

## “E” the People: Do U.S. Municipal Government Web Sites Support Public Involvement?

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*To what extent do local government Web sites support practical, meaningful public involvement? Fifteen years after the adoption and diffusion of the World Wide Web, the answer to this question remains cloudy and controversial. The promise—and peril—of Web-based public involvement, known as e-democracy, has been widely debated. Much of the debate has focused on theoretical abstractions or extrapolations of current political or technological trends. Empirical studies have been limited to reports on pilot projects, case studies, or special population surveys. This paper contributes to our empirical understanding of the question. It reports results of a recent comprehensive survey of official government Web sites in the principal cities of the 100 largest U.S. metropolitan areas. In particular, it examines whether and how U.S. city government Web sites facilitate users' involvement in local public issues.*

Scholars and practitioners are demonstrating increased interest in public-involvement initiatives in all areas of governance. On one hand, evidence suggests that citizens are apt to be more skeptical or cynical of democratic processes and less likely to participate. On the other hand, citizens are demanding more accountability and transparency from public bodies and more opportunities for direct input on public issues that affect them. The complexities of policy decisions and program delivery sometimes motivate public authorities to seek more citizen involvement. Particularly at the local level, citizens often have a special commitment to and knowledge of place, as well as social networks that can be mobilized for public decisions and actions that will lead to improved public policy outcomes (Bowles and Gintis 2000).

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In this context, we have seen a steady and extensive deployment of public-involvement programs at the national, regional, and local levels. These programs

address issues in a wide range of policy fields, including transportation, natural resources management (Priscoli 1990; Syme and Sadler 1994), economic and community development (O'Dubhchair, Scott, and Johnson 2000), land use and planning (Beierle 2000), law enforcement (Skogan et al. 2000), and public education and health care (Fannin and Scott 2002). Many public-involvement projects are initiated as experimental or pilot projects designed to develop or refine specific tools or techniques for broader application. Scholars and practitioners work to document these projects and relate them in some way to policy or program outcomes or to reforms in government structure or procedure.

However, the potential for public involvement through government Web sites has received relatively little notice, at least in the United States.<sup>1</sup> This is striking, considering the phenomenal growth of the World Wide Web. For example, the number of Web sites grew from 20,000 in 1995 to more than 10,000,000 in 2000, representing more than two billion pages of content (DiMaggio et al. 2001). It is estimated that more than two million Web pages are added every day (Lake 2000). When the International City/County Management Association surveyed more than 1,400 U.S. municipal governments in 2000, 85 percent had established Web sites, and more than half of them were less than three years old (Moon 2002). Furthermore, a recent survey conducted by the Pew Internet and American Life Project found that over 70 percent of U.S. Internet users have visited government Web sites for a variety of purposes (Larsen and Rainee 2002). Clearly, municipal government Web sites can provide new space and time for public involvement in local public issues.

Many are quite skeptical of the real potential of Web-based public involvement. For example, Margolis and

Resnick (2000) argue that information and communications technology extends “politics as usual” to a new medium, in part because the Internet simply reinforces the influence of already dominant actors in the policy process, such as political parties and media corporations. Golding (1996) and Wilhelm (2000) suggest that Web sites will do little to overcome limited participation among the disaffected, even if access to the Internet continues to increase. Others argue that Web-based public dialogue will favor heavy Internet users, who are generally thought to be disproportionately white and male, with relatively high incomes. Shenk (1997) contends that improved access to information will make governments more transparent, but if citizens lack knowledge of or strong commitment to the political process, they will be quickly overwhelmed by the sheer quantity of information. Nie and Erbring (2002) worry that heavy Internet use will reinforce social isolation and further encumber civic involvement. Chadwick and May (2003) conclude that e-governance initiatives in the United States, Britain, and Europe have thus far generally reinforced managerialism and do little to open significant new opportunities for citizens to participate in public debates.

However, recent studies of the social impacts of the Internet challenge several of these conclusions. For example, Putnam (2000) found that when controls for higher education levels are applied, Internet users are indistinguishable from nonusers with respect to civic engagement.<sup>2</sup> Internet users spend more time interacting with friends (Katz, Rice, and Aspden 2001) and participating in the arts (DiMaggio et al. 2001). Time spent on the Internet also does not generally displace time spent consuming other news media. Uslaner (2000) found that Internet users have larger social networks. Hampton and Wellman (2000) conclude that Internet users maintain community ties through both virtual and face-to-face interaction. They interact more with people at a distance and within their communities, and they know three times as many neighbors as do nonusers. Some argue that the Internet is particularly effective for establishing and maintaining the “weak” ties needed to sustain civic engagement (Castells 2002; Lin 2001; Resnick 2004).

