E-GOVERNMENT AND E-GOVERNANCE: CONVERGING CONSTRUCTS OF PUBLIC SECTOR INFORMATION AND COMMUNICATIONS TECHNOLOGIES

DONALD J. CALISTA
JAMES MELITSKI
Marist College

ABSTRACT

The widespread usage of the Web and the Internet—as information and communication technologies (ICTs)—is a recent important public sector innovation. In general, various descriptive models present a linear progression of stages—typically, going from routine online tasks that previously required people to visit agencies and then on to higher level connections, including creation of e-democracy. In addition, observers employ e-government and e-governance interchangeably, thereby, inhibiting distinguishing between them. Alternatively, they are discrete patterns with the former stressing service delivery transactions and the latter networked participatory interactions. These developments are traceable through the history of information technology in the public sector and in the application of theories of information technology and social change. The relationship between e-government and e-governance—which can be termed the dual e-gov construct—is both asymptotic and curvilinear whose trajectories converge twice. Their second convergence produces certain unintended consequences—negative spillovers—which impact democracy detrimentally. In order to continue employing ICTs to promote citizen empowerment in government, these spillovers need to be articulated and addressed. The conclusion suggests ways to recognize the onset of these potentially harmful effects on democracy.
INTRODUCTION

The diffusion of information and communication technologies (ICTs) in the public sector—particularly through the Internet and the World Wide Web—is now commonplace. Yet, the main implementation of ICTs, namely, as e-government and e-governance, has not been systematically differentiated. Nearly all observers treat them equivalently, not discretely. While Garson (2006) isolates them descriptively, he conflates their evolution. His explanation of four competing theories of information technology and social change, however, is useful in advancing the study of digital government. The theories provide grounding to clarify how the two electronic media are traveling different—though parallel—routes. Accordingly, employing these four conceptions—systems theory, technological determinism, sociotechnical theory, and reinforcement theory—contributes to meeting two important e-government and e-governance research objectives. The first is to explain that these electronic entities need to be operationalized as individual constructs and the other is to characterize them as comprising two curvilinear trajectories that converge twice over time.

To these ends, the opening section briefly defines the four information technology and social change theories as they correlate with e-government and e-governance, for which the following section shows them as deriving from divergent trends in information technology (IT). Next, a review of prior research pinpoints that observers depict the two electronic forms as progressing linearly over various stages—in tandem as an unbroken diagonal. This view contrasts with the proposed formulation of e-government and e-governance as deploying similar technologies, while possessing unique missions. To support this alternative view, the ensuing discussion demonstrates that they do not
belong to the same upward spiral, but, as noted, they generate curvilinear trajectories that converge twice. If the results of their initial convergence are untroubling, the second one is less forgiving, as it results in productive and unproductive outcomes. The conclusion suggests ways to anticipate certain of these unproductive outcomes as well as proposes areas for future investigation.

FOUR INFORMATION TECHNOLOGY THEORIES COUPLED TO TWO ELECTRONIC TRAJECTORIES

The four information technology and social change theories are valuable guides to specify the variability between e-government and e-governance. To display this exceptionality, these theories can be coupled, joined in pairs, an approach which also reveals that both e-govs engender desirable as well as undesirable expectations. As Figure 1 exhibits, the two theories more completely explaining e-government unites systems theory with technological determinism. Initially, e-government engages systems theory as it highlights the expertise of digital designers: engineers and software writers to adapt ICTs to achieve bureaucratic efficiency through greater access to information, automation of routine operations, and systems integration. In due course, technological determinism throws this effort off balance. While this theory reckons that the underlying technology is an overpowering phenomenon, it also hastens offsetting the engineered service benefits of e-government. The technology prompts the system’s designers to promote their own self-serving ends. In particular, public authorities and bureaucrats spearhead this upheaval of e-government.

In turning to e-governance, as Figure 1 also notes, sociotechnical theory bonds with reinforcement theory. In contrast to e-government, e-governance reflects more
activist theories, as it attempts to boost effectiveness by concentrating on offering citizens more participatory roles as networked actors. In accounting for its birth, sociotechnical theory states that ICTs serve as forceful self-determining equalizers, as stakeholders mediate social and economic disparities. This theory accepts a normative vision whose goals emphasize realizing transparency to support democratic government. While this probability remains distant and its realization uncertain, the subsequent emergence of reinforcement theory in e-governance turns against sociotechnical’s ascendancy. Although reinforcement theory reasons that ICTs are apolitical, they can become tools for controlling the status-quo, in fact thwarting democracy’s reach. The theory justifies demagogues attacking the electronic high ground by driving out wide-ranging stakeholder ownership of the network. As e-governance intensifies its early stakeholder gains, the devotees of reinforcement theory redeploy the technology to dilute digital dialogue. Not unlike e-government’s repositioning by self-appointed technocrats, self-aggrandizing demagogues confront e-governance’s laudable principles by interrupting the proliferation of democracy. The coupling of the four theories to explain the two e-govs, in sum, discloses disquieting tendencies: that these electronic categories possess the capacity to lead to both encouraging and discouraging conclusions.
The Relationship Between Four Theories of Information Technology and E-Government and E-Governance*

