

eRulemaking

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Introduction

A consensus appears to be emerging about the general purpose of eGovernment initiatives in the United States. It is now commonly argued that well-designed eGovernment is capable of providing faster, cheaper, and better-quality government services (Comedy, 2002; Schelin, 2003; Swiss, 2003). Once thought by many to be elusive public goods dispensed rather unevenly by an impenetrable phalanx of oddly-named agencies, those same government services now, as a matter of policy and practice, often reside no further than “three clicks” away from a digital citizen entering a Web-based federal portal (Fletcher, 2004). Thus, eGovernment is presumed to be intuitive and effective, even if the metrics for demonstrating this (e.g., page hits) are crude and tell us little (Franzel & Coursey, 2004).

Insofar as it facilitates citizen-government interaction, the operating assumption is that “best practices” in eGovernment enhance the democratic process (Holzer, Hu, & Song, 2004). Advocates seem to be saying that democracy can be “new and improved,” and that information technology (IT) is the linchpin that will make it possible. Forget, for now, that “efficient deliberation” well may be an oxymoron. Clearly there are fears in and out of government about the effect of unleashing vast quantities of electronically-produced public input (Rocheleau, 2003). Proponents of the digital government revolution nonetheless wish us to believe that all the values important to building the eGovernment consensus can be maximized simultaneously

through the development of appropriate software applications, user-friendly human-computer interfaces, and a Federal Enterprise Architecture run on sound business principles. Whether all public sector functions can operate well based on the successful application of an e-business model remains to be seen (Garson, 2004).

In the case of federal rulemaking, only a few observers will object to ongoing efforts aimed at better informing and engaging the citizenry, while making government more efficient, responsive, and accountable. Disagreements tend to occur, however, when the means to these ends are sought through unreflective and indiscriminate applications of IT to existing bureaucratic practices. An important debate now unfolding concerns how best to build electronic citizen-government architectures that remain true to the principles underlying the eGovernment consensus.

This chapter presents only a snapshot of the debate about the future of eRulemaking. We argue that simply speeding up, streamlining, or otherwise enhancing the collection and synthesis of public commentary inherent in the rulemaking process runs the risk of undermining the roles both of public mediators, such as interest groups and of government experts, whose job it is to exercise discretion bounded by a mandate from Congress and oversight from the Office of Management and Budget (OMB). What is most needed at this stage in the development of the eRulemaking enterprise is to articulate the trade-offs inherent in certain IT-driven eGovernment innovations.

In what follows, we set out the context in which key decisions about the new federal eRulemaking architecture are being considered. First, we provide an overview of recent literature on political and IT-management issues in eRulemaking. Second, we present a comparative analysis based on the findings from a pair of eRulemaking focus group sessions held with agency

personnel and representatives of interest groups during a workshop held at the National Science Foundation during the fall of 2003. Finally, we speculate about the next steps that might be taken to allow the dialogue that is underway to culminate in a public information system for eRulemaking that is technologically robust, applied in the most appropriate ways possible, and a genuine enhancement to both the regulatory and democratic processes.

The Institutional Context

In regulatory rulemaking, the stakes are often high. Rulemaking scholars note that the writing of regulations requires delicate decision-making to be made in a politically charged, information-intensive environment (Kerwin, 2003; Lubbers, 2003). One study presented to the House Government Reform Committee estimated that regulations “aimed at protecting health, safety, and the environment alone cost over \$200 billion annually or about 2% of GDP” (Hahn & Litan, 2003, p. 2). While creating significant costs, the thousands of rules promulgated yearly “collectively deliver enormous benefits to society” (Coglianese, 2004). Critics of the role played by federal agency personnel suggest that these high-stakes decisions often are made without adequate data, transparency, or accountability, and too often reflect the dominance of well organized interests in Washington, DC (Skrzycki, 2003a). For some, eRulemaking presents a chance to open the process up to greater scrutiny and more balanced access to decision-making.

In 1998, Professor Stephen Johnson published a path-breaking analysis of the potential impact of the Internet on rulemaking. His basic question—does the Internet change everything?—has remained pertinent and for the most part unanswerable to this day (Johnson, 1998). Intuitively, we are tempted to agree with scholars who speculate that IT-enhanced rulemaking may result in better rules, based on sound data, and arising from transparent, deliberative, inclusive, and accountable processes (Brandon & Carlitz, 2002; Carlitz & Gunn,

2002). Yet, in the absence of compelling studies demonstrating this is a general trend observable across a variety of rulemaking agencies, it is perhaps more prudent to be skeptical of the prospect for IT-driven change to transform the entrenched politics of rulemaking (Schlosberg & Dryzek, 2002; Tesh, 2002).

