still significant value in knowing that such processes can occur in this medium. While there are other digital platforms specifically designed for a more deliberative democratic process (Open Town Hall, MindMixer, and UserVoice to name a few), none have the reach and popularity of Facebook. People must seek those platforms out, whereas on Facebook, governments are seeking out the people. If we know that it is possible to spark spirited and deliberative discussions on the most popular social network in the world, then perhaps government agencies will be more willing to trust the

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discussions and outcomes of such digital mediums for decision-making, even if they are made on other more appropriate platforms.

Recommendations

   While many of the prerequisites of deliberative discussions on SMS rely on the behaviors and attitudes of the users of the system, a significant portion of the responsibility lies in the hands of the agencies as well. Just as with public meetings and forums in which matters of public interest are discussed face-to-face, agency and administrative personnel must cultivate and guide online public discussions and then use those outcomes to inform and shape policy decisions.

   Four main recommendations that would assist government agencies in cultivating deliberative discourse in SMS (and Facebook in particular) have been identified:

1. **Make consistent and quality posts on a wide variety of topics that are at least tangentially related to the agency's mission**. The posts with highest levels of engagement and comments were typically the ones that were either controversial, entertaining, or that actively asked for user input. Facebook is designed as a many-to-many communication medium and it should be used as such, with communication intended to go many different ways. It is important not to close the conversation before it starts by posting simple news stories or announcements and leaving it at that. It is recommended to post consistently and add interesting facts (as the PP&R often did) or include entertaining and informative media (as the PPB often did) to frame posts in such a way that stimulates public discussion. Doing so doesn't degrade the quality of the

message. Rather it cultivates interest in the post and increases the likelihood that users will identify and respond to it.

2. **Respond to user comments in a constructive manner that continues the conversation**. The PP&R comments are a shining example of this. Even when faced with criticism, the PP&R generally responded with insightful, researched, and polite responses. In the data analyzed in this study, there was no single instance where a user asked a question that did not receive a direct response from the PP&R, even if it simply was to say that they didn't know. The satisfaction of being listened to is a powerful force in encouraging continued participation and as such, agency comments should not only answer questions but also encourage and guide continued discussion. It is not expected that agencies respond to every comment, but when appropriate, agencies should address the recurring concerns in the thread.

3. **Encourage reasonable discourse**. The Internet is sometimes a wild place where anonymity and the digital veil encourage people to write and post things that they typically would not say in real life. When faced with such content, agencies should *not* avoid "jumping into the fray" but rather should help to guide discussions along more reasonable paths. Posting facts, laws, official positions, and other supporting information and media can help restore constructive dialog and hopefully sway users with seemingly unreasonable positions back into true and respectful deliberation.

4. **Ask for user input on policy and agency decisions and follow through with the results of those decisions**. Social media sites should of course not

(at least presently) be the primary driver in agency decision-making but it can certainly be part of a larger decision-making process. The agency can ask community-oriented questions of the user base and make a genuine effort to include the comments and suggestions in internal or public discussion forums. Questions like, "What location would benefit the most from street-side seating?" or "What are some ideas for modernizing our library?" are perfect for a medium like Facebook. These questions not only engage the public and elicit input but if followed up with a post explaining how their input was helpful in the decision-making process, it can encourage continued engagement and input.

Final remarks

This research was a long and challenging yet rewarding journey through social media and government-public interaction. The contribution it makes to the existing literature on governmental use of social media in the realm of deliberative democracy is, while admittedly small, still somewhat significant. Not only does this research closely examine how specific government agencies are using Facebook at the post level of analysis, it assesses those posts based on citizen-to-government and citizen-to-citizen interactions. From that analysis, through the lens of Young's (2000) deliberative democratic model, it makes recommendations to agencies on how they can better use social media to foster deliberative decision making in their agency.

While Young's deliberative democratic model fits squarely within Elstub's (2010) second generation of difference theorists, the application of her model to an institution like a global social media infrastructure lends itself to third generation macro deliberative

ideas. Indeed the very infrastructure of Facebook seems to fit the micro and macro instructional frames necessitated by third generation theorists with individual agency pages akin to micro frames and the more broadly inclusive city and state pages being macro in nature. Issues of scope and scale can be addressed through mediums like social networks but such applications also introduce matters such as information overload and filtered biases (Pariser, 2012) and fail to account for some idealized deliberative requirements. Facebook appears to allow, at least architecturally, both micro and macro frames to exist and interact within the same infrastructure making it a potentially rich resource for further study in deliberative democratic processes.

As I reflect on the processes and findings of this research, I am somewhat torn as to the future of social media in government. By many accounts, governments will continue to use social media as a one-way model of communication simply for its large and easily accessible audience. Fostering dialogue, be it deliberative in nature or not, is a difficult process that requires expertise and effort on all sides. Having read thousands of agency posts and public comments during this research, I am left somewhat uninspired by the potential for online communication, particularly that of social media, to be anything more than a cursory exercise in government and citizen babbling.

Having said that, the few instances of what I consider genuine deliberative dialogue in this research do linger in my mind. Instances where both the agency and the public came at an issue of concern with open minds and ready to construct a resolution that would appeal to both sides. These instances are hard to forget and stick out from the everyday social media chatter like a warm sunny day in an otherwise cold and gloomy Portland. The things that we can learn from these instances (and that have been

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recommended in this research) are what keep me hanging onto the idea that one day government decision-making can include deliberative discursive input from the public through widely accessed digital channels like social media.

As this research has shown, social media sites like Facebook can, and arguably should, be used as vehicles for third-generation institutionalized deliberative democratic decision-making. While some practical barriers to easy execution do exist, many can be overcome by simple changes in agency posting behavior and commenting practices. In the end, the success of social media use as both an information broadcast medium and as a deliberative democratic platform is entirely up to the agency and how they chose to use it. The tools and citizens are there and waiting.

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