

# Preface

## OVERVIEW

The World Wide Web appears to have changed the relationships between citizens and all levels of government. The Web has moved from a static source of information, offering simple transaction alternatives to in person or paper mail systems, toward a dynamic enabler of higher order transactions that tap collective wisdom to solve problems and take advantage of opportunities. These recent developments seem so different from earlier Web capabilities that some would suggest a new era of Web 2.0, which is having profound effects on governance and public service.

Certainly there is an almost euphoric zeal attached to social media technologies as there was when web access became more or less generally available. The intent of this book is to provide some evidence of the effects of Web 2.0 on governmental operations at this early juncture in its development. This information is essential to provide guidance for future efforts designed to capture more fully the potential of this new dimension of interaction between citizens and their governments. This is a compelling topic that seems to hold so much promise for beneficial change, but it is fraught with challenges for practitioners, academics, and students of public service because it raises many important and seemingly difficult questions. Even before these questions can be asked we must comprehend how Web 2.0 can be defined as a useful concept for inquiry.

There are wide differences in opinion on how to define Web 2.0. On one side is the view that Web 2.0 is what the Web was always meant to be, and that it is nothing fundamentally new, or at most it is simply the next stage in the evolution of internet technology. On the other extreme is the idea that the Web has undergone a fundamental change, at some time starting soon after the 2001 dot-com bubble bust, which has redefined the relationship between the creators and users of Web content.

The following excerpt from an interview with Web pioneer Tim Berners-Lee best expresses the attitude that no real change has occurred:

- **developerWorks:** You know, with Web 2.0, a common explanation out there is Web 1.0 was about connecting computers and making information available; and Web 2.0 is about connecting people and facilitating new kinds of collaboration. Is that how you see Web 2.0?
- **Berners-Lee:** Totally not. Web 1.0 was all about connecting people. It was an interactive space, and I think Web 2.0 is, of course, a piece of jargon, nobody even knows what it means. If Web 2.0 for you is blogs and wikis, then that is people to people. But that was what the Web was supposed to be all along. And in fact, you know, this Web 2.0, quote, it means using the standards which have been produced by all these people working on Web 1.0. It means using the document object

model, it means for HTML and SVG, and so on. It's using HTTP, so it's building stuff using the Web standards, plus JavaScript, of course. So Web 2.0, for some people, it means moving some of the thinking client side so making it more immediate, but the idea of the Web as interaction between people is really what the Web is. That was what it was designed to be as a collaborative space where people can interact (developerWorks, 2006).

Tim O'Reilly (2005) provides a complex and compelling argument for the idea that Web 2.0 is real and significantly different than the earlier Web. Rather than a paragraph length definition, O'Reilly discusses eight conceptual differences between Web 2.0 and the way computing developed in the 1.0 era. These are paraphrased below:

1. **The Long Tail:** Small sites make up the bulk of the internet's content; narrow niches make up the bulk of the internet's possible applications. *Therefore:* Leverage customer-self service and algorithmic data management to reach out to the entire web, to the edges and not just the center, to the long tail and not just the head.
2. **Data is the Next Intel Inside:** Applications are increasingly data-driven. *Therefore:* For competitive advantage, seek to own a unique, hard-to-recreate source of data.
3. **Users Add Value:** The key to competitive advantage in Internet applications is the extent to which users add their own data to that which you provide. *Therefore:* Don't restrict your "architecture of participation" to software development. Involve your users both implicitly and explicitly in adding value to your application.
4. **Network Effects by Default:** Only a small percentage of users will go to the trouble of adding value to your application. *Therefore:* Set inclusive defaults for aggregating user data as a side-effect of their use of the application.
5. **Some Rights Reserved:** Intellectual property protection limits re-use and prevents experimentation. *Therefore:* When benefits come from collective adoption, not private restriction, make sure that barriers to adoption are low. Follow existing standards, and use licenses with as few restrictions as possible. Design for "hackability" and "remixability."
6. **The Perpetual Beta:** When devices and programs are connected to the Internet, applications are no longer software artifacts, they are ongoing services. *Therefore:* Don't package up new features into monolithic releases, but instead add them on a regular basis as part of the normal user experience. Engage your users as real-time testers, and instrument the service so that you know how people use the new features.
7. **Cooperate, Don't Control:** Web 2.0 applications are built of a network of cooperating data services. *Therefore:* Offer web services interfaces and content syndication, and re-use the data services of others. Support lightweight programming models that allow for loosely-coupled systems.
8. **Software Above the Level of a Single Device:** The PC is no longer the only access device for Internet applications, and applications that are limited to a single device are less valuable than those that are connected. *Therefore:* Design your application from the get-go to integrate services across handheld devices, PCs, and internet servers.