The task of improving regulatory functions is highly complex, with sharp disagreements about what actually constitutes better regulation (Fischbeck, Farrow, & Morgan, 2001). It is clear, however, that it will take several years of research to establish new baseline data to begin to be able to generalize about the impact of IT enhancements on idiosyncratic elements of rulemaking, such as the role for public participation in the notice and comment process (Beirle, 2003; Shulman et al., 2003). New theories of bureaucratic change are needed to understand better the diffusion of technology and its impact on business process reengineering (Fountain, 2002a; Holden, 2003). While the eRulemaking research agenda is crystallizing a new community of scholars interested in public administration issues (Garson, 2003; Shulman, 2004), there are a number of professional hurdles that keep studies of the impact of IT on agency practices somewhat marginalized, particularly within the discipline of political science (Fountain, 2001, 2002b).

Whether or not the Internet changes anything that actually matters, the technical development of a unified federal system eRulemaking is ongoing (EPA, 2003). As is the case with many large-scale IT rollouts, the only certainty at this point is the emergence of unintended consequences (Fountain, 2003; NRC, 2000, 2002). The eRulemaking Initiative is part of the 24-point eGovernment element of the President's Management Agenda (OMB, 2002, 2003a). Many of the imperatives emphasized by the Office of Management and Budget (OMB) are supported by legislation, including the E-Government Act of 2002 (OMB, 2003b). In addition, a number of

General Accounting Office reports have trumpeted the possibilities for seamless electronic access to rulemaking documents and officials (GAO 2000, 2001, 2003).

As of January 23, 2003, a new federal portal is open at www.regulations.gov (Skrzycki, 2003b). This relatively simple interface (known as Module 1) allows access to all federal rules open for public comment and provides a Web-based form for submitting comments to the appropriate federal agency. Later iterations will allow for the migration of all federal eRulemaking to a single, unified docket system (Module 2), and will unveil an optional set of tools (a “Reg-Writers Workbench”) for the rule writers charged with the task of analyzing the significance of public comments (Module 3). It is against this backdrop that our eRulemaking Research Group convened a 2-day workshop at the National Science Foundation in Arlington, Virginia.

Data Collection and Analysis

The data were collected in the fall of 2003. Four focus groups were conducted: two for 14 governmental agency representatives and two for 13 interest group representatives who attended an eRulemaking workshop sponsored by the National Science Foundation (NSF). In addition, the four principal investigators and four additional academics facilitated and participated in the focus group discussions. The participants signed informed consent forms. They were instructed that their participation was strictly voluntary and that they may choose not to respond to a question or to withdraw from the group at any time. Permission to tape record the focus group was granted by the participants for the exclusive purpose of accurately capturing and retaining their comments for analysis. The participants were assured that their comments would be kept confidential. In addition, the participants were assured that their comments would not be attributed to them in any way, nor would the analysis identify any participants by name or

title/role (unless they specified otherwise). The discussion within each group lasted approximately 1½ to 2 hours.

Participants provided feedback at the end of the focus group session, when a brief summary was presented that outlined the critical points of discussion. The focus groups were later transcribed and analyzed. Upon analysis of the participants' feedback, themes emerged and illustrative quotes were sorted by thematic categories. Then, the researchers sought clarification from participants about the draft focus group reports. It is evident that there were shared themes that demonstrated an overlap between the groups, as well as competing conceptualizations of the eRulemaking environment. The focus groups were guided by a set of questions exploring the impact of IT on rulemaking, barriers to effective participation, and methods to enhance the rulemaking process for interest groups and agency personnel. In addition, group commonalities and differences were examined, which highlighted divisions and possible technological and informational bridges that may encourage a spirit of cooperation between the two groups.

