Using E-Government to Reinforce Government–Citizen Relationships

Comparing Government Reform in the United States and China

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A comparison of the United States and China shows that electronic government (e-government) can be used to enhance citizens' access to government as much as government's access to citizens. Both countries are using e-government initiatives as vehicles to improve internal efficiencies and provide better services to their citizens. However, in the case of the United States, e-government also represents an opportunity to infuse business principles into the government–citizen relationship (results-oriented government). In the case of China, e-government represents a means to bring subnational levels of government under greater scrutiny and control of the central government, as it reinforces monopoly control over the government–citizen relationship (transparency with security). Further comparative analysis along three dimensions suggests that although technology can play an important role in fostering the redistribution of power and encouraging interactions between governments and citizens, the notion of government reform carries many different connotations.

Keywords: *electronic government (e-government); government reform; administrative reform; United States; China; strategy; blueprint; citizen*

Information technology (IT), and more specifically, electronic government (e-government) is frequently presumed to be a mobilizing force behind democratization. However, some studies (Kalathil & Boas, 2003) have shown that IT can also be used by governments to consolidate control over their citizens. In this article we compare how, despite proclaiming similar goals (achieving administrative transparency, high efficiency, and economic benefits), e-government initiatives in the United States and China lead in very different directions. The contrast between the two countries provides an opportunity to demonstrate that although IT can foster the diffusion of bureaucratic power away from central governments, they can also facilitate the development of networks that can enhance surveillance and insert new control mechanisms, by virtue of how they are constructed.

Among the many promises of e-government is its potential to make governments more responsive to the needs of their citizens. In the United States, this often involves applying lessons from the private sector to make government more citizen centric and service oriented. E-government potentially empowers individual citizens by providing them with an alternative channel for accessing information and services and interacting with government. In contrast, although Chinese leaders also emphasize the importance of providing a better quality of service to their citizens, the major goal of e-government is strikingly different than in Western countries. In China, the focus of e-government has mainly been on "administrative reform" (*Xingzheng Guanli Tizhi Gaige*). As a consequence of a deeply centralized and often inefficient administrative management system, China has faced critical internal communications and governance problems. The application of e-government in China is intended both to accelerate decentralized administration and, at the same time, to enhance government's ability to oversee key activities.

Based on a review of national strategy documents, interviews conducted, and analyses of e-government initiatives, we compare how government reform is conceptualized by the respective countries, and how similar e-government practices can be used to achieve very different outcomes. In doing so, we attempt to answer three questions: How are the policy makers in each country implementing e-government? How is e-government transforming the governments of the U.S. and China? and What are the implications for the relationship between government and citizens in each country?

The article is organized into five primary sections: an introduction, a discussion of what constitutes e-government, an examination of e-government initiatives being carried out by the U.S. federal government, an examination of e-government initiatives being carried out by China's national government, and a comparative analysis of U.S. and Chinese e-government initiatives. A brief conclusion follows.

What is E-Government?

The concept of e-government conjures different images for different people (Relyea & Hogue, 2004; Seifert & Relyea, 2004). For some, it is submitting a form online. For others, it might be sending an e-mail message to a member of the legislature. A 2000 Gartner Group report described e-government as "the continuous optimization of service delivery, constituency participation, and governance by transforming internal and external relationships through technology, the Internet, and new media." In the *UN Global E-Government Readiness Report 2004*, e-government is defined as "the use of information and communication technology (ICT) and its application by the government for the provision of information and basic public services to the people" (United Nations, 2004, p. 15). Generically speaking, one could say that e-government is the use of IT to facilitate and modernize government activities. However, when comparing countries, e-government should be considered in the context of the individual governments being examined.[1]

For the U.S. government, the current official definition of e-government comes from the E-Government Act of 2002, which defines e-government as "the use by the Government of web-based Internet applications and other information technologies, combined with

processes that implement these technologies, to (A) enhance the access to and delivery of Government information and services to the public, other agencies, and other Government entities; or (B) bring about improvements in Government operations that may include effectiveness, efficiency, service quality, or transformation." For China, there does not appear to be an officially sanctioned definition of e-government. However, a review of relevant Chinese government documents suggests that the term *informatization* is sometimes used to characterize or describe e-government initiatives. *Informatization* refers to the production and use of IT hardware, software, and services (Kraemer & Dedrick, 1994a).

E-Government in the United States

Although the antecedents of today's e-government initiatives can be traced back to at least the 1960s, it is not until the late 1990s that the term *e-government* begins to take form for the federal government (Relyea & Hogue, 2004). In February 1997 the concept of "electronic government" took a recognizable focus with the release of a National Performance Review report, *Access America: Reengineering Through Technology*, in which a wide range of services were considered under the rubric of electronic government. For example, the report speculated that citizens would be able to check local environmental conditions around their homes and apply and receive education loans online; that police would verify fingerprints and criminal records electronically; and that companies would seek export assistance through a "one stop government shop" (U.S. Office of the Vice President, 1997, p. 2-3).

President Clinton's Memorandum on E-Government

On December 17, 1999, President Clinton released a memorandum directed to the heads of executive departments and agencies on the subject of electronic government. The memorandum laid out some general guiding principles. One of its primary guiding principles was that government information should be organized "by category of information and service—rather than by agency—in a way that meets people's needs" (The White House, 1999, p. 1). Implicitly embedded in this principle was the idea that government should be citizen-focused in a way that matches the manner citizens approach government for information and services, rather than in a way that reinforces the boundaries between different departments and agencies. A second guiding principle was that government should be open and convenient in communicating with, and providing information to, citizens. In other words, government officials were expected to use technology to facilitate two-way communication and access to information. As a third guiding principle, it was considered critical that citizens "have confidence that their online communications with the Government are secure and their privacy protected" (The White House, 1999, p. 1). The December 1999 memorandum represented the Clinton Administration's first concrete attempts to begin implementing e-government government-wide, while the development and proliferation of various technological enhancements, such as better web browsers, public key encryption, and multimedia web features, also contributed by offering a reason and a means for citizens to go online.