<table>
<thead>
<tr>
<th>Theories of E-Government</th>
<th>Theories of E-Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Normative</strong></td>
<td></td>
</tr>
<tr>
<td>Systems Theory:</td>
<td>Sociotechnical Theory:</td>
</tr>
<tr>
<td>Through automation,</td>
<td>ICTs serve as a</td>
</tr>
<tr>
<td>engineers and designers</td>
<td>forceful participatory</td>
</tr>
<tr>
<td>prepare technology to</td>
<td>and social equalizer,</td>
</tr>
<tr>
<td>achieve bureaucratic</td>
<td>as information technology</td>
</tr>
<tr>
<td>efficiency through</td>
<td>mediates social and</td>
</tr>
<tr>
<td>system integration.</td>
<td>economic disparities</td>
</tr>
<tr>
<td></td>
<td>through networked</td>
</tr>
<tr>
<td></td>
<td>stakeholders.</td>
</tr>
</tbody>
</table>

| **Descriptive**          |                          |
| Technological Determinism: | Reinforcement Theory:   |
| Technology is the        | Technology is            |
| centerpiece operating   | apolitical, yet acts as  |
| with a mind of its own   | a controlling tool for   |
| and seeks to reproduce   | the status-quo.          |
| itself.                  |                          |


THE GENESIS OF INFORMATION TECHNOLOGY MANAGEMENT THAT DISTINGUISHES E-GOVERNMENT FROM E-GOVERNANCE

Technological historians note that before managers took advantage of digital applications, such as the management of information systems (MIS), the underlying conventions evolved from a tripartite framework (Mahoney, 1988). At the outset, electrical engineers drove
technological innovations in hardware developments, as they wanted to construct machines for extending automation and complex reasoning. Software engineers next applied mathematical analysis to the newly developed hardware, followed by the creation of programs that yielded data to be organized, distributed, stored, and retrieved. As already suggested, systems theory and technological determinism provide a rationale for public investment in information technology hardware and software.

Intended to adapt new technologies to satisfy specific human and organizational needs, systems theory gives traction to the beginnings of e-government in the public sector. The demands of the new challenges needed digital champions to devise appealing—first-time—virtual outputs. As the technologies became progressively more sophisticated and broadly dispersed, particularly in the build-up to addressing Y2K compliance, e-government became a natural outlet to adapt them to agency environments—for which its preparation helped elevate the status of IT managers in the public sector (Culbertson, 2004). Much direction also derived from the Clinger-Cohen Act of 1996 that shaped the Department of Defense’s (DoD) and other federal agencies’ approach to the acquisition and management of IT. Eventually, the theory of technological determinism supplies a basis for furthering the development of IT, whereby, logically minded engineers and mathematicians crafted innovations to advance the electronic universe. The fallout does not always serve the public interest. The commonality between systems theory and technological determinism lies in their organizational outlooks; they cultivate conceiving agencies as highly structured creations containing centralized lines of authority. Both theories view organizations as efficiency-seeking bodies, which exist to attain clearly definable goals, increase core competences, and to control
operational activities of hierarchical structures (Bolman and Deal, 2003). These objectives, unfortunately, can easily be fulfilled by the organizational distortions intrinsic to technocratic determinism. Overall, however, it is these more finite administrative paradigms that inaugurate the formation of e-government.

E-governance, on the other hand, sprouts from an independent lineage, one brought on by the field of networking, which follows an alternative approach to technology. Unlike e-government’s administrative predispositions, it is politics that exemplifies e-governance’s networking features. Holden (2003) describes the evolution of integrated networks as a series of three stages. Public managers first began utilization information technologies in earnest in the 1960s with the MIS movement, which focused on automation and efficiency. In the 1970s, the Information Resource Management (IRM) movement surpassed MIS. IRM views technology as an interconnected system that gives way to the current stage of managing technology in an information age, typified by accessibility and integration. By the 1990s, networking and e-governance coalesce around a politics perspective that thrives on a shared interest in digitized communication and decentralized authority. That is, digitized and decentralized actors became a conduit for nurturing a networked world, which, in turn, elevates e-governance.

The creation of the original network, ARPANET—The Advanced Research Projects Agency Network—illustrates how the rational paradigm inadvertently facilitated the introduction of a new form of interactive communication. Formulated in the early 1960s, ARPANET’s funds came through the Department of Defense’s (DoD) Advanced Research Projects Agency, or ARPA, as the federal government wanted to exert more
influence over its diverse research computing initiatives. Such a response underlined Cold War unease of an infrastructure breakdown in the event of a nuclear attack, which reinforced joining of related technologies that, in turn, invited the unintended utilization of IT resources as a communications channel. Ostensibly, computer networks are more than simply a new technology; as they are greater than the sum total of their multiple nodes. In addition to the processing capabilities of all connected nodes, the value of networks derives from the connections themselves. To use a transportation analogy, it doesn’t matter how many widgets a factory produces if the roads aren’t maintained and trucks cannot deliver them to market. Much as transportation networks add value to commerce, computer networks create value for information technology and, ultimately, grounds e-governance.