In addition, researchers and practitioners are developing and testing important new methods of online public involvement. These techniques include Web-based surveys for city governments, e-consultation, deliberative polling, and citizen-driven discussion threads. Commercial software packages have been developed to support and enhance these methods. E-community tools are applied in political dialogue by political interest groups, election campaigns, and nonprofit and for-profit Web sites. Assistance with the planning and implementation of these services is now available from academics and consulting firms that

specialize in managing, moderating, fostering, and facilitating e-communities. For example, Whyte and Macintosh (2002) conducted an extensive electronic consultation<sup>3</sup> with Scottish youth at the request of the Scottish regional authority. They developed automated methods of engaging, monitoring, mediating, and analyzing an online policy discussion. Gronlund (2002) reported other methods used in online public involvement projects in four Swedish cities, including Web-based surveys, citizen juries, and a grassroots-driven online policy discussion forum. Apologists for electronic democracy, such as Howard Rheingold (2000) and Steven Clift (2004), argue that the future of public involvement—and the legitimacy of public officials and governments—depends on the capacity to embrace information and communications technology. Still, empirical evidence about the nature and scope of public involvement through government Web sites is sparse.

### **Municipal Government Web Sites**

This research examines the capacity of U.S. municipal government Web sites to support public involvement. Cities provide a wide range of services to their citizens. They also seek citizen input and involvement on many levels and through a variety of means, including community surveys, public meetings, neighborhood councils, task forces, boards and commissions, advisory panels, and suggestion boxes. City governments have historically adopted and adapted prevalent communication methods to involve the public, including newsletters, automated phone systems, radio, and public access television (Gronlund 2000). Local government Web sites are a recent, underdeveloped,<sup>4</sup> and understudied phenomenon; nonetheless, their capacity to connect directly to interested users and their potential to engage citizens synchronously or asynchronously is quite useful in public-involvement programs. Consequently, this study asks two principal questions:

1. How can municipal government Web sites facilitate public involvement in local governance?
2. To what extent do U.S. municipal government Web sites pursue this aim?

### **Existing Scholarship**

Research that directly assesses the content of local government Web sites is limited. However, several studies inform the current project. For example, a recent report published by Cap Gemini Ernst & Young (2003) examines user satisfaction with more than 3,000 local government sites in Europe. This research, commissioned by the e-Europe 2005 initiative, draws on a continuous nonprobabilistic Web-based survey that now includes responses from more than 30,000 local government Web site users. The study also evaluates the content and services offered by more than 3,000 sites reviewed by survey

respondents. Researchers assessed a wide range of services offered by the sites, each based on a four-point scale:

1. No communication or service
2. One-way flow of information from the public site
3. Two-way interaction
4. Full-service transaction

The survey found few sites that facilitated direct transactions, although many allowed direct interaction between site users and the local public authority. Based on results from the Web survey, researchers found that over 80 percent of respondents were satisfied with the information services provided by the local government sites.<sup>5</sup> At the same time, they found that local government webmasters, in general, had limited knowledge of users' actions and preferences on their Web sites. This finding suggests relatively limited commitment to public involvement among webmasters.

A second study conducted by Musso and colleagues produced a series of articles pertinent to this research (Hale, Musso, and Weare 1999; Musso, Weare, and Hale 2000; Weare, Musso, and Hale 1999). They completed a comprehensive assessment of more than 200 community-related Web sites in California in 1997. Researchers identified and monitored Web content on local government, civic, nonprofit, and corporate sites. Specifically, they examined the extent to which the sites informed citizens about elected officials, local businesses, and a variety of community issues and services. They were interested in the Web sites' support of civic communication, including vertical (e.g., government-to-citizen interaction) and horizontal (e.g., citizen-to-citizen interaction) relationships. In general, they found that the sites provided a broad range of information services and supported extensive opportunities for both vertical and horizontal communication links between citizens, local government, and civic organizations.

The Musso et al. study is important because it provides data on civic uses of local Web sites early in the adoption and diffusion of Web content and because, to date, it is the only published survey focused on public involvement and community Web sites. However, for our purposes, the research has significant limitations. First, Web content, capabilities, and culture have changed significantly since the data were collected in 1997. These changes suggest the need to update and extend the research. Second, Musso et al. examined a rather diverse array of organizational sites in their study, including municipal governments, local chambers of commerce, civic organizations, and advocacy groups. Findings specific to government sites are not distinguished from the general research population, so their research provides limited information

about the extent and nature of local governments' use of Web sites to facilitate public involvement. Third, the measures of public involvement applied in their study are quite exploratory and lack theoretical specificity. For these reasons, our current understanding of local governments' use of Web sites to facilitate public involvement is limited.