Agency Perspectives on the Rulemaking Process

Challenges. Participants were asked first to discuss the rulemaking challenges faced by their agencies. Several agency representatives expressed the sentiment that the rulemaking process is adding to their workload when budgets have declined. One person indicated that the “high volume of comments” has created a “crisis of getting all these form letters and having to parse things out.” Another participant said, “We’re getting many more and more comments at a time of having diminished resources to respond to them.” Even with the volume of comments, six participants suggested “including comments on the preamble discussion.” It was argued that these ideas might not be captured otherwise. Two agency representatives indicated that general paper comments tend to be lengthier, research-intensive documents that “cover the whole

spectrum of issues.” On the other hand, electronic comments tend to be more opinion and focused “on a particular issue or a bone they want to pick with the agency.” A participant indicated that written comments submitted by “Joe Public” are “brief and to the point.” It was suggested that regardless of the method of submission, a commenter who has vested interest in the outcome will write a more persuasive document.

One individual shared how mass form letters were counted. The participant said, “This would be the exact same letter.... Different people signed it; the wording was exactly the same. That counts as one entry of the docket.” One participant said, “We oftentimes end up noting the volume of the response, but have to say ‘though a number of people raised this issue, there were no substantive data submitted.... And so, you note it, and there’s nothing you can do.’” Several agency representatives noted that sorting documents by support/opposition to a particular rulemaking could have the unintended consequence of transforming the process into a referendum. It was suggested by some that since the opposition tended to comment more often, rulemaking could be driven by this bias. In addition, it also could generate an onslaught of non-substantive comments from both camps designed to tip the scales in their own favor.

Some participants noted that data compilation and management created challenges at various stages of the process. One participant mentioned that it was difficult to gather data from “diverse and small sources” like small businesses “to develop technical analyses ... which we use to propose and ultimately promulgate a rule.” After obtaining valid data, another individual said, “Being able to access it and present it in a way that is palatable and understandable by the decision-makers” is a primary goal.

Several agency representatives reported that the political climate, congressional mandates, and court requirements presented barriers to effective rulemaking. Five people

suggested that the political climate was a significant factor. There was a sentiment among some agency representatives that the current regulatory climate made their jobs difficult. On the other hand, not all participants agreed that their agencies were “subject to the same political whims.”

A participant said, “All the congressional mandates and the legislative challenges and the endless stream of supporting analyses that have to be written just this way or just that way” compound the problem. Two individuals commented that Congress has mandated “yet another layer in our regulations, whereby we have to do a concept paper that needs to go up in the chain before we can even start to do a proposed rule.” Three participants emphasized the challenges associated with court requirements. One person said, “The courts have this process of judicial review. Questioning about what the arbitrary and capricious test means has added a lot of requirements to the rulemaking process.” Two persons noted the incongruity between accessible language and legal jargon. One person said, “We do have attorneys that review all our rules before they get published.” Attorneys review the language that was “hopefully in plain English, and then if they see legal problems with it; they correct them,” the participant added. However, not all participants reported legal challenges as a significant obstacle.

Shift to eRulemaking. Most agencies reported an electronic shift. One agency representative commented that “we’ve done a lot to change the way we disseminate information, and we’ve used the Web effectively.” The person reported that the *Federal Register* was concerned that their documents were first published on the Web. On the other hand, stakeholders had more time to review “rules and comment.” One participant indicated, “In the last 5 years or so, we’ve become ... more proactive ... about trying to go out and notify people about the availability of a rule for comment.” In addition, one agency held “on-line public meetings on the Web” and gathered information via “consumer complaint hotlines.” One participant related the

success of requesting e-mail submissions. The person said, “Just a year, year and a half ago, my agency established one e-mail address that’s in every *Federal Register* notice.... Now that gives us an on-line searchable database of almost everything.” One participant discussed the challenges of being a contact for a major rule. The participant stated, “His voicemail box fills up every 15 minutes. And his e-mail, he got between 2 and 2000 a day.” An individual suggested that there are occasions when a high volume of comments is useful but need to be separated from substantive comments.

The transition to eRulemaking has not been a seamless process. Although most agencies reported their agencies had adapted successfully to eRulemaking, two participants noted cultural snags. One person shared that with higher comment volume, the agency would need to become automated, but this would go against the grain of the agency’s culture. If there were a discrepancy between ease of submission and system or data security, “Then it just won’t happen,” a participant commented. A few agency representatives discussed concerns about comment deadlines, file formats, attachments, and demographic data collection in an eRulemaking environment. One person asked, “If we go to an EDOCKET system, are we now going to formally abide by the cutoff period for the comments?” In reference to unzipping comment files, it was problematic for three participants. Another person recommended not underlining words because “that was fine in the hard copy; but when the PDF was read, it’s blank.” The inclusion of copyrighted articles in comments and Confidential Business Information (CBI) generated discussion among six participants. One participant requested a box that could be checked if an electronic document had an attachment. In regard to EPA’s EDOCKET, another person indicated it would be convenient to have the option of remaining anonymous or providing one’s name, location, and organization.