The networking impetus sets off sociotechnical theory, which advocates the dispersion of technology as a means to refine existing communication and organization structures. In the 1970s and 1980s, ARPANET became freely obtainable by academic and non-academic stakeholders—“...as the test bed of the Internet” (Garson, 2006: 33). Its genesis opened the way for e-governance’s arrival. By the 1990s, a technology bubble boomed, and the Internet blossomed, as always-on computers burgeoned with sources of information, available 24 hours a day and 7 days a week. As promulgated by the General Services Administration (GSA), high expectations accompanied ICTs to revolutionize government procurement (Calista, 1999) by means of Electronic Data Interchange (EDI)—it added to the attention electronic government was receiving. In all, sociotechnical theory prospers due to the successive achievement of ICTs to re-create dynamic digital interactions and to decentralize organizational linkages. Its sponsors steer the technology to go beyond generating traditional compacts among individual and institutional
stakeholders. This theory broadens basic assumptions about human resources and looks to devising a closer fit between stakeholder goals, societal needs, and organizational reforms. The issue is whether sociotechnical theory’s benevolent e-governance propositions are sustainable. In time, reinforcement theory disregards them, not only questioning their benevolence, but moving to negate them. Its proponents pre-empt the electronic realm’s decentralizing tendency in order to control public authority. The theory buoys up ideologically-oriented demagogues seeking to derail democracy. Reinforcement theory becomes the basis for ending the broad-based longings of sociotechnical theory by transmuting e-governance into self-enclosed online communities, at war over who’s in charge of the network.

POINEERING OBSERVERS COMMINGLE THE TWO ELECTRONIC TECHNOLOGIES

On the whole, early researchers of digital government entertained a more salutary outlook over its propagation. They conceived of the expansion of the electronic field with agencies and jurisdictions taking increasingly larger steps, but traversing the same path. These ground-breaking researchers, such as Layne and Lee (2001) and Moon (2002), asserted that e-government and e-governance pass through a uniform progression of phases; they consider their passage to be linear in movement and interchangeable in treatment. For example, the United Nations Public Administration Network (UNPAN) defines e-government as: “A permanent commitment by government to improve the relationship between the private citizen and the public sector due to enhanced, cost-effective and efficient delivery of services, information, and
knowledge. It is the practical realization of the best that government has to offer” (Durrant, 2002: 101). In essence, the notion of e-government became a shorthand for both the digitized engineered practices as well as the decentralized integrative factors associated with rapidly growing networks (Melitski, 2003). This co-mingling of the two dimensions is certainly understandable, as in large part, this view reflects a response to ever-growing electronic capabilities. That is, as multiple ICTs became ubiquitous in public organizations, the blending of hardware and application developments, in conjunction with networking, drew on a common analytical ground that fused e-government with e-governance.

Figure 2 incorporates three widely-cited linear descriptions of e-gov, as they combine both e-government and e-governance activities. Relatively routine and highly complex processes are expressed as happening successively and concurrently. Thus, the first stage is simple pooling—cataloging of agency services on a website and using an intranet for off-site communications. A later stage shows two forms digital integration of services, one is vertical, within agencies, and the other is horizontal, across agencies. Collectively, the stages serve as rehearsals for broader online client linkages. This amplification of stages, in sum, underscores the dominant view describing how the public sector would adopt electronic resources.
The commingled view is not entirely endorsed. As Yang and Melitski (2005) maintain, e-government is one of several competing strategic value centers that do not necessitate agencies automating and connecting their
administrative systems before engaging clients online. Nonetheless, the notion of lock-step stages prevails. Moon (2002) defines five stages of e-gov as: (1) Information distribution/catalog, (2) Two-way communication, (3) Service and financial transactions, (4) Vertical and horizontal integration, and (5) Political participation. This model resonates with most researchers (Layne and Lee, 2000; UN/ASPA, 2001; Seifert, 2003). They chart the expansion of both electronic forms as lying on a straight line between two coordinates. These linear-type arrangements generally heighten the organizational efficiencies to be gained by placing materials and services online. Expectations for digital democracy follow down the road, but in sequence. Accordingly, while separating the two e-govs, Garson remarks: “The vision is one of progression from passive, informational e-government to interactive, transformative e-governance” (2006: 24).