### ***Theory-Based Involvement Indicators***

Norris (2003) emphasizes the importance of theoretical specificity in measuring public involvement. She argues that scholars who are interested in e-democracy define e-participation in varying terms. For example, some scholars assume that public involvement through government Web sites requires extensive opportunities for citizen deliberation and consultation on public policy issues. Others seem to associate e-democracy almost exclusively with electronic voting. A deeper study of the literature suggests there are alternative normative benchmarks—often involving trade-offs among different values, such as the relative importance of transparency, accountability, equity, participation, and efficiency. Norris argues that these benchmarks derive from different theoretical perspectives on democracy. She compares three different types of democratic theory—representative, pluralist, and direct (or strong) democracy—and proposes different indicators to measure Web sites' support of public involvement according to each theoretical perspective. These theoretical perspectives and their respective indicators of public involvement are summarized in table 1.

### ***Representative Theory***

In representative theories of democracy,<sup>6</sup> citizens entrust detailed and difficult policy decisions to duly elected representatives. According to this perspective, citizens lack the knowledge or skills to make effective practical decisions. Democracy is best served when citizens choose qualified and dedicated public servants to represent their interests in these decisions. In fact, elections are the main mechanism for ensuring government accountability and legitimacy. Good citizens are most active in electoral politics. Elections should be fair, and the choice of representatives should be based on solid information. Informed citizens need a lot of different mediated and unmediated sources of information so they can determine who will best represent their interests. Alternative sources of information on policy and political debates are important. Citizens also need opportunities to interact with elected and other public officials to make sure their views are considered.

From a representative perspective, municipal government Web sites can improve accountability through the electoral process. Citizens can be more informed and better evaluate the performance of government and particular elected officials. They can also better

**Table 1** Democratic Theory and Indicators of Web-Based Public Involvement

	Representative Theory	Pluralist Theory	Direct Theory
Chief proponents	Mill (1965)	Schumpeter (1952) and Dahl (1981)	Barber (1984), Coleman and Götze (2003)
Key attributes	<p>Democratic governance occurs through citizen representatives. Elections are the key to accountability and legitimacy. Elections should be fair, and based on solid information. Citizens need lots of information.</p> <p>New technologies can improve representation by helping citizens to evaluate the records of governments and elected officials and by providing means for citizens to interact directly with officials.</p>	<p>Although elections are an important mechanism for accountability and legitimacy of government, democracy is preserved primarily through elite-level competition and bargaining of interest groups from all social sectors. A robust civil society is the key to the resilience and effectiveness of a democracy.</p> <p>New technologies reduce the cost of information, and facilitate the multiplication of interest groups.</p>	<p>Democracy works best when people are directly involved in policy debate, decisions, and actions. Government needs to create new mechanisms, policies, and programs to engage citizens in authentic deliberation on public issues.</p> <p>New technologies can reengage citizens that are disenchanted and disengaged. E-democracy can overcome space and time constraints on public involvement, as well as those associated with status differentials, such as age, gender, ethnicity, and wealth.</p>
Web site public-involvement indicators	<ul style="list-style-type: none"> <li>• Information about and communication with elected officials</li> <li>• Direct access to official government notices and records</li> </ul>	<ul style="list-style-type: none"> <li>• All indicators from column to the left</li> <li>• Service to multiple constituencies</li> <li>• Personalized content available</li> <li>• E-comment forms</li> <li>• Links to other local civic organizations</li> <li>• E-transactions</li> </ul>	<ul style="list-style-type: none"> <li>• All indicators from columns to the left</li> <li>• Voluntary service opportunities</li> <li>• Social networking software</li> <li>• Online issue chat rooms or discussion forums</li> <li>• E-consultations</li> </ul>

Adapted from Norris (2003).

evaluate and contribute to policy proposals and candidates standing for election. Table 1 proposes specific Web site functions and services that would facilitate public involvement according to this theory. They include (1) access to information about the city's chief elected officials; (2) opportunities for users to interact with these officials directly through e-mail links or electronic comment forms; (3) access to meeting agendas and minutes for both the city council and other official city boards or commissions; and (4) access to the calendar of scheduled city government meetings and events. These information and communication services would enable monitoring of official policy debates and decisions. They would also help citizens express their views to their representatives and evaluate responsiveness over time. As a result, citizens would be better prepared to elect effective representatives.

### **Pluralist Theory**

For pluralist theorists,<sup>7</sup> periodic elections allow citizens to hold government to account. However, between elections, it is interest group bargaining that preserves democratic legitimacy and civil liberties.

Democracy is preserved primarily through elite-level competition and bargaining among the representatives of diverse interest groups, agencies, and political parties. Rich and dense civic society is the essential foundation of pluralist democracy.

Pluralist theories have also been applied in the context of e-democracy. For example, Bimber (2000) argues that the study of civic engagement and the Internet should be redefined. He argues that the differences between e-mail, text-messaging, and Web surfing are too great to be usefully examined under one information and communications technology or Internet category. He argues that research on e-politics should shift from a technology-based to an information-based focus. We should stop searching for the political effects of the Internet and instead look toward the role of technology in politics.

