



**Bureaucratic Reform and E-Government in the United States:
An Institutional Perspective**

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ABSTRACT

Technology enactment, an analytical framework that focuses on the processes by which new information and communication technologies come to be used by organizational actors, is distinctly institutional in orientation. An institutional perspective provides a challenge to researchers to integrate attention to structure, politics and policy into studies of e-government. It also invites attention to the roles and relationships of formal and informal institutions. Formal institutions – laws, regulations, budget processes, and other governmental procedures – are central to legitimation and shaping incentives for the use of ICT as an integral and inseparable set of elements in the administrative state. Informal institutions – networks, norms and trust – are equally influential. Challenges in the development of e-government stem from core issues of liberty, freedom, participation and other central elements of democracy. Structurally, however, such challenges may be viewed through an institutional lens in terms of the adequacy of formal and informal institutions to support e-government. An institutional perspective, drawing primarily from economic sociology as well as from the institutional turn in economics, provides a path to deepening studies of information and communication technologies in government in ways that can illuminate state development and capacity. In addition, this chapter describes key institutional developments in e-government during two presidential administrations in the United States as well as key developments in state and local U.S. government.

The study of institutions is central to politics and governance, hence to internet politics and e-government. E-government research has focused predominantly on government information provision online, on public service delivery online and on the attitudes and use patterns of citizens. An essential complement to these streams of research is one that examines the internal structures and processes of what theorists of the state term “state capacity” and “state structure,” and what others have called the administrative or bureaucratic state. I argue in this chapter that an institutional perspective on e-government can provide important insights into bureaucratic reform, political development, the policymaking process, and the role of civil servants in information societies.

This chapter summarizes key elements of an institutional perspective and then briefly describes institutional developments associated with bureaucratic reform using e-government across two presidential administrations in the United States. Throughout, I sketch developments in budgeting, governance, management, oversight, and legislation that have been central to e-government. Similarly, I highlight several informal institutional arrangements such as management processes, culture, the structure of working groups, and informal norms. In addition, the chapter briefly summarizes key developments in state and local e-government in the United States. It concludes with a challenge to researchers to probe more deeply the emergent institutional correlates of increased internet and web use in government.

INSTITUTIONS: FORMAL, INFORMAL AND MIDDLEWARE

The term “institution” refers to regularized patterns and processes that simplify and order cognition and behavior at the individual, group, organizational and societal levels of analysis. I focus here on institutional perspectives on organizations (for key conceptual formulations and critical overviews see Meyer and Rowan 1977; DiMaggio and Powell 1991; Scott 1987). By definition, institutions are widely shared and socially agreed upon, regularized and, in many cases, taken-for-granted. Institutionalists (including neo-institutionalists) have sought to account for strategic behavior and entrepreneurship in institutionalized contexts (see, for example,

DiMaggio 1988; Beckert 1999; Garud, Jain and Kumaraswamy 2002; Maguire, Hardy and Lawrence 2004); institutionalization in inter-organizational networks and fields (DiMaggio and Powell 1983; Baum and Oliver 1992; Brint and Karabel 1991; Leblebici et al. 1991; Starr 1982); and institutional change (Greenwood, Suddaby and Hinings 2002; Dacin, Goodstein and Scott 2002; Hargadon and Douglas 2001; Hoffman 1999; Greenwood and Hinings 1996).

Formal governmental institutions include legislation; regulation; budgetary processes; and the structures and regularized practices of the U.S. executive, legislative and judiciary branches of government. Informal, micro-level institutions include those social processes which have been studied as “social capital:” trust, norms and networks of individuals (Putnam 1994; Fountain 1998; Nahapiet and Ghoshal 1998; Burt 2005). Mediating between formal and informal institutional elements are organizational and inter-organizational level structures and processes including management practices, task structures and operating routines. The connection to e-government, in which ICTs are used to regularize and rationalize a host of information and communication flows, should be obvious.

Government information flows can be conceptualized across these three levels of institutionalized processes. First, micro-level interactions at the individual and small group level structure and continually restructure ongoing social relations and comprise the locus of shared information and sense-making. For example, civil servants regularly contact trusted colleagues to interpret new information, to compare notes on accepted and promising practices, and to ask or give advice, support and referrals. In the process of these interactions, individuals reflexively monitor and update their assessments of those they can trust, those with whom to communicate, and to share knowledge.