The sequential view muddles the electronic provenance in the public sector, as it assumes e-government and e-governance occur linearly and interchangeably. Moon (2002) and Seifert (2003) complicate matters by attaching political participation to the blueprint that divides internal from external electronic associations, thereby, largely meshes e-government with e-governance. Thus, internal activities cover government-to-government linkages and external concerns government services to individuals and businesses. Adding the elements of political participation, as external attachments—filing comments and voting online—to this linear notion, however, mixes them with e-governance-type attributes. To hypothesize that ICTs can be used to encourage political participation, by facilitating an interface between citizens and government, necessitates a redefinition of the electronic universe.
A basic distinction can now be made between the nature of transactions and interactions, which, respectively, sets e-government apart from e-governance. It is this disposition to blend the transactions of e-government with the interactions e-governance, however, that lies at the root of interpreting the two formulations linearly and interchangeably. While both domains embrace corresponding missions, collapsing them into a single corridor fails to realize they contain contrasting assumptions. Surely, e-government does not discourage democratic objectives, but it is e-governance’s creation of active mechanisms for encouraging, empowering and engaging citizens at the grassroots level that stimulates democratic discourse. These processes are plainly the province of e-governance, as they align both with decentralized authority and digitized network communications, which questions the efficacy of fusing the two e-govs. Put differently, the two dimensions largely serve disparate client bases—e-government primarily transacts with customers as end-users of agency services and e-governance’s interactions reflect citizens playing their civic or professional roles in networked democratic affiliations. Nonetheless, as ICT offshoots, the two processes are often supportive of each other’s mission—implicitly and explicitly.
THE DISTINCTIVENESS OF THE TWO ELECTRONIC MEDIA AS CURVILINEAR TRAJECTORIES: THE DUAL E-GOV CONSTRUCT

It is more plausible to present the different electronic links—customer transactions and citizen interactions—as two asymptotic curvilinear trajectories. While Moon (2002) mentions that a curvilinear relationship might explain the two e-govs, he does not propose one.² As Figure 3 conveys, it is their opposing, yet intersecting, curvilinear directions that have gone unnoticed by previous researchers. In particular, the two trajectories can be drawn as a vertical or administrative (e-government) x-axis and a horizontal or politics (e-governance) y-axis. That is, the two lines satisfy diverse, yet complementary, administrative and politics missions. As the figure also shows, their curvilinear relationship converges twice, with e-government turning towards the administrative axis and e-governance towards the politics axis. The twofold convergence of e-government and e-governance also makes evaluating both their favorable and unfavorable consequences more perceptible. Taken together, they can be called the dual e-gov construct, as defined below.

Commentators have not totally ignored the terminology predicament. While in recent years the term e-governance has sometimes supplanted the use of e-government, the incidence is inconsistent, as observers consider the two e-govs congruently (Seifert, 2003). So, before discussing what makes each component singular, yet compatible, they require definition:

- **e-government** provides governmental services electronically, usually over the Web, to reduce the physical character of customer transactions by recreating them virtually, and,
• *e-governance* envisions employing the Web and Internet to overhaul how the state conducts its democratic dealings by using networked interactions with citizens to foster transparency and participation.

Convergence in their early development is mutually beneficial—e-government accentuates transaction services (i.e., completing forms and making payments) and e-governance highlights virtual interactions (i.e., monitoring agencies and contacting agencies via e-mail). Thus, the interval between the first and second convergence establishes opportunities to carry out more convenient practices, that is, by extrapolations of both e-government’s administrative customer transactions and e-governance’s citizen interactions. When they next converge, however, overt tensions emerge between them. As the two variables incite both positive and negative effects, these tensions can have possible lingering costs for democracy. Optimally, as long as their union maintains a steady-state equilibrium, positive outcomes persist—such as continuing e-government’s virtual agencies and e-governance’s virtual democracy. Sub-optimally, negative results spillover as convergence leads both e-government and e-governance to incline towards their opposite axes with damaging impacts on democracy. This drifting apart towards their axes provokes one of democracy’s great weaknesses—its dissection into tyrannies of minorities (Kampen & Snijkers, 2003). Parenthetically, as both trajectories veer towards their separate axes, they mirror an unwelcome redux of the administrative-politics dichotomy—unintentionally taking democracy full circle. ³
DO E-GOVERNMENT PRACTICES CONFIRM THE DUAL TRAJECTORY?

Before examining how unintended consequences surface, it is advantageous to determine whether the two trajectories are conforming to the predictions of the dual e-gov construct, noted in Figure 3. Concerning e-government, which will be considered first, one compendium of federal and state websites in the United States indicates that, in 2000, 74 percent of these jurisdictions offered publications and 42 percent databases online. Respectively, by 2005, the number grew to 98 percent and 67 percent (West, 2005b: 4). The aggregate of total services enlarges in a similar pattern. In 2000, 78 percent had no services available, which fell to 27 percent in 2003, while jurisdictions containing 3 or more services grew from 2 percent to 54 percent. (West, 2005b: 4). From a world-wide standpoint, the average number of services tendered by these U.S. jurisdictions in 2003 was 4.8, which is ahead of Turkey’s 3.2, but behind Singapore’s 7.8 (West, 2005a: 149). This study also compared country-wide e-government best practices and found that Singapore obtained top honors, followed by the U.S and then Canada (West, 2005a: 198).