For Bimber, information has always been the key to political participation. However, during the 19th and 20th centuries, information was costly. The information needed to mobilize large-scale collective action was not readily available in the absence of considerable organizational infrastructure. Politics represented

an older communications ecology in which information was costly and asymmetric. Municipal government Web sites can provide a wide range of information that is available any time to anyone with Internet access and a Web browser. The Web also facilitates the networking and “many-to-many” communications on which, according to pluralist theories, democracy depends.

Bimber states four hypotheses that are pertinent to our study of public involvement.

- H1:** Cheaper, more abundant information will make civic engagement more fragmented.
- H2:** Cheaper information will speed the political process.
- H3:** Cheaper information will multiply opportunities for civic learning and engagement.
- H4:** Changes in the information environment will also reduce deliberation and diminish the potential for identifying public goods beyond the simple utilitarian aggregation of private interests (see also Barber 1998).

Some pluralists argue that increasing the availability of information will force political elites to bow to the pressure of *potential* citizen awareness (e.g., Chadwick and May 2003). Dominant thinking in the United States about the nature and scope of government Web sites is consistent with this position. Emphasis is placed on “customer service,” “one-stop shopping,” “personalized content,” and direct electronic transactions. It is assumed that government Web sites that respond to specific constituent demands and interests and make routine vertical transactions more convenient and efficient will (1) make government agencies more effective and competitive and (2) foster greater citizen interest and involvement in public issues. New technologies reduce the cost of information and facilitate the multiplication of interest groups, sometimes called “hyperpluralism.” In states with a strong civil society, the Web will add strength. In countries with a

powerful state and weak civil society, the Web will improve transparency and increase opportunities for competition.

For pluralist theorists, measuring Web sites’ capacity to facilitate public involvement includes all of the indicators proposed previously under representative theory. Additional indicators are summarized in table 2. They include a Web site’s ability to serve multiple constituents (e.g., city residents, businesses, visitors, or those seeking employment), personalized content, electronic comment forms, direct links to civic organizations, and electronic transactions. Web sites that provide these services are thought to improve access to government, vertical interaction, administrative efficiency, and effective service delivery. This improves citizen satisfaction and facilitates competition, which heightens the voice of networked groups, civic organizations, and new social movements.

### Direct Democracy

Direct democracy theory<sup>8</sup>—sometimes referred to as *deliberative democracy* (Coleman and Gøtze 2003) or *strong democracy* (Barber 1984)—sees periodic elections or convenient vertical transactions as necessary but insufficient for contemporary democracy and citizenship. Direct democracy fosters government policies and programs that reflect the collective knowledge and commitment of citizens. To achieve these outcomes, citizens must be directly involved in policy debates.

Government Web sites can facilitate new forms of interaction between citizens and government. In doing so, they aim to deepen democracy by reengaging citizens who are disenchanted with and disengaged from the (electoral) political process (Coleman and Gøtze 2003; Hague and Loader 1999). Municipal government Web sites offer information that is often not widely disseminated through print, broadcast, or cable media, and they can provide this information unabridged and unmediated. New technologies, such as personalized e-mail alerts, user profiling, and portal software, allow users to filter information that they find of greatest interest or import. Other software

**Table 2** Public-Involvement Indicators: Representative Theory

	Population Less than 120,000 <i>n</i> = 23	Population 120,000–459,999 <i>n</i> = 45	Population 460,000 or More <i>n</i> = 32
Interaction with mayor	17 (74%)	40 (89%)	22 (69%)
Interaction with city council	18 (78%)	36 (80%)	25 (78%)
Council meeting agendas	13 (57%)	30 (67%)	17 (53%)
Council meeting minutes	12 (52%)	26 (58%)	15 (47%)
Other commission meeting agendas	8 (35%)	23 (51%)	11 (34%)
Other commission meeting minutes	7 (30%)	14 (31%)	6 (19%)
City government finances and budget	16 (70%)	37 (82%)	20 (63%)
Representational index <sup>a</sup> (mean = 11.07)	10.22	11.76	10.57

<sup>a</sup> Cronbach’s alpha = .853.

applications can support and analyze online discussion forums that no longer require citizens to be in the same place or time. These kinds of interactions also allow anonymity. Anonymity, though controversial, can overcome status differentials of age, ethnic composition, gender, and class, which often impede or discourage inclusive participation in dialogue on public issues.

According to direct democracy theory, all of the indicators of Web site public involvement listed in table 2 under representative and pluralist theory are useful. Furthermore, this theory suggests other indicators, such as the capacity of a site to support civic voluntary service, and provides opportunities for online policy discussions or the kind of social networking made famous by the Howard Dean presidential campaign.