At this early stage Web 2.0 research has focused on its current manifestations (e.g. social networking and file sharing websites) and /or on technologies that enable the Web 2.0 characteristics (e.g. wiki and blog technologies). O'Reilly's list of eight ways of distinguishing between Web 1.0 and 2.0 suggests eight areas in which to advance a research agenda.

It is clear that mobile access to web content has changed the nature of the Web and cell service providers vie with one another to provide more and better functionality. For example, Apple and AT&T's introduction of the iPhone was countered by Google, Motorola and Verizon's Droid. These hand held devices have thousands of Apps (applications) available that allow users to interact with Web content.

Developing definitions for any phenomena under study is an important exercise. However, whether or not what is occurring on the Web should be called Web 2.0 or something else is, in some respects, irrelevant. We are generally aware that the Web has changed the way we relate to one another by increasing opportunities for interaction and decreasing the cost of interaction. Some feel that this has had and will continue to have profound effects on society. We also sense that these changes and the consequent effects have been recent or perhaps recently accelerated. With this in mind we should consider whether or not these effects have been beneficial. For the purposes of this book Web 2.0 can be defined as recent changes in the Web that have changed relationships which have resulted in effects that may or may not be beneficial.

The preceding discussion suggests three Meta Web 2.0 questions:

1. *How has social media changed relationships?* There are many relationships to consider in the context of public service: relationships among individuals; among individuals and their governments; among individuals and their professions; among individuals and their jobs; among organizations; among governments; among genders, races, and nationalities.
2. *What are the affects of the changes in relationships caused by social media?* Some of the affects include: the affect on the political process; on economic activity; on sustainability; on service delivery; on transparency; and on the ethical and legal dimensions of public service.
3. *Has social media been beneficial to public service?* Some of the benefits may be: the ability to understand the consequences of actions in an increasingly complex and interdependent world; facilitating our ability to meet global problems such as hunger, poverty, climate change, disease prevention, and disaster relief; and making improvements in education, systems of governance and social equity.

#### Considering the Meta Questions and Where The Book Fits into The World

*How has social media changed relationships?* One, but by no means the only way to look at the question, is to consider how collective wisdom works to improve the information available on wikis and blogs. Magdon-Ismael et. al. (2008) developed a model that provides some valuable insights. In a recent paper they suggest that wikis and blogs are now trusted information sources that reach stable states based on editing by users. This illustrates one of the more interesting aspects of Web 2.0 that "users add value" (O'Reilly, 2005).

The Magdon-Ismael et. al. model has two salient features. First, as the quality of a particular wiki improves, more visitors are attracted, some of whom continue to improve the model resulting in a self-sustaining feedback process leading to continuous improvement. Secondly, as quality improves, subsequent visitors are less able to contribute to quality improvement and a steady state is reached where little enhancement occurs. A peak of editing activity is followed by some decay or lag followed by another peak caused by the increasing visibility of a page followed by decay to a steady state. When the model is applied to blogs, the lag disappears.

The implications of these findings provide suggestions for how understanding different relationships can be approached. It would seem, for example, that the relationships formed around questions

that require more immediate responses might be more appropriately dealt with on blogs, whereas more complex relationships around questions that require more time to consider would be more appropriate for wikis. The fundamental concept here is that social media does not work the same way in all cases and the reader will see this throughout the book.

*What are the affects of the changes in relationships caused by social media?* One of the many contributions of the New Public Management (NPM) was the idea that public administrators can best produce value by becoming more responsive to stakeholder needs (Denhardt, 2000; Barzelay, 1998; Osborne & Gaebler, 1992; Osborne & Plastrik, 1997; Kettl, 1993; Kettl & Milward, 1996; Moe, 1994; Stillman, 1995; Goodsell, 1993; Frederickson, 1980). This has resulted in a new or renewed interest in ideas regarding value enhancement and stakeholder sensibilities. In recent years the American Society for Public Administration's journal, *Public Administration Review*, has published collections of articles on civic engagement (Cooper, 2005), collaborative public management (O'Leary, 2006), and citizen participation and governance (Rethemeyer, 2007). Certainly Web 2.0 holds the promise of strengthening the relationship between public administrators and stakeholders in ways that better respond to expectations and needs, however, this does not mean that the NPM, as a dominate management theory, will benefit from the effects of Web 2.0.

For example, Dunleavy (2005) argues that NPM no longer dominates management thinking as it once did. He points out that the NPM is founded on themes of disaggregation, competition, and incentivization and has now largely stalled or been reversed in some "leading edge" countries. Dunleavy believes that the NPM is giving way to digital-era governance which involves reintegration, the adoption of holistic and needs oriented structures, and the progressing digitalization of administrative processes (2005).