Better IT Tools. Agency representatives reported a need for technological innovations to smooth the transition to eRulemaking. Many agency representatives defined various electronic tools that would be useful. These included guided commenting, section analysis, duplicate detection, text clustering and summarization, ready access to the comment database, and sorting capabilities. Many participants shared that IT could help citizens write better comments by guiding their responses and/or offering specific guidelines. One person stated, “We could use technology to focus the commenters into the areas that are useful.” Another participant added, “You could link to a certain part of the rule. What you would be doing is making people structure their comments in a manner that would be easier for you to do the analysis later.” Six individuals recommended a “section-by-section analysis” tool. One person indicated, “If there was any way to encourage commenters to follow that sort of format, I think that would be a great service.” A participant suggested that users could be educated about a particular site by adding links about “how to write a good comment or how to search easier.”

Seven participants noted the importance of tools that would detect copies, duplicates, and near-duplicates. One person stated, “We have these long form comments; and at the end, there’s this one nugget that actually is something we need to address, or we are going to end up in litigation.” Two people specifically mentioned a clustering tool. One participant stated that an automated method to cluster “a particular category” would save the time of going “through every single comment.”

Two participants desired an electronic tool that “could generate essentially a list of commenters, or an index of material in the docket.” It would allow agencies to respond to questions about commenters and reference the edocket number. In addition, “When we are defending the rule, we bring the whole docket into evidence by submitting the index,” suggested

a participant. One individual pointed out that “a quick transmittal of the body of comments received” was needed. Three participants viewed the summary tool with enthusiasm. However, two people disagreed. One person said, “I didn’t think that the technology had advanced enough to really make that useful.”

Interest Group Perspectives on the Rulemaking Process

Challenges. Limited financial resources posed constraints for most interest groups. One participant pointed out that interest groups have limited resources and choose only a few “hot topics ... a year ... to be effective.” A participant noted that the “pre-proposal stage” was critical, but dependent on resources, which precluded many interest groups from effective participation. In addition, this individual added, “There’s not a lot of impact of all those comments in the actual final outcome of the rule.” One person suggested that, comparatively speaking, there was a better opportunity to influence the “governing process” because of the “politicized” nature of rulemaking.

Many interest group representatives reported that their participation in rulemaking was motivated by several goals: to influence the outcome of a rulemaking; to be an advocate; to mobilize and educate their members; to conduct outreach by ensuring “that more people get involved in the whole process”; or to hold agencies and Congress accountable. A participant indicated that comments provide a public record so that agencies are held accountable and can be kept in check by the legislative branch. Four participants noted that they were hired to “advance the interests of our members.” Six participants indicated that they intended to shape the outcome of the rule, while two others were more skeptical. Two participants specifically suggested that they were motivated to influence the rule by offering substantive “high-quality comments.”

The point was also made by three participants that ranking the type of comments into categories such as “qualitative vs. quantitative,” “substantive vs. non-substantive,” and “mass form letter vs. non [form letter]” was a cause for concern. One individual agreed that there is “a distinction in sorting and reading mass comments versus other comments.” However, it was suggested that mass communications should not be labeled non-substantive, because they would be marginalized “instantly.” One participant raised the issue that eRulemaking must guard against the tendency to silence the “non-electronic voice.” Most participants indicated the digital divide precludes certain groups of people and communities from public participation. An individual stated, “We’ve always got to deal with those who do not and will not have it [information technology].”

The lack of standardization in comment submission requirements (i.e., triplicate, hardcopy, etc.), mandatory demographic characteristics, and short comment periods increased the burden on many interest groups. In reference to submission requirements for a specific rulemaking, one participant said, “All comments were to be filed in triplicate and hard copy. The agency required the three copies be together, and we had to collate separate piles of three for each person.” In addition, many participants indicated that it would be helpful to have access to submitted comments and summary statistics as well as agency staff to “answer questions.” One person added that agencies “that are not responsive are probably the most frustrating.”