President's Management Agenda (PMA)—E-Government Rebooted

In August 2001, the Bush Administration unveiled the PMA, which has served as the Bush Administration's primary vehicle for government reform efforts. The PMA emphasizes the application of business-like practices and principles. Three guiding principles are cited in the PMA as integral to "the President's vision for government reform," which states that government should be:

- citizen-centered, not bureaucracy-centered;
- results-oriented;
- and market-based, actively promoting rather than stifling innovation through competition (U.S. Office of Management and Budget [OMB], 2001a, p. 4).

The PMA includes five government-wide initiatives: Strategic Management of Human Capital, Competitive Sourcing, Improved Financial Performance, Expanded Electronic Government, and Budget and Performance Integration. Within the description of the Expanded Electronic Government initiative, one can find a number of the core ideas and values that have influenced the development of e-government at its most formative stages. Specifically, the PMA underscores the need to improve IT management, simplify business processes, and unify information flows between agencies. Also emphasized is the value of making government citizen-centered and not agency-centered; the importance of breaking down bureaucratic barriers, or the so-called "stove pipes" that separate agencies; the development of government-wide solutions; and the need to use technology to transform government, rather than simply automate existing processes (U.S. OMB, 2001a, p. 23). To achieve this vision of e-government, the PMA outlines a range of potential e-government projects that the federal government could decide to undertake. Some of the initiatives suggested include e-procurement, e-grants, e-regulation, e-signatures, and the expansion of the usa.gov web site (formerly firstgov.gov), the portal to the U.S. government.

Quicksilver Initiatives

Pursuant to the July 18, 2001, OMB Memorandum M-01-28, the E-Government (Quicksilver) Task Force was established to create a strategy for achieving the Bush Administration's e-government goals (U.S. OMB, 2001b). A steering committee of the Task Force selected approximately 30 initiatives, out of 350 originally identified, for further consideration. Mini business cases for each of these initiatives were then prepared by members of the Task Force to evaluate their potential costs, benefits, and risks (U.S. General Accounting Office [GAO], 2002, p. 14; U.S. OMB, 2002, p. 6; U.S. OMB, 2003, p. 21). Special attention was also paid to the initiatives' potential to reduce redundancy and transform the way government interacts with citizens, as well as the likelihood of being deployed within 18 to 24 months (U.S. OMB, 2002, p. 9). In their initial assessment of e-government opportunities, the Task Force discovered that the federal government's business architecture, the organization and function of its core processes, was characterized by excessive duplication and overlap. Specifically, they concluded that, "of 28 lines of business found in the federal government, the assessment revealed that, on average, 19 Executive Departments and agencies are performing each line of business" (U.S. OMB, 2002, p. 2).

A total of 24 projects, sometimes referred to as the Quicksilver initiatives, were selected. Examples of these initiatives include E-Authentication, a project to increase digital signature use; GovBenefits.gov, an eligibility assistance project intended to create a common access point for all government benefits programs available to citizens; E-Payroll, an effort to replace 26 individual agency payroll systems with 4 cross-agency providers; and the Business Gateway project, designed to help businesses conform with regulatory requirements.

E-Government Strategy—2002

In February 2002, OMB released the Bush Administration's first e-government strategy, stating that it "presents the federal government's plan for E-Government" (U.S. OMB, 2002, p. 1). For the most part, this document served to explain the work of the task force (described above) in selecting the Quicksilver initiatives as part of the strategy, and reinforce the idea that these initiatives are intended to help carry out the goals of all five of the government-wide initiatives of the PMA. The e-government strategy also served to further elaborate on the ideas originally presented in the PMA, emphasizing ease of service for citizens, efficiency and effectiveness by agencies, and the federal government's overall responsiveness to citizens (U.S. OMB, 2002, p. 1).

However, the document also enumerates a longer list of "significant improvements in the federal government" that are expected to result from carrying out the e-government strategy. These more tangible actions include:

- Simplifying delivery of services to citizens;
- Eliminating layers of government management;
- Making it possible for citizens, businesses, other levels of government and federal employees to easily find information and get service from the federal government;
- Simplifying agencies' business processes and reducing costs through integrating and eliminating redundant systems;
- Enabling achievement of the other elements of the PMA;
- Streamlining government operations to guarantee rapid response to citizen needs (U.S. OMB, 2002, p. 4).

As a mode of government reform, e-government is heavily reliant on the successful implementation of IT solutions. However, up to this point, the U.S. federal government's track record was dismal. Although it is the world's largest purchaser of IT, spending $50.4 billion in Fiscal Year 2002, (and a projected amount of approximately $65 billion in Fiscal Year 2008), there was a belief that the government "has not experienced commensurate improvements in productivity, quality and customer service" (U.S. OMB, 2002, p. 5). In previous decades, there were instances in which of millions of dollars were lost on ineffective and/or obsolete solutions. Although legislation, such as the Clinger-Cohen Act (Seifert, 2002), had been passed in recent years in an attempt to address the federal government's IT management problems, there was evidence to suggest that more could be done. In response, the e-government strategy attempted to address some of the structural problems by mandating cross-agency solutions, and enforcing much closer budget and project reviews by OMB. Four such problems were identified in particular: measuring program

performance value, leveraging technology, the lack of interoperable systems between departments, and bureaucratic resistance to change (U.S. OMB, 2002, p. 5).