An annual survey of e-government’s “maturity” by the Accenture firm echoes this assessment (Jupp, 2003)

Singapore’s unique status as a small city-nation presents a microcosmic opportunity to explore whether its services are in keeping with the projections of the e-government trajectory. Singapore has been an early adopter. Its “Civil Service Computerization Programme” (CSCP) began in the early 1980s. By September 2002, 83 percent of possible electronic services were online, including licensing of various types, paying bills and starting a business (Siew & Leng, 2003: 24). The program calls itself: “Many Agencies, One Government.” A Gallup
Poll, published in March 2002, disclosed that two-thirds of the nation’s citizens had transacted online over the prior year (Siew & Leng, 2003:25). Singapore’s e-government activities are beyond the trajectory’s transactional services mode. It is currently operating through the vertical integration of agencies. Related services are gathered under one searchable portal on its website, as in defense and security, education and employment, family and community development and the like (http://www.ecitizen.gov.sg/). Plans are in progress for horizontal integration which will allow customers to execute transactions across the services of these vertical agencies (Siew & Leng, 2003: 29). Clearly, the continuing roll out of Singapore’s online public service transactions coincides with e-government’s trajectory. Indeed, best practices demonstrate that agencies are implementing transactional e-government services before beginning interactive e-governance initiatives; nowhere is this more apparent than in such centralized regimes as Russia and China.

E-GOVERNMENT’S TENDENCY TO COMMIT TYPE I ERRORS: SYSTEMS THEORY AND TECHNOLOGICAL DETERMINISM

At its onset, then, e-government’s features tend to be relatively simple, largely throughput driven and its transactions reasonably passive. So, it is reasonable to ask: how can something that starts out so innocuously, as introducing online cataloging and publishing of agency activities, end up by heading towards technocracy—a takeover of government by expert-based authorities and bureaucrats? What confounds the situation? To address this question, Garson’s (2006) four theories of information
technology and social change are again suggestive. Consistent with systems theory, at first, e-government looks more like a Wizard of Oz, serving as a proxy for the technology engineers and designers of systems theory. The Wizard is an invisible creator who enjoys making online transactions for customers of e-government’s services more approachable and integrative. As the two trajectories originally converge, the magnitude is benign. That is, e-government customers—basically individuals and businesses—enjoy what services agencies offer and promote online, most often starting with follow-up by telephoning or writing the agency for additional information or forms.

As Figure 3 reveals, after their initial convergence, the two trajectories experience exponential growth, though proceeding in opposite directions. E-government evolves from simple cataloguing for customers to the complexities of administering agencies virtually. Indeed, the elaboration of each trajectory accommodates and supplements the gains of the other. As many of the same end-users are navigating both electronic highways, they become gradually more energized to want more operational maneuverability—mimicking the directions of Moore’s Law, whereby basic changes in electronic technology transpire ever so quickly and cheaply—and more seamlessly. Thus, at its peak, the elements of e-government’s trajectory give customers expanded transactional involvement with agencies. As the two trajectories converge again, e-government acquits itself as the public sector’s benchmark of efficiency. Filing income taxes online remains an exemplar, especially as people learn it is more secure than surface mail.

Over time, the theory of technological determinism comes into view and a curtain draws over the cooperativeness of agencies towards individuals and businesses. E-government loses its luster as a bearer of
accountability. Unintended consequences arise due the increasing costs of managing the enterprise—sifting through and analyzing huge amounts of data and documents that need to be sorted and evaluated, and then, converted into information relevant to agency and official decision-making. When customers demand greater disclosure of government’s inner workings, it threatens officialdom’s command over virtuality. As this revelation surfaces, e-government's trajectory trails off to its administrative axis. It is unnecessary to invoke any conspiracy theory to rationalize authorities and bureaucrats’ fear of losing hegemony over their electronic sphere of influence. Officialdom maneuvers to re-centralize its expiring license over e-government, technological determinism predicts it fends off troublesome intrusions.4

Nothing in this theory prevents officialdom from accepting the wisdom of putting their ends above others. It can reshuffle the electronic medium in both legitimate and illegitimate ways. One acceptable way to justify denying customer entrée to agencies and jurisdictions centers on the lingering complexity of authenticating end-users. And, in a globalized cosmos, authentication of who is a customer—even a bonafide citizen—often remains elusive. Likewise, the more government makes its portals available to customers, it exposes itself to becoming party to the extensive misuse of the technology, especially owing to fraud and identity theft that already plague the electronic arena. Conversely, customers may become dissuaded to share honestly, if they cannot preserve their anonymity—a sticky affair in dealing with governmental powers.