At a middle-level, functioning like “middleware,” organizations and interorganizational arrangements, including networks, also codify and routinize information through systems, routines and processes. Routinized information is, in part, what is meant by organization. Innovation often comprises a rethinking and restructuring of organizational and inter-organizational processes (Nahapiet and Ghoshal 1998). At a highly formalized and macro level, the rules of the state -- institutions such as legislation and regulation – constrain the behavior of

government department and agencies, as well as economic and societal actors. Formal institutions also include broad societal agreements on such matters as property rights and appropriate accountability, oversight, and resource allocation structures and practices. Thus, a multi-level integrated information system (MIIS) influences behavior directly and indirectly in government (Fountain 2007; Nee and Ingram 1998). Organizational change occasioned by information and communication technologies often perturbs – and is influenced by -- all three layers producing unanticipated effects. I have called this combination of institutional, organizational and new technological elements “technology enactment” (Fountain 2001).

In sum, an institutional perspective on e-government focuses attention on the internal workings -- the structure and capacity -- of the state. It draws out the role of the widely shared, regularized patterns of professional behavior of civil servants and other government officials working within institutionalized roles and settings. The study of e-government, using an institutional perspective, provides an opportunity to observe the collision of stable practices and traditions with technological innovations.

WEBERIAN BUREAUCRACY AND THE AMERICAN STATE

The modern American bureaucratic state is a child of the industrial revolution. Although the term “bureaucracy” has been used by neo-liberals to connote inefficiency and ineffectiveness relative to market-based mechanisms, bureaucracy as an organizational form in government largely replaced patrimonial systems (including widespread use of patronage appointments) with a professional civil service. Through a protracted series of political negotiations over decades, bureaucratic government came to substitute merit for political loyalty as the key measure of fitness for employment in the professional public service. The American bureaucratic state was built from a young nation of parties and courts. Although temporal delimiters oversimplify complex political development patterns, the American administrative (or bureaucratic) state was born during the final decades of the nineteenth century and the first two decades of the twentieth century. Innovations in state structure and processes, although deeply contested, were meant to align the government more closely with the results of enormous changes in the structure of the

economy, rapid shifts in transportation and communication, and ensuing crises in banking, finance, and, not least, conditions and prospects for labor (Skowronek 1982).

By analogy, one would expect to see changes in the structure and capacity of the state over a 50 year period as actors seek to re-align government with key dimensions of the information economy and network society. The institutional context in which long-term change efforts are embedded, however, is structured for stability. Thus, an institutional perspective draws attention to structure and process as well as the play of bureaucratic inertia, habits of mind, and the relative stability and durability of institutionalized forms and arrangements in the context of new capabilities occasioned by technology.

The development of ICT use by governments in the United States has by no means followed a predictable technologically determinist path. Nor could rational actor accounts predict the shape of bureaucratic reform through e-government. The technology enactment framework has been used to explain the successes and failures of ICT-based bureaucratic reform in the federal government during the Clinton administration (Fountain 2001). Yet many other frameworks and models used in e-government research draw from institutional perspectives as well (Gasco 2003; Danziger 2004; Gil-Garcia and Martinez-Moyano, forthcoming; Wiklund 2005; Heeks and Bailur 2007).

WHERE ARE WE NOW?

Since 1993, two presidential administrations in the United States have focused bureaucratic reform initiatives in part on e-government. This section draws from empirical and archival research conducted by the author and summarizes those initiatives and the institutional developments associated with them (Fountain 2001, 2006). More briefly, the section that follows sketches some of the major bureaucratic reform developments at the state and local government levels. Throughout, I highlight key institutional developments.

The emergence of the internet and the World Wide Web (the web) during the early 1990s led U.S. governments to begin to develop web-based government information and public services in order to align governments with societal and economic systems and expectations. Government agencies increasingly have made information available online including laws, rules and regulations as well as policy and practical information for citizens concerning retirement, disability, health, education, housing, agriculture, transportation and the environment. In addition, interactive public services increasingly are available including tax filing for individuals and businesses, licensing, registration, and permitting. Beyond the provision of information and services, bureaucratic reform also entails agency and inter-agency reorganization meant to leverage new capabilities made possible by ICTs.

“Reinventing Government” during the Clinton Administration

The Clinton Administration (1993-2001) coincided technologically with early societal and economic euphoria that attended the beginning of open access to the internet through the web. Politically, President Clinton’s was the first Democratic administration since the Franklin Roosevelt administration during the 1930s to win a second term. Economically, national unemployment rates and inflation were low, and the federal budget was briefly in surplus. Although Democratic, neoliberalism was a hallmark of the administration. Clinton declared in an address to Congress that “the era of big government is over” (1996).