Although the strategy did focus heavily on technology, it did not ignore the fact that government is composed of people, organized into various departments and agencies, who can pose far greater challenges than those associated with technology. Drawing on the work of the E-Government Task Force, the e-government strategy includes a list of five "recurring barriers," paired with planned mitigation actions (U.S. OMB, 2002, p. 11). These barriers included agency culture, the lack of a federal architecture, trust, resources, and stakeholder resistance.

One noticeable difference between the PMA and the e-government strategy is that, whereas the former focuses mostly on laying out a philosophy of government reform, the latter focuses mostly on the actual steps being taken, or to be taken, to implement one part of the PMA (namely, the Expanding E-Government initiative). In this respect, one can begin to see U.S. federal e-government developing a much more cohesive and demonstrable character to a degree that the National Performance Review efforts of the previous administration did not quite reach.

President Bush's Memorandum on E-Government

On July 10, 2002, 5 months following the release of the Bush Administration's E-Government Strategy, President Bush issued a brief, two-paragraph memorandum directed to the heads of executive departments and agencies on the subject of electronic government (The White House, 2002). Specifically, e-government was portrayed as "important in making Government more responsive and cost-effective," and placed a strong emphasis on "cross-agency teamwork." Although the PMA did promote e-government projects that would span traditional agency boundaries, these projects were to be selected by a task force, in coordination with OMB, suggesting a top-down approach without explicit reference to how agencies would be expected to carry out these initiatives. In contrast, the memorandum emphasized the administration's expectation that agencies would work together to break down the "stove pipes" that separated them, and would look past individual agency interests. By doing so, the memorandum provided both a mandate and political cover for agency heads to participate in e-government initiatives that an entrenched bureaucracy may be resistant to embracing.

E-Government Act of 2002

On December 17, 2002, President Bush signed the E-Government Act of 2002 into law. The stated purposes of the E-Government Act include establishing effective leadership of federal IT projects, requiring the use of Internet-based IT initiatives to reduce costs and increase opportunities for citizen participation in government, transforming agency operations, promoting interagency collaboration for e-government processes, and making the federal government more transparent and accountable.

Serving as the primary *legislative* vehicle for federal e-government, the law contains a variety of provisions related to federal government IT management, information security, and the provision of services and information electronically. One of the most recognized

provisions involves the creation of an Office of Electronic Government within OMB. The office is responsible for carrying out a variety of information resources management (IRM) functions, as well as administering an interagency E-Government Fund authorized by the law.

Although the Bush Administration's Quicksilver initiatives are separate from, and pre-date, the E-Government Act, some of the goals of the Quicksilver initiatives are also statu-torily affirmed by the act's provisions. For example, Section 216 addresses the development of common protocols for geographic information systems, which is also one of the objec-tives of the Geospatial One-Stop project. Section 203 directs agencies to adopt electronic signature methods. Likewise, the E-Authentication initiative strives to develop a govern-ment-wide approach to electronic identity systems. In addition, some of the act's broader provisions, such as those related to the development of privacy guidelines, information security standards, and the identification of means to bridge disparities in Internet access among citizens, contribute to the technological and regulatory infrastructure needed to sup-port e-government generally.

E-Government Strategy—2003

A little more than one year after it first unveiled its e-government strategy, the Bush Administration released an updated version in April 2003 that emphasized three major themes.

One theme was the emphasis on citizen-focused e-government. Throughout the docu-ment, references were made to concepts such as "one-stop, on-line access to information and services to individuals," (U.S. OMB, 2003, p. 9) redesigning government web sites "to provide government services with '3 clicks,'"(U.S. OMB, 2003, p. 11) and reorganizing the development of IT investments around "groups of citizens" (U.S. OMB, 2003, p. 3). Another theme was the emphasis on government-wide solutions. The revised e-government strategy spoke of both modernizing agencies from within, using "*principles of e-business*," such as "buy once, use many," and "collect once, use many," (OMB 2003, 16) as well as "integrating IT investments *across* agencies" (U.S. OMB, 2003, p. 3). A third theme was the importance of leadership to the success of e-government. The Chief Information Officers' Council and OMB, as well as various intergovernmental groups, are frequently mentioned for their roles in managing and guiding complex initiatives. The importance of support from agency leaders and the need to recruit and retain a qualified IT workforce, especially project managers, are highlighted as critical to the future of federal e-government (U.S. OMB, 2003, p. 15-16).

In the year following the release of the original version of the e-government strategy, the federal government had made notable progress facilitating the advancement of e-govern-ment. Most of these efforts revolved around the creation of various thematically organized portals, such as volunteer.gov, recreation.gov, govbenefits.gov, business.gov, and regula-tions.gov, and agency-specific modernization efforts (U.S. OMB, 2003, 12-13). Although most of the e-government activities up to this point required relatively little consolidation and integration of the government's technical infrastructure, these activities were important for laying the groundwork for collaboration between agencies in the future. Indeed, one of the major challenges identified for 2003 and beyond was "to physically migrate agency-unique

solutions to each cross-agency E-Government solution, reducing costs and generating more citizen-centered results" (U.S. OMB, 2003, p. 5). Other challenges included "leadership support, parochialism, funding, and communication" (U.S. OMB, 2003, p. 5).

To overcome these challenges and achieve its goals for e-government, OMB cited five broad strategies it would pursue:

- Simplify work processes to improve service to citizens;
- Use the annual budget process and other OMB requirements to support E-Government implementation;
- Improve project delivery through development, recruitment and retention of a qualified IT workforce;
- Continue to modernize agency IT management around citizen-centered lines of business;
- Engage agency leadership to support E-Government project implementation (U.S. OMB, 2003, p. 16-17).

The revised strategy also elaborated on the importance of the Federal Enterprise Architecture (FEA) initiative to e-government (discussed in the next section), and the anticipated efforts to develop new e-government initiatives centered around the lines of business (U.S. OMB, 2003, p. 17).