### Data and Methodology

This study attempts to measure municipal government Web sites' facilitation of public involvement using the measures suggested by each of the three theoretical perspectives. It examines the municipal government Web sites of the principal cities in the 100 largest U.S. metropolitan statistical areas, as defined by the 2000 U.S. Census. Following the method first introduced by Hale, Musso, and Weare (1999) and supplemented by Norris's (2003) theoretical classification, we developed a survey instrument that measured the presence or absence of more than 100 information or communication services provided at the sites. The instrument was pre-tested and revised. Coders then used it to assess each of the sites in the research population. Any variances in coding were resolved by consensus. In all, researchers assessed more than 3,000 separate Web pages on these 100 city government Web sites between February 4 and February 19, 2004.

The study selected the principal cities as our research population for several reasons. First, it extends the earlier Musso et al. study of California sites to a national level, thereby facilitating subsequent international comparative studies. Second, although we studied the 100 largest U.S. metropolitan markets, the populations of the principal cities varied from 37,322 (Hickory, North Carolina) to more than 8 million (New York City). In all, 23 cities had fewer than 120,000 residents (as of the 2000 Census), 45 cities had 120,000–459,999 residents, and 32 had more than 460,000 residents. Studies of local government Web sites typically assume that only the largest cities can offer high functionality (Kinder 2002; Moon 2002). We wanted to test this assumption. Despite the variation in population size, each of the principal cities was large enough to assume the cost of maintaining and developing its Web presence. Each also had multiple and complex communication and service-delivery demands. Each had multiple programs to

encourage and facilitate (offline) public involvement, and each was likely to have numerous and rich linkages with local civic organizations, which are thought by many to be the key to renewed civic engagement (Musso, Weare, and Hale 2000; Putnam 2000; Resnick 2004).

Data from each Web site were recorded, verified, and analyzed using SPSS and Microsoft Excel. Data for selected variables were used to construct three public-involvement indexes, each designed to reflect one of the theoretical perspectives described by Norris (2003). These indicators have rarely, if ever, been tested empirically. Further research is needed to assess their validity and reliability. Nonetheless, the indexes were constructed to reflect *content validity* for each of the theoretical perspectives. The reliability of each index was assessed statistically using Cronbach's alpha (Cronbach 1951; Carmines and Zeller 1979). Results from these tests are reported in the tables that follow. Scores on each of the indexes are also compared for cities in different population-size categories.

### Findings

The research revealed mixed but surprising results. First, municipal government Web sites offer surprisingly rich and diverse information for interested users. For example, many sites offered real-time traffic and transportation updates, Internet-based interactive mapping options, crime statistics, local demographic trends, information about the history and cultural heritage of the region, recreational opportunities, and content and services designed especially for children, youth, families, and senior citizens. The sites also generally offered extensive information about the specific functions, organizational structure, procedures, and key issues before city government. This rich information ecology was available from cities of all sizes. We found very few "standard services" offered in the same way across cities. In fact, data analysis revealed significant variation across both variables and cases. This is consistent with the rapid and dynamic patterns of adoption and diffusion of municipal government Web sites found in previous studies (Moon 2002; Weare, Musso, and Hale 1999).<sup>9</sup> However, our research clearly shows that Web sites reduce the cost of information for citizens. This in itself can serve as an important inducement and support for public involvement (Bimber 2000).

Second, the evidence regarding Web sites' support of public involvement is mixed depending on theoretical assumptions. In table 2, we compare Web sites' capacities from the perspective of representative theory. Most sites allowed users to interact directly with key elected civic officials such as mayors and city council members. The sites provided information about these officials, such as biographical sketches, contacts, vision

statements, public calendars, speeches. Most—more than 80 percent—facilitated direct interaction with these officials through e-mail or comment forms. Most also made routine public records, such as meeting notices, minutes, calendars, and annual budgets and financial reports, available on the sites. Approximately 60 percent of sites provided agendas for city council meetings, and more than 50 percent posted minutes. City councils represent the primary (legislative) policy-making bodies for these cities. Municipal governments also empanel numerous appointed regulatory boards and advisory commissions. The issues before these bodies at times generate significant stakeholder interest and occasions for public involvement. Cities were somewhat less likely to post current and past information about the deliberations and actions of these boards. For example, 42 percent provided online access to board meeting agendas, and 27 percent posted minutes. However, over 70 percent of the Web sites across population-size categories posted current city budgets or financial records. This information allows interested citizens to review the sources of revenue and expenditures for the city government, as well as assess priorities and financial performance; it is particularly useful for active, involved citizens.

We recorded the presence or absence of all theory-related information or communication services<sup>10</sup> and summed their scores to create a *representational index*.<sup>11</sup> The highest possible index score was 21; scores ranged from 0 to 14. The mean score of this index for the overall research population was 11.07. One-way analysis of variance showed that the mean score for medium-sized cities (11.76) was significantly higher than the means for large cities (10.57) and smaller cities (10.22). These results do not address the actual use of these functions by citizens or their effects on election participation or other policy and program outcomes. However, for anyone who has tried to access these routine city records offline, the

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diversity and accessibility of information is quite impressive. If, as representative theory implies, elections are the most important kind of public involvement, it is clear that the information available on city Web sites *can* greatly facilitate citizens' efforts to monitor official decisions and performance. In general, from a representative theory perspective, municipal Web sites contribute important resources for informed public involvement.