The beginnings of e-commerce and societal uses of the internet and web in the U.S. focused on development of web portals to simplify citizen and business search for information by integrating access to several websites. Before the internet was publicly accessible, bureaucratic reforms had been undertaken that focused on simplification of forms and procedures and service integration, notably, “one-stop shopping,” to make government information and organizations easier to navigate. These efforts mirrored standard business practice in the service sector. In one sense, digital tools merely enhanced the power of a set of reforms already underway and accepted as legitimate and appropriate by civil servants. Yet the extraordinary power of the internet to allow citizens to access government “anytime, anywhere,” greatly increased

accessibility and made abstruse government documents and procedures, now online, more glaringly unresponsive to citizens.

In the mid-1990s, some large government agencies began to develop what the administration called “virtual agencies,” or cross-agency web portals, in an effort to re-organize information and services by client type rather than agency jurisdiction. The U.S. federal government first organized *students.gov*, *seniors.gov*, and *business.gov* portals oriented toward three key voter groups, to provide these citizen subpopulations with a “single point of contact” with government. The term “virtual state” has been used by the author as a metaphor meant to capture the organization of government information increasingly in terms of virtual organizations such as these.

Launched on March 3, 1993, during the first phase of the National Performance Review (NPR), the bureaucratic reform effort begun during the Clinton Administration was led energetically and visibly by Vice President Al Gore. The *Gore Report on Reinventing Government* was presented to the president on September 7, 1993, followed by a national tour to promote the reform effort (Gore 1993). Information technology use was only one element of the larger bureaucratic reform initiative. The strategy for its use was underpinned by radical reengineering methods and heroic assumptions regarding the potential disintermediation effects of the internet (Hammer and Champy 1993). Initial steps of the NPR included cutting the federal workforce, primarily middle management positions, by 252,000 employees; passage of the Government Performance and Results Act (GPRA) which requires agencies to develop strategic and performance plans; dramatic reduction of internal regulations (or red tape); and a requirement for agencies to develop “customer service” standards and strategies.

The NPR staff published a report, “Reengineering through Information Technology,” in September 1993 that included 13 recommendations combining general directions with specific projects: strengthen leadership in IT; implement nationwide, electronic benefits transfer; develop integrated digital access to government information and services; provide governmentwide email; improve government’s information infrastructure; ensure privacy and safety; improve IT acquisition; provide incentives for innovation; provide training and technical assistance in IT to

federal employees; create a national environmental data index; establish an international trade data system; provide an intergovernmental tax system; establish a national law enforcement and public safety network. (Government Printing Office 1993). In 1998, the reform initiative was renamed the National Partnership for Reinventing Government.

Approximately 30 virtual agencies were developed throughout the U.S. federal government during the Clinton administration. Moreover, a single governmentwide portal, FirstGov.gov, was designed to connect to all federal agency web pages. At this writing, it remains one of the largest repositories of web pages in existence.

The strategic direction of this early bureaucratic reform effort was encapsulated in the subtitle of the Gore report: “building a government that works better and costs less.” The phrase echoes American public administration themes and objectives dating from the late nineteenth century. Early efforts, during a period in the 1990s when the federal budget actually was in surplus, focused publicly on government service enhancement, then referred to baldly as “customer service,” rather than cost cutting. Yet during the same period, the federal government, following the example of U.S. businesses, cut the federal workforce by 250,000 jobs, primarily in middle management positions. This dramatic reduction indelibly connected use of ICTs with downsizing in the psyche of the federal workforce.

Early federal government websites in the United States allowed taxpayers to interact with government in ways similar to interactions using e-commerce following a historical pattern of alignment of state and economy that characterizes the marketized culture of the American state. By 1999, for example, 20,000 citizens used credit cards to pay their federal taxes online. The Environmental Protection Agency provided environmental and regulatory data to the public over the web and estimated that it saved approximately \$5 million annually by digital provision of information. Public health agencies at the community, state, and federal levels began to provide access to previously centrally held information through centralized sites such as the Information Network for Public Health Officials (INPHO) housed within the Centers for Disease Control and Protection in the U.S. Public Health Service.

Proliferation of government websites and interactive information systems during this time period mirrors the highly fragmented and relatively autonomous nature of central departments and agencies in the U.S. federal government and the highly federated structure of the American state. Beyond the White House team of political appointees, staff and consultants leading the National Performance Review and the Reinventing Government programs, there was no adequate oversight body for the reform effort because institutional arrangements and formal institutions simply did not exist at that time. The strategy explicitly called for a decentralized approach to innovation, to allow federal employees to use and develop their ideas without overarching coordination and control. The e-government program of the Clinton administration followed closely the zeitgeist in the U.S. of the early days of the internet and web.