An individual argued that the burden to collect and analyze data should not fall on interest groups. The participant stated, “The federal government should have that research completed as a basis before they even begin these rulemakings. We should be supplementing good information they already have” instead of compiling it. It was suggested that rulemaking is an inherently adversarial process punctuated by amiable relations with agencies. A participant

stated, “So at one level, we are viewed as a resource. At the same time, we fight with agencies about a lot of things.... It’s not personal. It is just the way the process works.”

Shift to eRulemaking. Overall, most participants suggested that making the commenting process easier would facilitate the eRulemaking process. One person stated that outreach is desired specifically when regulations impact their group or their members. Two participants mentioned the importance of agency outreach to a cross-section of interest groups. A person stated that the organizational culture “is very much pushing e-activism,” but concerns were voiced about IT-illiterate interest group members and citizens. A participant shared that “income, age, and ethnicity impact the access to tools used to comment on the Internet.” One individual said, “In order for our communities to access eGov efficiently and easily is going to take a significant investment in technology.”

However, several participants pointed out that limiting methods of submission, particularly e-mail, and creating barriers to e-submission hindered a democratic process. Another individual suggested that the “infrastructure of these agencies sometimes is inadequate to receive mass comments from citizens.” One participant mentioned how “SPAM filtering” and “randomly generated images with numbers on them ... which require an authentication code” thwart the commenting process. Although it was recognized that SPAM filters were needed, there was a concern about additional barriers for citizen participation.

Other discussion points involved Web forms, interfaces, and usability. There was an observation by some participants that members should not be forced to “use a government-run Web form.” Some participants noted a concern about the capability of on-line forms to receive attachments. A person said, “An automated receipt that provides confirmation of your comment doesn’t necessarily indicate your attachments came through.” Four participants recommended a

“standard that allows advocacy groups to submit comments that directly interfaces with any databases that are being developed.” In response to a question of whether interfaces should differ for first-time users and professional users, there was general agreement that standardization and usability were important. Generally, participants desired options within a standardized process. One person said, “Regular users will know what the standards are when they go to each different place, but also, there are many options for the new user to choose from so that they can submit in a way that is easy for them.”

Better IT Tools. According to interest group representatives, IT tools must enhance a democratic process. Interest group representatives discussed how agencies should use IT tools in rulemaking. The emphasis was on promotion of citizen participation, examination of substantive comments, rational decision-making, consensus building, and compilation of data. Overall, many participants wanted more transparency in how agencies made decisions. The process should be giving ordinary people opportunities to put comments in.” A few participants recommended a timeline on rulemakings because it would educate the public by “having descriptions of the different steps in the process” and inform interest groups if “an agency decides they will never issue a final ruling on something after receiving the public comments.” There was recognition that IT tools need to be tailored to a “number of users.”

One participant indicated that IT tools could help interest groups view, search, and sort the database of comments. Two people mentioned that it would be helpful when viewing comments online if there were a “view all page.” Regarding regulations.gov, two persons indicated that it would be beneficial to analyze the differences and similarities between their comments and those from other groups. Also, a participant shared that it was cumbersome to find the “comments from a couple of particular groups.... There were five or six groups working on it

together, and each of us only found a few of them.” One individual was concerned that citizens would make erroneous assumptions because they would be unaware that other stakeholders had not weighed in on the matter. In addition, two individuals wanted a tool that would distinguish which regions of the country were less responsive to their outreach, so they could alter their approach.

It was suggested that future IT tools must be “incredibly user-friendly,” so interest group representatives could run frequencies and use search and sort functions to understand “how specific comments differ from canned letters with duplicates and duplicates plus.” In addition, an individual suggested that it would be helpful to separate the duplicate comments from the other unique comments. This person stated, “This would make it a more easily searchable database for the agency as well as for us. These two kinds of comments serve two different purposes.” One participant commented that assessing near duplicates would be a great benefit for interest groups. The individual stated, “If, for instance, half the people have changed the letter to add this one position,” it is worth knowing. Another person was interested in the “keyword tools” to search for “phrases,” “to get a sense of the range of ideas in comments and keywords that were there.”