In table 3, we report findings from a pluralist perspective. As stated previously, Norris (2003) argues that pluralist theory regards the indicators of representative theory as necessary but insufficient for effective democracy and public involvement. According to pluralist theories, democracy is best served when governments keep citizens satisfied with the effectiveness and efficiency of their services and when civic organizations and interest groups can engage citizens and government freely and effectively. When measured by pluralist indicators, city government Web sites seem to contribute significantly to local public involvement. For example, over 50 percent of sites provided a package of services to at least three of four particular constituent groups<sup>12</sup> directly on the home page. This measure represents the sites' range of services offered and the ease of navigation for interested users. Approximately 30 percent of the sites enabled users to personalize their content with features such as customizable portals, premium (or password-protected) services, "most popular" (user-based) services, or personalized topical e-mail alerts. These measures suggest the sites' capacity to apply user profiles or more sophisticated personalization techniques, such as data mining or knowledge management, to enhance the functions and features of their Web sites. Approximately 40 percent offered users electronic comment forms. These are distinguished from e-mail comments because the forms allow site administrators to automatically collect all entries in databases, send automated receipts, analyze the range of

**Table 3** Public-Involvement Indicators: Pluralist Theory

	Population Less than 120,000 <i>n</i> = 23	Population 120,000–459,999 <i>n</i> = 45	Population 460,000 or More <i>n</i> = 32
Serving multiple constituencies	13 (57%)	25 (56%)	15 (47%)
Personalized content enabled	7 (30%)	15 (33%)	13 (41%)
E-comment forms	10 (43%)	18 (40%)	17 (53%)
Links to other civic organizations	18 (78%)	42 (93%)	24 (75%)
E-transactions offered (mean = 1.96) <sup>a</sup>	12 (52%) (mean = 1.13)	35 (78%) (mean = 1.69)	25 (78%) (mean = 3.11)
Pluralist index <sup>b</sup>	5.17	5.61	6.29

<sup>a</sup> One-way ANOVA  $F = 9.465$  (significance = .000).

<sup>b</sup> Cronbach's alpha = .646.

comments received, and route each comment to the appropriate governmental department.

Another element of pluralist theory involves the capacity of personal and organizational networks to mobilize to pursue their interests. Over 80 percent of the city sites offered links to at least two different local civic organizations, including charities, religious organizations, arts and culture groups, voluntary service organizations, and others. Musso et al. see such links as facilitating local “horizontal communication” or networking that contributes to local social capital and civic engagement (Hale, Musso, and Weare 1999). When compared with Musso et al.’s earlier California study, the results of our research suggest that city Web sites are increasingly facilitating links across a wide array of organizations. This is in keeping with the overall growth of Web presence and content.

Much of the early interest in e-government initiatives has involved the development of particular online transactions, such as the payment of taxes and fees, license application and renewal, and reservation of recreational facilities. This has long been regarded as a measure of government Web site capacity because it represents a notable standard of service, convenience, and reliability for constituents. It also demonstrates the sites’ capacity to ensure overall security, process design and integration, and user privacy—all standards that have proved difficult for governments to attain. Recent site surveys in the United States (Moon 2002) and Europe (Cap Gemini Ernst & Young 2003) found relatively few local e-transactions offered. Moon found that in 2000, approximately 1 percent of U.S. municipal Web sites displayed this capacity. Just four years later, well over 50 percent of the sites in this study provided at least one type of transaction. Larger cities were more likely to offer these services than medium- or small-sized cities. Perhaps this difference relates to the cost of the information infrastructure required to maintain them and the overall information technology resources available to cities with larger populations and larger budgets.

All of the pluralist measures were combined into one 10-point *pluralist index*<sup>13</sup> (see table 3). Our findings suggest that the city Web sites make important contributions to local public involvement when viewed from a pluralist perspective. Generally, larger cities

scored higher on pluralist measures than medium or small cities. Some have argued that these types of measures suggest that government Web sites do more to promote “good management” than good democracy (Chadwick and May 2003; Musso, Weare, and Hale 2000). Nevertheless, many of the municipalities use sophisticated Web applications to make government services more accessible to key constituents.

Finally, in table 4, we report the sites’ capacity to support public involvement from a direct democracy perspective. Most cities run rather extensive programs designed to recruit, prepare, motivate, and manage public-service volunteers. These programs include neighborhood watch and beautification, program monitoring, parks and recreation services, mentoring, foster grandparents, and arts and culture specialists. Volunteers also serve on public commissions, boards, task forces, and standing committees that are engaged in significant policy decisions, service delivery, and program evaluation. Such voluntary service opportunities channel and encourage public involvement. This research shows that approximately 30 percent of the small- and medium-sized cities and 46 percent of the large cities provided information and direct communication links with city-sponsored voluntary service programs. Eighteen of the 100 cities allowed citizens to apply for specific voluntary assignments online.