On the negative side, the highly political nature of the vice president's reform efforts linked development timetables to political timing so that events could become showcases for new technological innovations. These temporal pressures were both catalytic in terms of speeding up new developments and problematic in terms of contorting the actual time required to manage such complexity. Structurally, the formal institutions required to govern digital projects lay in the future. The White House-based bureaucratic reform team had strong support at the highest levels of the administration. But they lacked funding, management and oversight methods and procedures adequate for governance and operations of fundamental technological innovation and change throughout the government. The naïve beliefs that the internet is self-organizing, self-correcting and infinitely flexible reflected the euphoria of the time and substituted for hard analysis and planning. Severe cuts in the federal workforce shifted resources to the private sector, with increasing use of contracting and IT assistance from outside the government.

On the positive side, the experiments and flexibility allowed to public servants broke through old, well-worn routines and mental frameworks for how governance should work. Civil servants were told to be "grassroots activists", and gained important experience with IT management, with envisioning the possibilities for governance and operations using web-based operations, and not least, with interagency working groups and projects. At the same time, other formal institutions required for legitimation developed, including legislation, oversight bodies and procedures, regulation, and emergent changes in congressional committees and oversight.

The “Presidential Management Agenda” of the Bush Administration

Beginning in January 2001, the Bush Administration continued to use e-government as a tool of bureaucratic reform following many, but not all, of the broad outlines developed during the Clinton Administration. The strong role of professional civil servants in the detailed design and implementation of reforms has much to do with this continuity of effort. Yet major discontinuities between the two administrations reflected, first, the need to reduce ICT costs during a much more constrained budgetary environment; second, a desire to evaluate and consolidate a plethora of disconnected, grassroots reinvention efforts which had produced a fragmented e-government landscape; third, heightened awareness of security and privacy challenges, post-9/11; and, finally, the Republican administration’s desire to *manage* by strengthening business methods, and specifically by instituting strong control, accountability and performance objectives.

The central strategy for bureaucratic reform through e-government was articulated in the “The President’s Management Agenda” (<http://www.whitehouse.gov/omb/budget/fy2002/mgmt.pdf>). The reform blueprint consists of five “government-wide initiatives” including e-government. This enterprise, or governmentwide, approach to bureaucratic reform is isomorphic with enterprise strategies in business.

The Government Performance and Results Act of 1993 became law during the Clinton administration and mandated agency strategic planning including annual performance plans and reports. The Clinger-Cohen Act (the Information Technology Management Reform Act of 1996) requires agencies to treat IT acquisition, planning and management as a “capital investment” in order to focus IT investments strategically. These and other legislative mandates began to institutionalize e-government systems management. The Bush administration continues the trend toward rationalization and control of ICT management.

The President’s Management Agenda is premised upon the economics of ICT and its potential to improve productivity. It notes that:

The federal government is the world's largest single consumer of information technology (IT). IT has contributed 40 percent of the increase in private-sector productivity growth, but the \$45 billion the U.S. government will spend on IT in 2002 has not produced measurable gains in public-sector worker productivity (Executive Office of the President, 2001: 22).

Bush administration staff attributed lack of productivity gains to lack of strategic IT development; that is, to a failure to align IT systems development with agency performance goals. They cited a tendency toward automation of "pre-existing processes" rather than strategic use of IT for innovation, a central finding of institutional perspectives on e-government. Moreover, they noted lack of consolidation across IT systems developed for generic functional areas such as finance, procurement, and human resources. To remedy these problems, the administration focused on performance strategies and performance gains at the enterprise level, "across agency boundaries" using the budget process as a key tool for project management. Put simply: those projects that do not produce results do not receive funding, have management replaced, and are noted in high visibility reports. In spite of consolidation efforts, both the Clinton and Bush administrations have remained dedicated to providing government information and services through multiple channels: face-to-face, telephone and web-based. Managing across multiple channels, however responsive to the public, increases the cost and complexity of e-government bureaucratic reform.

The President's Budget for 2002 proposed \$20 million for e-government in 2002 and \$100 million for the period between 2002 and 2004 to develop "collaborative E-government activities across agency lines" (Executive Office of the President 2001: 23). Yet congressional appropriations during this period were markedly less generous. Thus, most e-government projects have been funded largely through existing agency program budgets. Among the projects specifically singled out in the President's Management Agenda were further development of Firstgov.gov; development and implementation of digital signatures, which are needed for online transactions; a single e-procurement portal, with the ungainly name www.FedBizOpps.gov to

allow businesses to access notices of solicitations over \$25,000; governmentwide federal grants application and management (grants.gov); and greater transparency and access to administrative rulemaking in regulatory agencies (regulations.gov).