Comparative Analysis

The interrelationship between technology, social relations, and public values is key to designing a system that serves the needs of all stakeholders. The transition to electronic rulemaking creates immediate IT needs for agencies and interest groups alike. It increases the burden on agencies to sort through and synthesize enormous amounts of information generated from mandated public participation. Several agency representatives remarked on the need for IT tools to reduce the burden of searching for “nuggets” of information in mass form letters. Many noted numerous tools that would help them collect, manage, and slice up a comment database, so

they could meet the dual objectives of writing good rules and providing interest groups with requested information.

IT places financial strains on interest groups as they adapt to agencies' comment submission requirements, rally their constituents, and provide outreach to IT-disenfranchised citizens. Many participants suggested that eRulemaking is an additional cost and increases digital inequality. Interest groups seek IT tools that will make the rulemaking process more transparent and ensure that their positions are heard. Cross-agency standardization of comment submission, Web interfaces, and e-mail submissions with confirmation that all files are received would be valuable to many interest groups. Many participants were interested in data management tools such as duplicate detection, and search and sort functions.

Nevertheless, to apply an "IT fix" to streamline public commentary in the absence of reflection may have the unintended consequence of undercutting the symbiotic relationship between agency experts and interest groups. For the most part, IT tools that were desired by stakeholders did not radically reassess the rulemaking process, but addressed their most pressing needs. It seems that, to have a meaningful impact on the democratic and regulatory processes, technological innovation cannot operate in isolation from the values that infuse a collaborative exchange. Discourse, reflection, and inclusion of difference would expand eRulemaking and dramatically change the types of technology that would have currency.

It is apparent from the perspectives of agency personnel and representatives of interest groups that there is a mutually shared interest in improving regulation. Some agency representatives reported that their aim was to write quality regulations, but that they were hampered by legislative and legal challenges, which have added layers of requirements to the rulemaking process. However, skepticism and distrust between the two entities cloud these

points of commonality. Many interest group representatives report their efforts are devalued in the process, their writing campaigns are “pigeonholed as “non-substantive,” and agencies are non-responsive to their concerns. On the other hand, several agency representatives questioned the authenticity of interest groups’ commitment to the process. In regard to mass communication, an agency representative hypothesized that their “motivation might be fundraising, or increasing their profile, or simply winning the issue.” Another agency participant questioned whether interest groups were motivated to “make a political point” or a rational argument supported by data. As these focus groups have highlighted, the success of IT-driven eGovernment innovations rests on a solid foundation of group relations. Informational and technological bridges thus are built on a foundational equivalent of trust that is reinforced through continued dialogue and an open exchange of stakeholder ideas. In an eRulemaking environment, trust is demonstrated through authenticity and security of information and technological integrity. Otherwise, “people aren’t going to buy into it,” one agency representative added.

Agency personnel and interest group representatives share a belief that eRulemaking should promote a democratic process. However, this shared belief structure does not translate into attributing the same value to certain forms of civic participation. It was evident that many interest group representatives are concerned that eRulemaking may have the net effect of cutting them out of the democratic process. Furthermore, there was a palpable concern among several interest groups that IT would silence the “non-electronic voice,” and amplify longstanding social and economic inequities. In addition, most interest groups sought open access to the comment database, so that agencies and Congress were held accountable to the public.

Some interest group representatives were suspicious of structured commenting. An interest group participant stated, “We don’t think the scope of their questioning related to the

rulemaking is sufficient; so often times, we are providing answers to questions they didn't ask." This individual was concerned that if comments not directly relevant to a specific section were placed in the "other category," they would be "marginalized." An agency representative also was concerned about guided commenting, because some of "the best data to help guide my rule" may crosscut several issues.

Several interest group representatives suggested that agencies should support political participation through the solicitation of substantive comments while not devaluing citizen involvement in the form of mass mailings. For the most part, agencies acknowledge that mailing campaigns do not carry the same weight as substantive comments. From an agency perspective, it is not any more conducive to a democratic process if rulemaking turns into a referendum and the oppositional voices drive the outcome.

But, agencies are also faced with the responsibility of building consensus from conflicting viewpoints. An interest group representative reflects on agencies' use of IT to build "a comprehensive objective record." This individual argues that "if we can use the technology to really get to the quality of the information upon which these decisions are based, I think we could get both sides to agree a little bit more." This would seem to suggest that the quality of information influences the nature of the discourse among stakeholders. Therefore, electronic participation in rulemaking should not be justified solely on economic grounds, but also by its impact on the democratic process. It seems fundamental to a public information system for eRulemaking to construct places for deliberation. If information technology provides a place for discussion, reasoning, and engagement across lines of difference, stakeholders indeed may make proposals, attempt to persuade others, listen to the responses of those others, and determine the best outcomes and policies based on the arguments and reasons fleshed out in public discourse.