Federal Enterprise Architecture Initiative

In the mid-1980s, John Zachman developed the Zachman Framework, which was designed to serve as a blueprint, or an architecture, to facilitate the integration of IT systems (Zachman, 1987). The "enterprise," for which an architecture is created, refers to either a "single organization or mission area that transcends more than one organizational boundary (e.g., financial management, homeland security)" (U.S. GAO, 2004, p. 4). An enterprise architecture (EA) serves as a blueprint of the business operations of an organization, and the information and technology needed to carry out these functions. It is designed to be comprehensive and scalable, to account for future growth needs. EA planning represents a business-driven approach to IT management that emphasizes interoperability and information sharing.

Since the development of the Zachman Framework, various initiatives have attempted to institutionalize EAs into the federal IT planning process. Prompted by the findings of the task force in 2001, the FEA was started in February 2002 by OMB. Most recently, the E-Government Act, discussed earlier, tasked the Administrator of OEG with overseeing the development of EAs, both within and across agencies. The act defined enterprise architecture as:

(A) means— (i) a strategic information asset base, which defines the mission; (ii) the information necessary to perform the mission; (iii) the technologies necessary to perform the mission; and (iv) the transitional processes for implementing new technologies in response to changing mission needs; and (B) includes—(i) a baseline architecture; (ii) a target architecture; and (iii) a sequencing plan. (E-Government Act, 2002)

The 2003 E-Government Strategy emphasizes the role of the FEA in developing a comprehensive IT management strategy and supporting e-government initiatives. As both

e-government initiatives and the FEA evolve, it is anticipated that IT management decisions will become increasingly centralized. Although such centralization of decision making can dampen entrepreneurialism, and sometimes lead to one-size-fits all solutions that are not always appropriate, it can also provide benefits, such as improved efficiency and cost savings. The 2003 E-Government Strategy favors the latter view, (U.S. OMB, 2003, p. 13).

Lines of Business Initiatives

In attempting to develop a second generation of e-government projects, there is an interest in moving beyond the somewhat limited nature of the cross-agency collaboration of some of the Quicksilver initiatives toward projects that have a potentially truly government-wide character. To that end, in spring 2004, OMB identified "five major collaborative initiatives to transform government, improve services to citizens, and deliver substantial savings" (U.S. OMB, 2005, p. 11). These initiatives were chosen because they represent core business functions common to many departments and agencies, and/or have the potential to reap significant efficiency and efficacy gains. The initiatives and their primary objectives, as drawn from the Lines of Business web site (http://www.whitehouse.gov/omb/egov/ c-6-lob.html), are listed below.

Financial management. To develop a government-wide financial management solution that is efficient and improves business performance while ensuring integrity in accountability, financial controls, and mission effectiveness.

Human resource management. To develop government-wide, modern, cost-effective, standardized, and interoperable human resource solutions providing common core functionality to support the strategic management of human capital.

Grants management. To develop a government-wide solution to support end-to-end grants management activities that promote citizen access, customer service, and agency financial and technical stewardship.

Case management. To facilitate the management and sharing of information between federal and local law enforcement agencies, and with citizens, using common solutions and data standards.

Federal health architecture. To improve the health and safety of citizens through access to reliable health-related information and services, and through greater interoperability of health information and technology between medical providers.

In March 2005, OMB established a task force for a sixth project, the Information Technology Security Lines of Business initiative, intended to address common security weaknesses faced by many agencies. In February 2006, OMB announced plans to add three more Lines of Business: Information Technology Infrastructure, Budgeting, and Geospatial. In contrast to the first six Lines of Business initiatives, which emphasize the consolidation of activities at shared service centers, the most recent three Lines of Business initiatives instead focus on the development of common practices and information standards to facilitate cross-agency interoperability and collaboration.

Summary

As a major component of its current government reform agenda, the United States is using e-government as a means of making government operate in a more businesslike manner. This includes striving for new internal efficiencies by developing cross-agency business applications, and reorganizing government services along citizen-centered functional areas, rather than bureaucratic organizational boundaries. It also includes reducing the temporal and financial costs of complying with government regulations. Choices being made regarding the design of the federal enterprise architecture, the selection of new initiatives, and technological solutions being implemented reflect the values and priorities of the country's elected leaders. As the United States is reaching a critical point in its e-government maturation, it faces some key challenges, including organizational resistance by agencies wanting to maintain their autonomy, a growing need for project management expertise, and the need to adjudicate discrepancies between the horizontal nature of government-wide initiatives and the vertical organization of government funding and oversight mechanisms. However, if they challenges can be adequately addressed, then it is more likely that results-oriented nature of U.S. e-government will become institutionalized in the country's government-citizen relationships.

E-Government in China

Administrative Reform

The Chinese government's long-term basic goal is to promote economic development. For 40 years, the power structure in China has focused on the central government under a centrally planned economic system. The result has been inefficiency, functional duplication, and an extensive bureaucratic structure with overstaffing problems. To keep pace with rapid social and economic changes, the Chinese government initiated a series of administrative reforms (*Xingzheng Guanli Tizhi Gaige*) in 1982, 1988, 1993, and 1998 (United Nations Online Network in Public Administration and Finance, 1997, p. 19). The Chinese government believes that it can achieve economic and social development only by reinforcing and intensifying the administrative reforms that serve as the driving force behind its economic growth. China's administrative reforms attempt to clarify government functions (*Mingque Zhengfu Zhineng*), reengineer government procedures (*Zhengfu Liucheng Chongzu*), reduce administrative examination and approval processes (*Jianshao Xingzheng Shenpi*), and improve government management (*Gaijin Zhengfu Guanli*; He & Zhang, 2002, p. 71-73; Wang & Qiu, 2002).