Cross-Agency Initiatives and Shared Services

The Bush administration's e-government plan, initially called “Quicksilver” and based upon a set of projects developed during the Clinton administration, evolved to focus on the infrastructure and management of 25 cross-agency initiatives. The e-government plan also includes a Line of Business strategy, discussed below, and calls for a Federal Enterprise Architecture, an effort to align information architecture within agencies with respect to strategic planning and to align architectural components for similar functional areas across agencies.

The 25 projects are grouped into four categories: Government to Business, Government to Government, Government to Citizen, Internal Efficiency and Effectiveness and a project which affects all others, E-Authentication. Government-to-business projects include: electronic rulemaking, tax products for businesses, streamlining international trade processes, a business gateway, and consolidated health informatics. Government-to-government projects include: interoperability and standardization of geospatial information, interoperability for disaster management, wireless communication standards between emergency managers, standardized and shared vital records information, and consolidated access to federal grants. Government-to-citizen projects consist of: standardized access to information concerning government benefits, standardized and shared public recreation information, electronic tax filing, standardized access and processes for administration of federal loans, and citizen customer service. Projects focused on internal efficiency and effectiveness within the central government include: training, recruitment, human resources integration, security clearance, payroll, travel, acquisitions and records management. (For further information concerning each project see www.e-gov.gov).

The 25 projects were selected from more than three hundred initial possibilities by a task force working with IT specialists from OMB. The plethora of possibilities were developed during the

Clinton administration and continue as e-government projects although they lie outside the rubric of the President's Management Agenda. In all cases, such projects focus attention on the development of horizontal relationships across government agencies. In this sense, they advance beyond what some have called the first stage of e-government typically entailing information provision online to citizens. They also progress further than so-called stage two e-government, or putting transactions online such as payments to government. In a sense, the evolutionary stage three of e-government might be cross-agency initiatives built on shared systems.

Ironically, such efforts reinvigorate management developments from the 1970s by using proprietary intranets to develop shared databases and information systems using electronic data interchange. The public accessibility of the internet, flexibility of open standards, and web-based programming mean that the technological and systems development challenges differ significantly from the previous efforts, but many of the organizational and institutional challenges are similar. These institutional developments mirror supply chain integration in vertically integrated firms and industry networks. They are not being invented whole cloth by governments; they exemplify structural isomorphism (DiMaggio and Powell 1983). As processes and systems are incorporated into government from business, however, they become embedded in a distinctly different environment from their original setting in business.

The point of the Quicksilver effort was to find "quick wins," functional management areas in which an IT system had been developed that could be used as the basis for a governmentwide system and for which the benefits would be significant. But the opportunities to develop governmentwide IT systems to consolidate management functions obscured the challenges of institutional change. The effort was – and continues to be – led largely by IT professionals. It has suffered in many cases from lack of program management and the involvement of seasoned civil servants with program management experience. Experienced program managers, for example, understand subtle differences in seemingly generic management functions based on program and policy characteristics, history and legislation.

Governance and Oversight

The current e-government projects are overseen and supported by the OMB Office of E-government and Information Technology, a statutory office established as part of the E-Government Act of 2002 (Public Law 107-347). The Administrator for E-government and IT, at the apex of the organization, is an associate director of OMB reporting to the Deputy Director for Management, who reports to the OMB Director. The position initially was held by Mark Forman, a political appointee, and is currently held by Karen Evans, a former career civil servant and now a political appointee. The Associate Administrator for E-Government and Information Technology, who report to the Administrator, is responsible for the 25 cross-agency projects. Five portfolio managers have specific responsibility to oversee the cross-agency initiatives. A management consulting group (private contractors) has been responsible for most of the day-to-day communications and reporting for the programs. In effect, they serve as staff and liaisons between OMB and the cross-agency projects which are based in government agencies.

The new organization within OMB signals a major institutional development in the U.S. federal government. Before passage of the E-Government Act of 2002, which established the federal CIO and OMB structure, there was no formal capacity within OMB to oversee and guide cross-agency initiatives. This structural gap formed a major impediment to the development of networked governance during the Clinton administration. In terms of political development and fundamental changes in the nature of the bureaucratic state, we see here the emergent institutionalization of a structure for the direction and oversight of cross-agency, or networked, governance.