Illegitimate reasons for curtailing customer access to e-government materialize as well, and ultimately, signal the dawning of technocracy. Authorities and bureaucrats take advantage of a vulnerability inhering in the power of electronic technology. In a sense, officialdom steps aside to
exploit the tactics of information overload to weigh down customers with more documentation than they can realistically comprehend (O’Toole & Meier, 2004). Customers, in turn, become wary and distance themselves from the opportunity costs of transacting with government, as they are weighed down by a kind of e-clogging. The real cost of this planned information overload is the failure of agencies and jurisdictions to respect genuine citizen input. Both events—of technocrats overloading customers and customers retreating—precipitate a decline in the expansion of e-government. Together, they validate technological determinism, as multifaceted Wizards of Oz from officialdom become visibly defiant and recast the electronic architecture to maintain their own prominence. Democracy dims.

In this unpleasant scenario, it would be a mistake to contend that publics will exhibit unending patience to transact with e-government by uncritically tolerating these side-effects. As this assertion—hypothesis—of citizen toleration is not necessarily true, but may be false, it kindles committing a Type I error. An untrue null hypothesis fails to be rejected—that is, a false positive turns up. In other words, an unwillingness to reject the hypothesis of the unbroken bountifulness of e-government interferes with questioning its potentially troubling side-effects. By largely praising the arrival of e-government, Fountain’s seminal work (2001) ignores these side-effects and lapses into this error. While this type of error may be the lesser of two evils, it is not insignificant because the alternative remains a misleading claim, that is, to spuriously uphold the view that e-government is unendingly charitable.
THE UNFOLDING OF E-GOVERNANCE’S APPLICATIONS

In accounting for e-governance, its launch begins with disseminating information in dynamic forms, beginning with contact information and calendars of events that notify users of traditional participatory opportunities, which, in time, develops into various forms of online networked citizen interactions. Yet, a distressing question emerges—similar to the prior one affecting e-government’s occurrence—how does e-governance, which embarks on transmitting information, not only finally falls victim to the difficulties exposed by hyperpluralism (Kettl, 2002), but it also proceeds towards an errant form of social equality—participatory anarchy—the atomization of democratic polity? Recounting the underlying story makes this episode more intelligible. Early on, e-governance looks to networking technology to furnish contact with agencies and jurisdictions as citizens eagerly wait for opportunities to become engaged. E-governance becomes a marketplace of networked stakeholders who express their political aspirations through the norms of collaborative deliberation.

Citizens, thereby, begin to secure convenient portals to agencies and to their activities, including various synchronous and asynchronous dealings with agencies and jurisdictions. Yet, at this juncture, muscular citizen participation lies in the future. As interactions are amplifying, however, e-governance improves citizens’ relations with agencies and jurisdictions as well as invigorates their contributions to decision-making. Interagency associations also extend into augmenting networked communications as e-governance’s extends its participatory intentions. That is, following its initial convergence, e-governance’s trajectory continues to heighten citizen engagement. Citizens regularly file policy
comments, engage in chatroom discussions and vote online which, on the surface, can become worthwhile vehicles for legislators and bureaucrats. Democratic interchange flourishes, aided by the ubiquity of broadband and the attractiveness of multimedia techniques.

As posed in the discussion of e-government, how well do these assertions correspond with the public sector’s e-governance endeavors? In many nations, the public sector is undertaking a variety of citizen engagement actions, at national as well as local levels (Macintosh, 2003). In Europe, for example, as countries seek to utilize the Internet to facilitate a more direct democracy, the efficaciousness of bowing to the popular will is becoming more complicated, particularly since the inception of the super-national government in Brussels. The European Commission (EC) has expressed concerns about the issue of sustaining the integrity of national democracies, about which it is actively exploring the tools of e-governance (Riley, 2004). Macintosh (2003) reports on the activities inaugurated by twelve members of the Organization for Economic Co-Operation and Development (OECD) and finds that, practically speaking, citizen empowerment is in its infancy, largely falling within the agenda-setting phase of policymaking. As such, citizens are asked for their comments, sometimes at the front-end as a policy or regulation is under review, or, at the back-end to assess a bothersome implementation. Singapore’s website typifies the international commentary state of affairs. Its website asks people to “Voice Your Opinion” on such matters as the “national climate change strategy,” or, on the “extension of the smoking ban” (http://www.ecitizen.gov.sg/). The site also requests feedback on: “cutting waste in government” or “cutting red tape in government.” Much as Yang and Melitski (2005) contend for e-government, yet only more so for e-
governance, jurisdictions in every continent have jumped onto this trajectory in an uneven fashion.5

This circumstance is certainly reflected among the American states. From 2000 to 2005, two kinds of interactions are on a steady rise. Citizens are contacting agencies through e-mail and writing live comments on regulations and policies. Regarding e-mail access to policy makers, in 2000, 68 percent of the states offered it to citizens, which climbed to 92 percent in 2005. On citizens making on-line comments, this vehicle climbed from 15 percent in 2000 to 28 percent in 2005 (West, 2005b: 13). Such availability applies to selective agencies within each state, however. Some states have added upgrades. In 2005, eight states are using live citizen participation in the form of online chats for the first time (West, 2005b: 5). In relation to e-governance’s trajectory, these engagement features go beyond creating interagency interaction, which involves live querying of multiple agencies for a given problem set. Put differently, to apply the precepts of the linear progression model, many states have jumped to a higher level on the e-governance trajectory. For it is now clear that e-governance is introducing a wider virtual platform for informed citizen engagement—an occurrence that should, on the surface, please authorities, bureaucrats, and academics.