Dunleavy's model uses the level of social problem-solving as its dependent variable and looks at three independent variables: the level of autonomous citizen competence, the level of institutional and policy complexity, and change of public management regime. Among other things the model suggests that NPM changes have had "powerful adverse impacts on citizens' autonomous capacities," which in turn negatively impacts citizens' abilities to influence social problem-solving. Dunleavy argues that while the disaggregation made some government functions more responsive in small ways, it was largely a distinct disadvantage to citizens who required coordinated responses from government entities. In this regard he quoted the Organization for Economic Co-operation and Development (OECD, 2004): "Modernised (sic) governments are more responsive to groups of citizens. But there is a cost in capacity for collective action, when the public service is differentiated and fragmented."

Web 2.0 has the potential for reintegration for collective action which will influence public management ideas and theory. The effects of social media on public service are, in the main, moving toward higher levels of inclusion, however the broad results of this are as yet unclear in terms of whether they are revolutionary or evolutionary.

*Has social media been beneficial to public service?* There is an increasing emphasis in the literature on the use of networks to manage wicked (Weber, 2008) and tangled (Dawes, 2009) problems. Wicked problems can be identified on three dimensions: unstructured, cross-cutting and relentless.

Networks are required to manage wicked problems because they cut across organizational boundaries, sectors, and levels of government and are not amenable to easily determined routine bureaucratic approaches. Dawes (2009) argues that tangled problems are a broader set of problems that lie between routine and wicked problems and that they also require the creation of what she calls "public sector knowledge networks" (PSKNs). For Dawes it is the nature of the PSKNs that is of most interest and she

develops a typology based on two dimensions: the extent of the organizational network and the focus of knowledge networking.

The broader the focus (to create systematic capacity to share knowledge and information within a domain) and the greater the extent of the organizational network (across organizations in multiple jurisdictions, sectors, or levels of government) suggest problems that are toward the wicked end of the wicked-routine spectrum.

Dawes makes a number of recommendations that remind us that while networks can be effective, they require a lot of maintenance and effort. The 13th recommendation is that, “Technology is necessary but not sufficient for success.” (Dawes, 2009). It is this recommendation that underscores the fundamental concept behind the book that the application of Web 2.0 technologies without an enlightened understanding of their effects will not necessarily result in success and will almost certainly result in unintended outcomes. The chapters in this book unequivocally support the beneficial nature that social media has and is projected to have on public service, but suggest that benefits are by no means automatic.

## **Target Audience**

The book is targeted at three broadly defined groups. First are, upper division and graduate students in public administration, political science, business administration, policy analysis, and professional administration and management programs (EG. school administration and social work management). Students in these fields are likely to find themselves in careers that require an understanding of the relationship between Web 2.0 technologies and public service and should have some academic preparation.

Secondly are, academics (researchers and teachers) in the fields specified for students above. Academics in the fields specified should provide students, who are likely to require an understanding of the relationship between Web 2.0 technologies and public service, with an understanding of these phenomena.

Thirdly are, government managers, administrators and policy makers at the local, state, and federal levels of government in the US and abroad. Practitioners allocate resources to Web 2.0 and will be aided with a theoretical framework for those decisions.

## **Progression of the Book**

The first section of the book assembles those chapters that provide concepts or theory that help to better understand the nature and potential of Web 2.0 in public service. The section begins with a chapter by F. Dianne Lux Wigand who provides background for the use of social media in public service as well as definitions of key terms. She then applies two theoretical perspectives on how relationships are formed and maintained in an online environment. This is followed by Mariah Kraner’s chapter that looks at the effect of social media on voter participation and hypothesizes decline across groups and through time, regardless of the new uses of social media in political campaigning. Toby Fyfe and Paul Crookall conclude this section by examining what happens when the forces of social media collide with the entrenched patterns of public sector bureaucracy.