The projects themselves are not part of the OMB hierarchy. Oversight and guidance of the projects is exercised by portfolio managers, but the lead agency—or managing partner—for each project is a federal agency. Each managing partner agency appointed a program manager to lead its project. Program managers are typically senior career federal civil servants. They have been responsible for developing a consultative process among agencies involved in each project and, in consultation with OMB, they are responsible for developing project goals and objectives. In

most cases, program managers were also required to devise staffing and funding plans to support their project. Neither funds nor staff was allocated as part of the president's agenda.

The E-Government Act provided for federal funding for the projects of approximately \$345 million over four years. But an average of only \$4 to 5 million per annum actually has been appropriated by Congress. Strategies developed by each project for funding, staffing and internal governance vary widely and have been largely contingent on the skills and experience of the program manager. So far, the legislature has not adapted organizationally to networked government. This lag in institutional development makes it difficult to build networked systems because appropriations of funds continue to flow to individual agencies and programs within them. As John Spotila, former director of the Office of Information and Regulatory Affairs in OMB, remarked: "Even without homeland security absorbing most of the IT dollars, cross-agency projects have never been a favorite of Congress, where appropriations are awarded through a 'stovepipe system' of committees that makes a multi-agency approach difficult" (quotation in Frank 2002). Appropriations for the cross-agency initiatives were \$5 million in FY 2002 and 2003 and only \$3 million in FY2004. John Scofield, a spokesman for the House Appropriations Committee was quoted during the 2004 budget negotiations as saying: "We have never been convinced that the fund [requested to support cross-agency initiatives] doesn't duplicate what already exists in other agencies or performs unique functions ... It has never been well-justified, and we don't have a lot of spare cash lying around" (quoted in Miller 2004).

Lines of Business: Building a Shared Services Environment

In 2004 the Bush Administration launched the Lines of Business Initiative to further consolidate and streamline functional management across the federal government. The original five lines of business, identified by virtue of shared enterprise architecture, include human resource management, financial management, grants management, federal health architecture, case management and information systems security. In 2005 the Information Technology Security task force was added as a sixth line of business. The initiative also now includes a seventh, the budget formulation and execution line of business.

Consolidated systems, or “centers of excellence,” in PMA parlance, may be operated either by agencies or private vendors. Competition is to be fostered by maintaining approximately four IT systems for each line of business. Agencies then choose the system that best meets their needs and budget. For example, the grants management centers of excellence, selected by competition, include the Department of Health and Human Services, the National Science Foundation (primarily for research grants), and the Department of Education, which has yet to build its system. The centers are to compete for agency business and to develop competitive pricing for shared services.

Yet funding shared services is difficult at times to align with congressional appropriations and oversight, which remain agency based. Congressional committees increasingly have demanded that approval for budget transfers across agencies be approved by Congress. The authority of “lead agencies” over agencies within lines of business networks is collaborative and negotiated and, even when negotiated through Memoranda of Understanding, remains highly contingent and informal relative to statutory authorities. The coordination costs of such arrangements remain “off the books” in the sense that they fail to show up on budgets and in performance documents.

DEVELOPMENTS IN STATE AND LOCAL E-GOVERNMENT

A substantial gap in U.S. e-government collaboration exists between levels of government in the highly federated American system. For example, local and federal initiatives seldom collaborate with each other. This does not mean, however, that government leaders are unaware of initiatives outside their immediate level of government. In fact, “[d]ue to their variation in geography, demographics, and infrastructure, [the 50] states serve as laboratories of experimentation for e-government. Federal policymakers may find aspects of state e-government planning and implementation useful examples for future decisions regarding the integration of federal information and services” (Seifert & McLoughlin 2007, p. 1).

Currently all 50 states in the US have e-government or IT departments or divisions. However, the degree and types of activity in each department and the level of support for each initiative vary widely from state to state. West ranks the websites of states of Delaware, Michigan, Maine, Kentucky, and Tennessee as the top five with respect to access, privacy, and the availability of services and other resources. He notes that the Delaware website is designed for efficiency and ease of use, and, because most pages can be translated into Chinese, French, German, Italian, Japanese, Korean, Portuguese and Spanish, the information is also widely accessible (West 2007). By contrast, state websites for Arkansas, Mississippi, New Mexico, West Virginia, and Wyoming were ranked as the bottom five.

In addition to the number of services available, West (2006, 2007) examines the types of services available online. For example, in 2006, Iowa and Massachusetts allowed citizens to pay traffic tickets online; Alaska installed webcams at the field offices of the Department of Motor Vehicle to allow citizens to gauge wait times at offices. In 2007, Virginia and Vermont allowed online donations to military troops and charities; Georgia provided a searchable list of gas prices; and South Carolina provided closed captioned legislative broadcasts. Common problems among state websites include outdated information; inconsistent webpage structures or URLs; and inconsistent color schemes and layouts that make it difficult for users to know whether they have left the “official” state webpage when they click into a page that contrasts visually with others (West 2006).