Chinese leaders view IT applications and e-government initiatives in other countries as opportunities for their respective governments to clarify their roles and to transform their functions. Consequently, the application of e-government in China is intended to improve administrative efficiency and effectiveness and, through this administrative reform, to promote economic development.

China's Journey to Informatization

The emphasis on informatization (*Xinxihua*) as a driving force for modernization and economic development was first enunciated in 1984 by Deng Xiaoping. In his speech

"Promoting National Informatization" (*Tuijin Guojia Xinxihua*), Deng stated that "Telecommunication is the starting point of economic development" (Kraemer & Dedrick, 1994b, p. 3; Zhang, 2002). From then on, the importance of informatization has been reemphasized in many subsequent plans and policies. In 1992, the General Office of the State Council (*Guo Wu Yuan*) began developing plans to create an office automation (OA) system for national administration (Ma, Chung, & Thorson, 2005, p. 21). To manage administrative decision making and public services, the State Council required every government agency to develop an OA system.

The initiation of the Golden Projects (*Jinzi Gongcheng*), however, proved to be China's beginning mark in the direction of developing an information infrastructure. The National Joint Conference on Economy Informatization (*Guojia Jingji Xinxihua Lianxi Huiyi*)[2] and the former Ministry of Electronic Industry, now part of the Ministry of Information Industry (MII), launched the Golden Projects in 1993 to establish information infrastructure and to promote administrative efficiency (Lovelock, 1999). The Golden Projects aim to construct a national superhighway to develop IT in China, unify the country by connecting the center to the provinces, and allow "the government to act across ministerial and industrial demarcation lines" (Lovelock & Ure, 2002, p. 157; Zhang, 2002).

With the development of IT and the Internet, Chinese leaders have streamlined many of China's government operations and facilitated intragovernmental communication. However, because of the significant economic and political benefits associated with decision making and resource distribution, the central and local government agencies had a difficult time coordinating their interests. Consequently, China choose to insert a new bureaucratic layer between the State Council's Premier and the Ministries (Tan, 1999, p. 267). In January 1996, the State Council Informatization Leading Group (SCILG, *Guowuyaun Xinxihua Gongzuo Lingdao Xiaozu*) was set up to provide stronger leadership in promoting informatization in China. From April 18 to April 21, 1997, with the permission of the State Council, the SCILG organized the National Informatization Workshop (*Quanguo Xinxihua Gongzuo Huiyi*) in Shenzhen. In this meeting, then–Vice Premier Zou Jiahua promulgated "the definition, elements, guidelines, working principles, objectives and chief missions of the national informatization (NI, *Quanguo Xinxihua*) mechanism" (China Internet Network Information Center [CNNIC], 2005). In doing so, Zou put forth the "24-character direction" for China's informatization, which included overall planning (*tongchou guihua*), state dominance (*guojia zhudao*), unified standards (*tongyi biaozhun*), joint construction (*lianhe jianshe*), links between government units (*hulian hutong*), and shared resources (*ziyuan gongxiang*; Zhou, 2004).

In March 1998, China's Ninth National People's Congress approved a new ministry, MII (*Xinxi Chanyebu*), to overcome the weak financial and administrative power the SCILG had. MII was established by merging together the Ministry of Posts and Telecommunications and the Ministry of Electronic Industries, and has been responsible for regulating the telecom and IT industries in China. Since January 1999, China has been conducting its Government Online Project (GOP, *Zhengfu Shangwang Gongcheng*) which was the first official e-government project. The GOP not only made government documents, archives, and databases available online but also used electronic databases and online documents to integrate public information and resources and implement online administration (Chen, Chen, Huang, & Ching, 2006, p. 40). The development of GOP aims to supply accessible administrative systems, which enable the public and various enterprises to gain access to and further share information available on the Internet.

In October 2000, the Fifth Plenary Session of the 15th Central Committee of the Communist Party of China was held to approve the Proposal for the Communist Party of China Central Committee for Formulating the 10th Five-Year Plan for National Economic and Social Development ("CPC Central Committee," 2000). In a summary of its contribution to the proposal, which emphasized informatization, the Ministry of Information Industry observed:

> Informatization [*Xinxihua*] is the key in promoting industrialization and modernization. Therefore, national economic and social informatization should be the first priority. Putting effort into promoting national economic and social informatization is a strategic action in the fulfillment of the whole modernization construction plan. It aims at using informatization to promote industrialization and actualize the expeditious development in productivity. *It is the very first time for the Central Committee of the Communist Party of China to put informatization in such a high strategic position* (MII, 2002, italics added).

Later, in 2006, the General Office of the State Council announced the "State Informatization Development Strategy (*Guojia Xinxihua Fazhan Zhanlue*; 2006-2020)," which set China's goals in informatization development for the following 15 years. This strategy includes several important goals: "promoting informatization of the national economy; popularizing e-government; promoting information infrastructure; exploiting information resources more efficiently; and, improving people's ability in using information technology and cultivating more talents in information technology" ("China Maps Out Informatization," 2006).

To coordinate and implement the informatization plan, China reestablished the SCILG and changed its name to the State Informatization Leading Group (SILG, *Guojia Xinxihua Lingdao Xiaozu*), which was formed according to a decision taken in 2001 by the Central Committee of the Communist Party of China and the State Council. The SILG was reestablished to supply top-level coordination to interagency and intraagency issues related to IT. To provide stronger leadership, the group is now headed by the Premier of China, instead of the Vice Premier (United States Information Technology Office, 2002). Under this leading group, the State Council Informatization Office (SCITO, *Guowuyuan Xinxihua Gongzuo Bangongshi*), an executive body of the SILG, was also established to implement "the development strategy of national economic and social informatization" (Qu, 2002).[3] Though many departments and local governments have been involved in diverse IT projects in China, SCITO is in charge of setting the general policies and standards for China's e-government initiatives.