The ideal of deliberation is that of communication that actually changes the preferences of participants in the face of the arguments and positions of others. In this way, a process of democratic rulemaking cannot just be one-way, with an agency either positing a position for citizens to accept or simply taking note of objections to proposed rules. There must be room in the design of the online procedure for individuals not only to deliberate with others, but also to note changes in their own position. Authenticity within deliberative democracy depends on participants affecting the outcome of the process; this, of course, includes the possibility of changes to proposed agency policy.

Conclusions and Some Extensions

The comments provided by the participants in these focus groups provide an emergent perspective on the dominant themes related to federal eRulemaking in contemporary political discourse. Their comments addressed the impact of IT on rulemaking, barriers to effective participation, and how to enhance the rulemaking process both for groups interested in providing input and for the agency personnel who must receive and process that input and respond with policy outputs. In all respects, the emergent federal eRulemaking system must find ways to provide more equitable access and fair treatment of the viewpoints that are expressed.

Two main themes are of particular relevance to this study: (a) the innovation and diffusion of electronic methods for federal rulemaking, and (b) implications for democratic governance and democratic theory.

Innovation and Diffusion

One of the dominant themes we see emerging from these focus group data is the need to provide for electronic-based innovation in federal rulemaking and for the diffusion of that

innovation throughout the federal rulemaking regime. Diffusion of innovations theory offers demand-side explanations of what is involved in facilitating broadly based, if not universal, participation in federal eRulemaking. Rogers' (2003) model of adoption explains the process by which an innovation is implemented. Adoption occurs over time and through a series of stages. First, an individual, or, by extension, a government agency or an interest group, must learn about a new idea or approach before forming an attitude about it. This model posits that an attitude must be formed before behavior can follow that either supports or rejects the new technology. In Rogers' persuasion stage, an individual forms attitudes about a particular innovation. One can be persuaded to adopt an innovation if it has obvious advantages and is relevant to one's life. One's behavioral intention is manifested in the decision to accept or reject the new idea. Individuals put the innovation to use, and over time it becomes routinized in everyday life (Rogers, 2003). This entire process of adoption and diffusion of innovation is influenced by social relationships and individuals' knowledge base. Personal, agency, and group characteristics carry great weight in shaping both access to an innovation and receptivity to exploring technological advances.

The ongoing public debate about disparate levels of access to the Internet and functional knowledge about how to use it most effectively for federal eRulemaking reflects competing conceptualizations of governance and citizenship. A focus on information technology literacy (ITL) reveals a problem that is far more complicated than debates about the various pathways to universal IT access. However, less data-based information exists regarding the effectiveness of interventions that seek to identify and remove barriers to group or individual equity in citizenship in a comprehensive and systematic manner. Improving ITL "is not simply a matter of running wire and providing public computers—it is also a matter of ensuring that people have the requisite skills to use the technology and that they see the relevance of technology in their lives"

(Organization for Economic Cooperation and Development Secretariat, 2000; Seiden, 2000). We are more skeptical than the National Research Council that the full array of capabilities, concepts, and skills can be made universal, but agree with those authors that implementation needs will vary across population groups (National Research Council, 1999).

Citizen groups with lesser resource bases and underdeveloped technological infrastructures, like educationally and economically disenfranchised citizens, may face unique challenges that influence their desire to become more IT-fluent. Becoming a digital citizen, either as an individual or as a group, is a process influenced by technological attitudes that may have the effect of widening the digital gap between those groups that know already how to use IT to maximize their impact on federal rulemaking and those that as yet are relatively clueless how to go about achieving that aim. Future research may seek to identify the attitudinal and organizational elements that influence ITL and thus are most likely to foster digital citizenship and interest group effectiveness in eRulemaking. Similarly, future studies could focus on the different strategies pursued by federal agencies for the adoption and diffusion of IT to promote linkages between citizenship and ITL.