While the importance of an online presence is critical, e-government is much more than the existence of a website. E-government programs must have strong management and leadership and clear strategies in place in order to be effective. The majority of state government chief information officers (CIOs) surveyed by the National Association of State Chief Information Officers (NASCIO) have adopted an enterprise architecture as a way to structure e-government initiatives across an entire state government. Most states have designated a Chief Enterprise Architect to lead their programming, although the official title varies from state to state (NASCIO 2005). All 50 states have CIOs, but the management of e-government initiatives extends beyond the CIO to include finance and accounting offices, IT departments, and information resources departments (Seifert & McLoughlin 2007).

As with federal e-government programs, state-level e-government strategies seek to exploit the value of cross-agency collaboration for integration of existing services. Similarly, all such projects affect organizational structures and agency cultures. The challenge of building sustainable collaboration was ranked a high priority for state CIOs in a 2005 survey by NASCIO (NASCIO 2006b). State CIOs sought to consolidate and share models in several arenas—from procurement to security and disaster recovery. Communication services and online payment engines are reported to be the most commonly completed initiatives; standardized log-ins and identity authentication were the most commonly proposed new initiatives (NASCIO 2006b). Those CIOs who responded to the survey cited cost savings and increased information sharing as the most common reasons to begin a consolidation program. Seventy-seven percent of CIOs also cited a pervasive stovepiped, agency-based culture as the greatest human resources barrier to implementing any consolidation effort. Moreover, eighty percent view resistance to change in their workforces to be the major obstacle to successful implementation of consolidation projects (NASCIO 2006b).

Some of the “best practices” in bureaucratic reform through e-government at the state level reported by NASCIO are not necessarily transferable to other states due to geographic, political, social and fiscal disparities. Yet they signify innovation and change, act as benchmarks, and point to institutional developments. For instance, in 2006, NASCIO recognized the California Statewide Information System (SIS) for Prenatal and Newborn Screening Program as one of two best practices in cross boundary collaboration. Led by the California Department of Health Services (CDHS), the system allows physicians statewide to test newborns for 36 more genetic diseases than without the SIS. The program brings together labs, case coordinators, counselors, physicians and staff of the CDHS for better control of testing, reporting, and follow ups so that diagnosis and treatment is better administered and more successful. A second example is Washington D.C.’s Safe Passages Information System. Safe Passages allows caseworkers to look through the district’s information systems to see if their clients have case histories with other caseworkers or agencies. The program saves time and produces higher quality client services because caseworkers do not have to duplicate client histories and may quickly access previous case decisions.

Bureaucratic reform using e-government at the local level in the United States is highly varied, somewhat slower to have developed and less often studied than at the state and federal levels. At the county level, a survey of 3,099 county governments in the US indicated that 56.3 percent of counties have adopted e-government portals. Portal development is positively correlated with population size, population growth, racial diversity, income, employment opportunities, and education levels (Huang 2006). A 2004 analysis of 1,873 city government websites in the 70 largest metropolitan areas found 60 percent of the cities did not offer *any* online services (West 2004a). This shows little change from a previous study in which researchers observed that a “striking” number of cities studied did not offer e-government services (Kalor, Deshazo and Van Eck 2001) and from Edmiston’s 2003 finding that although most local governments have developed websites, there has been little change in local government operations or practice. However, using surveys from 2002, Norris and Moon (2005) reported “enthusiasm” for e-government at the local level and claims that plans for e-government developments were being made. They also noted the increasing rate of growth in the number of local government websites. Bureaucratic reform through e-government at the local level has lagged for several reasons. Local governments find it difficult or impossible to finance new IT systems given fiscal constraints and local budget processes. Small local governments tend to lack IT expertise and leadership on staff. Vendors already have packaged several e-government service delivery vehicles for local governments, including vital records processes (Edmiston 2003; Kaylor, Deshazo and Van Eck 2001; Norris and Moon 2005).

Forward looking state and local governments typically innovate before larger central governments whose systems are more difficult to change. However, local and state governments vary dramatically in the extent of electronic information and services available primarily because such governments range from small, poor, rural communities with little access to the internet to large metropolitan areas with extensive infrastructure and a range of conditions in between. The American federated system and the size and scale of the United States make e-government in the U.S. more heterogenous, fragmented and variable than perhaps in any other country. Local governments tend to be less highly institutionalized in the sense that staff are not always

professionalized, routines and procedures are less closely codified, turnover may be greater in employees and officials, and smaller scale allows for greater informality.