However, the study found no applications designed to facilitate networking or offline meetings of interest groups,<sup>14</sup> and only two sites facilitated online policy forums or discussion lists. One of these forums addressed a specific land-use controversy. In that case, the mayor had offered a particular resolution, and the forum was limited to citizen reactions to that proposal. In the other case, the forum was moderated by the local League of Women Voters. It consisted of a series of questions posed to city officials, their responses, and an opportunity for site visitors to comment.

These results contrast with research findings in European cities, according to Kinder (2002). Of 31 cities included in that study, 29 had established policies to promote online dialogue between citizens and city administrators. Twenty-four cities had outreach programs that targeted specific groups thought to be excluded by traditional public processes, and 19 integrated e-democracy services with existing literacy

**Table 4** Public-Involvement Indicators: Direct Democracy Theory

	Population Less than 120,000 <i>n</i> = 23	Population 120,000–459,999 <i>n</i> = 45	Population 460,000 or More <i>n</i> = 32
Facilitate voluntary service	7 (30%)	15 (33%)	13 (41%)
Online policy forum or discussion	1	1	0
Social network applications	0	0	0
E-consultations	0	0	0



and social inclusion policies. Fifty percent of the cities offered some type of online opportunities for citizen involvement in policy making, in some cases as early as 1995.

In general, our research found very little evidence that U.S. municipal government Web sites support significant public involvement in accordance with direct democracy theory. There are several plausible explanations for this conclusion. For example, it is likely that city governments want to avoid the political—and possibly legal—risks of opening up such communication channels. They may also lack the capacity to monitor, manage, mediate, or otherwise respond to such public discussions. Rules and procedures are in place to regulate public comments at most official public meetings. Similar policies may not yet be established or implemented for “virtual” meetings. Similar forums are also available from various interest groups, advocacy communities, or political organizations. There may be little real or perceived demand for electronic discussions on city government Web sites. Limited public dialogue might also be explained by the lack of policy direction or support from state and federal governments. In

other parts of the world, such as the European Union, Canada, Australia, Korea, and Singapore, central government agencies propose policies or content guidelines (Australia Information Management Office 2004; Information Society Commission 2003; U.K. Office of the Deputy Prime Minister 2004), support research on new applications, and fund pilot as well as mainstream local government initiatives in e-democracy and Web-based public involvement (Birch 2002; Gronlund 2002; Information Society Technology 2004; Kinder 2002; Whyte and Macintosh 2002). With few exceptions, U.S. state and federal government commitments to local e-participation are limited.<sup>15</sup>

## Discussion

This paper has reported analysis of a 2004 survey of government Web sites in the principal cities of the 100 largest U.S. metropolitan statistical areas. The survey reviewed more than 3,000 Web pages on these government sites to determine their capacity to facilitate local public involvement. The study found mixed results depending on how the concept of public involvement is defined and measured. For example, very few sites facilitated any online public dialogue or consultation, as defined by direct democracy theories. However, in general, the Web sites studied offered a wide array of information, communication, and transaction services that greatly reduce the cost of information and make local government much more accessible and accountable to interested users—

concepts that are essential in facilitating public involvement in representative and pluralist democratic theories. Contrary to previously published reports, which suggest that city population size and Web site functionality are highly correlated (Moon 2002; Kaylor et al. 2001), our study found wide variance in information and communication services across population categories. In general, the sites of medium-sized cities (populations of 120,000–459,999) provided more opportunities for public involvement than the sites of small or large cities.

These findings suggest that municipal government Web sites clearly have the potential to enhance and inform local public-involvement initiatives, whether online or conventional. The role of local government Web sites in advancing public participation and good governance is perhaps underappreciated and understudied. In the following section, we will discuss the

implications of these findings for public administration and explore the limitations and future directions of this research.

### **Implications for Public Administration**

Municipal governments in the United States have adopted Web

sites as a primary tool for service provision in a very short time. In fact, the effective use of information and communication technology to serve citizens is rapidly becoming an expectation (Accenture 2004)—even an imperative (OECD 2003)—for government agencies at all levels. Public administrators working in this field have achieved remarkable results, often while operating under significant resource constraints. To date, much of the work to establish local e-government has focused on developing and maintaining Web content and building capacity to support interoperability and direct electronic transactions (Landsbergen and Wolken 2001; Layne and Lee 2001).

This research invites scholars and practitioners to explore and debate the opportunities and challenges associated with e-participation. Web technology will likely redefine the relationship between citizens and government and help foster more engaged citizens (Caldow 2004). If this is true, public administrators need to address several key questions. For example, what objectives should administrators pursue with respect to facilitating public involvement? As Norris (2003) asserts, different theories of democracy imply different responses. Once basic philosophy and objectives are established concerning local e-participation, policies and procedures must be established to support effective Web-based public involvement. As with official public meetings, standards are required to determine eligibility, rights and restrictions, and

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... municipal government Web sites clearly have the potential to enhance and inform local public-involvement initiatives, whether online or conventional.