China's Blueprint for E-Government

On December 25, 2001, the former premier Zhu Rongji, then–Chair of SILG, moderated the first SILG meeting, which focused on the importance of e-government in carrying out informatization in China. In a speech to business and government leaders describing the SILG meeting, Qu Weizhi (2002), the executive vice minister of SILG, stated:

> [SILG] made a decision that is to take the construction of e-government as the keystone of Chinese informatization. . . . As a big developing country, it is of great significance to promote

Table 1
Guiding Suggestions on Constructing China's E-government

1. Establish and integrate a unified e-government network. To accelerate the pace of constructing a unified network platform, we should unify standards, use a unified network platform, and promote the sharing of resources and communication between every key project.
2. Build and improve key operational systems. To improve supervision and service abilities, we must accelerate the establishment of 12 main task projects and continue to improve on the four projects that have already begun to show initial success—namely, the Public Operations Resource System, Golden Customs, Golden Taxation, and Golden Finance Supervision Projects. We should also launch and accelerate the establishment of eight task projects—namely, the Macroeconomic Administration, Golden Finance, Golden Shield, Golden Audit, Social Security, Golden Agriculture, Golden Quality, and Golden Water projects. These key projects must be established using a unified plan.
3. Plan and develop important government information resources. To satisfy society's cry for administrative information, we should design an information resource directory system and construct basic information databases for population, corporation units, natural resources, macroeconomic indicators, etc.
4. Promote services to enterprises and citizens. The government departments at all levels should accelerate the pace of making administrative information known to the public. We should require every level of government to create its own web site and promote services such as "Openness of Government Affairs (*Zhengwu Gongkai*)," online "Administrative Examination and Approval System (*Xingzheng Shenpi Zhidu*)," social security, education, etc.
5. Build an information security system. We should improve the security management system and put more energy in developing key security products.
6. Improve standards and criteria for constructing e-government. Full e-government standards, measures, and mechanisms should be built more quickly.
7. Improve the training program for government officials. We should develop more diverse and intensive training programs to provide better knowledge and skills of information technology to officials. Examination standards and systems should be formulated.
8. Establish a legal system for e-government administration. Regulations and policies for electronic signatures, "Openness of Government Affairs," network information security, and e-government administration should be enacted more quickly.

Source: Decree No. 17, General Office of the State Council (2002).

the construction of e-Government. First, the construction of e-Government is an objective need for accelerating the transformation of government functions; is also helpful to improve socialist economic system, to make better government's working efficiency . . . and to raise the level of a hardworking and honest government and to strengthen the macro control.

On July 3, 2002, at the second meeting of SILG, a document titled "Guiding Suggestions on Constructing China's E-Government" (*Guanyu Woguo Dianzi Zhengwu Jianshu de ZhidaoYijian*; see Table 1) was approved by SILG, and later promulgated on August 5, 2002, by the General Office of the State Council (*Guowuyaun Bangongting*) as Decree No. 17 (CNNIC, 2005; General Office of the State Council, 2002).

Based on Decree No. 17, the main objectives for China's approach to e-government include unifying technology standards, improving government functions, establishing government information network platforms, sharing information resources, constructing basic and strategic government information databases, and improving rules and regulations related to e-government administration. Wu Ouyang, the Division Director of the

Department of Policy and Planning in the State Council Informatization Office, contends that the SILG leaders created Decree No. 17 to achieve three specific goals through e-government:

> First, they hope to transform government functions (*Zhuanbian Zhengfu Zhineng*) and strengthen leadership under a unified plan. China initiated several institutional reforms but most of them were just organizational changes. If we use advanced technology, we can do many things better. Through e-government, we can readjust the functions and scope of responsibility, and clearly divide the functions among various governmental units. It will help preventing redundant construction.
>
> Second, the leaders want to streamline administrative procedures (*Liu Cheng Cheng Xue Hua*) and unify information resources in China. Chinese government is trying to make its public institutions and processes more transparent and the procedure of examination and approval (*Shenpi*)[4] more streamlined. Through e-government, Chinese government can improve intra-governmental communication and information-sharing.
>
> Third, Chinese leaders want both "openness of government affairs and security" (*Xinxi Gongkai yu Anquan*). Through e-government, the leaders are willing to achieve these two goals at the same time. They want to provide efficient and fair service to the public, but also want a stable condition. Stability is very important. Many leaders think e-government will find a way to balance openness and security (Wu, interview, June 22, 2004).

It is evident in both Decree No. 17 and in Wu's interview that China's leaders expect to use e-government to improve administrative efficiency by transforming government functions, streamlining procedures, and enhancing openness of government affairs (*Zhengwu Gongkai*) and security. The transformation of government functions not only redefines the roles and tasks of the government but also distinguishes which functions are to be categorized within government administration and which are not. By reengineering government processes, China aims to implement transparency within its public institutions and processes and streamline examination and approval procedures (*Xingzheng Shenpi Zhidu*). The e-government project in China is expected not only to reduce excessive bureaucracy and expenses but also to standardize functions and responsibilities among the various ministries and commissions throughout China (Wang, 2006).