CONCLUSION

The future of e-government research can be greatly strengthened and enhanced by importation of several streams of institutionalist inquiry and methods. Institutional studies, building on a rich base of theoretical and empirical research, should be able to go further than stating that “culture matters,” or that the organizational and political issues in e-government are more difficult than the technical issues. Such research is not meant to supplant studies of information and service provision or studies of citizen attitudes and uses of e-government, but to complement them by examining institutional and organizational structures and processes and their role in structuring the context within which bureaucratic reform is envisioned, designed, and implemented.

The list of institutional research dimensions is rife with possibilities for e-government research. Among the key topics is the role of formal institutions. What type of legislation seems to be most important for bureaucratic reform to move forward, assuming that the goals of the bureaucratic reform are agreed upon by major stakeholders? Is there a discernible sequence, roughly speaking, to the legislation enacted to support e-government across countries? Might there be some predictive or practical value in answers to such questions? What institutional arrangements provide the necessary oversight and overall guidance for e-government reforms?

At the root of this work are normative questions. The number of services available online or the cultural shifts in civil service attitudes toward cross-agency arrangements are important and interesting. Yet, our principal motivation in the study of government typically is to ask whether the government being created is more democratic, along some dimension, than the government being left behind. Hence, normative inquiry, informed by strong scholarly foundations in political philosophy and theory and in the canonical writing of political science and political sociology, is greatly needed in the subfield of e-government.

Of great importance also are changes in relationships among government agencies across local, state, federal and national jurisdictions and between public, private and nonprofit organizations. Currently, institutional arrangements such as the budget process, oversight functions, and the committee structure within legislatures reinforce agency autonomy and operations at the level of a single agency or an agency working in partnership with private sector or nonprofit sector organizations. Such institutional arrangements are likely to be modified as policymakers respond to communities of interest, strengthened by the internet, that cross agency boundaries.

Potential near-term technological changes include greater use of wireless communication, personal digital devices, instant messaging, ubiquitous computing, and increased reliance on visual communications media. As these next-generation technologies become more dominant compared with personal computers, bulletin boards and chat rooms, and computer-mediated text communication, they are likely to exert as yet unknown effects on e-government. Similarly, web 2.0 tools are likely to have an effect on bureaucratic policymaking processes.

This chapter has focused on the traditional meaning of bureaucratic reform, that is, institutional, organizational and procedural modifications and improvements in government bureaucracies to increase responsiveness to citizens and business and to improve efficiency and effectiveness. Several important developments have not been summarized in this chapter and bear at least brief mention here. The growing use of open source software is influencing governments toward greater use of open standards, interoperability and potentially less reliance on single vendors for projects. Governments are making greater use of geographical information and mapping systems to visually display and layer political and policy data. Visualization of policy challenges using such tools provides valuable information for citizens as well as for policy makers. As ICT use in governance continues to develop and deepen, the central issues of privacy and personal information; information security; and digital literacy and access continue to remain core governance challenges.

Among the important and as yet unanswered research questions for the future are the following puzzles: What are the effects, if any, of e-government on the quality of policymaking and policy implementation? What are the effects of increased transparency and power to manipulate and

analyze information on the ability of governments to serve society and economy? What are the unanticipated consequences of governmental cyberinfrastructure? What institutional changes are emergent as a result of digitalization? Government officials and policymakers may use information and communication technologies for government reform, in part by restructuring government agencies, operations, and relationships across agencies and with nongovernmental organizations. But do they? And what are the principal goals of such reforms? Perhaps the most elusive, and certainly the area of highest speculation, is the degree to which the internet is likely to prove “transformative” for governance in the twenty-first century.

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GUIDE TO FURTHER READING

The author developed the technology enactment framework and presents detailed case studies of bureaucratic reform using e-government in the United States during the Clinton Administration (Fountain, 2001a). A research agenda for the study of ICT and governance was generated through dialogue at a workshop of approximately 30 researchers resulting in a monograph (Fountain 2002). Darrell West (2005) has compared information and services available on government websites in state and local U.S. governments as well as in and among federal agencies. Patrick Dunleavy, Helen Margetts, Simon Bastow and Jane Tinkler (2007) compare e-government developments in the United States, with specific attention to the role of the IT industry and the costs of projects, to those in several other countries including Canada, the United Kingdom and Australia. An assessment of cost savings in e-government is to be found in Fountain with Osorio-Urzua (2001). Finally, David Lazer's and Viktor Mayer-Schönberger's (2007) edited volume features several chapters on the role and importance of information in e-government.

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