The second section of the book contains chapters which use primarily descriptive analysis to provide an understanding of the current state of social media in public service. The section begins with a chapter by Ines Mergel, that features data collected through interviews with social media directors of some of the more innovative executive departments and agencies. The next chapter by Alana Northrop presents the results of a study of US cities and mayors’ uses of Facebook, MySpace, YouTube, Twitter, LinkedIn



and online surveys. This is followed by a chapter by Gerald A. Merwin Jr., J. Scott McDonald, Keith A. Merwin, Maureen McDonald, and John R. Bennett on their study which found that a majority of counties with significant populations of citizens with Limited English Proficiency do not provide for the translation needs of those citizens on their Websites. The chapter concludes with recommendations for employing Web 2.0 to engage non-English speaking populations. Gianluca Misuraca's chapter discusses the results of exploratory research conducted by the Institute for Prospective Technological Studies of the European Commission's Joint Research Centre, to collect and analyse evidence and assess the significance of Web 2.0 on public services in Europe. J. Scott McDonald, Gerald A. Merwin, Jr., Keith A. Merwin, and Mathew Richards look at the websites of the 50 most populous U.S. cities in terms of Web information available regarding human resources and find cities were generally not utilizing Web 2.0 applications. Matthew A. Jones, Melchor C. de Guzman, and Kornel Swaroop Kumar studied a sample of 163 municipal police departments to determine the extent to which social media applications such as Facebook, Twitter, blogs, iPhone applications, and Nixle are used for citizens and police interactions. Leila Sadeghi, Steve Ressler, and Andrew Krzmarzick explore how Web 2.0 and social media are being used as a vehicle to enhance e-government, and present a case study of GovLoop, a collaborative social media platform designed to complement the work of government. Chindu Sreedharan, Einar Thorsen, and Stuart Allan analyze the effect of WikiLeaks which they suggest is part of a radical recasting of what counts as a public service ethos, one which promises to reinvigorate anew traditional conceptions of journalism's role and responsibilities in a democratic culture. The section ends with Helen K. Liu's investigation of 4 cases of open source, crowdsourcing, and public engagement in the public and non-profit sectors.

The final section of the book contains chapters that provide some templates or ideas for the way forward. Jon E. Glasco's chapter sets the tone by describing the potential for a digital ecosystem of government, citizens, and businesses to use Web 2.0 and social media innovation to shape government transformation and contribute to government's quality-of-life mission. Pedro Isaías and Sara Pífano argue that Web 2.0 has the potential to improve democracy and does content analysis to assess the role that Facebook plays in terms of encouraging and facilitating citizen participation. Kathryn Kloby adds her voice to the transformative nature of Web 2.0 and points out that scarcity of resources and citizen demand for improved government services are leading public administrators and elected officials to search for new ways to communicate with citizens. B. Joon Kim and Savannah Robinson suggest the dialectical of a new E-government maturity model through both New Public Service and Social Construction of Public Administration views to the public policy-making process. Ines A. Mergel and Charles M. Schweik end the section with a discussion of the paradox social media with its innate openness creates for public sector bureaucracy needs to restrict, control, and constrain access to information and decision making.

## **SOME OBSERVATIONS AND THOUGHTS PROVOKED BY THIS BOOK**

One of the privileges of being an editor is to consider how Web 2.0 is likely to affect the future of the institutions of governance. This is almost certainly a dangerous enterprise. On the one hand specific, detailed predictions are invariably inaccurate. I often think of the Popular Science magazines I read in the 1950's that suggested the coming of the flying car. On the other hand general predictions lacking in specificity while safer are often of questionable value since they do not provide a sufficient basis for planning. Despite these pitfalls I would like to make four observations. First, Web 2.0 is and will con-

tinue to create value for political processes by decreasing costs and increasing opportunities for civic engagement. Secondly, Web 2.0 allows for citizen mobilization over longstanding issues of discontent and is likely to continue to do so. Thirdly, Web 2.0 is one step in an ongoing dialectic process between institutional control and the need for the freedom of citizen expression. Fourthly, the introduction of Web 2.0 technologies reduces the cost of communication and this will have significant institutional affects. The following is a brief explanation of these observations.

## **Value Creation**

In my earlier work on the Web and public service (Downey, 2010), I advanced an E-government model based on the idea that public administrators are compelled to respond to stakeholder value considerations. The theoretical value framework used was based on market and political value concepts. Market value is enhanced by reducing transaction costs and by changing economic arrangements in ways that grow a jurisdiction's economy by attracting people, businesses, other governments, and institutions to spend money in a jurisdiction. Political value is enhanced by making better use of existing resources (decreasing costs) and by tapping the resources of citizens, institutions and other stakeholders through civic engagement to foster the co-production of effective responses for problem solving and to take advantage of opportunities. From this value perspective, Web 2.0 can be understood as accelerating the creation of both market and political value, however it is political value that seems most interesting and refreshing. My earlier study of the value produced by government web sites concluded, as did others, that not much of the potential for using citizens as co-producers of value for solving problems and taking advantage of opportunities was evident in public service web sites. It would seem that Web 2.0 is beginning to provide opportunities for citizen participation that government web sites lacked in the past.