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support resources for virtual participation.<sup>16</sup> Prospects for Web-based public involvement also present important legal, technical, fiscal, organizational, and professional issues that are best addressed by active involvement by public administrators.

Municipal governments are not the only actors that can facilitate civic engagement through Web site services. Local special interest groups, nonprofits, religious or cultural groups, other public entities (such as school districts, universities, and state and federal government agencies), news media, and neighborhood associations can also use the Web to foster public involvement. As we investigate the role of local governments in facilitating deliberation and participation in local public issues, it is important to monitor and debate the complementary functions that these and other actors may play in the process.

### Conclusion

This study represents one of the first extensive analyses of content on municipal government Web sites available to researchers. Standard measures or benchmarks of a Web site's capacity to facilitate public involvement are not yet available. We propose three indexes derived from three different theoretical perspectives. More testing and refinement of theory and method is needed to address important questions about the validity and reliability of the measures used in this research.

This study examined only Web content from the "client side" of the municipal government sites. It did not assess "server-side" issues related to information technology infrastructure, process integration, or knowledge management that could contribute to the sites' capacities for online public involvement. It also did not assess user demand for web-based public involvement or actual user behavior. As applied, our measures of public involvement cannot address (1) the municipal government's intent or objectives regarding public involvement or (2) the impact of Web services on public actions or policy and program outcomes. These should be subjects of future study.

The nature of political and public dialogue on the Internet is changing, and it will undoubtedly affect cities' online objectives and strategies for the future. In subsequent research, we plan to survey the webmasters of these sites to learn about use patterns, resource allocation, future plans, citizen (and user) involvement, service integration, perceived impact of civic engagement, and key issues for the future. By combining these data, we hope to identify a set of best practices in this area and identify sites for more detailed research. We also hope to compare city government sites in the United States with those in other countries, such as Canada, Australia, and the United Kingdom—with particular attention to

the role of national policy in shaping Web-based public involvement.

Finally, it is important for subsequent studies to explore organizational and institutional changes linked with Web-based public involvement that move beyond a more narrow research focus on technology or tools. In the final analysis, we agree with Dutton (1999), who concluded that "digital government can erode or enhance democratic processes... [but] the outcome will be determined by the interaction of policy choices, management strategies and cultural responses—not by advanced technology alone. The debate over appropriate policies for guiding the application of ICTs [information and communications technologies] in politics and governance needs to begin in earnest."

### Notes

1. This is less the case outside the United States (Coleman and Gøtze 2003; Gronlund 2002; OECD 2003; Whyte and Macintosh 2002).
2. As cited by Castells (2002).
3. In e-consultation, public authorities usually post a series of questions on a Web site–based discussion forum for a prescribed time period. Interested users can then post comments and read others' views by discussion threads. Upon completion of the consultation period, the authorities analyze the comments received and publish overall findings.
4. Larsen and Rainee (2002) found that although more than 70 percent of Internet users had visited federal government Web sites, only about 35 percent had ever used sites administered by a local government.
5. Fully 50 percent reported that they were "very satisfied" with the local government Web sites they used.
6. John Stuart Mill (1965) was an important contributor to the representative theory of democracy.
7. Schumpeter (1943/1952) and Dahl (1981) are two key contributors to pluralist theories of democracy.
8. Proponents of direct democracy include Barber (1984), Habermas (1979), and Coleman and Gøtze (2003).
9. The International City/County Management Association's survey of municipal government Web site administrators found that only about 10 percent of more than 1,200 municipalities had adopted a strategic plan for development of their Web sites (Moon 2002).
10. Measures associated with representative theory were coded as follows: 0 = no information or communication service; 1 = one-way flow of information from the public site; 2 = two-way interaction; and 3 = full-service transaction.

11. Cronbach's alpha = .856.
12. The constituent groups tested included
  - (1) residents, (2) business interests, (3) those seeking city government employment, and
  - (4) visitors or tourists.
13. Cronbach's alpha = .646.
14. For examples of this type of networking application used for political or public dialogue, see [www.meetup.com](http://www.meetup.com) or [www.democracyforamerica.com](http://www.democracyforamerica.com).
15. In a national survey of more than 4,000 local governments conducted in 2002, the International City/County Management Association found that less than 5 percent of responding units received any federal or state funding to support their e-government services in general (Scott 2005).
16. For example, the city of Honolulu, Hawaii, has implemented policies and procedures for an online discussion board focused on developing a vision for the city's future. See <http://www4.co.honolulu.hi.us/idealbb/login.asp?sessionID={45E53895-18D8-4C24-B670-DF52272E223F}>.

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