Through e-government, Chinese leaders also want to achieve openness of government affairs and security (*Zhengwu Gongkai yu Anquan*) at the same time. By implementing e-government, Chinese leaders, such as the former premier Zhu Rongji, believe that the Chinese government will be able to establish a more transparent and honest government ("Premier Zhu Stresses," 2002). More recently, in the 17th Party Congress report, President Hu Jintao also emphasized the importance of e-government and transparency in improving administrative efficiency ("Hu Jintao's Report," 2007). However, this transparency is important to the leaders only when it strengthens the state's capacity to maintain its monopoly on power. To that end, the central government wants local governments to post more information online. Many local leaders, in contrast, are afraid of exposing their government decision making and approval processes to the full scrutiny of the central government because of the potential loss of autonomy and/or exposure of corruption. These objections notwithstanding, the Chinese central government will continue to develop e-government in a way that will not only provide opportunities that encourage economic development and a

transparent administration, but also supply the central government with the necessary information and means to monitor economic activities more efficiently.

Analysis: Mobilizing Democracy or Empowering Governments?

IT and the Internet can play an important role in fostering the redistribution of power over information and encouraging two-way interactions between state and various nonstate actors. As Kooiman (2000, p. 140) noted, "There seems to be a shift away from more traditional patterns, in which governing was basically regarded as 'one-way traffic' from those governing to those governed, toward a 'two-way traffic' model in which aspects, problems, and opportunities of both the governing system and the system to be governed are taken into consideration." However, as Kalathil and Boas (2001, Summary) suggest, IT and the Internet can also reinforce the one-way nature of governance by "seek[ing] to extend central control through proactive strategies, guiding the development of the medium to promote their own interests and priorities."

To date, China has used e-government initiatives to reinforce the control and oversight capabilities of government. In contrast, although U.S. e-government initiatives are intended to improve the functioning of government, they have been mostly citizen centric. Chinese e-government initiatives can be best understood as vehicles intended to support economic development through an increasingly transparent and decentralized administration while at the same time providing the central government the information and ability to efficiently monitor economic activity at a more abstract level. Although the United States also wants to facilitate economic activity through its e-government initiatives, the top priority of e-government in this country is citizen-centered service.

Among the many promises of e-government is its potential to make governments more responsive to the needs of their citizens. In market-based democratic societies such as the United States, this often involves applying lessons from the private sector to make government more citizen centric and service oriented. According to a report from the United Nations and American Society for Public Administration, "E-government will eventually transform the processes and structures of government to create a public administration less hierarchical, empowering civil servants to serve citizens better and to be more responsive to their needs" (United Nations and American Society for Public Administration, 2001). E-government can empower individual citizens by providing them with an alternative channel for accessing information and services and interacting with the government.

Table 2 provides a comparative overview of the goals of both countries' e-government initiatives, organized into three primary perspectives: their reform orientation, market orientation, and citizen orientation. What we find is that although in some cases both the United States and China may proclaim the same goals or use similar words and phrases, their objectives are quite different. In other words, *government reform* can carry many different connotations.

Reform Orientation

Comparing the reform orientation of the United States and China, the United States promotes the idea of changing government so that it is results oriented. Specifically, in

Table 2
Comparing U.S. and China E-Government Strategies

Perspective	United States	China
Reform orientation	Results oriented • Break down "stovepipes" and improve "cross-agency teamwork" • Eliminate redundancies • Using business cases to justify IT investments	Accelerate administrative reform • Transformation of government functions • Reengineering government processes • Enhancing transparency
Market orientation	Market based • Infuse e-business principles into government operations • Reduce barriers to conducting business with government • Reduce costs of complying with government regulations	Promote economic development • Stimulate economic progress • Attract more foreign direct investment
Citizen orientation	Citizen centered, not bureaucracy centered • "One-stop shopping" • Organizing along lines of business, not departmental boundaries • Improving government responsiveness to citizens	Openness of government affairs with security • Openness of Government Affairs (*Zhengwu Gongkai*) • Strengthen surveillance and monitoring • Put the local government under the authority of the central government

documents and speeches, the goals of breaking down the "stovepipes" that separate departments and agencies, and improving "cross-agency teamwork" are frequently repeated. Likewise, there is a strong emphasis on trying to eliminate redundancies between departments. For example, the E-Payroll e-government initiative is intended to reduce modernization costs incurred by various federal departments and agencies by consolidating 26 separate payroll providers down to 4 providers. Agencies ordered to shut down their payroll systems would then migrate to one of the four selected providers. In doing so, the federal government develops a greater standardization of payroll administration and potentially reduces the cost per payroll transaction per employee. Another key feature of the United States' reform orientation is the use of business cases to justify IT investments. By requiring departments and agencies to develop businesses cases for significant IT investments, the OMB has the opportunity to consider factors such as whether a department is already spending money on an initiative that could be shared with other departments. Other factors include, but are not limited to, identifying performance goals, identifying risks and benefits, assessing the lifecycle costs of a project, and detailing how well information security concerns will be addressed.

In the case of China, e-government is promoted as part of a larger need for "administrative reform." Administrative reform, broadly speaking, includes attempts to transform government functions and processes to improve efficiency and reduce corruption. Another goal

of administrative reform is to increase the transparency of government functions. As implemented, this serves multiple purposes, however. For citizens, administrative reform may bring improved services, fewer delays, and fewer chances to be taken advantage of by opportunistic officials. While providing a means to root out corruption and eliminate unnecessary layers of staff and procedures, it also allows the central government to assume greater control of an unwieldy bureaucracy and better manage its resources. In doing so, the central government gains an improved capability of communicating and enforcing its directives down the chain of command, while gathering more detailed information about the activities of its citizens.