## **Citizen Mobilization**

The events of 2011 in Middle Eastern countries have highlighted the role social media has played in mobilizing citizens against authoritarian regimes. Mobilization requires the development of common sentiments regarding values, goals, and the coordination of activities to achieve goals. We are led to believe that the pressures for regime change in some Middle Eastern countries have been building for years and it can be argued that social media provided the capacity to mobilize citizen discontent into more active resistance. This suggests a model that transcends the Middle Eastern experience. Perhaps Web 2.0 technologies will reduce the transaction costs associated with mobilization and thus provide the tools for dealing with long standing discontent elsewhere. It may also be that mobilizing different factions may solidify their positions and actually reduce the possibilities for consensus. Of course mobilization can threaten existing power relationships in ways that may well produce reactions just as in Tunisia, Egypt, Syria, Bahrain, Libya, and Yemen. In this regard many of the chapters in this book talk to the seeming threats that Web 2.0 presents to the old ways of sharing information and making decisions in public service.

## **Web 2.0 as Part of a Dialectic Process**

An acquaintance in IT characterized the early web and personal computing as being like the "Wild West." There were few rules and everything was new and untried. Nobody really knew how the Web

would work in education, public service, or how the private sector could use it to make money. As time went on public and private bureaucracies learned how to use and, yes, control the web. In doing so these institutions changed in fundamental ways that made them more transparent and open to influences on decision making. It may be that Web 2.0 is a return to the “Wild West” and that institutions are coming to terms with how to use and control it, just as they did when the web was new. This book is part of that process since it looks at the relationships between Web 2.0 and public service. As institutions learn how to deal with Web 2.0 they will use and control it to their advantage. But, this will also change the way they make decisions. Users may respond to this by developing and using some other, seemingly spontaneous, modes of communication that take on the characteristics of the “Wild West.” This suggests an ongoing dialectic process where new modes of citizen communication result in institutional responses to use and control them which lead to the development and use of yet newer modes of communication by citizens.

## **The Affects of the Web 2.0 Reduction in the Cost of Communication**

In the simplest sense, when faced with a problem requiring a public response we ask, can we do something together to solve the problem? In a democratic society this requires communication since we need to know the sentiments of others. Web 2.0 has provided a significant reduction in cost in terms of time and money of communicating to determining the sentiments of others. Historically when technology has reduced the cost of communicating institutions have changed rather dramatically and, although this is arguable, the change has been for the betterment of society. While there are other examples of this, the rapid change and development of institutions in America in the 33 years after 1815 is worthy of consideration. In his book on the Jacksonian era, Daniel Walker Howe (2007) makes the following observation:

*The most important forces that had made American democracy meaningful during the years since 1815 were three. First, the growth of the market economy... Second, the awakened vigor of democratically organized Protestant churches... Third, the emergence of mass political parties... The impact of all three of these forces had been multiplied by new developments in communication. The women's rights movement related to all three...*

Jackson rode to Washington on a horse to take office in 1829 and returned home on a train after his second term ended in 1837. Though anecdotal, this illustrates the rapid change in American institutions that took place during a time that saw significant decreases in the cost of communication (in this case communication on horseback vs. by rail). This time marks the rise of the Women's Rights Movement and while the Jacksonian era can be remembered for its damnable treatment of slaves and Native Americans, it was also the beginning of the end of these pernicious policies. If Web 2.0 can be considered as equivalent, in terms of reducing communication costs, to the new developments in communications that took place in the 33 years after 1815, then certainly we may expect consequent, significant changes in institutions in the future. Furthermore, for public administration, these changes are likely to be more reactive than proactive. It is a commonly held belief that the public sector has generally lagged the private sector in adopting technology. Web 2.0 may conform to this trend however, whether or not public bureaucracies adopt this technology is not really important since it would seem that citizens are adopting the technology which will have consequent effects on the public sector just as improved communication by telegraph and railroads did in the Jacksonian era.



This preface began with a discussion of the differing views on what Web 2.0 is. One view being that it is the same old web with more functionality and the other view that it is a new web that better allows and indeed encourages the exchange of ideas. Web 2.0 is different than its predecessor in that it has significantly reduced the cost to individuals of publishing content and to some extent the cost of accessing information has been reduced as well. In the early days, creating and maintaining a web site required considerable effort in learning new technologies, purchasing or renting the appropriate equipment, and maintaining both software and hardware. For most users the costs of publishing content were daunting and as a result most users used the web to find content published by others. This has changed, Web 2.0 allows most users not only to find content but to produce it as well. As a result the sheer volume of web content has exploded and the challenge for both individual citizens as well as institutions is to manage that content for the betterment of society.

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