E-GOVERNANCE’S TENDENCY TO ABET TYPE II ERRORS: SOCIOTECHNICAL AND REINFORCEMENT THEORIES

Coming out of the wheat fields of Kansas and skipping across the globe in search of the Wizard of Oz, Dorothy and Toto share these good tidings that e-governance’s demeanor is kinder and softer. Not
surprisingly, they run into sociotechnical theory that favors transparency and participation in government, as brokered through networked stakeholders as change agents. As e-governance’s second convergence nears, not only do citizen interactions with agencies and jurisdictions widen, improvements also occur in the quality of exchanges. The volume, frequency, character, and depth of electronic communications enrich democracy. Dorothy and Toto, as true believers, are almost exhausted by shouting e-governance’s praises in every village square. As the story goes, along their way, the well-wishers encounter an unintended consequence. As technology both lowers the cost of political communications and decentralizes the flow of information, citizens may unknowingly seek online confirmation—a self-referencing—from kindred souls (6, 2004). This bundling of political preferences is already in full swing as a corollary of the pervasiveness of electronic blogging.\(^6\) In some measure, incipient balkanization may be underway.

E-governance comes under the spell of reinforcement theory. It implicitly triggers ideological commandeering of the technology. While the theory considers the technology to be apolitical, in practice it bolsters wresting control of the established regime by undemocratic means. The unintended consequence is that as political interests both multiply and fragment, the sway of the party system weakens. Of course, in the American arena, where “uncertain responsibility” guides democratic principles and federalist procedures, the advent of perverse electronic hyperpluralism compounds these issues. Its decentralized arrangements become disassembled as an: “extraconstitutional skeleton that bestows limited, often underdeveloped mechanisms of ensuring accountability” (Kettl, 2002: 142-143). Pathologies surface.
In e-governance, the pathologies go beyond disenfranchisement, defined as citizens using the web to become ever-more narrowly enfranchised. As the e-governance trajectory slopes upward to the politics axis, it undercuts democracy by instigating participatory anarchy. Like-minded interests come together electronically to undermine the central tenets of democracy—openness and tolerance. Factional manipulation and fanaticism diminish democracy’s vitality. Wayward wicked witches of the west overwhelm the two weary messengers from Kansas, as evil-doers brazenly cloak themselves as populist demagogues. Policy and political elites suffer the same fate. What was once believability in the confidence of technology to do wonders presently exposes its darker side. Hopeful expectations of earlier sociotechnical theory envisioning citizens cultivating broadly-based communities of networked stakeholders dramatically dissolve. And, for all the convictions it placed in the long-term value of ICTs as the great citizen equalizer, sociotechnical theory now witnesses the transforming of the Web into composites of splintered publics. Reinforcement theory beckons uncaring despots to disengage the contributory orientations of e-governance. Failure to see the preliminary danger signs of run-away electronic hyperpluralism causes e-governance to slide into a participatory anarchy.

This condition invites committing the more fitful Type II error—a true null hypothesis is incorrectly rejected—a false negative looms large. In other words, the cost of ignoring that inflammatory populists are manipulating e-governance’s language of the day is more severe than willful technocrats contaminating of e-government. The voices of demagoguery strain e-governance. In his highly informed critique of the public sector’s slowness to enlarge virtual democracy, West (2005a: 166-167) overlooks this error. While citizens dwell
comfortably in their own electronic comfort zones, the price is disintegration of democracy.

CONCLUSIONS

The importance of distinguishing between the two electronic components becomes apparent for a number of reasons. E-government concentrates on making life more convenient for customers that stems from an administrative plane, while e-governance focuses on a politics plane, which sanctions the role of citizens. Thus, as customer transactions increase with authorities and bureaucrats, they are abetting e-government. And, as citizen interactions multiply, they are fulfilling an e-governance mission. Similarly, the two curvilinear trajectories circumscribe different digital elements that otherwise would make their intersections unimaginable. While both electronic paradigms possess participatory prospects, e-governance’s interactions aim overtly at a networked “e-democracy.” The conclusion is unmistakable: the two electronic trajectories form a dual e-gov construct that eliminates referring to e-government and e-governance in linear and interchangeable terms. This distinctiveness does not disqualify them from occasional cooperative ventures.