Market Orientation

There are also differences in the market orientation of the two countries, as it relates to their e-government initiatives. In the case of the United States, the orientation is more inwardly directed. For example, there is a focused attempt to infuse e-business principles into the way government operates. This means performing more cost/benefit analyses, measuring performance, changing personnel procedures, and exercising greater oversight of departments and agencies. Another example is the effort to reduce barriers to conducting business with the government (primarily procurement). To that end, the General Services Administration was tasked with developing the Integrated Acquisition Environment that was designed to reduce the costs to vendors and achieve greater savings for government through consolidated purchasing power. One part of this initiative involved the establishment of a single portal (http://www.fedbizopps.gov) "for publishing and retrieving procurement information for Federal business opportunities over $25,000."[5] Although the market orientation of U.S. e-government is predominantly designed to make government operate more like a business, there is also a strong emphasis on spurring economic development in the private sector by reducing the costs associated with complying with government regulations. To that end, the Small Business Administration was charged with developing the Business Gateway (http://www.business.gov).[6] Another example of a portal organized along the lines of the interests of citizens, rather than departmental boundaries, the business.gov site provides a variety of tools the business community can use, including downloadable forms and a means to quickly identify all of the laws and regulations that apply to a particular type of business.

China's market orientation is somewhat more narrowly focused on promoting economic development in its country. As a developing country that continues to struggle with its transition from a planned economy to a market economy, China sees economic development as critical to both maintaining stability inside its borders and increasing its power in the global political economy. To that end, China's e-government efforts are often carried out with an eye toward improving the business climate through improved transparency and more efficient interactions with government agencies. By doing so, China hopes to attract more foreign direct investment and continue to nurture the growth of its economy.

Citizen Orientation

Perhaps one of the most common refrains heard in conjunction with e-government at all levels is that it is citizen centered. In the case of federal e-government initiatives in the

United States, there is a heavy emphasis on making government citizen centered, and not bureaucracy centered. Although this sounds like a fairly basic idea, if carried out to its logical end, it involves reorienting government around themes rather than organizations. In doing so, there is the potential to centralize control (through OMB) and create a single "government.gov" image, as organizational boundaries are slowly erased from view. Whether this has positive or negative implications for governance remains to be determined. The underlying premise of this approach is that it should not be difficult to interact with government. To that end, the deployment of thematically driven portals (e.g., seniors.gov, students.gov, business.gov, regulations.gov) has grown significantly. Part of this orientation is driven by the intent to create "one-stop shopping" for citizens—the ability to go to a single site to accomplish tasks that, behind the scenes, may be carried out by multiple agencies. The creation of the usa.gov portal (http://www.usa.gov) is an example of this orientation. Usa.gov (formerly firstgov.gov) is designed to serve as a single point of entry to all other federal government web sites, as well as having links to state and local government sites. As an extension of the one-stop-shopping approach, the U.S. federal government is working to organize future initiatives along standardized "lines of business" that cut across the entire federal government. Again, by focusing on functions, rather than departments, the goal is to create reusable applications and further integrate and share information between departments.

China is also focused on the citizen, but toward a somewhat different end. It wants to achieve openness of its government affairs with security. By this, China is attempting to bring greater transparency and efficiency for citizens, while at the same time using this technology to improve the central government's ability to monitor the interactions of its citizens with government. Organizationally, this has brought about an attempt to bring local governments under greater control of the central government. Technologically, this orientation is reflected in the way it has developed its networked infrastructure (the Golden Projects). As the originator of the Internet, the United States already had an infrastructure that developed organically over time. In contrast, China's e-government efforts really begin with the purposeful development of its infrastructure in a way designed to reinforce its surveillance capabilities and give the impression of having complete control over information flows. By embedding these values into the infrastructure, China's leaders demonstrate a longer term dedication to maintaining the power of the state while resisting attempts to liberalize the government.

Conclusion

In its truest sense, e-government is not about democracy. It is about integrating technology into government processes to achieve greater efficiencies and improving the delivery of government services. E-government is not the same as e-democracy. However, the manner in which governments design and implement their e-government initiatives can and does affect the relationship between the citizen and the state. It is also a reflection of a government's history and future intentions. In both the United States and China, e-government is used as a means to reinforce, and some would argue, extend, the capabilities of their respective national governments. In the United States, though, the federal government's initiatives also embody, to varying degrees, the country's more democratic characteristics,

such as freedom of access to information, privacy, and support for a free economy. In contrast, China's e-government initiatives appear to embody some of the country's less democratic characteristics, such as its emphasis on security and surveillance, centralized planning and control by a single political party, and tight control over the means of communications. So, although e-government can be used for many purposes, it is not predestined to necessarily bring about openness in government, although that is one possible outcome. In the case of the implications of e-government for a country's political culture, it is perhaps best to think of each e-government initiative along a spectrum of outcomes where one country's attempt to improve government efficiency is another's attempt to consolidate government control.

Notes

1. Our understanding of how technology can influence and be influenced by governments is grounded in a technological constructivist approach. Instead of considering technology as the single most influential determinant in state and society, constructivists argue that technology is woven inseparably into the fabric of each country's political, social, and economic contexts. In the case of e-government, we suggest that the political and social implications of the technologies being embedded in government processes will depend on the economic, legal, and political decisions made by policymakers in each country. For more on constructivism see Giddens (1984), Wendt (1987), Onuf (1989), and Levy (2001).

2. On December 20, 1993, State Council established a high-level leading group known as the National Joint Conference on Economy Informatization to lead, organize, and coordinate national informatization plans and policies (China Internet Network Information Center [CNNIC], 2005).

3. The State Council Informatization Office, which is responsible for promoting the implementation of e-government, applies the principles and policies on informatization approved by the Central Committee of the Communist Party of China, State Council and the State Informatization Leading Group.

4. The examination and approval system (*Xingzheng Shenpi Zhidu*) is the main administrative process through which local governments and state enterprises must obtain approval before making any decisions. It requires the local governments to visit different departments in the central government and, at each point, wait for the answer.

5. See http://www.whitehouse.gov/omb/egov/c-4-7-iae.html.

6. See http://www.whitehouse.gov/omb/egov/c-3-5-bg.html.

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