Citizenship is increasingly mediated by digital communication (Hernon, 1998; Larsen & Rainie, 2002; Temin, 1997). Political parties interact with members online; interest groups use Web sites and electronic mail to woo the public; media organizations perpetually update the news on their information-rich sites; government makes vital information and documents available and collects it from citizens via the World Wide Web (Fountain, 2001). On-line information can provide the basis for environmental or personal health protection (Beierle & Cahill, 2000; Fox & Rainie, 2002). These and other communicative functions are all aspects of the emerging digital citizenship (Black, 1998; Davis, 1999). The rise of the “virtual” individual

and of cyberspace community substantively changes both the manner in which citizens can engage democracy and the prerequisites for equitable participation (Baddeley, 1997; Jordan, 1999; Moore, 1999). Whereas IT should make it easier for all citizens and groups to conduct their routine business with the government, in fact, it appears to be widening the gap between the IT literate and those without basic navigational skills.

Most prior research on digital divide issues has focused on how individual and family characteristics, and differential education opportunities, impinge on the ability to master technological fluency. It is as yet unclear whether similar delimiters of group and institutional ITL can be determined, and, if they can be determined, how their inequitable consequences may be ameliorated. Debates about establishing criteria for an ITL baseline are complex and controversial. The rapid pace of technological change makes it problematic to state definitively that certain IT skills are essential to underpin universal digital citizenship (McNair, 2000). Nonetheless, the presence of a moving target does not justify inaction, whether one believes in the existence of a digital gap or not (Walsh, Gazala, & Ham, 2001). The ability of citizens and groups to make use of electronic means to impact federal rulemaking must be considered against the backdrop of findings by the National Center for Education Statistics (1992) that about eight million adults could not perform simple literacy tasks and over 20% had only the most rudimentary reading and writing skills. Nearly half of the adult population “were apt to experience considerable difficulty in performing tasks that require them to integrate or synthesize information from complex or lengthy texts.” Patterns of institutional technological learning and how the playing field for technological access to government policymakers could be leveled among competing interests remain to be ascertained, although analyses of individual ITL such as that provided by the Web-Based Education Commission (2000) may provide fruitful clues to

guide that research agenda. The structure and limitations of government-provided portals for more equitable access likely will lead to future policy debates echoing those regarding market-based IT diffusion regarding organizations that are ITL “have-nows” versus the “have-laters” (Mueller, 2001; Symposium, 2000).

Democratic Theory

Studies of the federal rulemaking process (e.g., Kerwin, 2003; West, 1985; Woll, 1977) have established the link between agency activities and democratic theory. Other research has elaborated the link between democratic theory and societal change. For example, Shapiro (2003) argues that democracy should be geared toward minimizing domination throughout society, to redress the challenge posed by ethnic differences and claims for group rights, and inequities related to the unequal distribution of income and wealth.

Folbre (2001) embodies her discussion of democratic theory in economics and family values, focused on the moral and ethical aspects of governance in conjunction with feminist economics and social justice. Dahl similarly (1985) connects democracy to developments toward economic equality manifested in employee ownership and worker participation in management decisionmaking. They and others (e.g., Barber, 1984, 1992; Dryzek, 1990, 2000; Held, 1987; Pateman, 1970) provide different perspectives on the nature of democratic government and establish a framework to consider the nimbleness with which governments must be able to adapt to new circumstances such as technological innovations. The adoption of innovations by local governments has been a subject of previous studies (Bingham, 1976; Larsen & McGuire, 1998). Kautz and Pries-Heje (1996) have addressed the diffusion and adoption of information technology, and Stoneman (2002) has studied the economics of technological diffusion. Kirkman

(2002) questioned the global readiness for information technology, and McMeekin (2002) sees innovation as dependent on demand for the fruits of the innovation. The Organization for Economic Cooperation and Development (1999, 2001a, 2001b) has investigated various cross-national dimensions of innovation, through cooperation in national innovation systems, the mobility of skilled personnel in national innovation systems, and the management of national innovation systems. Chesbrough (2003) and Shulman (1999) provide arguments for open innovation, to create and profit from technology, and for “owning the future.” These are among the issues—at the interface between technological innovation and democratic theory—that will need to be dealt with successfully by current and future leaders in eRulemaking.

We find echoes of these issues, as well as at least hints of some possible resolutions, in the comments provided by these interest group and federal agency focus group participants. The future configuration of federal eRulemaking structures and procedures will depend on how these potential resolutions play out, and that configuration in turn will shape both the technological future of citizen-group-government interaction and the nature of governance.

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