Partitioning them reflects the dual nature of their own digital histories and illustrates the overall manifestation of ICTs in the public sector. One part of this chronicle focuses on fire-power—how computers can deliver greater capacity at lower costs, which accelerate e-government’s transactional base. The other course concentrates on functionality—how can end-users become more adept at balancing technical tools to serve organizational pursuits, more in line with e-governance’s networking predispositions. Commingling the two
dimensions into a unitary diagonal misses recognizing their disparate asymptotic character that converges twice. In particular, commingling cannot grasp the harm inherently produced through their second convergence.

The warning signs of such an eventuality can now be more fully, and presumably, more clearly articulated. While it is not possible to predict precisely when the second convergence will come about, its disturbing qualities can be delineated. Unavoidably, the damages are analogous, as technocrats and demagogues besiege end-users with linked forms of information overload—e-clogging. For e-government’s capture by technocrats, the two tell-tale signs are—first, authorities and bureaucrats make government seem overly “friendly”—solicitous in the extreme—by dumping data and documents, which busy customers cannot decipher. They respond—justifiably—by limiting their interest in transacting with agencies. For e-governance, the signs are reversed, but no less malignant. That is, self-promoting populists and their cadres employ guerilla tactics by consuming agencies and jurisdictions—and each other—with forms of disinformation. This disinformation bristles with demagoguery’s polemical positions and distasteful demands. Disquisition, not dialogue, dominates. Interest by non-aligned citizens in e-governance—in e-gov generally—falters, as factions hold agencies and jurisdictions hostage.

Consequently, e-government and e-governance have the capability of activating comparable, but worrisome obstructions. Self-appointed technocrats and self-aggrandizing demagogues deliberately impede the largely autonomous thrust of electronic communications. Worse, as the two trajectories are not mutually exclusive, it is even conceivable to acknowledge that they can gravitate to their troubling axes simultaneously. Alternatively, if the competing nature of their missions might be the source of
some complementary goals, they could be of creditable significance, but only if the conflicts do not simply become manifestations for pandering and posturing. A central part of any future research agenda needs to make that determination. In addition, attention can focus on verifying whether the predicted initial e-gov convergence has taken place. The most important research issue is: to learn in what ways can the effects of the second e-gov convergence be anticipated and mitigated. The question is: as their second convergence occurs, what factors preserve a beneficial balancing between the two trajectories, notably, by maintaining them in steady-state equilibrium? To live happily ever after, when Dorothy and Toto—and their merry making friends—finally meet up with the Wizard of Oz, they need to find ways to sing-along in two-part harmony.

ACKNOWLEDGEMENT

*Authors listed alphabetically. They wish to thank two anonymous reviewers of this journal for their helpful comments and suggestions.

NOTES

1. To insure that terminology is consistent, the expression “e-gov” refers to both e-government and e-governance as an integrated term of art.

2. The authors (Calista & Melitski, 2005) explained and diagramed the framework for this curvilinear relationship between the two dimensions. In addition, the earlier version of this paper did not reference Garson (2006), as it had not yet been published.

3. The two engineers principally responsible for the first network at ARPA, J. C. R. Licklider and Robert W. Taylor, expressed concern in (1968) for information overload and pictured it in a delightful cartoon, which they entitled: “filibustering destroys communications,” more
akin to the demagoguery outcomes associated with e-governance, as discussed subsequently

4. The only other observers to attempt a systematic distinction between the two forms of e-gov are: William Sheridan and Thomas B. Riley (2006). Their work appeared on June 21, which followed submission of this paper. Some significant exceptions appear with the dual e-gov formulation. Most importantly, the authors do not cast them as reflecting curvilinear trajectories that converge twice. They define e-government as providing “better service.” It deals with substituting virtual service delivery for hard-copy ones. They then go on to include interactive activities which, we maintain, falls under e-governance, namely, citizens contributing directly to the conduct of democracy. Next, the authors say e-governance is “coordinated propriety.” It seems that citizens would participate in the running of many everyday aspects of government—roads, health, or education. This separation between the two concepts is unclear. Alternatively, the dual e-gov construct offers both a more inclusive capability (e-government deals with transactions and e-governance with interactions) and an exclusive one as each trajectory engages different domains.

5. The most well-defined categorization of e-governance criteria stems from both the European Commission (EC) and the Organization for Economic Development and Co-Operation (OECD). The former has created an Interactive Policy Making (IPM) initiative that involves citizens in various forms of feedback and consultation in assessing impacts of the commission’s policies (Macintosh, 2003:124-128). The latter has proposed ten guiding principles for e-government, which range from “commitment: proclaim feasible goals and provide financial support” to “active citizenship: encourage active use; incorporate suggested improvements” (Riley, 2005).

6. Ten of the most popular blogs are predominately devoted to specialized topics in American politics. They also figure prominently in the top five (Bai, May 28, 2006: 13). For an upbeat journalistic summary of the content of the leading blogs, see (Thompson, 2006: 30-31).

REFERENCES


